

# Honors and Awards Committee

# **Reference Manual**

Updated: June 2021

# **Table of Contents**

1. Purpose	4
2. Appendix A-1: Honors and Awards – General	5
3. Appendix A-2: Awards Schedule	6
4. Appendix A-3: Form of all Honors and Awards	7
5. Appendix A-4: Plenary Format	8
6. Appendix B: Honors and Awards Calendar	9
7. Appendix C: Format for Committee Objectives	10
8. Appendix D: Guidelines for Awards	11
9. Appendix E: Content, Format, and Handling of Motions	
10. Appendix F: Mentoring Program	17
11. Appendix G: Code of Ethics	19
12. Appendix H: Confidential Information Agreement	20
13. Appendix I-1: Honors and Awards Review Schedule	21
14. Appendix I-2: Five-Year Review of ASHRAE Honors and Awards	22
15. Appendix I-3: Sample Five-Year Review Tracking Sheet	23
16. Appendix I-4: Honors and Awards Recommendation Form	24
17. Appendix J-1: Guidelines for ASHRAE Fellow Nominators	25
18. Appendix J-2: ASHRAE Fellow Nomination Form	
19. Appendix K: Pioneers of the Industry Nomination Form	
20. Appendix L: DSA/ESA Instructions and Point Tally Form	
21. Appendix M: ASHRAE Hall of Fame Nomination Form	42
22. Appendix N-1: Checklist for Write-Ups	
23. Appendix N-2: Sample Write-Up for F. Paul Anderson	
24. Appendix N-3: Sample Write-Up for ASHRAE Hall of Fame	46
25. Appendix N-4: Sample Write-Up for Honorary Member	47
26. Appendix N-5: Sample Write-Up for Louise and Bill Holladay Distinguished Fellow Award	
27. Appendix N-6: Sample Write-Up for Selection of Fellow	
28. Appendix N-7: Sample Write-Up for Andrew T. Boggs Service Award	
29. Appendix N-8: Sample Write-Up for ASHRAE Award for Distinguished Public Service	51
30. Appendix N-9: Sample Write-Up for the ASHRAE Pioneers of the Industry Award	
31. Appendix O: Biographies for Named Awards	
1. Andrew T. Boggs Service Award	
2. Crosby Field Award	
3. Dan Mills Chapter Programs Award	
4. Donald Bahnfleth Environmental Health Award	
5. Donald A. Siller Refrigeration Award	55

6. E.K. Campbell Award of Merit55
7. F. Paul Anderson Award
8. George B. Hightower Award
9. Homer Addams Award
10. John F. James International Award
11. Lincoln Bouillon Award
12. Lou Flagg Historical Award
13. Louis and Bill Holladay Distinguished Fellow Award59
14. Milton W. Garland Commemorative Comfort - Process - Cold Chain Award for Project Excellence
15. Ralph G. Nevins Physiology and Human Environment Award60
16. William J. Collins, Jr. RP Award61
17. Willis H. Carrier Award
32. Appendix P-1: History of F. Paul Anderson Award
33. Appendix P-2: History of Milton W. Garland Commemorative Comfort – Process – Cold Chain Award for Project Excellence
34. Appendix P-3: History of ASHRAE Award for Distinguished Public Service
35. Appendix Q: Past Presidents and Recipients of Honors and Awards

# 1. Purpose

The Honors and Award Reference Manual is a reference for guidelines, forms, procedures, sample documents and other tools that the Committee uses in its day-to-day operations. It ensures consistency in the operation of the Committee and serves as an educational tool for new members. The H&A Reference Manual is an internal document of the Committee and requires the approval of the Committee.

# 2. Appendix A-1: Honors and Awards – General

Prior to Board of Director's approval, the Honors and Awards Committee shall review all recommendations for new awards to ensure that the wording of criteria is sufficiently specific as to clearly establish the purpose of the award, and to ensure that the wording does not conflict with existing awards. Further, the official version of the criteria, as established in the Rules of the Board, shall be the version used in all ASHAE publications.

The BOD shall confirm individuals recommended for the following honors and awards based on the follow requirement:

Andrew T. Boggs Service Award	4 or more negative votes defeats
ASHRAE Award for Distinguished Public Service	4 or more negative votes defeats
ASHRAE Hall of Fame	2 or more negative votes defeats
ASHRAE Pioneers of the Industry	2 or more negative votes defeats
F. Paul Anderson Award	2 or more negative votes defeats
Fellow	4 or more negative votes defeats
Honorary Member	2 or more negative votes defeats
Louise and Bill Holladay Distinguished Fellow Award	4 or more negative votes defeats

Members Council shall confirm individuals recommended for the following honors and awards based on the following requirement:

ASHRAE Journal Paper Award	Majority vote
Crosby Field Award	Majority vote
Dan Mills Chapter Programs Award	Majority vote
Developing Leader Award	Majority vote
Distinguished 50-Year Member Award	4 or more negative votes defeats
Distinguished 75-Year Member Award	4 or more negative votes defeats
Distinguished Service Award	4 or more negative votes defeats
Donald A. Siller Refrigeration Award	Majority vote
Donald Bahnfleth Environmental Health Award	Majority vote
E.K. Campbell Award of Merit	Majority vote
Energy Genius Award	Majority vote
Exceptional Service Award	4 or more negative votes defeats
George B. Hightower Technical Achievement Award	Majority vote
Government Affairs Award	Majority vote
Homer Addams Award	Majority vote
John F. James International Award	Majority vote
Lincoln Bouillon Award	Majority vote
Lou Flagg Historical Award	Majority vote
Lower-GWP Refrigeration and Air-Conditioning Innovation Award	Majority vote
Milton W. Garland Commemorative Comfort – Process – Cold Chain Award	Majority vote
for Project Excellence Poster Presentation Award	Majority vote
	Majority vote
Ralph G. Nevins Physiology & Human Environment AwardScience and Technology for the Built Environment Best Paper Award	Majority vote
Science and Technology for the Built Environment Best Paper Award Service to ASHRAE Research Award	Majority vote
Standards Achievement Award	Majority vote
Standards Achievement Award Student Activities Achievement Award	Majority vote
Technical Paper Award	Majority vote
William J. Collins Jr. Research Promotion Award	
Willis H. Carrier Award	Majority vote
	Majority vote
YEA Award of Individual Excellence	Majority vote
YEA Inspirational Leader Award	Majority vote
Youth Outreach Award	Majority vote

# 3. Appendix A-2: Awards Schedule

Winter Conference Awards	Maximum # Per Year
Personal Honors and Awards	
ASHRAE Award for Distinguished Public Service	1
ASHRAE Hall of Fame	2
ASHRAE Pioneers of the Industry	2
F. Paul Anderson Award	1
Fellow	No Limit
Honorary Member	3
YEA Inspirational Leader Award	1
Pass-Through Awards	1
Developing Leader Award	No Limit
E.K. Campbell Award of Merit	1
John F. James International Award	1
Lower-GWP Refrigeration and Air-Conditioning Innovation Award	No Limit (1 <sup>st</sup> and HM)
Milton W. Garland Comfort – Process – Cold Chain Award for Project Excellence	1
Student Project Competition	3 (first), 3 (second)
Technology Awards / Award of Engineering Excellence	6 categories (up to 3 awards
Toomology Trivings / Triving of Engineering Excelence	in each category)
Annual Conference Awards	Maximum # Per Year
Personal Honors and Awards	
Andrew T. Boggs Service Award	1
Distinguished 50-Year Member Award	No Limit
Distinguished 75-Year Member Award	No Limit
Distinguished Service Award	No Limit
Exceptional Service Award	20
Louise and Bill Holladay Distinguished Fellow Award	1
Paper Awards	1
ASHRAE Journal Paper Award	1
Crosby Field Award	1
Poster Presentation Award	1
Science and Technology for the Build Environment Best Paper Award	1
Technical Paper Awards	4
Willis H. Carrier Award	1
Pass-Through Awards	
Dan Mills Chapter Programs Award	1
Donald A. Siller Refrigeration Award	1
Donald Bahnfleth Environmental Health Award	1
Energy Genius Award	1
George B. Hightower Technical Achievement Award	1
George B. Hightower Technical Achievement Award Government Affairs Award	1
Homer Addams Award	1
Lincoln Bouillon Award	1
Lincoln Boulinon Award Lou Flagg Historical Award	1
Ralph G. Nevins Award	1
	1
Service to ASHRAE Research Award	I No Limit
Standards Achievement Award	No Limit
Student Activities Achievement Award	1
William J. Collins, Jr. RP Award	
YEA Award of Individual Excellence	3
Youth Outreach Award	I I

# 4. Appendix A-3: Form of all Honors and Awards

Award	Plaque	Medallion	Lapel Pin	Honor arium	Endowed	Conference Presented	Other	
PERSONAL HONORS								
Andrew T. Boggs	•	•				Annual	Transportation	
ASHRAE Award for Distinguished Public Service	•	•				Winter	Transportation	
ASHRAE Hall of Fame	•					Winter	Plaque; trans. to conf.; one night's lodging	
ASHRAE Pioneers of the Industry						Winter	Display at HQ and ASHRAE Website	
E.K. Campbell	•			•		Winter	\$10,000 (from Life Members Club)	
F. Paul Anderson	•	•				Winter	Transportation	
Fellow	•	•	•			Winter		
Honorary Member	•	•				Winter		
Louise & Bill Holladay	•	•				Annual	Transportation	
YEA Inspirational Leader	•					Winter	Travel and conference registration (YEA)	
Р	ERSONAI	AWARDS F	OR GENI	ERAL SO	CIETY ACT	IVITIES		
Developing Leader Award	•		•			Winter	Plaque (YEA)	
Distinguished 50-Yr.	•		•			Annual		
Distinguished 75-Yr.	•		•			Annual		
Distinguished Service	•		•			Annual		
Exceptional Service	•		•			Annual		
Р	ERSONAL	L AWARDS F	OR SPEC	CIFIC SO	CIETY ACT	IVITIES		
Dan Mills Chapter Programs	•		•		•	Annual	Transportation	
Donald A. Siller Refrigeration	•					Annual	Plaque (CTTC)	
Donald Bahnfleth Environmental Health	•					Annual	Transportation (EHC)	
Energy Genius	•					Annual	Plaque (BEQ)	
George B. Hightower	•					Annual	Plaque (Atlanta Chapter)	
Homer Addams	•		•	•	•	Annual	\$5,000 (\$1500 H&A, \$3500 RAC)	
John F. James	•		•			Winter	Transportation	
Lincoln Bouillon	•		•			Annual	Transportation	
Lou Flagg Historical	•		•			Annual	Transportation	
Lower-GWP Refrigeration and Air- Conditioning Innovation						Winter		
Milton W. Garland	•	•	•		•	Winter	Transportation	
Ralph G. Nevins	•		•	•	•	Annual	\$500	
Service to ASHRAE Research	•					Winter	Plaque (RAC)	
Standards Achievement	•		•			Annual	Transportation	
Student Activities	•		•			Annual	Transportation	
William J. Collins	•	•	•		•	Annual	Transportation	
YEA Individual Excellence	•					Annual	Plaque (YEA)	
Youth Outreach Award	•					Annual	Plaque (SAC)	
		PA	APER AV	VARDS			• • • •	
ASHRAE Journal Paper	•			•		Annual	\$500 (divided equally)	
Crosby Field	•			•		Annual	\$750 (divided equally)	
Poster Presentation	•			•		Annual	\$250 (each presenter)	
Science and Technology for the Built Environment Best Paper Award	*					Annual	Plaque & Transportation (PEC)	
Technical Paper	•			•		Annual	\$500 (divided equally)	
Willis H. Carrier	•			•		Annual	\$500 (divided equally)	
		IETY AWARI	DS TO GI	ROUPS O	R CHAPTEI			
Government Affairs	•					Annual	Transportation	
Student Project Design	•			•		Winter	Honorarium & Transportation (SAC)	
Technology Award	•					Winter		

# 5. Appendix A-4: Plenary Format

# Approved June 22, 2008

These recommendations are made by the Honors and Awards Committee and approved by Members Council on June 22, 2008, to ensure that the recognition of members for their contributions to industry and the Society remains one of the most important activities of ASHRAE.

- 1. The New Plenary Awards Format should allow for comments by the recipients (or representatives of recipients) of the Louise and Bill Holladay Distinguished Fellow Award, the F. Paul Anderson Award, and the ASHRAE Hall of Fame.
- 2. The Format must recognize the importance of ASHRAE tradition in the awards process.
- 3. Changes to the Format should be submitted to the Honors and Awards Committee for its review.
- 4. The timing of the video presentation should reflect the importance of the award (i.e., Fellow vs. DSA/ESA). To assign equal time to each award detracts from the importance of some awards as it reduces the amount of information shared with the audience.
- 5. If the Plenary Awards Presentation requires more time, consideration may be given to moving the Photo Session back to its traditional time slot before the Plenary where it is more relaxed and less intrusive.

# 6. Appendix B: Honors and Awards Calendar

Consideration at Winter Conference	Recommending Committee or Council	To Members Council or BOD	Presentation	
ASHRAE Award of Distinguished Public Service		Annual	Winter	
ASHRAE Hall of Fame		Annual	Winter	
ASHRAE Pioneers of the Industry		Annual	Winter	
Dan Mills Chapter Programs Award	Chapter Technology Transfer Committee	Winter	Annual	
Distinguished 50-Year Member		Winter	Annual	
Distinguished 75-Year Member		Winter	Annual	
Donald A. Siller Refrigeration Award	Chapter Technology Transfer Committee	Winter	Annual	
Donald Bahnfleth Environmental Health Award	Environmental Health Committee	Winter	Annual	
Energy Genius Award	Building EQ Committee	Winter	Annual	
F. Paul Anderson Award		Annual	Winter	
Fellow		Annual	Winter	
George B. Hightower Technical Achievement Award	Technical Activities Committee & Technology Council	Winter	Annual	
Government Affairs Award	Government Affairs Committee	Winter	Annual	
Homer Addams Award	Research Administration Committee	Winter	Annual	
Honorary Member		Annual	Winter	
Lincoln Bouillon Award	Membership Promotion Committee	Winter	Annual	
Lou Flagg Historical Award	Historical Committee	Winter	Annual	
Paper Awards (ASHRAE Journal Paper, Crosby Field,	Publications Committee & Conferences &	Winter	Annual	
Poster Presentation, Technical Papers, Willis H. Carrier)	Expositions Committee			
Ralph G. Nevins Award	TC 2.1	Winter	Annual	
Science and Technology for the Built Environment Best Paper Award	Publishing and Education Council			
Service to ASHRAE Research Award	Research Activities Committee & Technology Council	Winter	Winter	
Standards Achievement Award	Standards Committee	Winter	Annual	
Student Activities Achievement Award	Student Activities Committee	Winter	Annual	
Student Project Competition	Student Activities Committee	N/A	Winter	
Technology Award / Award of Engineering Excellence	Chapter Technology Transfer Committee	N/A	Winter	
William J. Collins, Jr. RP Award	Research Promotion Committee	Winter	Annual	
YEA Award of Individual Excellence	Young Engineers in ASHRAE Committee	Winter	Annual	
Youth Outreach Award	Student Activities Committee	Winter	Annual	
Consideration at Annual Conference	Recommending Committee or Council	To Members Council or BOD	Presentation	
Andrew T. Boggs Service Award		Winter	Annual	
Developing Leader Award	Young Engineers in ASHRAE Committee	Annual	Winter	
Distinguished Service Award	<u> </u>	Winter	Annual	
E.K. Campbell Award of Merit	Life Members Club	Annual	Winter	
Exceptional Service Award		Winter	Annual	
John F. James International Award	Members Council	Annual	Winter	
Louis and Bill Holladay Distinguished Fellow Award		Winter	Annual	
Lower-GWP Refrigeration & Air-Conditioning Innovation Award	ASHRAE UN Environmental Liaison Committee	Annual	Winter	
Milton W. Garland Award	Refrigeration Committee	Annual	Winter	
YEA Inspirational Leader Award	Young Engineers in ASHRAE Committee	Annual	Winter	

# Committee

# Chairperson:

# Society Year:

# Date:

Objective	Planned Completion Date	Fiscal Impact	Responsibility	Program Approved	Cost Budgeted	Status

- List objectives, not action items or ongoing committee activities such as updating the committee's MOP.
- State objectives in clear, concise, measurable language. If necessary, cite sub-tasks and interim steps as a means of measuring objective completion.
- Cite both the completion date for the overall objective as well as individual sub-tasks.
- State fiscal impact in dollars, hours worked, or trips made. State whether the program has been approved by the council and whether its cost has been included in the budget.
- State the primary responsible individual, subcommittee or body.
- Report a brief but complete statement of status. Cite completion date if objective is fulfilled.

# 8. Appendix D: Guidelines for Awards

#### ROB 2.411.003.2 Guidelines for Awards

- 1. The following guidelines for ASHRAE awards are approved: (99-01-27-51/06-01-25-08/07-03-25-01)
  - A. All requests or suggestions for new awards, revisions to current awards, or award deletions shall be forwarded to the Honors and Awards Committee for review and recommendation before being forwarded to Members Council for review and approval. (10-06-30-15)
  - B. ASHRAE awards are grouped into the following categories, each of which has its defined form of award:
    - 1. Personal Honors (plaque and medallion)
    - 2. Personal Awards for General Society Activities (plaque and lapel pin)
    - 3. Personal Awards for Specific Society Activities (plaque and lapel pin)
    - 4. Paper Awards (plaque and honorarium)
    - 5. Society Awards to Groups or Chapters (plaque)
  - C. Awards will normally carry the name of an ASHRAE activity (e.g., Distinguished Service Award, Fellow, Journal Paper Award). No business, product or other commercial name shall be used for an award. Only in very exceptional instances may consideration be given to naming the award after an individual.
  - D. Each proposed award shall be submitted to the Honors and Awards Committee with a detailed description including the name of the award, the suggested category for the award, the reason for establishing the award, and the proposed selection and awarding process.
  - E. Initial total funding for the award shall be described in the proposal, along with provisions for future funding and inflation considerations. Funding shall be self-perpetuating and supporting for the expected life of the award.
  - F. Proliferation of awards that would tend to detract from the worth of existing awards must be avoided. The award must first be considered as applying to an important field of ASHRAE related activity; the name of the award would then add prestige.
  - G. Awards may be proposed by any committee, chapter, or individual to the immediate authority but eventually must pass through the Honors and Award Committee for approval prior to submission to Members Council and then to the Board of Directors. The Honors and Awards Committee will assist anyone wishing to submit a proposal for a new award. The proposal should be reviewed early in the process to allow determination for the appropriate nature of the anticipated award and meeting all necessary criteria for acceptance.
- 2. This committee shall include in their supporting material for candidates only information pertinent to the requirements for the particular award for which the candidate is being recommended. (70-07-01-11)
- All voting for honors and awards of the Society shall be strictly secret and held at meetings of Members Council (not by mail ballot), and the H&A Committee shall be instructed to place the necessary information for such voting before Members Council at least two months prior to the applicable meeting. (65-01-28-19/06-01-25-08/10-06-30-15)
- 4. It is the policy of the Society not to consider for approval any Society honors or awards posthumously, other than the Hall of Fame and Pioneers of the Industry.

# 9. Appendix E: Content, Format, and Handling of Motions

# 1. Introduction

A motion is an important tool for conducting business within the Society and for proposing action on an important issue. A motion should be written in succinct language. If a motion is expected to move through several levels of approval (for example from a subcommittee to a committee, then to a council and ultimately to the Board), state what is recommended but omit references as to which body must approve it. The committee can then pass the motion along to the council (and to the Board, if required) as it is written without having to rephrase it. If a rule or policy already exists, a motion to reaffirm the rule or policy is out of order.

# 2. Content

When a motion is made recommending that a higher body approve it, the following should be included:

- **A.** Motion (request action)
- **B.** Background (reason for action)
- C. Fiscal impact (estimated cost of action)

# 3. Format

The body of a motion should contain as completely as possible the following information:

- A. State the action that is being recommended. For example, "I move that \$75,000 be allocated..."
- **B.** Qualify elements of the motion so that they are not open for interpretation, debate or negotiation. For example, "I move that \$75,000 be allocated to develop a certification course on fan design..."
- **C.** Include the time frame for completing the action if a time is desired. For example, "I move that \$75,000 be allocated to develop a certification course on fan design to be completed by June 2007."
- 4. If a motion is anticipated to become a Rule of the Board (ROB) it should be worded as a rule. A rule number should also be suggested. Existing related rules may be included in the background. If a motion is to amend an existing ROB, deletions should be shown as strikethroughs and additions should be shown as <u>double underlines</u>. See examples below.
  - A. New ROB: "I move that a new ROB be added to ROB Volume 2, 2.105.003, to read as

follows: A reference manual should contain reference documents, white papers, guides etc. that the council or committee uses in conducting its work but that are not appropriately a part of the Rules of the Board or the council's or committee's Manual of Procedures.

- B. Amendment to existing ROB: "I move that the proposed change to the Election and Appointment Procedures be approved as follows (strike through = deletion; <u>double underline</u> = addition):
  - 1. Unless otherwise provided, the committee members and the respective chairs thereof shall be selected by the President-Elect in advance of the annual meeting and be confirmed by the President-Elect when he/she takes office as President, with the approval of the Board of Directors at the first meeting called after the report on the election. (SBL 7.2)
  - 2. The selection procedure for each <u>standing</u> committee which is not directly elected by the Board of Directors is as follows: <u>At least</u> two months prior to the Annual Meeting, the President-Elect shall submit <u>recommended</u> appointments of standing committees and their respective chairmen and vice chairmen to the Board of Directors. With approval of the Board, these designated shall, at least 30 days prior to the annual meeting. <u>Appointees shall</u> be invited to attend any meetings of their committees that may be called during the Annual Meeting. <u>Committee appointments shall be approved by the Board of Directors as required by the Society Bylaws (65-07-04-23/95-01-29-05).</u>

# 5. Background

Provide progression of events, the reason (what the action would accomplish) or other information that would help the approving body to debate and decide on the issue. The more thorough the background, the more convincing the arguments, the more complete the research, the more beneficial the request is to the betterment of the Society, the more likely the motion will be approved. Include the recommending body's vote count to assist the approving body in determining the level of support or controversy.

When a motion is made, it must be seconded unless it is from a committee or subcommittee. Once the motion is moved and seconded, the chair then states the motion unless it is presented in writing and all members have copies.

# 6. Fiscal Impact

Include an estimate of the cost to take the action requested. State whether this amount has been included in the budget for the year in which the expense will be incurred. If the expense will be incurred in a future year, request that the amount be included in that year's budget. If there will be no fiscal impact, this should be stated.

#### \* \* \* \* \*

Attachment A - Summary of Motions based on *Robert's Rules of Order Newly Revised* Attachment B - Format for Motion (used for a motion made during a meeting)

Rev. 2006.09.17

# Summary of Motions Based on *Robert's Rules of Order Newly Revised*

This summary provides At A Glance information on handling motions that may arise during a meeting.

MOTION	PURPOSE	SECOND	DEBATABLE	AMENDABLE	MOTIONS HAVING HIGHER RANK	VOTE	DESCRIPTION
1. Main	Introduce business	Yes	Yes	Yes	All	Majority+	The lowest rank of motion. To Amend Rules a 2/3 vote and Previous Notice is required.
2. Postpone Indefinitely	Defer a matter or kill it	Yes	Yes (on the Main Motion as well as postpone)	No	All except 1	Majority	May be applied only to main motions including Questions of Privilege.
3. Amend *	To change or modify a pending motion	Yes	Yes (but confined to the amendment)	Yes	All except 1,2	Majority (The vote is on the amendme nt only. Main motion returns for vote either amended or not.)	Amend by insert or add, strike out, strike out and insert, substitute (a whole paragraph or resolution)
4. Commit x	To place business in hands of a few (e.g. a committee)	Yes	Yes (as to propriety of committing only)	Yes	5,6,7,8,9	Majority	The motion Commit adheres to the Main Motion and together they make one question.
5. Postpone to set a time	To set a time when a matter must be considered	Yes	Yes (only as to the propriety of postponing)	As to time As to Special or General Order	6,7,8,9	Majority 2/3 for Special Order	If passed the subject cannot be taken up before the set time except by a 2/3 vote. General Order – a certain day Special Order – a certain time
6. Previous Question	To stop debate and order an immediate vote	Yes	No	No	7,8,9	2/3	To make this motion state: The Previous Question is moved on (State main motion or amendment on which vote is demanded.) Calling out question, question carries no requirement for action by the chairman.
7. Table Take from table	To lay aside a matter such that it	Yes	No	No	8,9	Majority	Table is not used to suppress the motion. Postpone

	May be considered later.						Indefinitely should be used to suppress.
8. Orders of the Day	To force a meeting to return to the program, which is the Order of the Day	No	No	No	9	2/3	Must be called for at a time when Orders of the Day are being deviated from (Except Special Orders).
9. Question of Privilege	To get the attention of the Chair at once	No	No	No	Adjourn	Majority	Use to Ask a Question – to attend to some matter of business that cannot wait. Usually decided informally, without floor. Do not wait for recognition from the Chair.

+ A majority means more than half of those who voted for or against the motion. A 2/3 vote means 2/3 of those who voted for or against the motion.

\* There may be only one amendment to the *Main Motion* pending at one time. This 1st degree amendment may have only one amendment (2nd degree) pending at one time. As each is voted, other amendments may be offered in succession. *Previous Question* (stop debate and vote) may be applied to a motion or an amendment. A *Substitute Motion* is an *Amendment*. Amendments must be germane to the subject matter to be amended. After all amendments are voted, vote on what has become the *Main Motion as amended*. x When a committee is to be appointed, nomination for the committee may be made from the floor. Chair puts vote; beginning with first named in succession. When the naming of the committee devolves upon the chairman, before the committee can act, the names must be announced to the assembly, unless permission is granted to the chairman to do otherwise. Whoever appoints the committee has power to appoint the chairman and fill vacancies. The committee reports to the assembly.

MOTION Honors & Awards Committee

Date
MOVED BY:
SECONDED BY:
MOTION:
BACKGROUND:
FISCAL IMPACT:
FISCAL IMPACI:
Vote count: ForAgainstAbstaining
Chairman voting? Yes No
Motion passed Motion failed
Motion referred to:

2006-06-12

# 10. Appendix F: Mentoring Program

## (ROB 100-128-003)

During the final meeting of the Fiscal Year, the Board of Directors/Board of Governors, Council or Committee Chair shall appoint an incumbent to be the mentor for an incoming member. A mentor should be appointed for each new member. The mentor will be responsible for the following tasks:

- 1. Before the next meeting of the Board of Directors/Board of Governors, Council or Committee Meeting, the mentor should contact the new member by telephone or email to introduce himself/herself and explain the new relationship and its purpose.
- 2. The mentor should make every effort to update the new member on:
  - A. Board of Directors/Board of Governors, Council, Committee or Chapter functions, focus and objectives.
  - B. Review the Rules of the Board (ROB) and Manual of Procedures (MOP) with the new member.
  - C. Discuss the typical meeting format and member duties and responsibilities.
- 3. The mentor should plan to meet the new member before the respective meeting is scheduled to start and introduce him/her to the chair and early arriving members. The mentor should also introduce the new member with pertinent data such as:
  - A. Member's field of expertise and employer
  - B. Chapter and city of the new member
  - C. Former chapter, region and Society positions previously held by the new member
- 4. The new member will be sent a copy of the group Rules of the Board (ROB), Manual of Procedures (MOP) and a copy of the most recent meeting minutes to acquaint him/her with the function and focus of the group. The new member should be encouraged to develop a rapport with other members to effectively work with fellow members to maximize productivity.
- 5. The chair of the Board of Directors/Board of Governors, Council, Committee or chapter shall have the following responsibilities:
  - A. Assign a mentor to each incoming new member of the group prior to the first meeting.
  - B. Assure that the time allotted at the beginning of the first meeting is sufficient for proper introduction of the new member by the assigned mentor.
  - C. Assess at a later meeting the effectiveness of the mentor/new member relationship.
  - D. Provide any assistance to enhance the mentor/new member relationship.
- 6. Completion date: The relationship terminates at the end of the new member's first year in the group.
- 7. Process of Measurement at the Society and Regional Level:

Measurement	Actual %	Tool	Responsible Party
1. Each BOD/BOG, Council, Committee will include the mentoring program in their Manual of Procedures (MOP).		MOP	Committees / Council
<ol> <li>The Committee Management by Objectives (MBO) should include an objective for mentoring which will be reported to the Council at each meeting.</li> </ol>		MBO	Council
<ol> <li>The mentoring program will be monitored to determine its effectiveness through the MBO process.</li> </ol>		MBO	Council
<ul><li>4. The Councils at each annual meeting will include in their report to the Board of Directors the status of that Council's mentoring program.</li></ul>		BOD Report	Council

8. Process of Measurement at the Chapter Level:

Focus and measurement will be accomplished using the Presidential Award of Excellence (PAOE) program. Points will be awarded based on a chapter submitting an effective plan to accomplish mentoring of new members. Short term results

will be measured by PAOE compliance. Long term measurement would be completed by retention % reduction for new members who have belonged to the Society for less than two years.

Measurement	Actual %	Tool	<b>Responsible Party</b>
1. Percent of chapters having a mentoring program in place as		PAOE Report	Membership Promotion
reported by PAOE			Committee
2. Retention decrease of new members		Membership	Membership Committee
		Report	-

# 11. Appendix G: Code of Ethics

# American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

Approved by ASHRAE Board of Directors January 31, 2007

As members of ASHRAE, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety and welfare.

Members and organized bodies of the Society shall be good stewards of the world's resources including energy, natural, human and financial resources

Our products and services shall be offered only in areas where our competence and expertise can satisfy the public need.

We shall act with care and competence in all activities, using and developing up to date knowledge and skills.

We shall avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.

The confidentiality of business affairs, proprietary information, intellectual property, procedures, and restricted Society discussions and materials shall be respected.

Each member is expected and encouraged to be committed to the code of ethics of his or her own professional or trade association in their nation and area of work.

Activities crossing national and cultural boundaries shall respect the ethical codes of the seat of the principal activity.

# 12. Appendix H: Confidential Information Agreement

The ASHRAE Honors and Awards Committee has an important role in ASHRAE. The selection of highly qualified candidates for all honors and awards is very important.

In order to make the best possible decisions on the nominees, free and open discussion as well as exchange of information must be conducted. This requires the strictest adherence to the requirement that none of the deliberations or other information presented at meetings of the Honors and Awards Committee be disclosed outside of the committee meetings. The requirement for non-disclosure of information is not limited by time.

By signing this confidential information agreement, I agree that I am committed to strictly observing the non-disclosure of any of the Honors and Awards Committee discussions or material pertaining to candidates. I realize that this is an obligation that I will adhere to faithfully and I understand to do otherwise is a breach of trust given to me by my fellow committee members and the Society. In addition, disclosure of restricted Society discussions constitutes a violation of the ASHRAE Code of Ethics contained in the Rules of the Board.

Member Name (printed):

Date:

Member Signature:

Witness Signature:

Chair, Honors & Awards Committee

# 13. Appendix I-1: Honors and Awards Review Schedule

# Honors and Award Manual of Procedures Operating Rules

8.14 All Society awards shall be reviewed every five (5) years considering, but not limited to: current prestige and appeal to the society, number of candidates on an annual basis, financial status of the award, and basis for original establishment of award. The awards to be reviewed each year shall be those in a specific group as listed in Appendix A of the H&A Reference Manual (Form of all Honors and Awards chart). The initial year of review of a group of awards shall include those in the "Personal Honors" group. Reviews in succeeding years shall include awards in "Personal Awards for General Society Activities," "Personal Awards for Specific Society Activities," "Paper Awards," and "Society Awards to Groups or Chapters." Review of award groups shall commence in 2000-01. Elimination of or revisions to awards are to be submitted to Members Council and the Board for approval.

# **Review Schedule**

2020-21	ASHRAE Hall of Fame, ASHRAE Pioneers of the Industry, E.K. Campbell, Energy Genius, Homer Addams, Honorary Member, Lincoln Bouillon, Lou Flagg, Service to ASHRAE Research, William J. Collins, YEA Inspirational Leader
2021-22	Andrew T. Boggs, Dan Mills Chapter Programs, Donald Bahnfleth Environmental Health, F. Paul Anderson, Government Affairs, Technology Awards
2022-23	ASHRAE Journal Paper, Dist. 50-Year, Dist. 75-Year, Standards Achievement, Student Activities, Student Design Competition, YEA Award of Individual Excellence, Youth Outreach Award
2023-24	ASHRAE Award for Distinguished Public Service, Crosby Field, George Hightower, Louise & Bill Holladay Distinguished Fellow, Poster Presentation, Science and Technology for the Built Environment Best Paper, Technical Paper, Willis H. Carrier
2024-25	Developing Leader, DSA, Donald A. Siller, ESA, Fellow, John F. James, Lower- GWP, Milton Garland, Ralph Nevins

Approved 06-27-2011

# 14. Appendix I-2: Five-Year Review of ASHRAE Honors and Awards

#### Sample Memorandum to Councils and Committees

TO:	Council/Committee Chairs for Pass-Through Awards
FROM:	Donald G. Rich Chair, Honors and Awards Committee
SUBJECT:	Five-Year Review of ASHRAE Honors and Awards

The Society Honors & Awards Committee is required to review all Society awards at least every five years. This is to ensure that each award continues to meet its intended need and that the candidate-selection process for each award is properly implemented. This applies not only to those awards that H&A administers (Hall of Fame, F. Paul Anderson, Fellow etc.), but also to the so-called "pass-through" awards that originate from other Society groups.

In order to properly conduct this review H&A must obtain input from each group that sponsors a "pass-through" award. Specifically, H&A must receive answers from your committee (Council) to the following questions as they apply to the particular award(s) that your committee (Council) sponsors.

- 1. Does the award have current appeal?
- 2. Does the award's scope overlap or conflict with other current or proposed awards? Do you believe the majority of ASHRAE members would be of the opinion that this award should be
- 3. presented at a Chapter Meeting, a Regional Meeting, a Society Committee function, the Plenary Session, or possibly some other Society function? Please state the reasons for your choice.
- 4. What are the criteria for the award? Do they include a requirement for adherence to the ASHRAE Code of Ethics? Do they include a limit on the number of candidates that may receive the award annually? Please include a criteria statement that can be published in the awards section of the ASHRAE website.
- 5. Is there a written process for the selection of candidates? If so, please send a copy. Also, please include a statement regarding the selection process that can be published in the ASHRAE website
- 6. Are there financial commitments associated with the award such as travel costs, honoraria, or earmarked income from the ASHRAE Foundation?
- 7. Of the following six groups, which do you feel is most appropriate for your award?
  - A. Personal Honors
  - B. Personal Awards for General Society Activities
  - C. Personal Awards for Specific Society Activities
  - D. Paper Awards
  - E. Society Awards to Groups or Chapters
  - F. Regional Awards
- 8. Is your award named for an individual? If so, provide details as to why it is so named and a brief statement regarding that individual that can be given to each award recipient.

Your reply by August 1, 2005 will be greatly appreciated.

Thank you for your help on this important project.

Cc: Staff Liaisons, Councils and Committees for Pass-Through Awards

# 15. Appendix I-3: Sample Five-Year Review Tracking Sheet

Andrew T. Boggs Service Award     Honors & Awards     Image: A strands       StRRAF. Award for Distinguished Public     Honors & Awards     Image: Amards       Service     Honors & Awards     Image: Amards       ASHRAF. Hall of Fame     Honors & Awards     Image: Amards       ASHRAF. Bournel Paper Award     Poblications     Image: Amards       ASHRAF. Bournel Paper Award     Poblications     Image: Amards       Orody Field Award     Conferences & Expositions     Image: Amards       Dan Mills Chapter Porgrams Award     Chapter Technology Transfer     Image: Amards       Distinguished S0-Year Member Award     Honors & Awards     Image: Amards       Distinguished Refrigeration Award     Honors & Awards     Image: Amards       Distinguished Refrigeration Award     Honors & Awards     Image: Amards       Donald A Silf Refrigeration Award     Honors & Awards     Image: Amards       E.K. Campbell Award of Merit     Life Members Club     Image: Amards       E.K. Campbell Award of Merit     Life Members Club     Image: Amards       E.F. aud Andreson Award     Honors & Awards     Image: Amards       George G. Hightower Technical     Technical Activities     Image: Amards       Government Affairs Award     Research Administration     Image: Amards       Homer Addams Award     Research Administration     Image: Amards <th>Award</th> <th>Responsible Council or Committee</th> <th>Council or Committee Chair</th> <th>Staff Liaison</th> <th>Date Response Received</th>	Award	Responsible Council or Committee	Council or Committee Chair	Staff Liaison	Date Response Received
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YEA Award of Individual ExcellenceYoung Engineers in ASHRAEYEA Inspirational Leader AwardYoung Engineers in ASHRAE					
YEA Inspirational Leader Award Young Engineers in ASHRAE					
			1		
	Youth Outreach Award	Student Activities			

# 16. Appendix I-4: Honors and Awards Recommendation Form

Honors and Award Recommendation Form *All fields are required for H&A approval*	
Name of Award:	
Name of Candidate(s):	
ASHRAE Member Number(s):	
Statement of Candidate's Qualifications for the Award:	
The signature below certifies that:	

- ✓ The procedures for the award above submitted to the Honors and Awards Committee were followed in making this recommendation.
- ✓ To the best knowledge of the nominator, the nominee adheres to the ASHRAE Code of Ethics.

Council/Committee Chair

Date

Please submit to: Honors & Awards Committee <u>HonorsandAwards@ashrae.org</u>

# 17. Appendix J-1: Guidelines for ASHRAE Fellow Nominators

**Revised February 2018** 

# The deadline for receipt of Fellow Nominations at ASHRAE Headquarters is December 1

Email the completed nomination in Adobe pdf format to: HonorsandAwards@ashrae.org

The Fellow Grade of membership recognizes exceptional contributions which distinguish the nominee.

#### **Fellow Qualifications**

Section 15.2, Honors & Awards Manual of Procedures

- 15.2.1 Requirements for eligibility for election to the Fellow Grade by the Board of Directors:
- 15.2.1.1 Good standing as Full Member grade for at least ten (10) years
- 15.2.1.2 Participation or service to ASHRAE is not a metric to be evaluated.
- 15.2.1.3 Attained distinction and made substantial contribution in HVAC&R and in the built environment such as:
  - 15.2.1.3.1 Education and/or research
  - o 15.2.1.3.2 Engineering design/consulting/forensics
  - o 15.2.1.3.3 Invention/original work
  - o 15.2.1.3.4 Engineering executive on projects of unusual or important scope
  - 15.2.1.3.5 Sharing knowledge and contribution through outreach activities such as mentoring, publications, oral presentations and involvement in industry activities
  - 15.2.1.3.6 Other activities leading to advancement of the arts and sciences of HVAC&R and the built environment including that of contractors, manufacturers and their representatives
  - 15.2.1.4 Distinction is interpreted to mean: seen by his/her peers in the industry as a person of Excellence
- 15.2.1.5 Substantial contribution is interpreted to mean: one or more contributions to the industry which had a notable, unique, and positive impact in the advancement of the arts and/or sciences of HVAC&R, the built environment and a sustainable world.

Proposals for Fellow undergo a peer review by the ASHRAE Honors and Awards Committee.

References: (Available at http://www.ashrae.org/honors)

- Complete listing of ASHRAE Fellows
- ASHRAE Fellow Nomination Form for current year

#### **Requirements for Eligibility**

The basic requirements are: good standing as Full Member grade for at least 10 years, and acknowledged distinction and having made substantial contribution(s) in HVAC&R. Hence, these will be the criteria for evaluation. For this particular award, activities and service within ASHRAE are not considered. The DSA and ESA recognize achievement in those areas.

# **Distinction and Substantial Contribution**

A working definition for distinction is: "seen by his/her peers in the industry as a person of excellence." Amongst the potential measures for distinction are:

- 1. Comments from the referees and presenters of the nomination, and their own standing in the industry and proper perspective to evaluate the quality and eminence of the applicant
- 2. Recognitions, awards, citations from other organizations, clients, associations, municipalities, etc.

A working definition for substantial contribution is: "one or more contributions to the industry which had a notable, unique and positive impact in the advancement of the arts and/or sciences of HVAC&R, the built environment and a sustainable world."

That definition acknowledges that a contractor who might have conceived one particular, new, and unique method for installation of equipment, which led to major changes in the cost and efficiency, and was emulated by his/her competitors might be a stronger

candidate than a researcher with 200 published papers openly cited by other experts in that area, but never leading to a tangible impact on the industry. Potential measures, or qualifiers of substantial contribution are:

- 1. Special aspects of the main contribution(s)
- 2. Importance of this contribution(s) in value and/or impact on the industry
- 3. Aspects of the contribution(s) that are original and attributed exclusively to the candidate
- 4. Recognition(s) and/or awards, if any, that followed this contribution(s)
- 5. Sharing knowledge and contribution through outreach activities such as mentoring, publications, oral presentations and involvement in industry activities

In general, reference letters from professionals familiar with the nature of the contribution(s), should provide insight into answers to those questions.

#### Differentiation between advancements in the "arts" and in the "sciences":

#### 1. Contributions in the "sciences":

Advancement in the "science" of HVAC&R, via activities such as education and research, should be measured by quality rather than quantity. For example, one single research publication, presenting a new and original computer model which resulted in major impact on the industry might be a "distinctive and substantial" contribution – on the other hand, a series of 40 papers all presenting results using a commercially available model differing in their correspondence boundary or initial conditions, while potentially of interest and impressive would not by itself meet the criteria for advancement to a fellow grade. (Nominations with publications listed are encouraged to attach copies of three publications considered by the candidate to be the major contributions).

Distinctive and substantial contributions through research and related activities should also demonstrate relative broad application in the industry. Five patents resulting from research, with none leading to a product of benefit to society, will never compare with one single patent which was applied to a product and resulting in improved quality of life for the public. (Nominations based on research should include at least one and not more than three examples of research programs and/or patents that led to product advancements, or some other tangible evidence of advancement in HVAC&R).

In like manner, distinctive and substantial contributions in education would not be measured solely by publications, changes in curriculum, dollars of research, administrative roles, but rather by the product – that is quality and accomplishments of students having entered into the HVAC&R industry and their testimonies of the impact of their professor in their lives.

# 2. Contributions in the "arts":

Distinction and substantial contributions in the "arts" (that is, "how to do it," "applications," etc.), could be on the part of ASHRAE members serving the public as a) design/consultant engineers, b) contractors, c) OEMs/sales engineers, and/or d) building owners/facility users. (That is the "big four").

The criteria are harder to define and implement, in part for two reasons: a) quantity might become an important parameter, b) the work is usually made by groups of professionals rather than one unique person. However, two aspects should not be compromised – the impact and uniqueness of the contribution.

The impact of the contribution upon society, rather than the specific nature of the contribution itself, could be addressed by considering questions such as: a) How has this contribution shown a measurable financial benefit? b) How has this contribution shown a documented benefit on the environment /comfort? c) How has this contribution shown a quantifiable societal benefit? Examples for the above could be: a) new motor type applied to elevators in a high rise hotel, reducing the cost of power consumed, with broad potential application in other buildings, b) unique distribution and installation strategies for emergency portable chillers following a major storm, c) development of low-head hydro refrigeration systems in parts of Africa.

#### **Fellow Nomination Requirements**

A nomination for elevation to ASHRAE Fellow must be initiated by an ASHRAE member and supported by at least one Fellow Member of ASHRAE who has knowledge of the nominee's background. If the nominator is an ASHRAE Fellow, the professional references need not be a Fellow. The nomination must also be accompanied by at least one professional reference (not more than two). The nominator and professional references must be capable of evaluating the nominee's distinction and contributions with a substantial impact on the advancement of the arts and/or sciences of HVAC&R.

- 1. Determine the completion date for your nomination and when each of the following tasks will be accomplished. The deadline for receipt of Fellow nominations at ASHRAE Headquarters is December 1.
- 2. Determine the membership status of your nominee:
  - A. Has the nominee been Full Member grade in good standing for the last ten (10) years?
  - B. Can you attest that the nominee adheres to the ASHRAE Code of Ethics?

If the answer to either of these is 'no' and will be 'no' at the time of submission, STOP: The nominee does not qualify! If you are unsure of the member grade requirements, contact the Honors & Awards Committee Staff Liaison at (678) 539-1128 or HonorsandAwards@ashrae.org.

- 3. Confirm that your nominee's ASHRAE Biographical Record is current. Do not include a personal Curriculum Vitae (CV) or Resume with your nomination.
- 4. Obtain a digital photograph of the nominee for submission with the nomination package.
- 5. Identify your ASHRAE Fellow and Professional Reference(s). See Instructions for ASHRAE Fellow and Professional Reference Letters. Solicit references from at least one ASHRAE Fellow and one (and not more than two) professional reference(s) for each individual contribution identified for the nominee. The nominee's ASHRAE Biographical Record will generally give you most of the details you will require in preparing the nomination.

References must be from organizations different than that of the nominee. They are not required to be ASHRAE members, but must be capable of describing the impact of the nominee's substantial contribution(s) to the advancement of HVAC&R and to the built environment.

- 6. Complete the ASHRAE Fellow Nomination Form.
- Write your nomination letter as the nominator. After all the work and your vast knowledge of the nominee's qualifications, you are in the most supportive position. As appropriate, refer to specific items in the nominee's ASHRAE Biographical Record.
- 8. Prepare a description of the nominee's substantial contribution(s) and distinction in the advancement of HVAC&R and the built environment. See section IV of the Fellow Nomination Form. This should be 100 words or less in length. This is a Mandatory requirement.

#### **Guidelines for ASHRAE Fellow and Professional Reference Letters**

#### 1. Nominator's Request for Fellow Letters

Following a phone call, and obtaining a commitment for a letter from at least one ASHRAE Fellow (or two):

- A. Send the nominee's ASHRAE Biographical Record and the Fellow Qualifications to the Fellow(s) preparing letters
- B. Request a letter of support in pdf format identifying the nominee by name. The letter of support must be a testimony of the distinction and professionalism of the nominee
- C. Advise the Fellow that ASHRAE service should not be the focus of the letter. The letter should refer to the professionalism and ethics of the candidate.
- D. Instruct the Fellow to provide the following information in a one-page letter:
  - 1. Relationship of Fellow to the nominee
  - 2. Highlights of the nominee's educational and professional background
  - 3. Highlights of the nominee's significant contributions
  - 4. Explanation of how the nominee has attained distinction
- E. Agree to a deadline well in advance of December 1 and provide your email address for the response

#### 2. Nominator's Request for Professional Reference Letters

Following a phone call (or email exchange), and obtaining a commitment from one or two professional references.

- A. Send the nominee's ASHRAE Biographical Record, the **Fellow Qualifications**, and the completed Fellow Nomination Form to the individuals providing Professional Reference letters
- B. Request a letter of support in pdf format identifying the nominee by name. The letter of support must be a testimony of the distinction of the contributions and technical accomplishments of the nominee

- C. Instruct the individual to provide the following information in a one-page letter:
  - 1. His/her name, contact information, and position in the industry
  - 2. His/her professional background and expertise and relationship to the nominee
  - 3. Critical evaluation and demonstration of substantial impact in the advancement of the arts and sciences of HVAC&R of the substantial contribution(s)
  - 4. Comments on nominee's distinction
- D. Agree to a deadline well in advance of December 1 and provide your email address for the response

#### Things to Remember

- 1. The deadline for receipt of your Fellow nomination at Society Headquarters is <u>December 1</u>.
- 2. Email the completed nomination package in Adobe pdf electronic format to HonorsandAwards@ashrae.org
- 3. It is the responsibility of the nominator to submit the nomination packet to Society Headquarters by the **December 1** due date. Sending the packet earlier will enable the Staff to review the packet and let you know if you omitted an important document.
- 4. Make sure the nomination is in order by using the "Check List" provided at the end of this document. Avoid having the nomination returned or delayed by not providing all required information.

# What to Expect

- 1. Receipt is acknowledged by the Honors and Awards Staff Liaison in writing to the nominator. If an acknowledgement is not received within five (5) business days, contact the Honors and Award Committee/Staff Liaison at HonorsandAwards@ashrae.org.
- 2. The Staff Liaison will send the nomination to the Honors and Awards Committee for evaluation at the next Winter Conference, which usually occurs in late January.
- 3. The Honors and Awards Committee reviews the nomination and will vote whether to forward the nomination to the Board of Directors for election of the nominee to Fellow grade.
- 4. Those nominees elected to Fellow grade by the Board of Directors will be presented a lapel pin and a plaque with a medallion at the Plenary Session during the following the next Winter Conference.

# **ASHRAE Fellow Nomination Check List**

An incomplete nomination will be returned without review by the Honors and Awards Committee. Material that is supplementary to that required is not evaluated by the Committee.

#### 1. Nominator, Fellow, and Professional References

- □ Is the Nominator an ASHRAE Member?
- □ Have you included your own letter as nominator?
- □ Is there at least one supporting letter from an ASHRAE Fellow?
- □ Are there one or two Professional Reference letters?
- Are names, email addresses, and addresses of the Nominator, Fellow, and Professional Reference(s) included?

# 2. Letters of Support from Fellow and Professional References

- **D** Do the letters support the distinction of the nominee?
- Do the letters from the Professional Reference(s) clearly evaluate the contribution(s) with a substantial impact on the advancement of the arts and/or sciences of HVAC&R and on the industry?

# 3. Professional Record

- Does the significant work and/or publications listed on the Fellow Nomination Form emphasize the contribution(s) with a substantial impact on the advancement of the arts and/or sciences of HVAC&R?
- □ Is a current ASHRAE Biographical Record attached?

Are there contributions to ASHRAE Technology that distinguish the nominee from his/her peers adequately identified as such?

# 4. Brief Description of Nominee's Accomplishments

□ Have you provided the **MANDATORY** 100-words-or-less description of the contribution(s) with a substantial impact on the advancement of the arts and/or sciences of HVAC&R and on the industry?

## 5. Overall Fellow Nomination Packet

- □ Is the submittal legible and does it conform to the Guidelines?
- □ Is a digital photograph of the nominee included?
- □ Have you included all of the required materials?

#### 18. Appendix J-2: ASHRAE Fellow Nomination Form

# **Revised February 2018**

# FELLOW NOMINATIONS ARE DUE IN ASHRAE HEADQUARTERS DECEMBER 1

All nomination material must be provided to ASHRAE electronically. Email the completed nomination package in Adobe.pdf electronic format to: <u>HonorsandAwards@ashrae.org</u>

# PLEASE REVIEW THE GUIDELINES FOR ASHRAE FELLOW NOMINATORS BEFORE COMPLETING THIS FORM

I. NOMINEE'S NAME:	Nomination Date:	
Year Elected to Full Member Grade		
Current Position Title:		FOR STAFF USE ONLY
Company:		
Address:		Date Nominee Advanced to Full Member Grade
Phone:		
Email Address:		

II. NOMINATOR:	Nominator attests that to the best of his/her knowledge the nominee adheres to the ASHRAE Code of Ethics.	
Name:		
Address:		
Phone:		ASHRAE Grade Supplied by Staff
Email Address:		by Stall

	ING FELLOWS AND PROFESSIONAL REFERENCES: Professional References do not have to be ASHRAE Members)	
,	<b>REFERENCE (AT LEAST ONE REQUIRED – UNLESS THE</b>	NOMINATOR IS A FELLOW)
1. Name:		
Address:		
Phone:		ASHRAE Grade Supplied
Email:		by Staff
	ADDITIONAL REFERENCES	
2. Name:		
Address:		
Phone:		
Email:		ASHRAE Grade Supplied by Staff
3. Name:		
Address:		
Phone:		
Email:		ASHRAE Grade Supplied by Staff

# **IV. OUTSTANDING ACCOMPLISHMENTS:**

Provide a **100 words or less** description of the nominee's substantial contribution(s) and distinction in the built environment. **THIS IS A MANDATORY REQUIREMENT.** 

# ASHRAE FELLOW NOMINATION FORM

# V. SIGNIFICANT WORK:

List in chronological order three of the nominee's most significant achievements/projects and/or publications. For each achievement/project or publication, identify the specific contribution listed in the **Fellow Qualifications** and provide a BRIEF summary.

# ACHIEVEMENTS/PROJECTS

DATES: FROM/TO	ACHIEVEMENT/ PROJECT NAME	ACHIEVEMENT/PROJECT FOCUS/DESCRIPTION	CONTRIBUTION
	FROM/TO	FROM/TO PROJECT NAME	FROM/TO       PROJECT NAME       FOCUS/DESCRIPTION

# PUBLICATIONS

	DATE	TITLE	PUBLICATION	ТҮРЕ
1.				
2.				
3.				

# 19. Appendix K: Pioneers of the Industry Nomination Form

# Pioneers of the Industry Nominations are due in ASHRAE Headquarters December 1.

Please return to:

ASHRAE Attn: Honors and Awards Committee 180 Technology Parkway, Peachtree Corners, GA 30092 Tel: (678) 539-1128 • Fax (678) 539-2128 Email: HonorsandAwards@ashrae.org

- 1. Name of Nominee:
  - A. Date and Place of Birth:
  - B. Last Occupation or Profession:
  - C. Significant Positions Held:
- 2. List outstanding contributions of the nominee which have advanced the heating, refrigeration, air conditioning and ventilation industry. Include other pertinent information that clearly indicates the nominee's outstanding contributions in order of significance. Note: Attach additional sheets, if necessary.
  - A. Other:
  - B. Type of Activity:
- 3. Honors and/or Recognitions:
- 4. Publications:
- 5. Professional Memberships (include offices held and committee involvement):
- 6. Criteria for ASHRAE Pioneers of the Industry:
  - A. Must have made milestone contributions to the growth of Air Conditioning, Heating, Refrigeration, and/or Ventilation. A milestone contribution is an innovative technological advancement in the industry. Evidence of distinction in these areas may be accomplished through invention, entrepreneurial activity, research, publishing, outstanding academic, or engineering leadership, or a combination thereof.
  - B. Must be deceased.
  - C. The personality and popularity of the candidate and evidence of awards shall be considered only in the context of evaluating the contribution which shaped the industry.
  - \* \* \* A biography and photo of the nominee are required with the nomination. \*
- 7. Nomination submitted by:
  - A. Name:
  - B. Address:
  - C. Phone:
  - D. Email:

#### 20. Appendix L: DSA/ESA Instructions and Point Tally Form



#### DSA/ESA Nominations are due at ASHRAE Headquarters May 1

- 1. The DSA/ESA Nomination and Point Tally Form, a current ASHRAE Biographical Record, and digital photo of the nominee must be provided to ASHRAE electronically. Email the completed nomination in Adobe pdf format to <u>HonorsandAwards@ashrae.org.</u>
- 2. Member nominated by other members, chapters, regions, committees as well as self-nominations are accepted by the Honors and Awards Committee for DSA and ESA submissions.
- 3. A current ASHRAE Biographical Record must be provided with each DSA/ESA nomination. Each point count listed on the Point Tally Form should be supported by the dates and activities detailed on the nominee's ASHRAE Biographical Record.
- 4. Attach a digital photograph of the nominee to the nomination package. This is a **MANDATORY** requirement.
- 5. In the second column of the Point Tally Form, list dates (Society years) and <u>name</u> for each activity claimed, e.g., standing committee name, standard project committee name, title of publication or lecture.
- 6. In the third column of the Point Tally Form (ASHRAE BIO SECTION), list the Section on the nominee's ASHRAE Biographical Record corresponding to each activity and date listed in the first column, e.g., 5a, 5b, etc.
- 7. In the last column of the Point Tally Form, list points for each activity and the totals for each category at the end of each section.
- 8. Points are required in at least three (3) categories (A-F) for the DSA.
- 9. Three points are required in at least three (3) categories (A-F) for ESA.
- 10. Use an additional sheet if more than two (2) published papers are claimed in Categories E and F.
- 11. If multiple points are claimed for the same activity or position, list all years in the Activity/Date column.
- 12. Note that all Categories A-F have point maximums for several activities.
- 13. List the total for each category and the total points claimed on the last page of the Point Tally Form.
- 14. When preparing the Point Tally Form, use General Standing Committee and Council names as they existed during the nominee's participation. Points will be approved for service on committees, councils, offices, boards, etc., that have over time been phased out or replaced. Points will be approved by the Honors and Awards Committee as equal as possible to parallel office/point designations presently in use.
- 15. Category E: General Activities, line item 5 ASHRAE-sponsored Conferences includes YEA Leadership Weekend 1.0, YEA Leadership Weekend 2.0, and YEA Leadership International.
- 16. Receipt is acknowledged by the Honors and Awards Staff Liaison in writing to the nominator. If an acknowledgement is not received within ten (10) days, call 678/539-1128 or email HonorsandAwards@ashrae.org.

<b>General Standing</b>	<b>Committees and</b>	Councils include:

	Government Affairs
Accreditation Services	Handbook
Admissions and Advancement	Historical
Advocacy	Honors and Awards

Scholarship Trustees Society Programs Society Rules ASHRAE Program Board Planning Board Policy for Standards Building Energy Quotient Certification

Chapter Programs Chapter Technology Transfer Chapter Regional Charter and Bylaws Conferences and Expositions Continuing Education Course Development Electronic Communications Environmental Health Finance Foundation Trustees International Joint Expo Policy Journal/Insights Meetings Arrangements Members Council

Membership Promotion Nominating Planning President-Elect Advisory Professional Development Publishing & Education Council Publications Refrigeration Regions Council Research Administration Research Promotion Standards Standards Advisory Student Activities Technical Activities Technical, Energy & Gov. Activities Student Activities Technology Council Young Engineers in ASHRAE

#### CHECK LIST

#### FOR COMPLETION OF THE DSA/ESA POINT TALLY FORM

An incomplete nomination will be returned without review by the Honors and Awards Committee.

- □ Is each point count listed on this Point Tally Form supported by the dates and activities detailed on the ASHRAE Biographical Record?
- Does the third column of the Point Tally Form list the section of the ASHRAE Biographical Record corresponding to each activity and date listed in the second column?
- □ Is a digital photo of the nominee provided with the nomination package?
- $\Box$  Are points claimed in at least three (3) categories for the DSA?
- $\square$  Are three (3) points claimed in at least three (3) categories for the ESA
- □ If more than two (2) published papers are claimed in Categories E and F, are they listed in an attachment?
- Did you note that all Categories A-F have point maximums for several activities?
- □ Are the totals for each category and the total number of points claimed entered on the first and last pages of the Point Tally Form?
- □ Did you confirm that no activities were double counted or listed under more than one category? For instance, credit as a committee member and chair of that committee for the same dates should not be claimed.

# (For Staff Use Only)



NOMINATION AND POINT TALLY FORM For Distinguished Service Award (DSA) And Exceptional Service Award (ESA)

**Revised August 2019** 

Please review and follow the instructions for completion of this form.

NAME OF NOMIN	NEE:	<b>REGION:</b>	CHAPTER:	
ADDRESS:				
PHONE:				
EMAIL:				
NOMINATION SUBMITTED BY:				
NAME:				
ADDRESS:				
PHONE:				
EMAIL:				
NOMINATION TYPE:         DSA NOMINATION (Minimum 15 points and points in at least 3 categories are required)         ESA NOMINATION (At is a 45 with a 12 with in the 12 with in the 12 with in the 12 with a 12 with in the 12 with in the 12 with a 12 with in the 12 with a 12				
ESA NOMINATION (Minimum 45 points and 3 points in at least 3 categories are required)         SUMMARY OF POINTS: (Note Point Maximums for activities in all Categories A-F.)				
CATEGORY A:	(SOCIETY OFFICERS/BOD/ REGIONAL POSITIONS/CHAPTER OFFICERS/CHAPTER BOARD OF GOVERNOR/ OTHER LISTED CHAPTER POSITIONS)			
CATEGORY B:	(SOCIETY GENERAL OR AD HOC COMMITTEES)			
CATEGORY C:	(STANDARD PROJEC	(STANDARD PROJECT COMMITTEES - SPC/SSPC/GPC/SGPC)		
CATEGORY D:	(TECHNICAL COMM	(TECHNICAL COMMITTEE (TC) AND TASK GROUP (TG)		
CATEGORY E:	(GENERAL ACTIVITI	(GENERAL ACTIVITIES)		
CATEGORY F:	(SPEAKERS/AUTHOR	S/ASHRAE PU	UBLISHED PAPERS)	
	TOTAL POINTS IN AI	LL CATEGOR	IES:	

# CATEGORY A: SOCIETY OFFICERS/BOARD OF DIRECTORS/ REGIONAL POSITIONS/CHAPTER OFFICERS/ CHAPTER BOARD OF GOVERNORS/ OTHER LISTED CHAPTER POSITIONS

			-			
SO	CIETY POSITIONS	ACTIVITY/DATES Society Year(s)	ASHRAE Bio Section	POINTS	TOTAL	
1.	Society President			5		
2.	Society President Elect			4		
3.	Society Vice President or Treasurer			3 per year		
4.	Society Board of Directors:					
	a. Director and Regional Chairman			3 per year		
	b. Director-at-Large			2 per year		
5.	Assistant Regional Chairman			1 per year		
	(prior to 2014-15 Society Year)					
6.	Regional Members Council Representative			1 per year		
				SUBTOTAL (1-6)		
	<b>APTER POSITIONS - For items 7-13, a <u>maxima</u> I other list chapter positions (except Chapter Press</b>					
7.	Chapter President			1 per year		
8.	Chapter Officers (President-Elect, VP, Secretary, Treasurer, CRC Delegate, or CRC Alternate)			½ per year		
9.	Chapter Board of Governors Do not include points here for positions claimed in 7 above			¼ per year		
10.	Student Branch Advisor			1⁄2 per year		
11.	Chapter Historian Do not claim points for Regional Historian for same year			½ per year		
12.	Chapter Webmaster Do not claim points for Regional Webmaster for the same year			½ per year		
13.	Chapter Committee Chair Give committee names, year(s) served			½ per year		
	3 points maximum plus	s points for service as Cha	pter President	SUBTOTAL (7-13)		
RE	<b>REGIONAL POSITIONS -</b> For items 14 – 17, a <u>maximum of 3 points</u> may be claimed					
14.	Regional Refrigeration Chair			½ per year		
15.	<b>Regional Historian</b> <i>Do not claim points for Chapter Historian for</i> <i>same year</i>			½ per year		
16.	<b>Regional Webmaster</b> <i>Do not claim points for Chapter Webmaster for</i> <i>same year</i>			½ per year		

17. Regional Treasurer or ARC after 2014-15 Society Year			½ per year	
	<b>3 poi</b>	ints maximum	SUBTOTAL (14-17)	
	TOTAL POINTS FOR CATEGORY A			

# CATEGORY B: SOCIETY GENERAL STANDING OR AD HOC COMMITTEES

(See **Instructions** for listing of committees)

# Note: There is no point limit in this category except for an Ad Hoc Committee.

Service on phased-out committees may be claimed provided adequate detail is given. The ASHRAE Biographical Record must reflect this activity. If you have served as a committee chair or subcommittee chair, please list points for the years you served in lieu of, <u>not</u> in addition to, the points you should list as a committee member. List separate entries for Chair and Subcommittee Chair service on your ASHRAE biographical record.

		ACTIVITY/DATES Society Year(s)	ASHRAE Bio Section	POINTS	TOTAL
1.	Councils: Members, Publishing & Education, and Technology (Only Voting members, including Vice-Chairs should claim points here. BOD Officer nor non-voting Members should not claim points)			1 per year	
2.	General Standing Committee Chairs (BOD Officer or Member, & CRC Delegate & Alternate, should not claim points)			2 per year	
3.	General Standing Vice Chairs or Subcommittee Chairs (No points if also serving as the General Committee Chair)			1½ per year	
4.	General Standing Committee Member ( <i>Regional Vice-Chair points should be entered</i> <i>here. BOD Officer or BOD Member should not</i> <i>claim points</i> )			l per year	
5.	Nominating Committee Alternate (Nominating Committee Members and Vice- Chairs should claim points in B4)			<sup>1</sup> / <sub>2</sub> per year	
6.	Consultant (unpaid) (Give details)			<sup>1</sup> / <sub>2</sub> per year	
7.	Presidential Ad Hoc Committee <u>Maximum 7 points</u>				
	<ul><li><i>List committee name and years served:</i></li><li>a. Chair</li><li>b. Vice-Chair or Member</li></ul>			2 per year ½ per year	
8.	Region -At-Large Sub-Region Chair			2 per year	
9.	Research Advisory Panel Chair and/or Position Document Committee Chair <u>Maximum 3 points</u>			1 per year	
10.	Research Advisory Panel Member and/or Position Document Committee Member			<sup>1</sup> / <sub>2</sub> per year	

Maximum 3 points

There are point limits in this category <u>Ad Hoc</u> <u>Committees, Position Document Committees and</u> <u>the Research Advisory Panel</u>

# TOTAL POINTS FOR CATEGORY B

CA	CATEGORY C: STANDARD PROJECT COMMITTEES (SPC/SSPC/GPC/SGPC/TAG) <u>The maximum in this category is 10 points.</u> List committee name and years served.					
		ACTIVITY/DATES Society Year(s)	ASHRAE Bio Section	POINTS	TOTAL	
1.	Standing Standard Project Committee (SSPC or SGPC) Chair			1½ per year		
2.	Standard Project Committee (SPC or GPC) Chair			1 <sup>1</sup> / <sub>2</sub> per year – 4 per project maximum		
	(Points for Chair are in addition to points for member or Vice-Chair)					
3.	Standing Standard Project Committee (SSPC or SGPC) Voting Member or Vice-Chair			1 per year		
4.	Standard Project Committee (SPC or GPC) Voting Member or Vice-Chair			1 per year – 3 per project maximum		
5.	Standing Standard Project Committee (SSPC or SGPC) Non-Voting Member			<sup>1</sup> / <sub>2</sub> per year		
6.	Standard Project Committee (SPC or GPC) Non-Voting Member			<sup>1</sup> / <sub>2</sub> per year – 2 per project maximum		
	The maximum in this category is 10 points.   TOTAL POINTS FOR CATEGORY C					

# CATEGORY D: TECHNICAL COMMITTEE (TC) 10 Points Maximum per Committee TASK GROUP (TG) 3 Points per TG or 7 Points Total

The maximum in this category is 10 points. List TC/TG name and years served.						
	ACTIVITY/DATES Society Year(s)	ASHRAE Bio Section	POINTS	TOTAL		
1. TC/TG Chair or Secretary			1 per year			
2. Vice Chair, Member, or Subcommittee Chair			<sup>1</sup> / <sub>2</sub> per year			
3. Corresponding Member (Provisional Corresponding Members should not claim points.)			<sup>1</sup> ⁄4 per year			
HANDBOOK ACTIVITY: Auth	HANDBOOK ACTIVITY: Author/Reviser (Maximum of 7 points may be claimed)					
<ol> <li>Handbook – New Chapter Principal author (give specific details).</li> </ol>			2 per chapter			
5. Handbook – Chapter Reviser			1/2 per chapter			
The maximum in this category is 10 points.   TOTAL POINTS FOR CATEGORY D						

		ACTIVITY/DATES Society Year(s)	ASHRAE Bio Section	POINTS	TOTAL
1.	Technical Paper Session Chair			<sup>1</sup> / <sub>4</sub> per session	
2.	Seminar, Workshop, or Conference Paper Session Chair			<sup>1</sup> / <sub>2</sub> per seminar	
3.	Forum or Debate Moderator			<sup>1</sup> / <sub>4</sub> per forum	
4.	ASHRAE Annual & Winter Conference Chair Co-chair			2 per conference 1 per conference	
	Subcommittee Chair			1 per conference	
	Technical Conference Chair			2 per conference	
5.	CRC or other ASHRAE-sponsored Conferences Chair Co-Chair Vice Chair Subcommittee Chair			2 per conference 1 per conference ½ per conference	
				<sup>1</sup> / <sub>4</sub> per conference	
6.	Society Annual/Winter Conference Intersociety Assignment (Maximum 10 points for sub-category E-6) a) Representing ASHRAE on Conference			1 per conference	
	<ul> <li>Committee</li> <li>b) Representing ASHRAE (unpaid on Continuing Assignment (ANSI, ABET, ICC)</li> <li>COMMITTEE ASUBAE (See Section 2014)</li> </ul>			2 per year	
	c) Representing ASHRAE (for fee or expenses – non-Staff)			1 per year	
7.	<ul> <li>International Services</li> <li>(Maximum 7 points for sub-category E-7)</li> <li>a) Chair or co-chair of ASHRAE international co-sponsored conference</li> <li>b) Technical paper presented at ASHRAE co-sponsored conference*</li> </ul>			1 per conference ½ per paper	
	c) ASHRAE Associate Society Alliance representative			<sup>1</sup> / <sub>2</sub> per year	
	*Use an additional	sheet if more than 2 pape	ers are being clai	med for points	1
8.	ASHRAE Foundation Trustee a) Chair			2 per year	
	b) Officer/Member			1 per year	
9.	HVAC&R Research Journal a) Editor			2 per year	
	b) Associate Editor			1 per year	

# TOTAL POINTS FOR CATEGORY E

# CATEGORY F: Publications and Presentations – Society Annual/Winter Conference or ASHRAE - Sponsored Conference or Special Presentations

Give details, i.e., when paper was delivered, title and page numbers, where paper was published or in what ASHRAE Transactions edition it was published and the page numbers. Papers in the Transactions qualify for points for each one published. Use additional sheet if more than two (2) papers are being claimed for points. No points may be claimed for paid lectures or services.

		ACTIVITY/DATES	ASHRAE	POINTS	TOTAL
		Society Year(s)	Bio Section		
1.	Technical Paper, ASHRAE Research Journal Author			1 per paper	
2.	Symposium and/or Conference Paper, ASHRAE Journal, ASHRAE Specialty Publications Author			1 per paper	
3.	Seminar, Technical Session Speaker			$\frac{1}{2}$ per presentation	
4.	Webcast Presenter detail where and when			$\frac{1}{2}$ per presentation	
5.	ASHRAE Distinguished Lecturer – State location and date			<sup>1</sup> / <sub>4</sub> per presentation	
6.	Design Manual & Guide – New Chapter Principal Author (Give Specific Details)			2 per chapter	
7.	Design Manual/Guide – Chapter Reviser			<sup>1</sup> / <sub>2</sub> per chapter	
	Note: Points in Category F are limited to the total of Categories A through ETOTAL POINTS FOR CATEGORY F				

# ENTER TOTAL POINTS IN ALL CATEGORIES A through F

# ESA/DSA Nominations are due at ASHRAE Headquarters May 1

The ESA/DSA Point Tally Form, a current ASHRAE Biographical Record, and digital photo of the nominee must be provided to ASHRAE electronically.

Email the completed nomination in Adobe pdf format to: HonorsandAwards@ashrae.org

# 21. Appendix M: ASHRAE Hall of Fame Nomination Form

# Hall of Fame Nomination Form Hall of Fame Nominations are due at ASHRAE headquarters <u>December 1</u>.

- 1. Name of Nominee:
  - A. Date and Place of Birth:
  - B. Last Occupation or Profession:
  - C. Significant Positions Held:
- 2. List outstanding contributions of the growth of ASHRAE related technology. Include other pertinent information that clearly indicates the nominee's outstanding contributions in order of significance. Note: Attach additional sheets, if necessary.
  - A. Other:
  - B. Type of Activity:
- 3. Honors and/or Recognitions:
- 4. Publications:
- 5. Professional Memberships (include offices held and committee involvement)
- 6. Criteria for ASHRAE Hall of Fame:
  - A. Must have been an ASHRAE Member (any grade) or a member of a predecessor society.
  - B. Must have made milestone contributions to the growth of ASHRAE-related technology and distinction in the Society. A milestone contribution is an innovative technological advancement in the industry and/or service to ASHRAE resulting in improved stature and leadership in the Society. Evidence of distinction in these areas may be accomplished through invention, entrepreneurial activity, research, publishing, outstanding academic, Society or engineering leadership, or a combination thereof.
  - C. Must have shown evidence of distinction in the Society, either technically or academically
  - D. Must be deceased.
  - E. The personality and popularity of the candidate and evidence of Society awards shall be considered only in the context of evaluating the contribution which shaped the industry.

# \* \* \* A biography and photo of the nominee are required with the nomination. \* \* \*

- 7. Nomination submitted by:
  - A. Name:
  - B. Address:
  - C. Phone:
  - D. Email:
- 8. Family Member/Representative to accept award at ASHRAE conference presentation:
  - A. Name:
  - B. Address:
  - C. Phone:
  - D. Email:

Please return to: ASHRAE Attn: Honors and Awards Committee <u>HonorsandAwards@ashrad.org</u>

# 22. Appendix N-1: Checklist for Write-Ups

## 1. F. Paul Anderson Award

This is considered to be ASHRAE'S highest award. The following information shall be included:

- A. Considerable activity in fields of the Society.
- B. Outline broad based activity of outstanding value to the industry such as consulting, contracting, engineering, design, and outstanding work or service in any specific field(s) of the Society.
- C. A full-page letter of recommendation to the Board of Directors. Sample write-up is included as Appendix M-1 in the H&A Reference Manual.

## 2. ASHRAE Hall of Fame

The following information shall be included:

- A. Milestone contributions to the growth of ASHRAE related technology.
- B. Evidence of distinction within the society, either technically or academically.
- C. A listing of the outstanding contributions which have advanced ASHRAE related technology.
- D. A full-page letter of recommendation to the Board of Directors. A sample write-up is included as Appendix M-2 in the H&A Reference Manual.

## 3. ASHRAE Pioneers of the Industry

The following information shall be included:

- A. Milestone contributions to the growth of air conditioning, heating, refrigeration and ventilation and benefits to the industry.
- B. Evidence of distinction, either technically or academically.
- C. A listing of the outstanding contributions which have advanced the heating, refrigeration, air conditioning and ventilation industry.
- D. A full-page letter of recommendation to the Board of Directors.

#### 4. Honorary Member

The following information shall be included:

- A. The recipient should be a person of preeminent professional distinction.
- B. The candidate shall not be a member of the Society.
- C. Write-up should include reason for the selection, outlining works of distinction in any field of endeavor, not necessarily ASHRAE-related.
- D. A full-page letter of recommendation to the Board of Directors. Sample write-up is included as Appendix M-3 in the H&A Reference Manual.

## 5. Louise and Bill Holladay Distinguished Fellow Award

The following information shall be included:

- A. Candidate must be an ASHRAE Fellow.
- B. Evidence of continued preeminence in engineering or research work. Indicate type of work and number of years involved to show continuity.
- C. A full-page letter of recommendation to the Board of Directors. Sample write-up is included as Appendix M-4 in the H&A Reference Manual.

#### 6. Fellow

The following information shall be included:

- A. Write-ups should follow the "Guidelines for Selection of ASHRAE Fellows," (See Appendix I-1 of H&A Reference Manual).
- B. A full-page letter of recommendation to the Board of Directors, outlining activities reflecting "unusual distinction" of candidate. Sample write-up is included as Appendix M-5 in the H&A Reference Manual.

# 7. Andrew T. Boggs Service Award

The following information shall be included:

- A. Candidate must be a recipient of the Exceptional Service Award.
- B. The award is for continuing service to ASHRAE above and beyond that required for the Exceptional Service Award. Service should be unselfish, dedicated and extend over a considerable length of time.
- C. A full-page letter of recommendation to the Board of Directors. Sample write-up is included as Appendix M-6 in the H&A Reference Manual.

# 8. ASHRAE Award for Distinguished Public Service

The following information shall be included:

- A. Recipient must be a member recognized for distinguished public service.
- B. A detailed statement outlining the public service rendered should be provided.
- C. A full-page letter of recommendation to the Board of Directors. Sample write-up is included as Appendix M-7 in the H&A Reference Manual.

# 23. Appendix N-2: Sample Write-Up for F. Paul Anderson

Professor Bergles' professional career began as Associate Professor at MIT and Georgia Institute of Technology in teaching and research, Department Chairman and Professor at Iowa State University (teaching and research for 14 years), an as Professor of Engineering and Dean of Engineering for Rensselaer Institute since 1986.

He has published very widely and has been a consultant to numerous industrial companies. He has contributed to all major handbooks, including ASHRAE's Handbook on Fundamentals and has served on the editorial board of many journals.

He has given approximately 300 lectures at conferences and academic center throughout the world. A widely published author, he has written 22 book, 313 papers, 130 articles and reports. Some of these articles and papers included 27 ASHRAE Transactions papers, two ASHRAE Journal articles, one International Journal of HVAC&R Research article, and one International Journal of Refrigeration. He holds one patent and has sponsored 46 research programs in academic and industrial laboratories including six ASHRAE projects.

His technical credentials and academic excellence is documented by membership in the U.S. National Academy of Sciences. He has received more than 25 other national and international medals, honors and awards. In 1997, he was awarded Doctor Honoris Causa of the University of Porto. In 1998, he received the A.V. Luikov Medal, the highest award of the International Center for Heat and Mass Transfer. His work has been of immense importance in the development in theory, applications and engineering, particularly in the HVAC&R engineering field and sciences.

The Honors and Awards Committee unanimously recommends that Professor Arthur E. Bergles be awarded the F. Paul Anderson Award.

# 24. Appendix N-3: Sample Write-Up for ASHRAE Hall of Fame

November 12, 2001

TO: ASHRAE Board of Directors

FROM: Honors and Awards Committee

## SUBJECT: MILTON W. GARLAND, NOMINEE FOR ASHRAE HALL OF FAME

Milton Garland was born in Harrisburg, Pennsylvania in 1895 and was called home in the year 2000 at the age of 104. Mr. Garland received a BSME in 1920 and an Honorary Doctorate of Engineering degree in 1995 from Worcester Polytechnic Institute. He earned a P.E. license in early 1930 and was a Life Member of NSPE.

Mr. Garland joined ASHRAE in 1946 and became a Life Member in 1960. He received Fellow/Life Member grade of membership and the Distinguished Service Award in 1970. Mr. Garland was the 1988 recipient of the Paul Anderson Award and was presented with the Louise and Bill Holiday Distinguished Fellow Award in 1995.

Mr. Garland was named a pioneer in technology by ASHRAE during the Society's Centennial Celebration. He was an inventor and author, affectionately know as "Mr. Refrigeration" by all those who knew him, and the oldest active engineer, continuing to work up to one month prior to his passing. In 1998, at the age of 102, Milton Garland was honored by the United States Senate as the nation's oldest worker in a ceremony held at the White House Visitor's Center.

Mr. Garland provided the initial \$10,000.00 contribution to establish the Region III Milton W. Garland/Jose A. Reig Student Challenge Award in 1991. The York-Frick Company provided a \$10,000.00 endowment fund and Region III provided \$2,300.00 to establish the Society's Milton W. Garland Refrigeration Award in 1989. The York-Frick Company also provides annual scholarships to deserving children of Frick family employees in his memory.

During his 80-year career with the Frick Company and York-Frick, Mr. Garland made significant contributions to this profession. Some of his most notable achievements were the development of ice-skating rink refrigeration in 1936 that brought the sport indoors and the development of the first successful machinery for making dry ice. He provided engineered systems to cool concrete mixture for the construction of the Hoover Dam, which otherwise may not have been constructed. Mr. Garland developed cold storage facilities to preserve and transport food for troops in World War II. He designed an all-weather laboratory to test aircraft engines to assist the atomic energy program and developed a process to make synthetic rubber.

During his career, Mr. Garland received 41 patents for refrigeration devices and processes and also published many papers and articles from 1952 through 1980. He was an active member of ASHRAE, NSPE, ASME, and IIAR. Mr. Garland was judged by his peers at the International Institute of Ammonia Refrigeration and was honored as the first recipient of the Andy Ammonia Award in 1996 for his paper entitled "The Influence of Vapor Pressure in the Condensing Process of the Ammonia Refrigeration Cycle."

In his retirement years, Mr. Garland organized a training school for Frick's refrigeration engineers and wrote an engineering design manual. He called it "Industrial Refrigeration 102" in honor of his age at the date of publication. In addition to his dedication to the engineering profession, Mr. Garland still found time to participate in community and church activities. He also served in the U.S. Navy during World War I.

The achievements of this great man are without parallel and far exceed the award requirements. The Honors and Awards Committee unanimously recommends Milton W. Garland for induction into the ASHRAE Hall of Fame.

# 25. Appendix N-4: Sample Write-Up for Honorary Member

April 26, 1994TO:Board of Directors, ASHRAEFROM:ASHRAE Honors and Awards CommitteeSUBJECT:HENRY VOGT HEUSER, NOMINEE FOR HONORARY MEMBERHenry Heuser received his BSME degree from Purdue University in 1936 when he joined the Henry Vogt Machine Company in<br/>Louisville, KY. He served as President and Director from 1956 to 1984 and as Chairman from 1956 to 1984 and as Chairman of the<br/>Board from 1084 to 1991.Mr. Heuser was very active in ASME but a significant portion of his company's technology deals with refrigeration and ice making.

Henry has been extremely active in the community as well as serving on many directorates, such as, Louisville Labor-Management

Committee, University of Louisville Board of Overseers, KY Southern College, Louisville Chamber of Commerce, Associated Industries of Kentucky, Nat'l Association of Manufacturers, Children's Hospital and Louisville Development Committee.

He is also a member of many civic organizations including Rotary, Pendennis, Filson, Louisville Country Club, and the Newcomer Society. He is also an Elder and Trustee of the Highland Presbyterian Church.

From 1967 to 1991, he served on twenty-six boards or committees varying from universities to city mayor's planning and control committees.

The Honors and Awards Committee unanimously recommends Henry Vogt Heuser be approved as an Honorary Member.

# 26. Appendix N-5: Sample Write-Up for Louise and Bill Holladay Distinguished Fellow Award

TO:ASHRAE Board of DirectorsFROM:ASHRAE Honors and Award Committee

December 1, 1995

SUBJECT: Harold E. Straub, Nominee for Louise and Bill Holladay Distinguished Fellow Award

Harold E. Straub was born in Carlinville, Illinois on October 3, 1919. He graduated from the University of Missouri in 1949 with a B.S. Degree in Mechanical Engineering. In 1952 he received his Master of Science Degree in Mechanical Engineering from the University of Illinois.

Following his graduation, he taught Heat-Power courses and conducted research at the University of Illinois. In 1955 Harold's feelings that an Engineer "should make thing work, not just theorize," prompted him to leave academia for industry and join Titus Manufacturing Corporation. He has remained with this organization, starting as Chief Research Engineer, and progressing to his current position of Vice President of Production Engineering and Chief Engineer. In 1964 he was recognized by the University of Missouri, School of Mines and Metallurgy with an Honorary Degree of Mechanical Engineering.

Due to his experience and knowledge of the theories of air distribution, he has been a prominent figure in many notable construction projects. An example was during the design of the Astrodome in Houston, Texas where he was asked to develop the conceptual air distribution system.

Mr. Straub has made many contributions to our industry, including 10 patents, 28 published articles. The Space Air Diffusion chapter of the Fundamentals Handbook is based extensively on Mr. Straub's research and he served as a reviewed/author since 1062. He has been on the ASHRAE Standards Committee, numerous Technical Committees, Research Projects as well as a member of the Monitoring Committee for RP 703, 705, and 755. In addition, he has made significant contributions to the International Standards Organization, the Air Diffuser Council, and the American Refrigeration Institute.

Mr. Straub became a Member of ASHVE in 1950 an in 1973 received the Distinguished Service Award. In January 1984 he was elevated to the grade of Fellow and became a Life Member.

The Honors and Awards Committee unanimously endorses the nomination of Harold E. Straub for the Louise and Bill Holladay Distinguished Fellow Award.

# 27. Appendix N-6: Sample Write-Up for Selection of Fellow

April 15, 1999

1	
TO:	ASHRAE BOARD of Directors
FROM:	ASHRAE Honors and Awards Committee
SUBJECT:	WINFIELD L. (ROY) KELLEY, NOMINEE FOR FELLOW
Corporation as	y graduated from The University of Florida with a B.S. Degree. His first work after graduation was with Honeywell a sales engineer. Mr. Kelley served three years with the U.S. Army, where he attended the U.S. Army School of e then spent seven years as a principal for a mechanical contracting company, doing air-conditioning, sheet metal, and .

Mr. Kelley was a pioneer in variable air volume air distribution, virtually unknown in the 1960's. He then entered the manufacturing business, where he designed, manufactured, and patented many innovative products for the distribution and delivery of air. He invented and manufactured the fan-powered box, a new concept in air delivery; at the same time he was reorganizing Warren Manufacturing Company, which became Warren Technologies.

While the company continued to manufacture and sell electric duct heaters, Mr. Kelley headed a four-man design team charged with developing new products. Many of his patented designs are still used today, and would be described as "indoor environmental solutions."

The Miami Herald recognized Warren Technologies as the "Small Business of the Year" in 1990. Both HPAC and Contracting Business magazines presented Warren Technologies, under Mr. Kelley's brilliant guidance with "The Innovative Product Award" as voted by their readers. Some of the most impressive buildings in the USA, Hong Kong, and Japan, including the Joe Robbie Stadium in Miami, have been fitted with Mr. Kelley's innovative devices.

Mr. Kelley is a 30-year member of ASHRAE. He has published seven articles and is a noted speaker on IAQ, VAV and individual room temperature controls. He holds 15 patents in the U.S. and foreign countries for various HAC products. His mission is to produce products that have real value for health, comfort and efficiency.

The Honors and Awards Committee unanimously recommends Winfield L. (Roy) Kelley for advancement to the grade of ASHRAE Fellow.

# 28. Appendix N-7: Sample Write-Up for Andrew T. Boggs Service Award

November 1990

TO: Board of Directors, ASHRAE

FROM: ASHRAE Honors and Awards Committee

## SUBJECT: PRESTON E. McNALL, Jr., NOMINEE FOR ANDREW T. BOGGS AWARD

Mr. McNall received the ASHRAE Distinguished Service Award in 1972. Since that time, he has continued being ever active in serving on ASHRAE Committees, the Board of Directors, ASHRAE Vice-President, and has continued his activity in writing papers on ASHRAE related subjects. The Honors and Awards Committee feels that Mr. McNall's extended, notable service to ASHRAE, as summarized below, indeed meets the criteria for the A.T. Boggs Service Award.

Following are principal ASHRAE activities of Preston McNall subsequent to his receiving the Distinguished Service Award: R&T Committee, 5 years; Metric Committee, Chairman 3 years; Standards Committee, 3 years; Environmental Health Committee, 4 years; Director at Large; Vice President, 2 years during which he also served as Chairman of Member Council; Presidential Ad Hoc Committee on Legionnaire's Disease; Chapter 7, Fundamental Handbook, 4 years; and Presidential Committee on Environment, 2 years.

In addition to serving in the above listed capacities, Mr. McNall was author or co-author of some 25 articles and papers, since 1972, dealing with the technology embraced by ASHRAE.

The Honors and Awards Committee is proud to unanimously recommend Preston E. McNall for receipt of the Andrew T. Boggs Service Award.

# 29. Appendix N-8: Sample Write-Up for ASHRAE Award for Distinguished Public Service

April 15, 1999	
TO:	ASHRAE Board of Directors
FROM:	ASHRAE Honors and Awards Committee
SUBJECT:	JERRY G. BARTOS, NOMINEE FOR THE ASHRAE AWARD FOR DISTINGUISHED PUBLIC SERVICE

Jerry Bartos has provided exemplary service to the public over a period of 30 years that established him as a role model for engineers of all disciplines. His record of service to the local, state, national, and international communities indicates he has definitely improved the public image of engineers.

Jerry Bartos has always believed in a strong commitment to business and civic affairs of his community. He has served the community with dedication. His leadership roles are numerous and the following is only a partial list:

- A Beautiful Clean Dallas President 1975
- North Dallas Chamber of Commerce President 1975-76
- U.S. Chamber of Commerce Regional Chair of Small Business, 1978-79
- White House Conference on Small Business Chair Dallas Delegate 1980
- Greater Dallas Planning Council President 1984-86

Mr. Bartos has served on dozens of committees and boards. Some are listed below:

- Texas State Fair Pan-American Committee
- Texas Safety Association, Board of Directors
- Big Brother/Big Sisters of America, National Board
- North Texas Leadership Council, Board of Directors
- National Trust for Historic Preservation
- Dallas Council on World Affairs

Jerry Bartos has been very active in local, state and national politics. He has served as a member of the Dallas County Republican Men's Club. He has been a frequent delegate to Republican Party Conventions, and served as co-chair of one of the host committees for the 1985 National Republican Party Convention in Dallas.

He has also been elected to serve his community in the following roles:

- Dallas Independent School District, Board Member 1979-81
- Dallas City Council, Member 1987-93

In the early 1990's Mr. Bartos served as the chair of a delegation representing the city of Dallas to create the Dallas/Brno (Moravia, Czechoslovakia) sister-city relationship. He led this delegation to Brno to establish this international partnership.

Because of Mr. Bartos' dedicated and continuous endeavors in community civic affairs, the Honors and Awards Committee unanimously recommends Jerry G. Bartos for the ASHRAE Award for Distinguished Public Service.

# 30. Appendix N-9: Sample Write-Up for the ASHRAE Pioneers of the Industry Award

February 2012	
TO:	Board of Directors, ASHRAE
FROM:	ASHRAE Honors and Awards Committee
SUBJECT:	WILLIAM E. FONTAINE, NOMINEE FOR THE ASHRAE PIONEERS OF THE INDUSTRY AWARD

William Ellsworth Fontaine was born in Chicago, Illinois on May 5, 1905, and died on February 26, 1993 in Lafayette, Indiana, after having served as Distinguished Herrick Professor of Mechanical Engineering, and Founding Director or the Ray W. Herrick Laboratories at Purdue University.

Professor Fontaine's major contribution to the HVAC&R Industry was establishing the Ray W. Herrick Laboratories at Purdue University. Its successes have had a great influence on expanding industry support of graduate student research that in the 1950s was usually limited to supporting fellowships. Professor Fontaine recognized that engineering graduate students were getting a more scientifically based education and were becoming better able to contribute to the Industry's specific research needs related to their specific products. In other words, he was able to convince companies to enter contract relationships with the Herrick Laboratories using graduate students to work on their specific research problems under professorial supervision. He successfully found ways to protect sponsors' proprietary interests without compromising students' needs to write and publish their theses. This was a completely new paradigm for HVAC&R related and cooperative research between industry and academia- and quite a shift from the typical aerospace and Department of Defense research of the 1950s. The way that the Herrick Laboratories under Professor Fontaine's leadership handled such issues became a role model for the way industry and many other universities do directed research.

The laboratories grew steadily under Professor Fontaine's leadership, and continue to do so since his retirement. More than 700 students have graduated from the laboratories since Fontaine's dream became a reality; close to half of them were specifically relevant for the HVAC&R industry. Amongst these graduates were some notable leaders in the industry: Will Stoecker (University of Illinois); Carl Johnson (past vice-president at RANCO Controls), Terry Manon (past vice-president of the Trane Company) Edward Eisele (past vice-president of Whirlpool), Richard Erth (vice-president at Borg) and Ken Cooper (Poolpak Int., currently Director of Special Projects); as well as more recent graduates such as Anthony Jacobi (University of Illinois), Bill Murphy (University of Kentucky), and Dennis O'Neal (Texas A&M), all heavily involved in ASHRAE and part of Bill Fontaine's legacy.

In the form of summary: Professor Fountaine's milestone contribution was establishing the Ray W. Herrick Laboratories at Purdue University; the first of its kind. Bill Fontaine's unique and pace-setting goal was to increase and enhance engineering research for the good of the HVAC&R Industry using the research of graduate students directed by their major professors and with cooperation from the engineering personnel who were employed by the sponsoring organizations. He did this maintaining protection of proprietary interests of the sponsors and the academic need to publish the these written by the students. The outcome has been tangible advancement of the arts and sciences of HVAC&R. Based on these accomplishments the Honors and Awards Committee unanimously recommends William E. Fontaine's recognition as an ASHRAE Pioneer of the Industry.

# 31. Appendix O: Biographies for Named Awards

# 1. Andrew T. Boggs Service Award

A native of Pennsylvania, Andrew Boggs, III, grew up in New Jersey. Following high school, he attended Norwich University, the oldest private military college in the United States. World War II interrupted his studies at Norwich. After serving during the war as a tank commander in Europe for which he received the Belgian Military Cross, he returned to Norwich and graduated with a degree in chemistry. He remained in the Army Reserve and retired as a major in 1965.

Mr. Bogg's business career started when, as a teenager, he went to work for the Edison Electric Institute in New York. After graduation from college, he returned to EEI where his duties included collection and correlation of all research material for the preparation of reports on heat pump technology and air conditioning practices and theories.

Mr. Boggs worked for EEI until 1955 when he became ASRE technical secretary. He assisted ASRE's Research, Standards, Program and General Technical Committees. Much of his ASRE work increased American involvement in the International Organization for Standardization (ISO). He also was managing editor of the ASRE Data Book and answered all technical inquiries. During his professional career he authored several papers, and is listed in "Who's Who in Engineering."

After ASRE's merger with the American Society of Heating and Air-Conditioning Engineers in 1959, he took over the Membership Department at the Worth Street office (ASHAE's former headquarters) while continuing to manage the Technical Department at the Fifth Avenue office (ASRE's former headquarters). Mr. Boggs was named ASHRAE's associate secretary in 1961, and in 1967, he became ASHRAE's executive secretary, the chief staff position.

Widely respected among his peers, Mr. Boggs has long been active in the Council of Engineering and Scientific Society Executives. He served as its president in 1981-82. He also has been president of the Alumni Association and a member of the Board of Trustees of Norwich University, was elected a Fellow of his University, and in 1977, was given Norwich's Outstanding Alumnus Award.

He was named an ASHRAE Fellow in 1979 and considered it one of the greatest honors bestowed upon him. Mr. has represented ASHRAE countless times, encouraged members to become active in the industry and championed the importance of ASHRAE is important to the wellbeing of humanity.

When Mr. Boggs retired in 1985, he was named an ASHRAE Honorary Member and Executive Vice President Emeritus. In 2001, Mr. Boggs received the Distinguished Fifty-Year Member Award.

The Andrew T. Boggs Service Award was established in 1986 to recognize a past recipient of the Exceptional Service Award for continuing unselfish, dedicated, and distinguished work on behalf of the Society. The award honors Andrew T. Boggs, ASHRAE Executive Vice President Emeritus, for his 30 years of outstanding service and leadership. The award consists of a plaque with a medallion.

# 2. Crosby Field Award

Colonel Field, as he was called by his friends and admirers, was born in 1889 in Jamestown, New York. In 1909, he received a B. S. degree from New York University and three years later an M.E. degree from Cornell University. In 1914, he was awarded an M. S. degree in electrical engineering from Union College, and later, studied chemical engineering at Brooklyn Polytechnic Institute.

Following his graduation from Union College, he joined General Electric Company's Test Program, working for a time under Dr. Steinmetz in the Protective Apparatus Laboratory. Here he developed several inventories including the Oxide Film Arrestor. From 1914-15, he was in private practice as a consulting engineer until associating as Chief Engineer with Standard Analine Products Company from 1915-17.

From 1917-19, he served in the U.S. Army, Ordnance Department in various capacities from Major to Acting Chief of the Explosives and Loading Section, Inspection Division. Following World War I, he joined National Analine and Chemical Company as Engineering Manager in charge of all engineering including construction, maintenance, power plant, appraisal and engineering research.

From 1923 to 1942, Colonel Field was a Vice President, Director and Secretary of the Brillo Manufacturing Company, during which time his invention of the automatic single pass machine for the production of steel wool completely revolutionized the industry. One of his machines did the work of 250 machines of the type superseded. By a constant

program for the development of new products, he was able to avoid any appreciable technological unemployment, actually increasing the total number of employees.

In 1938, Colonel Field was President of ASRE. He was first elected a Director of the Society in 1932 and remained on the Board for 12 years. He was a frequent contributor to *Refrigerating Engineering*, and was a contributing author of a chapter in the *Refrigerating Data Book*.

Concurrently, during this period, Colonel Field was President of the Flakice Corporation and introduced Flakice frozen water ribbons, helping to make the small ice industry of today possible. He returned to active duty in the U.S. Army in 1942 as Assistant Director of Safety, Office of Chief of Ordnance with the rank of Colonel.

Affiliated with ASME since 1915, he was elected Fellow in 1938. He also served as Fellow of the American Institute of Electrical Engineers, and a Past-President of ASRE, as well as numerous other engineering societies and fraternal bodies.

Colonel Field received the U.S. Legion of Merit in 1946 for his work in safety methods in the loading of ammunition. His manual for investigators, "The Study of Missiles Resulting from Accidental Explosions," published in 1947, was later adapted, and is still in use by the U.S. Atomic Energy Commission Division of Operational Safety.

In 1953, Colonel Field was awarded the ASME Medal for "his high engineering skills and inventions which established and expanded industries and made invaluable contributions to improved designs and production techniques in may fields." He was also named Honorary Member and became a Fellow of ASME. He was named an Honorary Member of ASHRAE in 1961, and in 1968 received the ASHRAE F. Paul Anderson Award.

Always conscious of his responsibilities as an engineer, Colonel Field devoted a great deal of his life to active participation in engineering societies and other organizations winning almost all top honors and awards. His many patents and published articles have contributed greatly to the progress of the industries he served and to the welfare of the general public.

Colonel Field passed away September 20, 1972 at the age of 83.

The Crosby Field award was established in 1973. This award is for the highest rated paper presented at a Technical Session or Symposium for the Society year. The award consists of a \$750 honorarium and plaque.

#### 3. Dan Mills Chapter Programs Award

Daniel M. Mills was born September 27, 1908 in Hanover, Indiana. He attended Madison Indiana high school, graduating with a diploma in 1928, and Purdue University graduating with a B.S. in chemical engineering in 1933.

In 1936, Mr. Mills began his career with Surface Combustion of Toledo as a sales engineer, continuing until 1940. He was then employed with F. J. Evans Engineering as Vice President from 1940-1965. At that time, he founded his own company of D. M. Mills and Associates serving as President, and in 1991 became Chairman of the Board of Mills-Wilson-George, Inc., serving until his death.

Mr. Mills served on numerous ASHRAE committees including the Chapter Delegates Committee, the Nominating Committee, and as the Chair of the Life Members Club. He also held many chapter offices with the Houston and Memphis Chapters.

Mr. Mills was a member of the Memphis Joint Engineers Society having served as Chair, and a member of the advisory councils for numerous manufacturers such as General Controls and Peabody and Reznor.

Mr. Mills received the Distinguished Service Award in 1966, became a Life Member in 1972, and was awarded the grade of Fellow in 1985. He was also named by the Memphis Engineers Joint Council, the Featured Engineer of the Year in 1965, and received a Certificate of Appreciation in Advancement and Promotion Engineering Profession in 1979. Mr. Mills assisted with the charter of several ASHRAE Student Branches including the one at the University of Texas.

Mr. Mills passed away in November 1992.

The Dan Mills Technical Award was established in 1988, and recognizes a Chapter Technology Transfer Committee Chapter Chair who excels in promoting technical and energy activities. Prior to 2014 the award recognized a Chapter TEGA Chair who excelled in meeting TEGA goals in technical, energy, and government activities. In 2019, the Dan Mills Technical Award and the Chapter Program Star Award were combined to create the Dan Mills Chapter Programs Award. The award consists of a plaque and lapel pin.

# 4. Donald Bahnfleth Environmental Health Award

Donald R. Bahnfleth, born July 16, 1927 had an extensive career as research professor, editorial director of Heating/Piping/Air Conditioning magazine, and consulting engineer. He wrote over 30 articles and gave speeches all over the world. He was the driving force in opening up opportunities for women and minorities in all ASHRAE activities. In addition, he was outstanding in planning and directing complex heating, ventilating, and air conditioning projects.

During his ASHRAE presidential year of 1985-1986, Donald R. Bahnfleth recognized the increasing interest in and concerns about indoor air quality in buildings and ASHRAE's potential role in addressing those concerns. As president he emphasized research efforts in energy use, indoor air quality, and fire and smoke control. He convened a presidential ad hoc committee with some of the world's leading experts in the field and charged them with examining the issue of IAQ and ASHRAE's role. The findings of this ad hoc led to the initiation of the ASHRAE IAQ conference series that continues to this day, the creation of the Environmental Health Committee, and a recognition of ASHRAE as a key source of information, standards, research and publications in the field.

Donald R. Bahnfleth died August 11, 2016 at the age of 89.

The award, originally named the Environmental Health Award, was renamed to the Donald Bahnfleth Environmental Health Award in 2019. The Environmental Health Committee renamed this award in an effort to recognize the key role of Mr. Bahnfleth in ASHRAE's environmental health activities and to ensure that his role is remembered. Established in 2006, this award recognizes excellence in volunteer service focused on environmental health issues.

## 5. Donald A. Siller Refrigeration Award

Donald A. Siller, P.E., was born in Chicago, Illinois on October 6, 1940. He received a Bachelor's in Mechanical Engineering from the Illinois Institute of Technology in 1964 and an MBA from Washington University in 1977. He was the president and owner of Electro Motion Refrigeration, Inc. in Chesterfield, Missouri until 2004 and through his knowledge became a leading expert in the area of Refrigeration.

Totaling more than forty years of experience in industrial refrigeration system engineering, design and applications, Don was a registered professional engineer and longtime member of ASHRAE.

Don worked on a number of large scale refrigeration projects, including design of the Pinnacle Foods Ammonia Blast Freezing system, the replacement of the HCFC in Mid States Dairy, the Hazelwood Farms Bakery blast freezer, and computer control system for par-baked products.

While representing the St. Louis Chapter as Chapter President, Secretary, and Membership Promotion Chair for a number of years, Don, through his commitment and dedication to ASHRAE, inspired members to work together to bring change and excellence within the refrigeration industry.

Constantly challenging the Society to remember the "R" in ASHRAE, he worked tirelessly to disseminate knowledge regarding the refrigeration industry and was well respected by his peers. Don served on a number of ASHRAE committees and councils, including the Refrigeration Committee, the Chapter Technology Transfer Committee, and Technology Council. He was also an ASHRAE Life Member and Distinguished Service Award recipient. It is because of his work, service, and tireless dedication to the Society and the industry, that this award bears his name.

Donald A. Siller, P.E. died in September 2013 at the age of 73.

The Chapter Technology Transfer Committee's "Refrigeration 'R in ASHRAE' Award" was renamed the "Donald A. Siller Refrigeration Award" in 2015, and recognizes exceptional performance by a Chapter Refrigeration Chair for planning activities and providing technology transfer on the subject of refrigeration. The award consists of a plaque and lapel pin.

#### 6. E.K. Campbell Award of Merit

Member and Secretary of the Life Members Club, E.K. Campbell enjoyed a long association with the Society since joining ASHVE in 1920. He served as Secretary-Treasurer for the ASHRAE Life Member Club from it inception until his death on November 25, 1962. Numerous functions have included terms on the ASHVE Council from 1931-33 and 1939-42 and as national Treasurer from 1942-43.

Mr. Campbell represented the Society in the development of the insurance code for heating and ventilating garages from the standpoint of carbon monoxide. Additionally, he served as Chair of the committee to develop a code for testing and rating heavy-duty furnaces.

Other committees on which he has served are: Technical Advisory on Garage Ventilation, Chair, 1928-30; Technical Advisory on Ventilation of Garages and Bus Terminals, Chair, 1931-35; Increase of Membership, 1931; Chapter Relations, member 1931, Chair, 1932-33; Membership, Chair 1933, 1939, member, 1940; Research 1934-36; Intermittent Heating, Chair, 1937; Technical Advisory on Heat Requirements of Buildings, 1939-42; and Finance Committee of Committee on Research, 1941.

Active as well in the Kansas City Chapter, he served as President from 1931-31, and was a member of various committees. A graduate of Grinnell College, Mr. Campbell was President of the E. K. Campbell Company, a firm he founded in 1910. He first developed the furnace fan system based on recirculation instead of carbon dioxide. Mr. Campbell has written numerous articles and presented papers at Society meetings.

Chairman of the Board of E. K. Campbell Company, ASHRAE Fellow and Life Member, Mr. Campbell died at the age of 87.

The Life Members Club "Award of Merit" was renamed the E.K. Campbell Award of Merit in 1963, and is presented by the Life Members Club to honor outstanding service and achievement in teaching. The award consists of a \$10,000 honorarium and plaque.

# 7. F. Paul Anderson Award

He is noted now as the namesake of the F. Paul Anderson Award. This is ASHRAE's highest award. It is given once per year to a member for "notable achievement, outstanding work or service in any field in the Society." Clearly he must have been an unusual ASHRAE contributor himself.

He was born in South Bend, Indiana in 1867. There was no record available of his early life or accomplishments outside his professional experience. He graduated from Purdue University in Mechanical Engineering in 1890 and later received a Professional Mechanical Engineering degree in 1894.

In 1891 he was appointed Professor and Dean of the School of Mechanical Engineering at the then A&M College of Kentucky at Lexington. This soon became the University of Kentucky. He had a long and productive career there. He introduced several new courses in ME as well as other departments. He introduced cultural requirements for a degree in engineering long before courses in the humanities were required for engineering degrees, as is universal in these days. He devoted his professional life to building a notable College of Engineering, and under his leadership it became one of the top schools in the nation.

In 1921 he joined ASHVE and immediately became active. He made several comments on technical papers and authored one on dust in building materials in 1923. He was named Director of Research in 1923, after the untimely death of the first director. The Laboratory in Pittsburgh, Pennsylvania was only two years old. He served for four years shuttling between Lexington and Pittsburgh. He recruited many of his best students and young faculty members to work in the laboratory. During his tenure 62 papers were published on heating, ventilating and air conditioning. He published a paper on the need or ventilation standards in 1926. He also was trying to develop a "zone of comfort of atmosphere" including solar energy and temperature to provide an ideal environment. He also published a paper on radiator performance in 1928. He was a prolific commenter on many technical presentations in national meetings.

In 1927 he was elected President of ASHVE as a result of his many contributions. He was on several important committees including the Advisory Council, and helped formulate many new policies for the growing Society.

He was also a member of the National Research Council, the American Association for the Advancement of Science and the Royal Society for the Encouragement of Arts.

ASHVE initiated an award in 1930 to recognize a person who had made the greatest contribution to the field of heating and ventilation. It was named the F. Paul Anderson Award. Thornton Lewis, President of ASHVE in 1929, said "He has directed the education of more engineers engaged in the heating and ventilating profession than any other man in the world." The award consists of a plaque with a medallion.

F. Paul Anderson was Dean of Engineering at the University of Kentucky for 43 years until his death in 1934 at the now early age of 67.

## 8. George B. Hightower Award

Mr. Hightower was a native of Atlanta, GA, born March 28, 1911. He was a 1933 graduate of Virginia Military Institute with a degree in Electrical Engineering and as a Second Lieutenant in the Cavalry Reserve. He entered the Air Force on January 21, 1942 and on September 8, 1943, he left Norfolk, VA by convoy through the German bombing attacks in the Mediterranean to Bombay, India. He later served as a Major in the Air Force Flying Tigers and was stationed in China during the Japanese invasion. As the Japanese approached, he was responsible for destroying several air bases after the American and Chinese forces had evacuated, often behind Japanese lines.

His dedication and abilities were described by one of his fellow officers in a letter to their commanding officer stating "His evacuation of Sincheng, Namyung, and Kanchow could not have been improved upon Hightower has a keen faculty of grasping a complicated over-all picture in one squint, and of retaining it for prompt, balanced and constructive decisions later." He was the recipient of the Legion of Merit, the Bronze Star with Oak Leaf Clusters, the American Theater Ribbon, and the Asia Pacific Campaign Ribbon.

Mr. Hightower spent 55 years in the engineering and contracting professions. 35 years of those years as one of the owners of Conditioned Air Engineers, a commercial air conditioning contracting firm in Atlanta, GA. During that time he actively served in numerous capacities including on the Board of Directors of the National Society of Professional Engineers (NSPE), Georgia Society of Professional Engineers (GSPE), Georgia Engineering Foundation (GEF), Society of American Military Engineers (SAME), National Environmental Balancing Bureau (NEBB), and the American Society of Heating, Refrigeration, & Air Conditioning Engineers (ASHRAE). He was a Fellow of the SAME and ASHRAE and awarded Life Member status from Associated Mechanical Contractors of Atlanta (AMCA) and ASHRAE. He was recognized as Eminent Engineer by Tau Beta Pi.

Mr. Hightower died on November 8, 2008 at the age of 91.

Established in 2006, the George B. Hightower Technical Achievement Award recognizes an individual for excellence in volunteer service in the area of Technical Committee/Technical Group/Technical Research Group leadership and contribution. The form of the award is a plaque.

#### 9. Homer Addams Award

The Homer Addams Award recognizes a graduate student who has been engaged in an ASHRAE research project. The award was authorized in June, 1956, and the first award was given in 1957. In June, 1959, the ASHRAE Board of Directors was pleased to receive a \$10,000 endowment from Paul K. Addams, Homer Addams' son. In 1991 the endowment of the award was increased to \$25,000 and the honorarium was increased from \$600 to \$1500. The award also consists of a plaque and lapel pin.

Mr. Addams was born June 22, 1873, in Addamstown, Pennsylvania, a town established by his ancestors in the early 1700's. He began his business career at the age of 15 after completion of preliminary education in public schools in the Addamstown area and in the Schuylkill Seminary. The desire for education was so great that he managed to combine business with study, taking business and engineering courses in his off hours.

His first job was as a helper, installing heating plants in Eastern Pennsylvania. In 1895, he joined Barber and Ross, a heating contracting firm in Washington, D.C. Mr. Addams handled development, engineering and research of the products for a group of cast-iron boiler manufacturers in Philadelphia in 1896. During that same year, he was a founder of The American Society of Heating and Ventilating Engineers.

In 1903 he was employed by the Kewanee Boiler Company of Illinois. He went to Washington as a special representative to contact government agencies and to act as a consultant on various heating projects. He rejoined the Kewanee Boiler Company in 1911 to set up a New York branch and also to serve as sales manager of the operation. From 1911-18, he spent much time in Washington as a liaison representative between the company and the government on the design and development of boilers and hot water heaters.

Foreseeing the extended growth of construction along the eastern seaboard and the prospect of sizeable business volumes, Mr. Addams joined with the Kewanee Boiler Company of Illinois in 1920 to form a subsidiary company known as the Kewanee Boiler Company of New York. His initial position with the new firm was Vice President, and in 1921 he became President. The same year he acquired the Fitzgibbons Boiler Company, of Oswego, New York, and also became its President. He resigned as President in 1947, and was succeeded by his son, Paul K. Addams. Concurrently, he became Chairman of the Board of the firm and pursued his responsibilities with the same fervor that marked his long and outstanding career. Dr. Addams' career closely paralleled that of ASHVE, being identified with the advancement of engineering practice, research and development techniques in the field of heating and air conditioning. He received the F. Paul Anderson Medal in 1952 in recognition of his notable contributions to the advancement of the fields of boiler design and performance.

In the 1951 he was awarded the degree of Doctor of Science from Albright College.

Homer Addams served as ASHVE President in 1924. He also served as First Vice President, Treasurer and on the ASHVE Council. He was active in the founding of the Society's Research Laboratory at the United States Bureau of Mines, Pittsburgh, Pennsylvania, in 1919, and was a member of the first Guide Committee in 1922. He served ASHVE with many committee assignments

He also held membership in the American Society of Mechanical Engineers, the American Uniform Boiler Low Society, the Steel Boiler Institute, Inc., the Engineers Club of New York, the Engineers Club of Philadelphia, and the Greenleaf Lodge, F. & A. M., Allentown, Pennsylvania.

## 10. John F. James International Award

John F. James was born in Kiukiang, China, the son of an English missionary who worked in various parts of the world, and spent several childhood years in Hong Kong. Eventually the family settled in Bournemouth, a city on the south coast of the United Kingdom. Mr. James obtained his academic qualifications through Bournemouth Technical College and South Bank Polytechnic and was a Chartered Engineer.

In 1960, after completing his National Service commitment as a member of the Royal Air Force, he joined the firm of R. W. Gregory & Partners in London as a Design Engineer, in which position he was responsible for the design and supervision of all building services and structural work on major projects. He became a Partner of the firm in 1972 and remained in this capacity until 1991, when he became a Director and Partner in the London office of the Canadian firm, The Mitchell Partnership.

Mr. James was widely respected for his work in integrating mechanical and electrical building engineering services. Among his many designs were innovative systems for a \$70 million sports facility in Saudi Arabia, cold storage facilities with requirements to -29°C, underground military complexes, and a deicing plant for British Airways. He was elected a Fellow of The Chartered Institution of Building Services Engineers in 1972 and was made a Fellow of the Institution of Hospital Engineers in 1982. He also served on the British Standards Institute Committee which developed specifications for expansion vessels using an internal diaphragm for sealed hot water heating systems.

Mr. James joined ASHRAE in 1979. After serving with distinction on a number of ASHRAE Standing and Technical Committees, in June of 1989, he was elected as a Director-at-Large of the ASHRAE Board of Directors. In June 1992, he was elected as a Vice President of the Society, the first member residing outside North America and the non-contiguous states and territories to become an ASHRAE officer and member of the Executive Committee. In January 1993, he was made a Fellow of ASHRAE. Using his broad contacts in the European HVAC&R industry, Mr. James served as an ASHRAE liaison there, assisting in the dissemination of technology to ASHRAE members and others throughout Europe. In 1993, Mr. James received the International Activities Award in recognition of his outstanding efforts to enhance the Society's image in the international community.

Mr. James passed away on June 29, 1993 while attending the Society's 1993 Annual Meeting in Denver, Colorado.

The International Activities Award was established in 1983 to recognize members of the Society, both international and domestic, who have done the most to enhance the Society's international presence or posture. The award was renamed the John F. James International Award in 1996. The award consists of a plaque and lapel pin.

#### 11. Lincoln Bouillon Award

Lincoln Bouillon joined ASHVE in 1933 and was President of the Pacific Northwest Chapter in 1935. Following the formation of ASHRAE, he achieved a grade of Fellow in 1963 and held Society officer positions as a member of the Board of Directors from June 1962, Vice President for the 1964-65 fiscal year and President-elect for the 1965-66 year.

Other activities in which he participated at the Society level included membership on the Program Committee, Technical Coordinating Committee, the Task Force for the New Psychometric Chart, the Charter and Bylaws Committee, and the Finance Committee.

During his career, he emphasized membership promotion and felt that people making their living in air conditioning should become active participants in the Society. He spearheaded a membership campaign in 1965 that resulted in 105 new members for the Puget Sound Chapter, an increase of about 40% during a three-month period.

The Lincoln Bouillon Award was established in 1967 to commemorate Mr. Bouillon's effort in increasing Society membership. The award is given each year to a Society member who has achieved the most outstanding record in membership activities during the previous year.

The award was initiated by Clarence F. Fleming, Membership Promotion Chairman, and approved by the Board of Directors in memory of President Lincoln Bouillon. An award is presented annually to the individual who performs the most outstanding work in increasing the membership of the Society. The award consists of a plaque and lapel pin.

Lincoln Bouillon's legacy to ASHRAE and the consulting engineering industry continues with the firm he founded in 1931, in Seattle, Washington, that bears his name today.

# 12. Lou Flagg Historical Award

Louis Flagg was born April 12, 1914 in Augusta, Maine. He graduated from Central High School in 1932, and from the University of Maryland with a B.S. in electrical engineering in 1936. He worked for Kingswell, Inc. as an Assistant Superintendent until 1941, when he joined the U. S. Army. He was serving as Lt. Colonel in 1946 when he left the army to begin a long career with Honeywell, working in Washington, D.C., New York City and Minneapolis until his retirement in 1984.

Mr. Flagg served ASHRAE for more than 50 years on numerous committees and councils, becoming Society President in 1988-89. During Mr. Flagg's service to ASHRAE, he received the Distinguished Service Award, the "Logbook of Time" Award as historian for ASHRAE's Region VI, the Presidential Certificate of Honor, the Andrew T. Boggs Distinguished Service Award, and the Distinguished Fifty-Year Member Award. He was elected Fellow in 1984. He also received the Centennial Medal from the University of Maryland College of Engineering.

Mr. Flagg authored many articles and chapters of books including the ASHRAE Handbook and its predecessor ASHRAE Guide, the IEEE Gray Book, and a Training Book on Pneumatic Controls for the United Association of Pipefitters.

Mr. Flagg's many building projects during his career included the Senate Office Building and buildings for the Richmond News and the University of Richmond. Mr. Flagg died October 27, 1999 after courageously battling breast cancer for over four years.

The Lou Flagg Historical Gold Ribbon Award was approved by the ASHRAE Board of Directors in June 2002 "to recognize a Chapter Gold Ribbon Award winner for compiling information on outstanding historical projects or persons related to HVAC&R." At the recommendation of the Historical Committee, the name of the award was changed to the Lou Flagg Historical Award in June 2003. The award consists of a plaque and lapel pin.

# 13. Louis and Bill Holladay Distinguished Fellow Award

William L. Holladay became a member of ASRE in 1930. He was a Presidential Member, Fellow, and Life Member. He was elevated to the grade of Fellow in 1950 and became President of ASHRAE in 1968.

Mr. Holladay served as chairman of the Honors and Awards Committee twice, chaired the Charter and Bylaws Committee for two years, and the Weather Data Committee for eight years. In 1961, he was a member of the Research and Technical Committee. He was President of the Southern California Chapter twice during his career while the chapter was still an ASRE Section. He also held membership positions on TC 2.1, Physiology and Human Environment, and TC 2.2, Plant and Animal Environment.

Mr. Holladay published ten papers and two books and authored several ASHRAE Journal articles. In an ASHRAE video, "Leadership Recalled," made before he died, Mr. Holladay noted that he was the first member of the "white goods" business (sales of refrigerators) to join ASRE. He also held a patent on a heat exchanger.

Mr. Holladay initiated the Louise and Bill Holladay Distinguished Fellow Award in 1979. In 1978 Mr. and Mrs. Holladay contributed \$5000 to finance the new award with the "hope that the income from the gift be used to finance a medal for Distinguished Fellowship, the criterion for which would be pre-eminence in Engineering. And it is our hope also that it may be known as the Louise and Bill Holladay Distinguished Fellow Award. The award consists of a plaque with a medallion.

Mr. Holladay died in 2001 at the age of 98.

# 14. Milton W. Garland Commemorative Comfort - Process - Cold Chain Award for Project Excellence

In 1998 Mr. Milton W. Garland was honored as the nation's oldest worker, having begun his career in 1920 at the Frick Co., now part of York International. He was known as "Mr. Refrigeration" for his work in refrigeration systems for gold mines in South Africa and in the ice cream factories of Philadelphia.

Mr. Garland held some 40 patents of refrigeration-related items, ranging from icemakers to screw compressor volume controls. His work in refrigeration aided in the construction of Hoover Dam for which he designed systems to cool the water, sand and rock used to make the concrete to build it.

He was a recipient of the ASHRAE F. Paul Anderson Award, the Distinguished 50-Year Member Award and the Louise and Bill Holladay Distinguished Fellow Award. In 1996, he received the first Andy Ammonia Award from the International Institute of Ammonia Refrigeration for his paper, The Influence of Vapor Pressure in the Condensing Process of the Ammonia Refrigeration Cycle.

At ASHRAE's Centennial Meeting in 1995, Mr. Garland was recognized as a pioneer in technology. In 1989, ASHRAE endowed an award in his honor - the Milton W. Garland Commemorative Refrigeration Award for Project Excellence. The award consists of a plaque with a medallion, and a lapel pin. In 2021, the Milton W. Garland Commemorative Refrigeration Award for Project Excellence and the Refrigeration Comfort Cooling Award for Project Excellence were combined to create the Milton W. Garland Commemorative Comfort – Process – Cold Chain Award for Project Excellence. The award consists of a plaque and lapel pin.

Milton Garland, P.E., Fellow ASHRAE, died in July 2000 at age 104. He was inducted into the ASHRAE Hall of Fame at the Society's 2003 Winter Meeting.

# 15. Ralph G. Nevins Physiology and Human Environment Award

The Ralph G. Nevins Physiology and Human Environment Award is given once each year to a young researcher who has distinguished himself in man's response to the environment, which may include thermal, acoustical, olfactory, microbial or other effects. The award includes a plaque, \$500 honorarium, and lapel pin. This award honors Ralph Nevins, a remarkable man of many accomplishments, who died of cancer at the age of 48. The award recognizes Dr. Nevins' great interest in students and the environmental field, and is funded by memorial contributions in his name.

He was born in 1925 and grew up in Dodge City, Kansas. He earned BS and MS degrees in Mechanical Engineering from the University of Minnesota and a PH.D. from the University of Illinois. He spent a year in the military and joined the faculty at Kansas State University as an instructor. He rose quickly to full professor and ME Department Head in 1957. He was the Kansas Power and Light Company Distinguished Professor, 1963-67, and he received distinguished alumni and service awards from the University of Illinois in 1970 and 1971. He conducted much original research. In 1958 he co-authored a paper on a concentrating solar collector.

In 1961, ASHRAE decided to close its research laboratory, located in Cleveland since 1924, and invited interested organizations to bid on receiving its considerable equipment. Dr, Nevins, seeing an opportunity to develop a significant new program, bid on ASHRAE's environmental chamber. He, with the University's permission, obtained from the state of Kansas \$160,000 for a building and a like amount from the National Institutes for Health for installation and operation. He obtained the chamber and promised to carry on research in ASHRAE's interest for at least 5 years. The new facility was named the Institute for Environmental Research, and Dr. Nevins became its Director. The results are history. Dozens of the Institute's students have received the Ralph G. Nevins Award over the years, and more than 10 graduate students and associated KSU faculty members are now ASHRAE Fellows and valuable contributors to ASHRAE. Some have received the Louise and Bill Holladay Distinguished Fellow Award.

He was instrumental in developing the engineering Ph.D. program and the College of Engineering Center for Effective Teaching at KSU .In 1967 he was promoted to Dean of Engineering at KSU. Along the way he received ASHRAE's Distinguished Service Award. He published over 70 technical papers in ASHRAE, ASME, ASEE and others. He delivered many technical speeches, several of which were invited and some were overseas. He was on many ASHRAE General Committees and on the Board 1964-66. He was on several Technical Committees and Standards Project Committees.

In 1973 he accepted the position of Fellow and Head of the Environmental Engineering Group and Member of the Executive Committee of the John B. Pierce Foundation Laboratory, New Haven, Connecticut, a world class environmental research organization. In association with Yale University, he was also a visiting professor of Environmental Technologies.

Unfortunately, within a year he died. However, he was working with some Pierce scientists even before his appointment, and he authored or co-authored 6 papers from Pierce. Some of the papers were published posthumously.

He was active in ASME, serving on many committees, including the National Nominating Committee, Policy Board and ME Department Heads Committee. In ASEE he was Midwest Section Chair, a member of their Distinguished Lectureship Roster, member of several committees and Vice President 1968-70. He was a registered engineer in Kansas and a member of NSPE. His name appears in eight "Who's Who" publications of well-known engineers and other significant people.

He was on the Board of Directors and Chair of the Budget Committee of Project Concern. He was Chair of the Kiwanis Club, Manhattan, Kansas, and a Director of the Chamber of Commerce. He was a Director of the Kansas State Bank. He was a member of the Governor of Kansas' Committee on Marijuana Investigation. He was a member of the Methodist Church and of the US Naval Reserve. He was a private pilot, an amateur radio operator, a scuba diver, and a Mason. He was a pianist and a percussionist in the KSU Symphony Orchestra.

## 16. William J. Collins, Jr. RP Award

William J. Collins, Jr. was born May 26, 1915 in Iron River, Michigan where he lived and graduated from high school in 1931. He received a BSME Degree from Michigan Tech University in 1935. After working a year for Swift and Company as an engineer, he was employed by C. A. Dunham in the Research and Development Department in Michigan City, Indiana.

In late 1937 he joined Loeffler-Givens Supply Company of Oklahoma City as a consulting engineer. In 1941, Mr. Collins was employed by the Austin Company of Ft. Worth, Texas. In 1942, he joined the U.S. Army Corp of Engineers, where he served until 1946 as a Lt. Colonel Reserve. Mr. Collins returned to Oklahoma City and established Collins Engineering Associates and served as CEO and President for thirty years.

Mr. Collins became a member of ASHVE in 1949, and served actively in the Society. He was the first editor of the Central Oklahoma Newsletter – The "Southwester". He served as Chapter President in 1952, and introduced the ASHRAE diamond studded Past Presidents Pin, which continues today.

By 1954, Society membership had grown to the point that it was difficult for the Society President to visit all chapters. This was the beginning of regional meeting. Mr. Collins chaired the first of these meetings. The regional meeting concept was added to the Society Bylaws in 1952.

In 1959, Mr. Collins was elected to a 3-year term on the Council of ASHAE. However, he was only able to serve part of one day, due to the merger of ASHAE and ASRE. That merger resulted in becoming ASHRAE. Mr. Collins was to serve 1-1/2 years on the ASHRAE Board of Directors as a RVC, was re-elected for a 3-year term, and was instrumental in the forming of Region VIII. From that point, he went on to become Society Vice President and then President.

In 1971, Mr. Collins and others from Region VIII were able to develop the Golden Gavel Award. From this program, he developed the PAOE system, which has developed into a major portion of chapter operations planning.

In 1972, Mr. Collins was instrumental in developing the Research Promotion program (now Resource Promotion) that today is successful in financing a great portion of the research that ASHRAE contacts. The Society Board of Directors, in an effort to show gratitude to Mr. Collins, created the William J. Collins Research Promotion Award. This award recognizes the outstanding Chapter Resource Chair in Society annually.

In 1976 Collins-Soter Engineering was formed, and in 1991, he started the Collins Enterprises to pursue projects at a less hectic pace.

Mr. Collins is a Presidential, Fellow and Life Member, as well as serving actively in Central Oklahoma Chapter. He has also served as a Trustee on the Foundation Committee, and as Chair of the Journal and Insights Committee.

Mr. Collins has served as President of the Consulting Engineers Council of Oklahoma and is a Life Member. He is also a Life Member of the American Consulting Engineers Council and is a member of the Hall of Fame at Oklahoma State University.

Mr. Collins has received numerous ASHRAE awards including becoming a Fellow in 1966, the Distinguished Service Award in 1965, the Regional Award of Merit in 1978, the Andrew T. Boggs Service Award in 1993, the F. Paul Anderson Award in 1997, and The Distinguished 50-Year Member Award in 1999.

The William J. Collins, Jr. RP Award was established in 1985 to honor the Chapter RP Chair who excels in raising funds for ASHRAE's RP Campaign. The award "recognizes the Chapter RP Chair who excels in raising funds for ASHRAE. The award consists of a plaque with a medallion, and a lapel pin."

## 17. Willis H. Carrier Award

Dr. Willis H. Carrier was born in Angola, New York in 1876. He received his elementary education in district schools of Erie County and graduated from Central High School, Buffalo, New York. He received a degree in mechanical engineering from Cornell University in 1901 and his doctorate was conferred upon him at Lehigh University in 1935. He also received his doctor of science degree from Alfred University in 1942. Known widely as "The Father of Air Conditioning," it is said he installed the world's first scientifically designed air conditioning system in 1902.

Dr. Carrier was employed by Buffalo Forge Company as a project engineer from 1901 until 1906. During this period he devised a solution to a major temperature and humidity problem occurring during summer at the Sackett-Wilhelms Lithographing and Publishing Company in Brooklyn, New York. This solution led to the invention of the spray type dehumidifier which later became a standard in controlling space temperature and humidity.

1907, Dr. Carrier and a group of his colleagues formed Carrier Air Conditioning Company of America as a subsidiary of Buffalo Forge Company. After the company became independent in 1915, he served as President until 1931, at which time he became Chairman of the Board.

Dr. Carrier was associated with all the "firsts" during the infant stages of air conditioning. He is credited with the design of the centrifugal refrigeration machine. Dr Carrier provided the first air conditioning not only in the printing and textile fields, but also made some of the first installations in paper mills, rubber, chemical, pharmaceutical, rayon, candy, aircraft, electrical and motion picture manufacturing plants.

Some of his notable accomplishments are: received Gold Achievement Medal as member of ASME; served as President of both ASRE and ASHVE; holder of many patents and author of numerous publications; Member of ASRE Advisory Board and edited the first publication of Refrigerating Data Book; Published "Fan Engineering" in 1914; presented paper to ASRE entitled "Rational Psychometric Formulae" which set in place the science of air conditioning; received the F. Paul Anderson Award in 1932; presented paper in 1915 to ASRE entitled "Centrifugal Compression as Applied to Refrigeration" which described his work leading to the development of centrifugal refrigeration machines; inducted into National Inventors Hall of Fame in 1985, joining a list of distinguished inventors such as Thomas A. Edison, Alexander Graham Bell, Charles Goodyear and George Eastman.

Dr. Willis Haviland Carrier died in 1950 at the age of 74. He was inducted into the ASHRAE Hall of Fame on June 25, 1994 at the Society's 1994 Annual Meeting in Orlando, Florida.

The Willis H. Carrier Award was established in 1960. It is sponsored by the Carrier Corporation and is awarded for the best published paper of outstanding quality presented at a Society meeting by a member of any grade who was 32 years of age or less at the time of presentation of the paper. The award consists of a \$500 honorarium and a plaque.

# 32. Appendix P-1: History of F. Paul Anderson Award

Philadelphia, Pennsylvania January 13<sup>th</sup>, 1930

The Council of the American Society of Heating & Ventilating Engineers

#### Gentleman:

I herewith take pleasure in presenting to the American Society of Heating and Ventilating Engineers a certified check for the um of One Thousand Dollars, subject to the following conditions:

- That this sum, together with such other sums as may be added to it, be made a permanent endowment fund, the income from which shall be used to provide an annual medal of award (accompanied by suitable certificate), to some member of the A.S. H.V. E. in recognition of work done or services performed in the field of Heating, Ventilation or Air Conditioning;
- 2. That the Council of the A.S. H.V.E. shall in its discretion invest the principal and administer this fund, decide itself, or by special committee appointed by it, to whom the award shall be made, and shall decide and announce to the Society at least one year in advance, the conditions upon which the award will be made;
- 3. While it is herein stated that this is to be an annual award, the Council of the A.S.H.V.E. shall have the power to refuse to award the said medal in any year if in its opinion no work or service worthy of the honor has been performed in accordance with the conditions which the said Council previously set forth. Should such conditions prevail, the income from the fund shall be added to the principal;
- 4. That all decisions of the Council relating to this award shall be made by a majority vote of all the members of the Council;
- 5. Should the A.S.H.V.E. go out of existence, then its last Council duly elected shall have the power to dispose of this endowment fund in such manner and for such purpose as may best promote the art of Heating and Ventilating.
- 6. The name of this award shall be "The F. Paul Anderson Medal."

(Signed) Thornton Lewis

# **33.** Appendix P-2: History of Milton W. Garland Commemorative Comfort – Process – Cold Chain Award for Project Excellence



ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE • Atlanta, Georgia 30329 • Tel 404.636.8400 • Tlx 705343 • Fax 404-321-5478

J. Thomas Sobieski

Vice Chairman, Region III Refrigeration Reply to: Miller Picking Corporation P. O. Box 130

Johnstown, PA 15907 Ph: 814-479-4023 Fax: 814-479-2469

January 29, 1990

TO: Mr. David Rickelton, P.E. Chairman, Honors and Awards Committee 3413 Highview Road Charlotte, NC 28210

Re: Refrigeration Award

Dear Mr. Rickelton:

As a follow up to your telephone conversation with Fred Pearson this past November, you are award that he, I, and many others (see attached letters) have been actively pursuing the establishment of a Society level Refrigeration Award named after Milton W. Garland. The award would be similar in concept to the Lincoln Bouillon Award for membership and the Williams J. Collins, Jr. Award for research promotion in that it would promote refrigeration activities and education at the chapter level by recognizing superior achievement by chapter refrigeration committee chairpersons.

To date we have made progress. A motion to establish the award has passed the Region III CRC, has been presented at the Members Council meeting in October, which then referred it to the Refrigeration Committee (see copy of Members Council minutes, page 11 attached). The motion has been put on the Refrigeration Committee agenda to be held in Atlanta on Sunday, February 11, 1990 at 8:30 a.m., has the endorsement of the Chairman, Mr. Stan Westhoff (see letter attached) and, therefore; has excellent prospects of passing.

Financing of at least \$2,000.00 has be secured by Region III funds and we have a verbal indication that Frick Company (Mr. Garland's long time employer) would be willing to donate \$10,000.00 which would also cover the cost of transportation of the award recipient to the annual meeting.

Also, in accordance with "Rule of the Board" #S80-001-006, I have enclosed a Biographical Record (please note in particular that Mr. Garland is an ASHRAE fellow, recipient of the Life Member Award, Distinguished Service Award and the F. Paul Anderson Award) and many letters of endorsement from distinguished ASHRAE members recommending establishment of the award in the name of Milton W. Garland. Mr. Garland is my immediate predecessor as Refrigeration Vice Chairman Region III and I can attest that he made every effort to assist me in the transition and has continued to volunteer his time to the Region in many ways but especially as a teacher through seminars and chapter programs.

Letter to Mr. David Rickelton January 29, 1990

I would like to ask for your help in reviewing the enclosed to see if any additional information would be required by your committee to properly evaluate this proposal and also request some time on your agenda to explain the award to your committee members. Hopefully, your meeting would be after the Refrigeration meeting so I could come before you with the passed motion.

We, also, would like to have your Committee's endorsement at this meeting so that the motion can be taken to the Board of Directors and hopefully approved so that we could make a special presentation to Mr. Garland at the summer meeting in St. Louis to celebrate his 95<sup>th</sup> birthday which will occur in August and also have the award in place so that the first award can be made to coincide with the first year the Refrigeration Committee has full grassroots status and has become part of the PAOE system. The first recipient would be selected based on PAOE points earned this society year (1989-90) and would be selected at the winter meeting of the Refrigeration

Committee in January 1991 (in New York) and with actual award presentation made at the Plenary Session at the annual meeting in June 1991 (in Indianapolis).

I will call you before the Atlanta meeting to arrange details and provide any additional information you may require.

Best regards,

(Signed) J. Thomas Sobieski

cc: George W. Buckler, Vice President and Chairman of Technology Council Neil R. Patterson, Vice President and Chairman of Member Council Stanley M. Westhoff, Chairman Refrigeration Committee James H. Norman, Manager Technical Services

# 34. Appendix P-3: History of ASHRAE Award for Distinguished Public Service

ASHRAE-ALCO AWARD (Letter)

## AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS, INC.

John E. Dube C/o Alco Valve Company P.O. Box 398 Creve Coeur Branch St. Louis, Missouri 63141 U.S.A. United Engineering Center 345 East 47<sup>th</sup> Street New York 17, N.Y. Plaza 2-6800

July 4, 1965

#### TO THE BOARD OF DIRECTORS:

A great deal has been said about the poor public image of engineers, but like talking about the weather, nothing is ever done about it.

The improvement of our image would not be merely an idle gesture to gain friends and increase popularity, it is of vital importance if we are to attract bright and capable young men, potential leaders, to a career in engineering.

Some people think this is an imaginary problem, but I fear they are indulging in wishful thinking. About 1961 the Bar Association of my home state of Missouri engaged an independent research organization to find out what the Missouri public thought of the Legal Profession and why. The project was financed by a grant from the Prentice-Hall Foundation and the report was published in 2963. It contained a by-product that was of particular interest to me as an engineer:

The public was asked to rate lawyers "in general reputation in the community" in comparison with six other occupational groups. Without regard to competency, merely on the basis of community reputation, lawyers were ranked against bankers, clergy, doctors, dentists, teachers and engineers.

In this study, which appears to have been conducted in a highly objective and competent manner, engineers came out last with an alarming consistency. We were last in the large cities as well as in the country; we were named last by every single occupational grouping of people who were interviewed. Every one of these categories placed engineers' reputation in the community last; white collar, blue collar, service worker, farm worker, armed forces, retired, housewives, unemployed and "others." There was a further breakdown by income groups and the only people who gave us a little break were those with annual incomes over \$10,000. They put us second last just ahead of the teachers.

Since this study was conducted for the benefit of the legal profession, it did not go into depth for the other occupations and no qualifying data was sought to explain the poor standing of engineers.

Letter to BOD July 4, 1965

I have heard many explanations of this regrettable phenomenon and so have you, no doubt. The term engineer has been abused, the public is confused and does not know what an engineer is, his work does not bring him in direct contact with the public, engineers are inept in the field of public relations, etc. I am sure these are all factors contributing in varying degrees to our poor public image, but in my judgment there is another even more significant factor and that is the engineers' general indifference to civic affairs.

It is a peculiar enigma that, in an age when technical change and progress have become the most powerful force in human society, the people responsible for most of this change and progress, the engineers, seem to shun the council tables and public forums where the destiny of the product of their efforts is decided.

I am convinced that this incredible indifference is on of the major contributing factors to the poor public image of engineers.

Of course, civic mindedness is primarily a personal matter and not the direct concern of a technical society. Indirectly, however, the Society has an obligation to motivate its members to individually take part in public affairs on all levels. To this end I am proposing to this Board of Directors the creation of a new award to be given annually to a member of the Society who has distinguished himself conspicuously, not in the advancement of our arts and science not through special service on behalf of the Society, but who distinguished himself conspicuously, on a voluntary basis, in behalf of his community or his country.

We need engineers of highest technical competency and we reward them. We also need engineers endowed with a high degree of social responsibility and public awareness – and we should also reward them.

Specifically, I am proposing that this Board of Directors accept on behalf of the Society the sum of \$1,500.00 from the Alco Valve Company to establish and maintain an award to be known as the "ASHRAE-Alco Medal for Distinguished Public Service," that the medal and a suitably inscribed scroll be awarded annually to a member of the Society, said member to be chosen by the Honors and Awards Committee and approved by the Board of Directors; and that the Honors and Awards Committee be charged with the preparation of rules governing the administration of the award.

(Signed) John E. Dube President June 1, 1987

## ROBERT V. OGRODNIK PRESIDENT

Mr. Frank M. Coda ASHRAE 1791 Tullie Circle, NE Atlanta, DA 30329

Dear Frank:

This is to acknowledge your correspondence concerning the ASHRAE/Alco Award for Distinguished Public Service and to inform you that Alco will continue to support this award, estimated to cost \$300 per year. This confirms my telephone conversation with David McMinn.

Kindly send your invoice annually to my attention and we will remit the appropriate amount due.

I also ask for the opportunity to attend the function at which the above award is presented.

Please excuse the delay in formally establishing our position on this award. We trust this response meets with your approval and satisfaction.

Sincerely,

(Signed) Robert V. Ogrodnik

RVO/db Cc: D. Goode J. Behr

D. Hannasch

ALCO CONTROLS DIVISION EMERSON ELECTRIC CO. P.O. BOX 12700 ST. LOUIS, MISSOURI 63141

OFFICE: 11911 ADIE ROAD PHONE: (314) 569-4500, -4509 TELEX: 447162

#### 35. Appendix Q: Past Presidents and Recipients of Honors and Awards

# **Society Presidents**

#### American Society of Heating and Ventilating Engineers (ASHVE)

1894 Edward P. Bates
1895 Steward A. Jellett
1896 R. C. Carpenter
1897 William M. Mackay
1898 Wiltsie F. Wolfe
1899 Henry Adams
1900 D. M. Quay
1901 J. H. Kenealy
1902 A. E. Kenrick
1903 H. D. Crane
1904 Andrew Harvey
1905 William Kent
1906 John Gormly
1907 C. B. J. Snyder
1908 James Mackay

1909 William G. Snow
1910 James D. Hoffman
1911 Reginald P. Bolton
1912 John R. Allen
1913 John F. Hale
1914 Samuel R. Lewis
1915 Dwight D. Kimball
1916 Harry M. Hart
1917 J. Irvine Lyle
1918 F. R. Still
1919 Walter S. Timmis
1920 E. Vernon Hill
1921 Champlain L. Riley
1922 Jay R. McColl
1923 H. R Gant

1924 Homer Addams
1925 S. E. Dibble
1926 W. H. Driscoll
1927 F. Paul Anderson
1928 A. C. Willard
1929 Thornton Lewis
1930 L. A. Harding
1931 W. H. Carrier
1932 F. B. Rowley
1933 W. T. Jones
1934 C. V. Haynes
1935 John Howatt
1936 G. L. Larson
1937 D. S. Boyden
1938 E. Holt Gurney

1939 J. F. McIntire
1940 F. E. Giesecke
1941 W. L. Fleisher
1942 E. O. Eastwood
1943 Merril F. Blankin
1944 S. H. Downs
1945 C. E. A. Winslow
1946 Alfred J. Offner
1947 Baldwin M. Woods
1948 George L. Tuve
1949 A. E. Stacey, Jr.
1950 Lester T. Avery
1951 Lauren E. Seeley
1952 Ernest Szekely
1953 Reg. F. Taylor

## American Society of Refrigerating Engineers (ASRE)

1905 John Edwin Starr
1906 W. Everett Parsons
1907 David S. Jacobus
1908 Edgar Penney
1909 Louis Block
1910 Roderick H. Tait
1911 Edward N. Friedmann
1912 Thomas Shipley
1913 Peter Neff
1914 Henry Torrance
1915 Louis K. Doelling
1916 Theodore O. Vilter
1917 Nicolai H. Hiller
1918 Ezra Frick

1919 George E. Wells
1920 Fred E. Mathews
1921 Fred Ophuls
1922 Harry Sloan
1923 William S. Shipley
1924 George A. Horne
1925 Van R. H. Greene
1926 L. Howard Jenks
1927 Willis H. Carrier
1928 George B. Bright
1929 Arthur J. Wood
1930 Harry D. Edwards
1931 Alvin H. Baer
1932 Glenn Muffly

1933 Alfred W. Okley
1934 A. R. Stevenson, Jr.
1935 Harry Harrison
1936 L. S. Morse
1937 H. M. Williams
1938 Crosby Field
1939 Gardner Poole
1940 George E. Husle
1941 L. L. Lewis
1942 W. R. Hainsworth
1943 Charles R. Logan
1944 A. B. Stickney
1945 John F. Stone
1946 Charles S. Leopold

1947 R.H. Money
1948 Clifford F. Holske
1949 Burgess H. Jennings
1950 John G Bergdoll, Jr.
1951 Paul B. Christensen
1952 Edward Simons
1953 Richard C. Jordan
1954 Arthur J. Hess
1955 Leon Buehler Jr.
1956 Carlyle M. Ashley
1957 Hermann F. Spoehrer
1958 Cecil Boling

# American Society of Heating and Air-Conditioning Engineers (ASHAE)

1954 L.N. Hunter 1955 John E. Haines 1956 John W. James 1957 P.B. Gordon 1958 E.R. Queer 1959 Arthur J. Hess

## American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)

Jan. 1959 - June 1959 June 1959 - Feb. 1960 June 1960 - Feb. 1961 Feb. 1961 - June 1962 June 1962 - June 1963 June 1963 - June 1964 June 1963 - June 1964 June 1964 - June 1965 June 1965 - June 1966 June 1966 - Sept. 1966 June 1967 - June 1968 June 1968 - June 1969 June 1968 - June 1970 June 1970 - June 1971 June 1972 - June 1972 June 1973 - June 1973 June 1974 - June 1975 June 1975 - June 1975 June 1976 - June 1977 July 1977 - June 1978 July 1978 - June 1981 July 1980 - June 1981 July 1983 - June 1983 July 1984 - June 1985 July 1985 - June 1986 July 1986 - June 1987 July 1987 - June 1988 July 1988 - June 1988 July 1988 - June 1989 July 1989 - June 1989 July 1989 - June 1980	Cecil Boling Arthur J. Hess Walter A. Grant Robert H. Tull John Everetts, Jr. John H. Fox Frank H. Faust John E. Dube James W. May Lincoln Bouillon P. N. Vinther William L. Holladay William G. Hole Frank H. Bridgers Stanley F. Gilman Walter F Spiegel Roderick R. Kirkwood David Rickelton William J. Collins, Jr. William R Chapman Bruno P Morabito Morris Backer Hugh D. McMillan, Jr Charles E Sepsy Jack B. Chaddock Clinton W. Phillips Richard R Perry Robert O. McDonald Donald R Bahnfleth Frederick H Kohloss H. E. "Barney" Burroughs Louis E Flagg David S. Butler Sr.	July 1990 - June 1991 July 1991 - June 1992 July 1993 - June 1993 July 1993 - June 1994 July 1994 - June 1995 July 1995 - June 1996 July 1996 - June 1997 July 1997 - June 1998 July 1998 - June 1999 July 1999 - June 2000 July 2000 - June 2001 July 2000 - June 2002 July 2002 - June 2003 July 2003 - June 2004 July 2003 - June 2005 July 2005 - June 2006 July 2006 - June 2007 July 2007 - June 2008 July 2008 - June 2009 July 2008 - June 2010 July 2010 - June 2010 July 2011 - June 2012 July 2011 - June 2012 July 2013 - June 2014 July 2014 - June 2015 July 2015 - June 2016 July 2016 - June 2017 July 2017 - June 2018 July 2018 - June 2019 July 2019 - June 2020 July 2019 - June 2020 July 2020 - June 2021 July 2021 - June 2021	A. Damon Gowan Donald G Rich Richard A. Charles Neil R. Patterson Billy R. Manning Richard B. Hayter James E. Hill Donald E. Holte George A Jackins Harley W. Goodman, Jr James E. Wolf William J. Coad Donald G. Colliver Richard H. Rooley Ronald P. Vallort Lee W. Burgett Terry E. Townsend Kent W. Peterson William A. Harrison Gordon V. Holness Lynn G. Bellenger Ronald E. Jarnagin Thomas E. Watson William P. Bahnfleth Thomas H. Phoenix David T. Underwood Timothy G. Wentz Bjarne W. Olesen Sheila J Hayter Darryl K. Boyce Charles E. Gulledge III Mick Schwedler
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# **ASHRAE Honors and Awards Recipients**

## Andrew T. Boggs Service Award

Established in 1986, this award annually recognizes a past recipient of the Exceptional Service Award for continuing unselfish, dedicated, and distinguished work on behalf of the Society. The award honors Andrew T. Boggs, ASHRAE Executive Vice President Emeritus, for his 30 years of outstanding service and leadership.

1987	Frederick J. Reed	1998	Kenneth W. Wicks	2012	(No award given)
1988	Sam P. Soling	1999	Donald E. Nichols	2013	Richard A. Charles
1989	Hans O. Spauschus	2000	David S. Butler, Sr.	2014	Kenneth W. Cooper
1990	Morris L. Markel	2001	Ross F. Meriwether	2015	William A. Harrison
1991	Preston E. McNall, Jr.	2002	William J. Coad	2016	H.E. Barney Burroughs
1992	Frank H. Faust	2003	George A. Jackins	2017	Steven T. Taylor
1993	William J. Collins, Jr.	2004-07	(No award given)	2018	Van Baxter
1994	Thomas J. White	2008	Donald G. Rich	2019	Ross Montgomery
1995	Richard P. Perry	2009	Laurance S. Staples	2020	Bjarne Wilkens Olesen
1996	Louis F. Flagg	2010	Donald G. Colliver		
1997	(No award given)	2011	Richard Hayter		

# ASHRAE Award for Distinguished Public Service

In 2008 the ASHRAE-Alco Award for Distinguished Public Service was renamed the ASHRAE Award for Distinguished Public Service. This award recognizes a member of the Society who has performed outstanding public service in their community, and in doing so, has helped to improve the public image of the engineer.

2009	Kenneth M. Fulk	2015	William Sigman	2020	Carl F. Huber	
2010-12	(No award given)	2016	Erich Binder	2021	(No award given)	
2013	Harold Lewis	2017-18	(No award given)			
2014	Jeff Gatlin	2019	Patricia Graef			

#### **ASHRAE Hall of Fame**

Established in 1990, this award honors deceased members who have made milestone contributions to the growth of ASHRAE-related technology and/or the development of ASHRAE as a Society. Individuals inducted into the Hall of Fame must have been an ASHRAE member (any grade) or a member of a predecessor Society.

1994	F. Paul Anderson	2003	Milton W. Garland	2015	Rolla Carpenter
1994	Willis Haviland Carrier	2004	(No award given)	2015	Robert Tamblyn
1994	Francis W. Hutchinson	2005	Henry Galson	2016	Calvin D. MacCracken
1995	Carlyle Martin Ashley	2005	Gardner Voorhees	2016	John Edwin Starr
1995	A. Pharo Gagge	2006	Jasper G. Woodroof	2017	(No award given)
1996	Gianfelice Bertolini	2007	Mary E. Pennington	2018	Lynn G. Bellenger
1996	John Engalitcheff, Jr.	2008	Frank J. Dean, Jr	2018	Seichi "Bud" Konzo
1996	Margaret Ingels	2008	P. Ole Fanger	2018	A. Damon Gowan
1996	George Lewis Tuve	2009	(No award given)	2019	George Hightower
1997	Reuben N. Trane	2010	William J. Collins, Jr	2020	Frederick Ernst Giesecke
1998-99	(No award given)	2010	J. Donald Kroeker	2020	Richard Perry
2000	Rudolf Plank	2011	(No award given)	2021	William M. Mackay
2001	Charles S. Leopold	2012	Roderick R. Kirkwood	2021	Hugh J. Barron
2002	(No award given)	2013	Wilbert F. Stoecker		
2003	Frank H. Fraust	2014	Fred W. Wolf, Jr.		

#### **ASHRAE Journal Paper Award**

This award is presented to the author of the best article published in the ASHRAE Journal during the Society year.

1983	Bruce J. Novell	2002	John Frederick Straube
1984	Francis J. McCabe	2003	Gordon V. R. Holness
1985	R.L. Webb & A. Villacres	2004	Joseph W. Lstiburek
1986	Carl H. Jordan & Makio Goto	2005	Dennis Stanke
1987	Clifford M. Scofield & James R. Taylor	2006	Michel Bernier
1988	Mark O. McLinden & David A. Didion	2007	Fredrick Rohles
1989	Carl H. Jordan	2008	James Cummings & Charles Withers, Jr
1990	Gershon Meckler	2009	James Steven Brown
1991	William J. Coad	2010	Steven T. Taylor & C. Hwakong Cheng
1992	Thomas B. Romine, Jr	2011	John A. Murphy
1993	F. Sherwood Rowland	2012	John A. Murphy
1994	Marhta J. Hewett, Mary Sue Lobenstein, & Susan K. Nathan	2013	Daniel Nall & Robert Sedlack
1995	Bernard A. Nagengast	2014	Paul Lindahl
1996	Steven T. Taylor	2015	Philip Bartholomew
1997	Lewis G. Harriman, III	2016	Hugh Crowther & Yi Teng Ma
1998	Gurvinder Singh & John Mitchell	2017	Omar Hawit & Trevor Jaffe
1999	Lewis G. Harriman, III, Donald G. Colliver, & K. Quinn Hart	2018	Dan Koenigshofer & John Roberts
2000	Rudolph Stegmann	2019	Edward A Arens, Tyler Hoyt, Gwelen Paliaga & Hui Zhang
2001	Thomas B. Hartman		

## **ASHRAE** Pioneers of the Industry

Established in 2010, this award honors deceased individuals who have made milestone contributions to the growth of air conditioning, heating, refrigeration, and ventilation. Individuals inducted into the Pioneers of the Industry must have shown evidence of distinction either technically or academically.

2011-12	(No award given)	2015	Carl Linde	2017	Frederick Wittenmeier
2013	Gillbert Carson	2015	Andrew Muhl	2018	Sadi Carnot
2013	William F. Fontaine	2016	Daniel Livingston Holden	2019	(No award given)

2014	John Gorrie	2016	Benjamin Franklin Sturtevant	2020	Warren S. Johnson
2014	Alfred R. Wolff	2017	Carl Georg Munters	2021	(No award given)

#### **Crosby Field Award**

Established in 1973, the Crosby Field Award was named for a former ASHRAE President. This award is for the highest rated paper presented at a Technical Session or Symposium for the year.

- 1974 Paul R. DeCicco & Robert J. Cresci, "Smoke and Fire Control in High-Rise Office Buildings"
- 1975 Herbert P. Becker, "Energy Conservation Characteristics of Various Pumping Systems Compared with Variable Speed Systems"
- 1976 J.E. Hill & T. Kusuda, "Dynamic Characteristics of Air Infiltration"
- 1977 Clayton A. Morrison, James M. Wheeler, Jr., & Erich A. Farber, "An Experimental Determination of Shading Coefficients for Selected Insulating Reflective Glasses and Draperies"
- 1978 William Rudoy & L.M. Robins, "Comparison of Cooling Load Calculation"
- 1979 Istvan L. Ver, "A Review of the Attenuation of Sound in Straight Lined and Unlined Ductwork of Rectangular Cross Section"
- 1980 George T. Tamura, "The Calculation of House Infiltration Rates"
- 1981 Lawrence G. Spielvogel, "The Solar Bottom Line"
- 1982 Warren E. Blazier, Jr., "Revised Noise Criteria for Design and Rating of HVAC Systems"
- 1983 Robert D. Fischer, Lawrence J. Flanigan, Sherwood G. Talbert, & Daniel A. Jaffee, "Degree Days Method for Simplified Energy Analysis"
- 1984 Brian P. Leaderer & William S. Cain, "Air Quality in Buildings During Smoking and Nonsmoking Occupancy"
- 1985 D.W. DeWerth, S.G. Talbert, S.M. Sobieski, & D.D. Paul, "Vent Capacity Data for High Efficiency, Condensing-Type, Gas-Fired Appliances"
- 1986 William J. Coad, "Variable Flow in Hydronic Systems for Improved Stability, Simplicity and Energy Economics"
- 1987 Will K. Brown, Jr., "Fundamental Clean Room Concepts"
- 1988 John P. Kettler, "Efficient Design and Control of Dual- Duct Variable-Volume Systems"
- 1989 Joseph H. Eto & Cecile Meyer, "The HVAC Costs of Increased Fresh Air Ventilation Rates in Office Buildings"
- 1990 Milton Meckler, "Computer Analysis of Smoke Transport During Hotel Fire"
- 1991 Emil E. Friberg, "Central Heating and Cooling Plant Economics for the College Campus"
- 1992 Eric D. Larson & Lars J. Nilsson, "Electricity Use and Efficiency in Pumping Air-Handling Systems"
- 1993 Nancy J. Banks, "Field Test of a Desiccant-Based HVAC System for Hotels"
- 1994 Dale T. Hitchings & Richard S. Shull, "Measuring and Calculating Laboratory Exhaust Diversity—Three Case Studies"
- 1995 Frederic B. Morris, James E. Braun, & Stephen J. Treado, "Experimental and Simulated Performance of Optimal Control of Building Thermal Storage"
- 1996 Paul C. Tseng, Robert Krout, Dale Stanton-Hoyle, & Steve Kimsey, "Energy Program of Requirements for a New Detention Center—Energy Design Criteria for Prisons"
- 1997 Robert H. Green & Linda Roberts, "The Effect of Air-Coil Design on the Performance of Heat Pumps and Air Conditioners"
- 1998 Shuzo Murakami, Shinsuke Kato, & Jie Zeng, "Flow and Temperature Fields Around Human Body with Various Room Distribution, Part 1—CFD Study on Computational Thermal Manikin"
- 1999 Richard J. deDear and Gail Schiller Brager, "Developing an Adaptive Model of Thermal Comfort and Preference"
- 2000 Melvin W. First, Edward A. Nardell, William Chaisson, & Richard Riley, "Guidelines for the Application of Upper-Room Ultraviolet Germicidal Irradiation for Preventing Transmission of Airborne Contagion—Part I"
- 2001 Steve Kavanaugh & Marita Allan, "Thermal Conductivity of Cementitious Grouts and Impact on Heat Exchanger Length Design for Ground Source Heat Pumps"
- 2002 Jim L. Heldenbrand, "NBS Research and ASHRAE's 90 Series Standards"
- 2003 Paul L. Riemer, John W. Mitchell, & William A. Beckman, "The Use of Time Series Analysis in Fault Detection and Diagnosis Methodologies"
- 2004 William J. Rahmeyer, "Pressure Loss for PVC Pipe Tees"
- 2005 Ali A. Jalalzadeh-Azar, "A Comparison of Electric al and Thermal-Load Following CHP Systems"
- 2006 Sang-Min Lee & Jin-Won Lee, "A New Local Ventilation System Using a Vortex Flow Generated with a Finned Rotating Annular Disk"
- 2007 Michael R. Collins, Ph.D., & John L. Wright, Ph.D., P.Eng., "Calculating Center-Glass Performance Indices of Windows with a Diathermanous Layer"
- 2008 Francis M. Farrell, Thomas M. Fitch, & Michael J. Morgan, "Development ad Performance of a Retrofittable, High-Efficiency, Grease Filter System for Kitchen Hoods"
- 2008 Kee-Chiang Chung, Ph.D., Tsai Kuo-Pao, & You-Hsuan Wang, "Performance of Local Ventilated Hood 1: A General Ventilation Working Environment"
- 2009 Jelena Srebric, Ph.D. & Paulo Cesar Taberes Velasco, Ph.D., "The Role of Plants in the Reduction of Heat Flux Through Green Roofs: Laboratory Experiments"
- 2010 Jeffrey D. Spitler, Ph.D., P.E., & Bereket A. Nigusse, Ph.D., "Refinements and Improvements to the Radiant Time Series Method"
- 2011 Jacob L. Edmondson, Dennis L. O'Neal, Ph.D., PE, John A. Bryant, PhD, PE, & Michael A. Davis, Ph.D., "Performance of Series Fan-Powered Terminal Units with Electronically Commutated Motors"

- 2012 John A. Bryant, Ph.D, P.E., Michael A. Davis, Ph.D, & Dennis L. O'Neal, Ph.D, P.E., "Modeling the Performance of ECM and SCR Parallel Fan-Powered Terminal Units in Single-Duct VAV Systems"
- 2013 James W. VanGilder, P.E., Christopher M. Healey, Ph.D., Zachary M. Pardey, & Xuanhang Zhang, "A Compact Server Model for Transient Data Center Simulations"
- 2014 Didier Thevenard, PhD, Peng, & Mark W. Shephard, "Temperature Trends for Locations Listed in the Tables of Climatic Design Conditions in the 2013 ASHRAE Handbook Fundamentals"
- 2015 John A. Shonder & Cyrus Nasseri, "Achieving Deeper Energy Savings in Federal Energy Performance Contracts"
- 2016 Stephen Kujak & Edward M. Hamilton, "Examination of the Reactions of R-40 with R-134a and POE Refrigeration System Materials"
- 2017 Michael Roth, "Updating the ASHRAE Climate Design Data for 2017"
- 2018 Amy Van Asselt, Douglas T. Reindl, Ph.D., P.E., & Gregory F. Nellis, "Strategies to Increase Deployment of Renewables Using Cool Thermal Energy Storage"
- 2019 Charles S. Barnaby & Peter Simmonds, "Development of a Unified Tool for Analysis of Room Loads and Conditions"

#### **Dan Mills Chapter Programs Award**

Established in 1988, this award recognizes a Chapter Technology Transfer Committee Chapter member (Chair or Vice-Chair) who excels in promoting technical and energy activities of the CTT Committee. Prior to 2014, this award recognized a Chapter TEGA Chair who excelled in meeting TEGA goals in technical, energy, and government activities. In January 2019, the Dan Mills Technical Award was combined with the Chapter Programs Star Award and renamed.

2000	Charles E. Gulledge III, North Piedmont Chapter
2001	

- 2001 Christopher Winfree, Southern Piedmont Chapter
- 2002 Christopher Winfree, Southern Piedmont Chapter
- 2003 Meredith T. Krieg, North Piedmont Chapter
- 2004 Henry Manczyk, Rochester Chapter
- 2005 Rajean Blais, Montreal Chapter
- 2006 Wei Sun, Detroit Chapter
- 2007 Bryan Lampley, North Piedmont Chapter
- 2008 Thomas Kroeschell, Illinois Chapter

#### 2009 Oscar Cobb, Detroit Chapter 2010 Jean-Gabriel Joannette, Montreal Chapter 2011 Keith H. Reihl, Houston Chapter 2012 (No award given) 2013 Eric M. Fullerton, Arkansas Chapter 2014 Lee Huffines, North Piedmont Chapter 2015-19 (No award given) 2020 Beatriz Salazar, Toronto Chapter

#### **Developing Leader Award**

Established to recognize new members who have shown a diverse involvement and commitment to ASHRAE within five (5) years of Associate Member join date.

- 2019 Chi Fung Chow (Taylor), Ashu Gupta, Lindsey King, Manalee Nabar
- 2020 Abhishek Khurana, Akshay Bhargava, Elise Kiland, John Constantinide, Joseph Higham, Margaret Mathison, Rupesh Iyengar, Stephen Forner, Vanessa Freidberg
- 2021 Madison Schultz, Alekhya Kaianathbhatta, Anthony Fontanini, Enrica Galasso, Kimberly Pierson, Matt Clark, Badri Patel, Eleazar Rivera, Elise Backstrom, Jacob Moberg, Cinthya Mendez

#### **Distinguished 50-Year Member Award**

Established in 1967, this award recognizes individuals who have been ASHRAE members for a minimum of 50 years, were a Past Society President, a Fellow, recipient of the Distinguished Service Award, or otherwise performed outstanding service for the Society.

Auros I Mory 1006	Bennett, Arthur H.—2013
•	,
	Benz, Donald L.—1999
Baade, Peter K.—2000	Bergdoll, John G.—1974
Bahnfleth, Donald R.—2004	Bertrand, Luc—2017
Barbier, William—2007	Bevirt, W. David—1999
Barker, Perley K.—1996	Bishop, Marion W.—1985
Barnard, Lloyd—2009	Bishop, Walter P.—2013
Basso, Peter J.—2008	Bisset, John B.—2020
Batherman, Richard E.—2008	Blackmore, Joseph C.—1986
Bathgate, Thomas—2018	Blankin, Merrill—1969
Baum, Albert L.—1967	Blazier, Warren E-2008
Baum, Richard T.—2004	Bodinus, William S.—1991
Becker, Stephen A.—2020	Boehmer, Andrew P.—1985
Behls, Herman F.—2016	Boggs, Andrew—2001
Bendelius, Arthur G.—2015	Boling, Cecil—1986
	Barbier, William—2007 Barker, Perley K.—1996 Barnard, Lloyd—2009 Basso, Peter J.—2008 Batherman, Richard E.—2008 Bathgate, Thomas—2018 Baum, Albert L.—1967 Baum, Richard T.—2004 Becker, Stephen A.—2020 Behls, Herman F.—2016

Bottum, E.W.-1988 Bourquin, Paul A.-1999 Bovay, Harry E., Jr.-1996 Boyd, Robert L.—1991 Boyd, Spencer W.-1986 Braun, Robert H.—2008 Bridgers, Frank H.—1997 Briley, George C.—2003 Brink, Laurence K-2013 Britton, Paul E.-2005 Brown, Floyd L.-2013 Brown, Leonard N.-1999 Brown, Seymour W.—1993 Bruechert, Carl J.-2002 Bryan, William L.-1992 Buckley, Jack B.—1998 Buckley, Norman A.-1996 Buckmaster, C. Roger-2003 Buehler, Leon-1974 Bullock, Charles E.-2016 Burdick, Robert S.-2015 Burkhardt, Robert G.-2005 Burr, Griffith C., Jr.-2010 Burr, Richard W.-2020 Burroughs, Barney-2018 Butler, Perc M.-1999 Buzzard, Francis H.—1989 Caffrey, Ronlad J.-2013 Callahan, Charles D.-2020 Campbell, George S.-1986 Carroll, J. Raymond—1996 Carscallen, George F.-2010 Carter, Franklyn Y.-1993 Carter, Hugh C.-2007 Cawley, Richard E.-2020 Chaddock, Jack B.-2002 Chapman, William P.-1998 Charles, Richard A.—2012 Chato, John-2009 Chenault, Charles V.-1999 Chenh, Hung C.—2019 Cherne, Realto E.-1979 Chewning, Ray C.-1995 Christensen, Paul B.-1986 Clark, Kenneth—2018 Clarke, John H.-1991 Clements, Waller S.-2013 Cloke, Jr., Thomas H.-2003 Cohen, Raymond—2017 Cohen, Walter-2010 Colborne, William G.-2003 Colen, Harold R.—2000 Collins, Jr., William J.—1999 Conley, Harry E.-2004 Conrad, Paul R.-2019 Cooper, D.S.-1988 Cooper, William S.-2002 Copeland, Charles-2019 Copeland, John E.-2005 Costantino, Mario-2012 Coughlin, Robert J.-2007

Cox, William A., Jr.-1996 Crider, Thomas G.-1985 Crosland, Robert B., Jr.-1996 Cross, Robert C.—1986 Cumming, Robert W.-1978 Daly, Edward-2009 Davidson, Lindell A.-2014 Davis, Williard J.-2003 Day, Vincent S.—1976 Dean, Bob W.-1999 Deltz, Paul N.-2015 Dewerth, Douglas W.-2020 Dibble, S.E.—1967 Digiacomo, William A.-2002 Donley, Wallace L.-2003 Downing, Ralph C.-2002 Drake, Margaret S.-2006 Driscoll, Daniel-2019 Dugan, John T.-2010 Dugan, Philip A.-2012 Duignan-Woods, Eileen-2016 DuPernell, Paul C.-2003 Engdahl, R.B.-1988 Engen, Byron-2018 English, Richard A.-2003 Ervin, Dixon A.-2003 Evans, Bruce L.—1986 Evans, Richard A.-2006 Evans, Robert J.-2006 Everetts, John, Jr.—1979 Fahnestock, Maurice K.-1982 Falk, David S.-1986 Faust, Frank H.-1980 Ferdelman, Thomas J.-2012 Ferreira, Francis-2020 Flagg, Louis F.-1997 Fogleman, Sam R.-2005 Foster, Theodore G.—1999 Fox, John H.—1985 Frankfurt, William W.-1993 Freeman, George-2001 Friberg, Emil-2017 Friedman, Dick-2004 Fuller, Robert H.-2020 Galazzi, Joseph A.-1995 Galson, Edgar L.-2004 Gant, H.P.-1967 Garbarino, Arthur-2009 Gardner, M. David-2018 Garland, Milton W.-1996 Gates, Albert S., Jr.-1991 Gatley, Donald P.—2012 Geary, David F.-2020 Gendler, Gershon L.-1995 Giannini, Albert-1997 Gilbertson, Thomas A-2013 Gilmore, Clarence F.—1996 Glaser, Donald L.-2013 Goldberg, Norman-1999 Goldman, Ralph F.-2020 Gonzales, Don J.-2005

Goodman, Harley W., Jr.-2012 Goodman, William-1991 Govan, Francis A.-2008 Graber, Ernst-1986 Graham, J. Barrie-2004 Grant, Walter A.-1979 Grant, Walter H.—1990 Grant, Whitney I.-2000 Green, Waring M.-2003 Greenberg, Alfred-2003 Groff, Gerald C.-2006 Grumman, David L.-2014 Grondzik, Walter-2019 Gupta Vijay-2018 Gupta, Hem C.-2008 Gupton, Guy W.-2008 Gusler, Denard L.-2004 Guttman, Karl-2000 Hahn, Warren G.-2017 Haines, Roger W.-2003 Halyard, Paul J.-2016 Handegord, Gustav-2001 Hansen, E.G.-2005 Hansen, III, Charles-1999 Hanson, Lars C.-1986 Hardin, Donald, C.-2008 Harju, Richard J.-2011 Harmon, John J.-2007 Harnack, John L.-2004 Harrison, Harry-1967 Harrison, Warren D.-1999 Harrison, William-2018 Hayakawa, T. George-2006 Hayter, Richard-2018 Heffron, Donald B.-2000 Hegberg, R.A.-2005 Heiman, Jordan L.-2000 Hellman, Albert A.-2000 Hershman, Mark P.-2020 Hertzler, John R.—1978 Hesselschwerdt, August, Jr.-1986 Hiers, Charles R.—1977 Hightower, G.B.-1988 Hirsch, Sylvan R.-1983 Hole, William G.—1992 Holladay, William L.-1983 Holness, Gordon V.R.-2017 Holste, Frederick R.-2011 Horvay, J. Benjamin-2000 Howell, Ronald H.-2020 Humphreys, Clark M-1981 Hungerford, Leo-1980 Hunton, Richard-2018 Ibison, J.L.-1988 Jackins, George-2009 Jain, Prem-2009 James, Jack K.-1996 James, John W.-1983 Jarik, George-2009 Jennings, Burgess H.—1984 Jennings, Irving C.-1975

Jensen, Robert E.-2005 Johnson, Gary E.-2014 Jensen, Ronald-2018 Johnson, Norman W.—2016 Johnson, Victor J.-1998 Jones, Robert R.—2013 Jordan, Carl H.—2010 Jordan, Richard C.—1983 Jorgensen, Robert-2003 Kalischer, Milton-1979 Kampmeyer, John-2018 Kelley, Winfield-2018 Kelso, Richard-2018 Kelter, S. Louis-2017 Kennedy, Edwin C.-2004 Kennedy, John M.-2004 Kenny, Eoin-2008 Kerschbaumer, H.G.-2020 Kilker, Robert L.-2003 Kimball, William-2018 Kirkwood, Roderick R.-1996 Klote, John H.-2020 Knights, Charles R.-2011 Kramer, Daniel E.-2004 Kroll, Morton-2009 Kuenhner, Richard L.-2004 Kwok, Ping Ki-2016 L'Anglais, F.-2007 Laksanakorn, Wichai-2020 Lang, James H.—2015 Lee-Thorp, Vincent D.—2015 Lehr, Valentine A.-2020 Lesser, N.I.-2005 Lewis, Oliver K.-2011 Lewis, Rodney H.-2017 Linstromberg, William J.-2003 Lipshultz, Max-2009 Lizardos, Evans J.-2015 Lloyd, Robert T.-2004 Lodge, Robert H.-2014 Loewer, Harald E.—2012 Lum, Franklin Y.S.-2020 Mackie, Edward I.-2014 Logsdon, R.F.-2005 Lortie, Rodney-2017 Lotz, W.A.-2007 MacPhee, Carl W.-2007 McFall, James D.-2013 McMinn, David N.-2007 McNall, Preston E.—2003 McNeil, Daniel C.—2000 Meckler, Milton-2008 Melton, BJ-2014 Menster, Paul C.-2003 Menzies, George E.-2017 Meriwether, Ross-2019

Merrick, Richard H-2003 Miller, Clint D.-2006 Miller, Richard-2019 Missimer, Dale-2001 Morabito, Bruno P.-2002 Morris, Denis J.-2016 Morse III, Charles—2018 Moseley, Terrell D.-2006 Mumma, Stanley A.-2020 Munger, Gurdon-2001 Nack, Donald H.-2004 Nagengast, Bernard-2018 Nettleship, Louis C.—1995 Newman, James L.-2013 Nishi, Yasunobu-2019 North, Forrest H.-2003 O'Dell, Leonard J.-2005 Olsen, Erling J.-2017 Ossi, Fareed—2011 Ostrander, William—2018 Pagliasotti, Robert D.-2017 Paranjpey, Ramesh P.-2020 Pasch, Roger-2018 Pearson, Richard J.-2017 Perkins, C. Stuart-2004 Perry, Richard P.-2014 Pflug, Irving-2001 Phillips, Herbert-2018 Pietsch, Joseph A.—2006 Pons, Ramon-2018 Powell, Frank J.-2008 Procell, Charles J.-2016 Punsalan, Laurentino-2018 Ratai, Walter R.-2008 Reid, David-2018 Rhea, Hal H.-2006 Rich, Donald G.-2007 Rivers, Richard—2018 Roberts, Jack-2001 Romine, Thomas B.-2000 Ross, Donald E.-2006 Roubal, James P.-2010 Rountree, Harry E.-2003 Sanchez, Alberto J.-2017 Schreiner, John R.-2002 Schulze, Sr., James-2018 Schumacher, Ernest W.-2008 Scofield, Clifford M.-2012 Scott, Norman-2018 Scriven, James A.—2016 Shah, Mirza M.-2020 Shefferman, Sholom M.-2006 Shitzer, Avraham-2019 Simpson, Charles D.-2020 Sirjord, Jr., Arthur B.-2003 Sisti, Michael F.-2008

Slabinski, Stanley-2020 Smith, Thomas-2011 Sobieski, J. Thomas-2016 Soumerai, Henri P.-2002 Sowell, Edward—2019 Speich, Carl F.—2010 Speigel, Walter F.-2000 Spielvogel, Lawrence G.—2012 Stambaugh, Leo-2018 Stamper, Eugene-2017 Staples, Laurance S.-2017 Stefanutti, Uberto V.-2003 Stoecker, Wilbert F.-2002 Straub, Harold E.-2000 Sullivan, E.P.-2005 Sun, Tseng-Yao-2016 Swenson, Carl A.—2016 Swygert, Harold B.—2008 Tamblyn, Robert T.-2007 Tan, Sunny C.L.-2017 Taylor, William-2006 Teske, Edward R.-2000 Thompson, C. Alan-2019 Thornton, Raymond-2001 Tilney, Ralph-2001 Timmer, Chester W.-2003 Toub, Samuel-2019 Trueman, Cedric-2019 Tully, Richard E.J.-2006 Vaculik, Frantisek-2020 Valerio, E.L.-2007 Vallort, Ronald P.-2015 Voelz, Robert-2001 Vogel, Chester T.-2010 Waeldner, William J.-2003 Wallstrom, Lloyd L.-2002 Weld, Gordon B.-2016 Wells, Robert D.-2007 Wells, William P.—2000 Welsh, John W.—2016 Wicks, Kenneth W.-2003 Williams, Verle A.—2013 Willliams, Thoma-2018 Wingfield, Gary L.-2016 Wolf, James—2018 Wolfberg, Howard A.-2006 Wolfert, John E.-2010 Woods, James E.-2013 Woodworth, J.I.-2005 Woody, Alfred-2019 Wright, J. Richard-2011 Yamamoto, George S.-2018 Young, E.H.—2005 Yousoufian, Hrant H.-2014 Zagar, Robert-2019 Zanders, Robert W.-2000

#### **Distinguished 75-Year Member Award**

Established in 2020, this award recognizes individuals who have been ASHRAE members for a minimum of 75 years, were a Past Society President, a Fellow, recipient of the Distinguished Service Award, or otherwise performed outstanding service for the Society.

Falk, J.-2021

#### Menditch, B-2021

Strahan, E., Jr.—2021

#### **Distinguished Service Award**

Established in 1962, this award recognizes members who have served ASHRAE faithfully and with distinction on committees or otherwise giving freely of their time and talent on behalf of the Society (15 service points are required).

Abdelaziz, O.—2016	Bauman, F. S.—1997	Britton, P.E.—1993
Abedin, A.—2012	Baxter, V.D.—2002	Broabent, C.—2019
Abellon, D.—2015	Bean, R.—2017	Brown, C.R.—1989
Abramson, D.S.—2013	Beaty, D.L.—2006	Brown, F.L.—1976
Abushakra, Bass—2010	Becker, B.R.—1999	Brown, J.S.—2015
Achenbach, P.R.—1967	Beda, M.F.—1994	Brown, L.N.—1976
Adams, E.—2017	Behls, H.—2001	Brown, R.W.—2002
Agopian, N.—2017	Bellenger, L.G.—1996	Brown, S.W.—1963
Aguilo, R.R.—2010	Bennet, A.H.—1978	Brueckner, T.—2017
Albern, W.F.—1993	Bergles, A.E.—1996	Brundage, D.M—2013
Albrecht, R.—2015	Berlin, G.—2015	Bruning, S.F.—2004
Albright, D.C.—1972	Bernier, M.—2007	Bryan, W.L., Jr.—1974
Alfonso, G.—2019	Betz, F.W.—2010	-
		Bryant, D.C., Sr.—1996 Bryant, Bohin 2020
Algie, W.L.—1988	Bidstrup, N.—2019	Bryant, Robin—2020
Allen, D.M.—1966	Biehn, G.L.—1974	Buck, R.J.—2002
Allen, M.W—2000	Bilderbeck, M.—2001	Buck, W.J.—1992
Alphonso, Jason—2020	Billedeaux, B.—2018	Buckler, G.W.—1987
Alvine, R.G.—1985	Binder, E.—2010	Buckley, J.B.—1990
Alyea, H.W.—1967	Bishop, M.W.—1968	Buckley, J.S.—2003
Amende, Kevin—2020	Bishop, W.P.—1995	Buckley, N.A.—1988
Amrane, K.—2014	Bisset, J.B.—1995	Buckmaster, C.R.—1997
Anderson, B.E.—2013	Bivens, D.B. —2010	Bueno, O.—2017
Anderson, J.R.—2013	Black III, A.W.—1996	Bullard, C. W.—2004
Anderson, M.K.—1992	Blalock, A.—2019	Bundock, J.—2014
Andrepont, John S.—2020	Blanford, M.—2018	Bunn, R.A.—2003
Appleby, L.V.—1972	Blossom, J.S.—1981	Burdick, R.S.—1985
Ares, R.A.—2000	Bochat, J.—2016	Burgett, L.W.—1999
Arnold, C.G.—2003	Boester, C.F.—1972	Burke, V.J.—1972
Arnold, D.—2013	Bohanon, Hoy—2009	Burkert, J.W., Sr.—1981
Atkinson, G.V2008	Boldt, J.—2015	Burkhead, R.—2019
Atkisson, J.A.—2017	Boling, C.—1983	Burr, R.W.—2003
Atwood, T.—1976	Boome, A.J.—1998	Burroughs, H.E.—1984
Austin, G.W., Jr.—2013	Bootle, B.T., Jr.—1981	Bushby, S.T.—2004
Aute, V.C.—2017	Borges, D.S.—2000	Bushnell, J.J.—2014
Ayres, J.M.—1993	Bosworth, C.M., Jr.—1973	Butler, D.S., Sr.—1987
Ayub, Z.—1999	Boudani, N.—2019	Butler, P.M.—1976
Baade, P.K.—1971	Bourquin, P.A.—1973	Buzzard, F.H.—1966
Backer, M.—1976	Bowman, R.J.—2013	Cabot, P.W.—2013
Bagheri, H. M.—2005	Boyce, D.K.—1997	Caffrey, R.J.—1976
Bahnfleth, D.R.—1976	Boyd, Nathaniel—2020	Callahan, C.D.—1992
Bahnfleth, W.P.—1998	Brager, G.S.—2000	Callaway, C.A—2013
Bailey, R.B—2013	Brambley, M.R.—2008	Calm, J.—2001
Baker, M.—1971	Brandemuehl, M.J.—2007	Cane, R.L.—2017
Baker, R.G.—2007	Brandt, D.L.—2005	Cappelletti, R.A.—1998
Balaras, C.—2006	Branson, D.J.—2014	Cappellin, T.—2014
Bansal, P.K.—2006	Braun, J.E.—2003	Carlson, G.F.—1973
Barker, P.K.—1965	Brickman, H.—1998	Carlson, J.A.—2017
Barnaby, C.S.—2006	Bridgers, F.H.—1983	Carroll, J.R.—1973
Bartel, D2013	Bridges, B.—2017	Carscallen, G.F.—2002
Bartholomew, R.W.—1980	Briley, G.C.—1992	Carter, D.E.—2005
Batherman, R.E.—1998	Brink, L.K., Jr.—1997	Carter, F.Y.—1963

Carter, J.J.-2013 Case, M.E.-2013 Castelvecchi, J.-2007 Caulk, J.R., Jr.-1970 Cawley, R.E.—2013 Chaddock, J.B.-1970 Chakroun, W.-2011 Chamberlain, J.R.-1968 Chapman, W.P.-1969 Charalambopulos, C.-2019 Charles, R.A.-1990 Charneux, R.-2018 Cheek, G.H.—1981 Chen, Q.-2001 Cherne, R.E.—1974 Chewning, R.C.—1965 Chin, J.A.-2017 Choksi, R.-2019 Ciricillo, S.F.-1979 Claridge, D.E.-1997 Clark, E.M.-1993 Clark, J.A.-2001 Clark, J.H.-1975 Clark, K.M.-2001 Clarke, J.-2018 Clavijo, F.-2015 Clements, W.S.-2010 Cloke, T.H.-1980 Coad, W.J.—1980 Cochrane, Andrew L.-2020 Cohen, A.P.-2015 Cohen, J.J.-2019 Cohen, R.-1999 Cohen, W.-1992 Cole, R.A.-1987 Collarin, Michael-2020 Collins, W.J., Jr.-1965 Colliver, D.G.—1995 Conlan, W.-2016 Conover, D.R.-2013 Conrad, P.R.—1991 Constantinide, John M.-2020 Coogan, C.H., Jr.—1963 Coogan, James-2009 Cook, R.E.-1987 Cooke, F.M.-1981 Cooke, W.-1967 Cooper, D.S.-1994 Cooper, Gary-2018 Cooper, K.W.-1984 Cooper, Michael P.—2020 Copeland, B.B.—1998 Copeland, J.E.-1981 Couchrane, D.-2015 Coughlin, R.J.-1984 Cowan, J.D.-2016 Coward, C.-2015 Craddock, R.-2015 Cramm, K.-2006 Crawford, J.-2019 Crawley, D.B.-2003

Cremaschi, L.-2019 Crider, T.G.—1968 Crosby, R.W.-1996 Cross, R.C.—1967 Crowe, Derek-2020 Crowther, H.F.-2013 Culp, C.H.—2013 Cummings, S.D. Jr.—1992 Curlin, C.D., Jr.-2013 Dale-Derks, C.-2016 Damiano, L.A.-2017 Danks, R.-2014 Darby, D.F.-1997 Darwich, A.-2017 Davies, H.-2017 Davis, A.V.-2008 Dean, K.W.-2007 Debes, G.C.—2002 DeBullet, J.R.-1999 Decker, A.S.—1971 Decker, H.E.-1982 Degelman, L.O.-2017 Den Low, H.-2019 Denton, D.H., Jr.-1979 Dettmers, D.J.-2013 Deverall, C.N.-1963 DeWerth, D.W.—1985 Diehl, H.C.-1964 Dietrich, W.E.-2010 Dillard, W.M.-1994 Dillon, M.E.—1991 Dinse, D.R -2007 Ditzler, J.L.-1970 Doerr, R.G.-2000 Dols, W.S.-2015 Domanski, P.-2007 Donley, W.L.-1986 Donovan, W.J.-1972 Dorgan, C.B.-2002 Dorgan, C.E.—1998 Dougherty, B.-2006 Dowless, E.C.-1985 Downs, J.H.-1967 Drake, M.-2005 Dube, J.E.-1983 Duda, Stephen-2009 Duffy, P.-2019 Dugan, J.T.-2002 Dugan, P.A.—1985 Duignan-Woods, E.-1995 Dunford, D.W.-2008 Dunlap, J.F.—2017 Dwyer, A.-2017 Dwyer, T. C.-2011 Earley, J.-2017 Eckels, S.-2014 Eichelberger, E.C., Jr.-2014 Eichhorn, R.L.—1969 Elleson, J.S.-2005 Ellis, B.—2017 Elmahdy, A.-2001

Elsea, R.-1975 Emerson, Keith I.-2020 Emmerich, S.-2009 Enck, H. J.-2015 Engalitcheff, J.-1963 Engdahl, R.B.-1970 Engen, B.W.—1984 Eppelheimer, D.M.-2002 Erbe, D.—2016 Ervin, D.A., Jr.-1975 Escamilla, J.-2013 Evans, B.L.-1971 Evans, P.E.-1988 Evans, R.A.-1996 Evans, R.J.-1975 Fahnestock, M.-1967 Fairey, P.-2019 Falk, D.S.-1975 Fallin, K.W.-2013 Fanger, P.O.—1985 Faris, E.-2019 Farnes, B.W.-1971 Faust, F.H.-1983 Fenton, D.L.-2013 Ferdelman, T.J.-1990 Fick, D.-2014 Fields, J.R.-2006 Filler, J.-2015 Fisher, D.S.—1996 Fisher, L.J.-2003 Fisk, W.J.-2015 Fitts, E.D.-2006 Flagg, L.F.-1967 Flanagan, R.W.-1972 Flaniken, B.—2019 Fleming, C.L.-1970 Fleming, W.S.-2005 Floreth, J.W.-1984 Fly, M.-2008 Fontaine, W.E.-1971 Foster, T.G.—1970 Fox, J.H.-1983 Fox, W.-2018 Francisco, P.W.-2015 Frazell, C.-2006 Freeman, G.A.-1985 Friberg, E.E.-1979 Fricke, B.-2014 Freidberg, Vanessa-2020 Friedman, G.-2014 Friedrich, M.—2006 Fulk, K.M.-2008 Fuller, R.-2016 Furman, Joseph L.-2020 Gage, C. L.-2011 Gagge, A.P.-1974 Gallagher, M.-2018 Galson, E.L.-1996 Gamble, C.B.-1963 Ganta, R.-2014 Garbarino, A.P.-1998

Gardner, C.R.-1964 Gardner, P.-2018 Garland, M.W.-1970 Gates, A.S., Jr.—1965 Gatley, D.P.-1982 Gatlin, J.-2012 Geary, David-2009 Gebke, K.J.-2011 Geistert, D.L.-1992 Giannini, A.A.-1965 Giesler, A.L.-2008 Gifford, E.W.-1975 Gilbertson, T.-2015 Gilbertson, T.A.-2013 Gilkey, H.T.-1970 Gill, K.E.-1995 Gilman, S.F.-1983 Gilmore, C.F.-1994 Glass, M.—2015 Glicksman, L.R -2008 Godwin, D.S. -2011 Goepfert, D.C.-1984 Goldschmidt, V.W.-1984 Gonzalez, D.J.-1980 Gonzalez, R.A.-1963 Goodman, H.W.-1988 Goodwin, R.R., Jr.-1981 Gorton, R.L.-1989 Gowan, D.—1988 Gowdy, A.C.-1970 Gowri, K.-2013 Graef, P.T.-2006 Gragg, H.G.—1972 Graham, J.B.-1969 Grant, W.A.-1983 Grant, W.I.-1984 Grasso, M.-2001 Grav. C.M.-2017 Green, W.M.-1983 Greenberg, A.—1973 Greenwald, R.—1972 Groff, G.C.-2013 Groll, E.A.-2003 Grondzik, W.-2012 Grumman, D.L.-1990 Grusnick, N.—2015 Grzywacz, C.M.-2011 Gu, L.-2015 Gulledge III, C.E.-2008 Gupta, V.K.-2007 Gupta, V.P.-2010 Gupton, G.W., Jr.—1981 Haberl, J.S.-2001 Haddad, K.-2017 Hafendorfer, B.-2019 Haglid, K.-2009 Hahn, W.G.-2010 Haines, R.W.-1971 Halel, D.-2018 Hall, C.L.-1964 Hall, J.R.-1976

Hall, R. L.-2004 Hallstrom, A.D.-1998 Hammack, K.-2014 Hamrick, B.A., Jr.—1984 Hanegan, T.A.-2013 Hanley, A.J.-1993 Hanley, James T-2020 Hansen, C.G.-1991 Hanson, S.-2015 Hardin, D.C.-1999 Hargan, M.R.-2004 Harju, R.J.-2003 Harnack, J.L.-1987 Harris, W.S.-1967 Harrison, W.A.-2003 Harrod, J.L.-2009 Harrod, John L.-2008 Hart, Michael—2009 Hart, Nathan-2020 Haves, P.-2015 Haydock, P. -2017 Hayter, R.B.-1993 Hayter, S.J.-2001 Healy, W.-2019 Hedrick, R.-2017 Hegberg, M.C.-2001 Hegberg, R.A.-2001 Heiden, R.-2018 Heiman, J.L.—1985 Heinemeier, Kristin-2020 Helander, L.-1967 Henck, C.E.-1998 Hensen, Jan-2009 Hermans, R.-2006 Hershman, M.P.-2010 Hertal, M.-2019 Hesselschwerdt, A.L.-1969 Hewett, M.J.-2003 Hightower, G.B.-1984 Hill, J.E.—1995 Hiller, Carl C.—2020 Hinge, A.—2008 Hitchcock, R.-2016 Hittle, D.C.-1995 Hoey, P.J.-1995 Hoffman, J.E.-1985 Hogan, J.F.-2004 Hogeling, J.-2019 Holcomb, B.-2018 Hole, W.G.—1965 Holladay, W.L.-1964 Holness, G.V.R.-1991 Holte, D.E.-1996 Horn, W.-2016 Horsburgh, B.J.—1972 Hosni, M.H.-2003 Hourahan, G.C.-2000 Houston, S.H.-1997 Howell, R.H.—1983 Hu, Y.R.—2011

Huber, C. F.-2016 Hughes, P.-2014 Humble, J.-2019 Hunn, B.-2016 Hunt, Trenton S.-2020 Hutcheon, N.B.—1967 Huttenlocher, D.-1994 Hwang, Y.-2010 Hydeman, M.M.-2005 Hyman, L.B.-2013 Ibison, J.L.-1976 Immekus, P.M.-2008 Int-Hout III, D.—1993 Isenbeck, J.-2015 Ivesdal, S.W.-2001 Jackin, L.L.-2008 Jackins, G.A.-1989 Jackson, Mark-2020 Jacobi, A.M.-2003 James, J.K.-1972 Janssen, F.-1965 Janssen, J.E.-1995 Jarnagin, R.E. -2005 Jayaraman, N.R.-2013 Jenkins, L.L.-1997 Jensen, N. E.-2017 John, D.A.-2012 Johnson, N.W.-1995 Johnson, P.A.-2011 Johnson, V.J.—1966 Johnson, W.B.-1985 Johnson, W.R.-1975 Jokar, A.-2017 Jones R. K.-2017 Jones, J.W.-1980 Jones, R.-2016 Jones, R.R.-1987 Jones, T.R -2015 Judkoff, R.-2019 Justince, Thomas Allen-2020 Kainlauri, E.O.—1995 Kamm, J.L.-1989 Kandasamy, Ganeson-2020 Karnaz, J.-2018 Katipamula, S.-2006 Kato, S.-2007 Kayan, C.F.-1969 Kazachki, G. S.-2011 Keen, J.A.-2010 Keikavousi, Firouz-2020 Kelso, R.M.-2000 Kelter, S.L.-2010 Kemp, F.P.-2007 Kempf, P.G.-2010 Kennedy, S.D.-2007 Kennoy, D.-2015 Kerr, C.M.-2003 Kershock, O.M.-1984 Kessner, R.J.-1997 Kettler, G.J.-2008 Khalil, E.E.—2011

Khankari, K.-2015 Kilker, R.L.-1976 Kilkis, B.-2008 Kim, Hyojin-2020 King, Lindsey-2020 Kirkwood, R.H.-1983 Kiselbach, D.D.-1994 Klassen, J.—1975 Klock, W.K.-2012 Knebel, D.E.—1995 Knight, Malcolm Dennis-2020 Knight, W.D., Jr.-2011 Knights, C.R.-1996 Knutson, G.W.-1999 Kohler, J.A.—2010 Kohloss, F.H.-1978 Konzo, S.-1963 Koperski, W.D.-1998 Koptis, C.R.—1992 Kramer, D.E.-1985 Krause, W.O.-1986 Kroeker, J.D.-1967 Kroeschell, T.R.-1998 Kuehn, T.—2015 Kuempel, J.L., Jr.-2013 Kujak, S.-2017 Kunkel, Stephanie-2020 Kusuda, T.-1976 Kweller, E.-2019 Kwok, A.G.—2012 Lahmon, R.D.-1991 Laksanakorn, Wichai-2020 Laman, W.-2006 Landman, W.J.-1998 Landsbergm D.—2016 Lang, J.H.-1995 Larry, J.C. -2017 Lau, J.-2015 Laube, H.L.-1982 Lavitt, R.-2018 Lavoie, I.-2018 Law, W.-2019 Lawrence, T.M.-2010 Lawson, C.N.-1993 Lawton, W.-2006 Leach, J.-2017 Leblanc, K.-2016 Leck, T.J.-2017 Lecompte, M.-2017 Ledgett, F.D.-1976 Leitsch, S.L.—1992 Lemire, Nicolas-2020 Lentz, M.S.-2001 Leppard, B.A., Jr.-2008 Levenhagen, J.I.-1980 Levin, H.-2013 Levine, D.J.-1979 LeViseur, S.-2001 Lewis, O.K.-1991 Lewis, R.H.-1999 Liebtag, B.G.-1982

Lim, C.L. dL-2015 Lin, C.H.-2015 Lincoln, A.A.-1989 Lindahl, P.A.-2017 Linder, R.J.—2013 Linskie, G.A.-1970 Listvan, M.-2019 Littwin, D.A.-2008 Liu, B.—2014 Liu, Xiaobing-2020 Lizardos, E.J.-2000 Lloyd, R.T.-1999 Logsdon, R.F.-1970 Lorch, F.A.-2004 Lorsch, H.G.-1998 Loveley, J.D.-1969 Lovvorn, N.C.-2003 Lynch, Brian—2020 MacCracken, M.-2016 MacDonald, R.L.-1985 Mack, L.-1968 Mackey, C.O.-1963 Macauley, D., III-2014 Malphus, W.W.-2008 Mamayek, M.-2016 Manning, B.R.-1992 Maor, I.-2015 Maref, W.-2017 Marek, Steven A.—2020 Marin, A.—1967 Markel, L.C.-2013 Markel, M.L.-1982 Marks, P.-2014 Marple, K.L.-2013 Marschall, P.J.-1963 Massa, D.-1975 Massart, K.G.-1975 Maston, S.E.-2017 Mastro, Giustino-2009 Mathaudhu, S.S.-1997 Mathis, R.C.-2019 Mathur, G.D.-2004 Mattison, R.M.-1996 Maxwell, N.-2013 May, J.W.-1983 McBride, M.F.-1999 McCartney, W.J.-2007 McDermott, M.J.-2013 McDonald, R.O.-1976 McDougall, M.-1984 McDowall, R.—2013 McDowell, C.G.-2001 McDowell, T.-2016 McGinn, T.J.-2013 McGowan, A.-2016 McGrath, J.M.-1976 McGrath, W.L.-1983 McIntyre, D.J.-1995 McKew, H.J.-2012 McLinden, M.O.-2005 McMillan, H.D., Jr.-1976

McMillan, H.D., III-2003 McMinn, D.N.-1990 McNall, P.E., Jr.-1972 McNeil, D.C.—1991 McQuade, W.F.-2012 McQuiston, F.C.-1984 Means, J.K.-2015 Meckler, M.—1993 Meeuwsen, G.-2016 Meffert, G.H.-1967 Mehboob, F.-2018 Mehboob, Farhan Adil-2020 Meisel, P.W.-2015 Meitz, A.K.-1994 Melikov, A.-2006 Mendez, F.J. ---2008 Menster, P.C.-1993 Mentzer, J.C.-1998 Menzies, G.E.-1981 Meredith, D.-2019 Meredith, D.B. -2004 Meriwether, R.F.-1977 Merrick, R.H.-1972 Merrigan, Tim-2020 Mescher, Kirk-2009 Metzger, Corey-2020 Meyer, T.-2012 Middlebrooks, M.-2016 Millard, G.E., Jr.-1987 Miller, D.K.—1992 Miller, P.L., Jr.-1996 Millies, R.L., Jr.-2014 Milliken, H.-2015 Mills, D.M.-1966 Mills, F.A.-2017 Miner, S.M.—1976 Minor, B.-2016 Mitchell, J.W.-1997 Mittal, R.-2019 Modera, M.P.-2013 Moffitt, R.—2017 Mohamed, Ahmed Alaa Edlin-2020 Molnar, J.-2019 Monplaisir, Carrie Anne-2020 Montgomery, R.D.-1998 Morabito, B.P.-1975 Morasch, S.-2011 Morgenroth, D.E.-1984 Morner, S.—2018 Morrison, F.T.-2017 Morrison, W.B.—1976 Morse, C.L.—1998 Moyer, R.C.-1985 Mueller, W.H.-1983 Muller, C.O.-2007 Mumma, S.A.-1995 Munger, G.R.-1970 Murphy, J.A.-2014 Murphy, W.E.-1995 Murray, H.G.S.-1968 Mutum, J.L.-1983

Myers, G.N.-2001 Myers, G.W.F.-1968 Nagengast, B.A -2003 Nall, D.H.-2012 Nanes, R.W.—1995 Naughton, P.J.-2013 Nawaz, K.—2018 Neely, R.—2017 Neff, F.P.-1964 Nelson, B.I.-2013 Nelson, M.-2019 Nettleship, L.C.-1976 Neuman, V.A.-2001 Nevins, R.G.-1972 New, J.-2018 Newcomer, Keith-2009 Newman, H.M.-2010 Newman, J.L.—2012 Newton, A.B.—1963 Nicholas, S.W.-2015 Nichols, D.E.-1975 Ninomura, P.T.-2015 Nix, J.H.—2013 Noble, R.E.-2001 Nolfo, A.P.-2003 Norman, J.H.-2007 Norris, R.W.-1982 Novosel, D.-2003 Nussbaum, O.J.—1976 Nutter, D.-2015 O'Dell, L.J.-2003 O'Higgins, K.B.-1999 O'Neal, D.L.-1997 O'Neill, Z.-2019 Oakes, A.W.-1975 Offermann III, F.J.-1994 Ohadi, M.M.-2003 Olert, J.-2006 Olesen, B.W.-1997 Olivieri, J.B.—1975 Olsen, J.C.—1981 Olson, D.R.-2013 Ow, C.S.-2013 Owen, K.-2019 Pagliasotti, R.D.-1980 Palmatier, E.P.-1964 Pannkoke, T.E.-1988 Papar, R.A.-2010 Parke, E.A.—1999 Parmelee, C.E.-1972 Pasch, R.M.—2017 Patenaude, R.E-2000 Patterson, N.R.-1988 Patton, R.M.-2017 Payne, W.V.-2015 Pearson, F.J.-1990 Pearson, R.J.-1985 Peet, K.C.-2015 Penar, V.L.-2014 Pentzer, W.T.-1964 Perkins, C.S.—1976

Perreault, G.-2011 Perry, R.P.-1975 Persily, A.K.-2006 Pesterfield, C.H.-1972 Peterman, K. L.—2012 Petersen, R.—2016 Peterson, J.C.-2010 Peterson, K.W.-2001 Pettit, K.A.-1975 Pettway, D.C.-2007 Pflug, I.S.-1974 Phetteplace, G.-2019 Phillips, B.-2009 Phillips, C.W.-1969 Phillips, D.S.—1972 Phillips, T.J.-1968 Phoenix, T.H.-1996 Pierce, J.D.-1981 Pietsch, J.A.-1994 Platt, H.-2016 Pons, R.-2008 Porter, J.M.-1996 Poston, I.G.-2005 Pouchak, M. A.-2017 Powell, F.J.-1982 Prather, D.-2019 Price, G.—2018 Priester, G.B.-1968 Procell, C.J.—1995 Radermacher, R.-2002 Rakheja, A.-2015 Ramsey, M.A.-1966 Randolph, C.H.-1976 Rasmussen, D.W.-2013 Reddy, A.—2008 Reed, F.J.-1963 Reedy, W.-2009 Reich, H.H.—1984 Reichert, I.-2017 Reid, D.W.—1996 Reid, J.G.—1973 Reig, J.A.-1994 Reihl, K.-2019 Reinarts, T.-2005 Reindl, D.T.-2006 Reistad, G.M.-1991 Reynolds, B.-2015 Riback, L.-2017 Rich, D.G.—1972 Richard, O.E.-1981 Richards, W.V.-1984 Richardson, G.-1995 Richardson, J.O., Jr.-2002 Rickelton, D.-1983 Rieke, J.A.-2013 Rishel, J.B.-1998 Risley, R.-2009 Rivers, R.D.-1992 Roberts, J.F., Jr.-1984 Robertson, E.J.-1963 Robinson, K.E.-1973

Rock, B.A.-2004 Rockwell, T.F.-1966 Rodriguez, F.R., Sr.-2012 Rogers, D.-2016 Rohles, F.H., Jr.-2000 Romero, R.-2019 Romine, T.B., Jr.—1993 Rooley, R.H.-1991 Rose, R.M.-2005 Rosen, S.-1980 Rosen, S.-2014 Rosenstock, S.-2016 Ross, J.H.-1968 Rottman, G.B.-1965 Rountree, H.E.-1989 Rudoy, W.-1980 Ryan, H.J.-1970 Ryan, W.-2017 Sachs, H.M.-2013 Sainsbury, G.F.-1976 Sanchez, A.J.-1994 Sandfort, J.F.-1971 Sanvordenker, K.S.-1979 Sauer, H.J., Jr.-1981 Schambach, F.H.-2003 Schenk, J.A.-1963 Schlentner, K.O.—1970 Schmidt, W.A.-1977 Schoen, L.J.-2013 Schopplein, H.-2019 Schrecengost, R.C.-2013 Schreiner, J.R.-1969 Schultz, K.-2017 Schumacker, E.W. -2007 Schwedler, M.-2008 Schwenker, E.H.-1993 Scoggins, G.-2009 Seelaus, J.J.-1976 Segal, S.C.-1963 Seiler, E.N.—1993 Sekhar, Chandra-2010 Sekhar,S.C.-2007 Sepsy, C.F.-1976 Sestak, G.J.-1995 Seth, A.K.-2016 Setty, B.S.-2014 Shadpour, F.-2016 Shah, M.M.-2003 Shapiro, L.-2017 Shavit, G.-1997 Shea, J.E.-1982 Sheerin, Michael P.-2020 Sheffield, J.W.-1991 Sheinman, H.-2016 Sherber, M.S.-2013 Sherif, S.A.-2003 Sherman, M.H.-1997 Shrestha, S.-2016 Siller, D.A.-2013 Silvera, A.-1964 Simmonds, P.-2009

Simmons, R.-2019 Simonsen, T.-2017 Singh, H.—1997 Singh, J.B.-2006 Sipes, J.-2014 Sipes, J.M.-2007 Skelton, B. A.-2016 Slabinski, S.-1994 Slone, M.R.-1991 Smith, L.R.-1969 Snyder, E.F.-1970 Sobieski, J.T.-1996 Soling, S.P.—1969 Somasundaram, S.-2006 Sonderegger, R.—2016 Sosoka, J.R.-1988 Soumerai, H.P.-1969 Spangler, A.T., Jr.—1980 Spauschus, H.D.-1971 Speich, C.F.—1985 Spence, R.A.-2014 Spencer, S.A.-1965 Spevak, F.-2008 Spiegel, W.F.-1983 Spielvogel, L.G.-1975 Spitler, J.D.-2000 Spofford, W.A.-1973 Spurlock, B.H.-1970 Srebric, J.—2007 Staebler, L.A.-1967 Stambaugh, L.P.—1994 Stamper, E.-1985 Stanke, D.-2014 Stanley, J.H.-2001 Staples, L.S.-1989 Starner, K.E.-1992 Stenger, H.G.-1982 Stern, R.M.-1971 Stethem, W.C.-1984 Stoecker, W.F.-1976 Stone, D.T.-1994 Stotz, R.B.-1999 Stover, R.S.-1969 Strahan, E.K.-1970 Straub, H.E.-1973 Strong, H.G.—1963 Strong, R.H.—1998 Stuber, R.J.-2017 Sturm, E.-2019 Subherwal, B.-2016 Sud, I.—2003 Sultan, Z. M.-2017 Sun, L.-2011 Sun, W.-2019 Sundaresan, G.-1995 Supple, R.G.—1987 Swanson, Michelle-2020 Swatkowski, L-2017 Swenson, C.A.-1985 Symko, J.-2019 Szymurski, S.R.-2013

Talbott, J.M.-2015 Tamblyn, R.T.-1994 Tamura, G.T.-1983 Tapias, A.—2003 Tauby, J. R.-2014 Taylor, S.T.-2004 Taylor, W.—1972 Teske, E.R.—1974 Thedford, Jr., M.T.--1999Thomle, A.-2015 Thompson, J.W.-1971 Thomson, Q.R.-1976 Thornton, J.K.-1972 Thornton, R.C.-1989 Thrasher, K.C.-2004 Threlkeld, J.L.-1963 Thuman, J.-2006 Tilney, R.B.—1970 Timm, M.L.—1996 Tinsley, W.E.-2008 Tisdale, R.W.-2007 Todorovic, B.B.-1995 Todorovic, M.-2019 Tosh, M.-2017 Toub, S.G.-2011 Townsend, T.E.-1997 Traboulsi, S.R.-2008 Trafton, P.M.-2004 Tran, T.M.—2013 Traylor, J.L.-2014 Traugott, F.A.-1979 Tressler, D.K.-1964 Tronville, P.-2015 Troutman, M.G.-2012 Trueman, C.-2018 Tse, V.-2003 Tsui, E.K.C.-2015 Tumilty, J.E.-1975 Turnbull, P.G.-2012 Turpin, M.C.-1964 Tutt, R.D.—1973 Underwood, T.D.-2002 Urban, F.O.-1963 Urdahl, T.H.-1967 Utesch, A.L.-1986 Vaculik, F.—1997 Valerio, E.L.-1993 Vallort, J.K.-2001 Vallort, R.P.—1996 VanGeem, M.G.-2014 Varley, J.—2018 Vaughn, F.L.—1972 Veeck, A.C.-2013 Vehlow, R.-2019 Vener, A.S.-1989 Vermillion, B.J.-1992 Viessman, W.-1971 Villanueva, S.V.-2013 Vineyard, E.A.-1999 Vinther, P.N.-1964

Virgin, D.G.-1984 Virmani, A.K.-2014 Vucci, J.I.-2010 Wagner, E.K.—1968 Walker, I.S.-2008 Walker, W.O.—1968 Wallstrom, L.L.-1976 Walter, W.F.-2008 Walters, F.H.-2015 Wang, L.M.-2012 Wang, X.-2011 Wargocki, P.-2017 Warres Bayer, C.-2019 Warrick, L.K.-1968 Watson, R.-2015 Watson, T.E.-2002 Watz, Michael L., Jr.-2020 Wayland, S.—2016 Webb, W.A.-2015 Weld, G.B.-1981 Wellborn, J.M.-1974 Wellford, B.-2017 Wells, G.E.-2004 Wells, J.-2009 Wells, W.P.-1975 Wentz, T.G.-2013 Werden, R.G.—1971 Werkema, T.E., Jr.-2010 Werman, L.F.—2005 Werner, P.H.-1981 Wessel, D.J.-1996 Westbrook, Ronald L.-2020 Westcott, R.M.-1968 Westhoff, S.M.-1996 Westling, L.L.-1964 Weston, T.A.-2013 Wheeler, A.E.-1978 White, T.J.—1969 Whitesel, H.A.-1964 Whitmer, L.R.-2004 Wicks, K.W.—1973 Wile, D.D.-1983 Wilkins, C.-2016 Williams, B.H.-2013 Williams, S.J.-1963 Williams, T.H.-1997 Williams, V.A.-1994 Willson, J.-2008 Wilson, A.G.—1971 Wilson, D.P.-2015 Wingfield, G.L.-2008 Winters, P.—2017 Wischmeyer, W.F.-1963 Wissmiller, V.D.-1968 Wolf, J.E.-1991 Wolf, J.L.-1970 Wolfert, J.E.-2003 Wong, Y.W.-2005 Woodford, M.W.-1990 Woodroof, J.G.-1964 Woods, J.E.-1981

Woods, L.D.—2013 Woodworth, J.I.—1991 Woody, A.W.—1994	Yang, X.—2008 Yashar, D.—2014 Yuill, D.P.—2013	Zarour, J.H.—2013 Zbin, R.—2019 Zentz, D.—2015
Woolrich, W.R.—1963	Yelton, K.—2019	Zhai, Z.—2010
Wray, C.P.—2004	Yost, Robert W.—2020	Zhang, J.—2008
Wright, J.L2019	Young, Chariti—2020	Zhang, Y.—2007
Wright, J.R2013	Yount, F.—2019	Zhivov, A.M.—2011
Wyckoff, P.W.—1965	Yuill, G.K.—1996	Zhou, X.—2017
Yamamoto, G.S.—1988	Zagar, R.A.—2001	Zuo, Z.—2017
	Zanders, R.W.—1995	

#### **Donald A. Siller Refrigeration Award**

Established in 2013, this award recognizes exceptional performance by a Chapter Refrigeration Chair for planning activities and providing technology transfer on the subject of refrigeration. The name of the award was changed from the Refrigeration 'R in ASHRAE' award in June 2015.

2014-16	(No award given)	2018	Kevin Galbraith	2020	Brittney Garcia
2017	James Paul Martin	2019	Edward P. Bricker		

#### **Donald Bahnfleth Environmental Health Award**

Established in 2006, this award recognizes excellence in volunteer service focused on environmental health issues. The name of the award was changed from the Environmental Health Award in 2019.

2006	(No award given)	2011	(No award given)	2016	Francis Offerman
2007	David Grimsrud	2012	Steven J. Emmerich	2017	W. Gene Tucker
2008	Hal Levin	2013	Lawrence J. Schoen	2018	Pawel Wargocki
2009	H.E. "Barney" Burroughs	2014	Chandra Sekhar	2019	William P. Bahnfleth
2010	Andrew K. Persily	2015	Jack Spengler	2020	Paul Francisco

#### E.K. Campbell Award of Merit

The E.K. Campbell Award of Merit is presented by the Life Members Club to honor outstanding service and achievement in teaching.

1059	Lynn Holondon	1000	E.C. Haaman	2002	Duranialary Tedanaryia
1958	Lynn Helander	1980	F.C. Hooper	2002	Branislav Todorovic
1959	Dean Merl Baker	1981	William F. Rudoy	2003	Harmohindar Singh
1960	Lester S. O'Bannon	1982	Raymond Cohen	2004	Anthony Jacobi
1961	Burgess H. Jennings	1983	Harry J. Sauer, Jr.	2005	James E. Braun
1962	(No award given)	1984	Burgess H. Jennings	2006	(No award given)
1963	Maurice K. Fahnstock	1985	Charles F. Sepsy	2007	Ronald H. Howell
1964	Carl F. Kayan	1986	Faye C. McQuiston	2008	David B. Meredith
1965	C.O. Mackey	1987	Victor W. Goldschmidt	2009	Judi Steciak
1966	Richard C. Jordan	1988	Stanley A. Mumma	2010	Eckhard A. Groll
1967	S. Konzo	1989	William J. Wepfer	2011	(No award given)
1968	Walter O. Walker	1990	David J. Wilson	2012	Wayne A. Helmer
1969	B.H. Spurlock, Jr.	1991	James C.S. Chou	2013	Michal Bernier
1970	John Everetts, Jr	1992	Jan F. Kreider	2014	Jeffrey D. Spitler
1971	James M. McGrath	1993	J. Ben Austin	2015	Charles "Charlie" Culp
1972	Jack B. Chaddock	1994	Gordon M. Reistad	2016	Michael Ohadi
1973	Wilbert F. Stoecker	1995	Joseph B. Olivieri	2017	Thomas H. Kuehn
1974	Ralph G. Nevins	1996	David A. Didion	2018	Julia A. Keen
1975	Herbert B. Nottage	1997	S.A. Sherif	2019	William P. Bahnfleth
1976	John F. Sandfort	1998	David E. Claridge	2020	Janice K. Means
1977	Rodney G. Keif	1999	Margaret S. Drake	2021	Chandra Sekhar
1978	Stanley F. Gilman	2000	Timothy G. Wentz		
1979	Donald C. Bryant, Sr.	2001	David R. Tree		

**Exceptional Service Award** 

Established in 1998, this award recognizes members who have served the Society faithfully and with exemplary effort, in excess of that required for the Distinguished Service Award (45 service points are required).

Aguilo, Roberto-2014 Arnold, David-2014 Austin, George W.-2020 Ayub, Zahid H.—2013 Anderson, M. Kent–2019 Bahnfleth, William P.-2008 Baker, Robert G.-2014 Balaras, Contantinos-2011 Bansal, Pradeep—2016 Baxter, Van-2011 Becker, Bryan-2014 Beda, Michael F.-2008 Bellenger, Lynn B.-2006 Betz, Frederick-2018 Bilderbeck, Michael R.-2012 Binder, Erich-2017 Boyce, Darryl K.-2008 Brandemuehl, Michael J.-2012 Brandt, Donald L.-2015 Buck, William J.-2003 Burgett, Lee W.-2013 Burroughs, H.E. Barney-2008 Bushby, Steven T.-2017 Butler, David, Sr.-2001 Calm, James M.-2002 Carter, Dale E.—2013 Chakroun, Walid-2019 Charles, Richard A.-2000 Chen, Quingyan (Yan)-2006 Coad, William-2001 Cohen, Raymond-2013 Colliver, Donald G.-2010 Conlan, Wade H.-2020 Cooper, Kenneth W.-2008 Cramm, Kellev—2019 Crawley, Drury B.-2013 Cummings, Jr., Sam D.-2017 De Bullet, Julian R.—2010 Dean, William K.—2013 Debes, Gary C.-2010 Dillard, William M.-2010 Domanski, Piotr-2016 Donley, Wallace-2001 Dorgan, Chad-2016 Dorgan, Charles E-2002 Dwyer, Timothy C.—2011 Emmerich, Steven-2015 Evans, Richard A.-2006 Ferdelman, Thomas J.-2007 Fields, James R.-2014 Fisher, Larry-2018 Flagg, Louis F.—1999 Fleming, William S.-2011 Fly, Mark W.-2020 Francisco, Paul W.-2015 Fricke, Brian-2016 Fulk, Kenneth-2014 Gatlin, Jeff-2020

Giesler, Arthur-2019 Goodman, Harley W.-2008 Gowan, A. Damon-2016 Graef, Patricia T.-2017 Grasso, Maureen-2008 Groff, Gerald C.-2014 Groll, Eckhard A.-2014 Gulledge, Charles E.-2015 Hallstrom, Arthur D.-2007 Harrison, William A.-2010 Harrod, John-2016 Hayter, Richard B.-2002 Hayter, Sheila-2011 Hegberg, Mark-2009 Henck, Charles E.—2012 Hermans, Richard D.-2011 Hiller, Carl C.-2020 Hogan, John-2015 Holness, Gordon V.R.-2006 Hosni, Mohammad, H.-2013 Hourahan, Glenn C.-2006 Hughes, Patrick-2014 Hwang, Yunho-2013 Hvdeman, Mark-2014 Int-Hout, Daniel, III-2007 Jackins, George-2001 Jarnagin, Ronald E.-2010 Jones, T. Randall-2016 Kelter, S. Louis-2014 Kessner, Ronald J.-2010 Khalil, Essam E.-2017 Khankari, Kishor K.-2017 Kilkis, Birol-2008 Klock, William-2019 Knebel, David E.—2012 Knight, Malcom Dennis-2020 Kohloss, Frederick H.—1999 Lawrence, Thomas M.-2011 Lawson, Carl N.-2012 Leitsch, Stanley-2008 Lemire, Nicolas-2020 Leppard, Ben A. Jr.-2013 LeViseur, Suzanne-2014 Logsdon, Robert F.-1998 Lovvorn, Nance-2014 Markel, Lawrence—2019 Marple, Kevin L.—2020 Mastro, Giustino-2009 Mathis, R. Christopher—2019 McGinn, Tim-2020 McMillan, Hugh-2009 Menzies, George E-2013 Mescher, Kirk-2014 Millies, R. Lee, Jr.-2020 Montgomery, Ross D.-2006 Murphy, William E.-2014 Myers, Garry N.-2010 Newman, H. Michael-2018

Nichols, Donald E.-2003 Nix, John-2019 Ohadi, Michael M.-2011 Olesen, Bjarne W.-2006 Patenaude, Raymond E.-2010 Perry, Richard P.-1999 Persily, Andy-2009 Peterson, Kent W-2006 Pettway, Daniel C-2014 Phillips, Clinton W.-1999 Phillips, Elbert-2017 Phoenix, Thomas H.-2007 Poston, Ira G.-2015 Radermacher, Reinhard-2005 Reedy, Wayne-2014 Rich, Donald G.-2007 Risley, Robert B.-2014 Rooley, Richard H.-2013 Rose, Richard M.-2014 Sanchez, Alberto J.-2013 Sauer, Harry, Jr.-2001 Schwedler, Michael "Mick"-2015 Schwenker, Eric-2001 Scoggins, Mary G.-2015 Scott Fisher, David-2019 Sekhar, Sitaraman Chandra—2013 Sherif, S.A.—2010 Sherman, Max H.-2005 Simmonds, Peter-2014 Sobieski, J. Thomas-2009 Spitler, Jeffrey-2019

# F. Paul Anderson Award

Established in 1930 to honor the accomplishments of the late F. Paul Anderson, Past President of the Society, this award is presented annually for notable scientific achievement or outstanding services performed in the field of heating, ventilating, or air conditioning.

1932	Willis H. Carrier	1964	Axel B. Algren	1991	William Goodman
1932-35	(No award given)	1965	Louis N. Hunter	1991	P. Ole Fanger
1936	Arthur C. Willard	1966	Richard C. Jordan	1993	Jack B. Chaddock
1937-38	(No award given)	1967	Walter A. Grant	1994	Hans O. Spauchus
1939	Frank B. Rowley	1968	Crosby Field	1995	Frank H. Faust
1940-41	(No award given)	1969	Dean W.R. Woolrich	1996	William J. Coad
1940-41	Frederick E. Giesecke	1909	Glenn Muffly	1990	Joseph B. Olivieri
1942	(No award given)	1970	Donald K. Tressler	1997	William J. Collins, Jr
1943	Ferry C. Houghten	1971	Robert H. Tull	1998	Donald R. Bahnfleth
1944	(No award given)	1972	Seichi Konzo	2000	
1945				2000	Arthur E. Bergles
	Alfred E. Stacey, Jr. James H. Walker	1974	William L. Mcgrath Neil B. Hutcheon		(No award given) Clark W. Bullard
1947		1975		2004	
1948-49	(No award given)	1976	Paul R. Achenbach	2005-09	(No award given)
1950	ChasEdward A. Winslow	1977	(No award given)	2010	Gerald C. Groff
1951	Samuel R. Lewis	1978	Wilbert F. Stoecker	2011	Richard P. Perry
1952	Homer Addams	1979	Daniel D. Wile	2012	(No award given)
1953	Everett N. Mcdonnell	1980	Herbert L. Laube	2013	Richard H. Rooley
1954	Walter I. Fleisher, Sr.	1981	Burgess H. Jennings	2014	Kent W. Peterson
1955	Charles S. Leopold	1982	John Engalircheff, Jr.	2015	A. Damon Gowan
1956	Robert W. Keeton, M.D.	1983	William P. Chapman	2016	Thomas E. Watson
1957	M.F. Fahnestock	1984	(No award given)	2017	(No award given)
1958	George Lewis Tuve	1985	Walter F. Spiegel	2018	Steven T. Taylor
1959	C.P. Yaglou	1986	A. Pharo Gagge	2019	(No award given)
1960	Peter Ben Gordon	1987	Everett P. Palmatier	2020	William P. Bahnfleth
1961	J. Donald Kroeker	1988	Milton W. Garland	2021	Samir Traboulsi
1962	C.M. Ashley	1989	George O.G. Lof		
1963	Arthur J. Hess	1990	Frank H. Bridgers		
		•	0		

#### Fellow

The grade of Fellow is conferred on Members who have attained distinction in the arts relating to the sciences of heating, refrigeration, air-conditioning, ventilation, or the allied arts and sciences.

Abedin, A.—1998	Athienitis, A.K.—2017	Bayer, C.—2016
Achenbach, P.R.—1959	Atwood, T.—1992	Beaty, D.L.—2007
Acorn, W. A.—2006	Avery, G.—1997	Becker, B.—2004
Adams, L.—1955	Ayres, J.M.—1973	Becker,S.—2008
Advani, A.—1996	Ayub, Z.—2008	Behls, H.F.—1995
Aguilo, R.R.—2013	Azer, N.Z.—1992	Bellenger, L.G.—1998
Akerman, J.R.—1981	Baade, P.K.—1971	Belt, Jr., N.W.—1998
Albern, W.F.—1992	Bahnfleth, D.R.—1975	Bendelius, A.G.—1997
Alderman, B., Jr.—1977	Bahnfleth, W.P.—2005	Bennett, A.H.—1983
Altieri, J.L.—1986	Baker, R.G.—2009	Benz, D.L.—1993
Alvine, R.G.—1981	Balaras, C.—2011	Bergles, A.E.—1992
Amann, W.L.—1985	Bales, E.L.—1999	Berglund, B.—1992
Amstrong, P. R.—2015	Bansal, P.—2008	Berglund, L.G.—1991
Anderson, C.M.—1982	Barbier, W.H.—1987	Bernier, M.—2016
Anderson, P.P., Jr.—1979	Barkman, H.G.—1987	Bertrand, L.—1998
Angus, D.L.—1971	Barnaby, C.—2016	Besant, R.W.—1993
Appling, E.B.—1983	Barnard, L., Jr.—1989	Betz, F.W.—2017
Armstrong, R.M.—1950	Basso, P.J.—1997	Bevirt, W.D.—1992
Armstrong, R.S.—1997	Bathgate, T.A.—1992	Bhatti, M.—2004
Arnold, D.—2001	Baum, R.T.—1977	Biehn, G.L.—1975
Ask, A.—2019	Bauman, F.S.—2018	Bilderbeck, M.R.—2005
Asker, G.C.F—1996	Baxter, V.—2011	Bishop, W.P.—1985

Bisset, J.B.-1995 Blagojevic, B.-2019 Blatt, M.H.-1999 Blazier, W.E.-1990 Blossom, J.S.-1977 Bodinus, W.S.-1975 Boggs, A.T., III-1979 Boldt, J.G.—2017 Bong, T.-Y.-1990 Bosworth, C.M.-1971 Bottum, E.W.-1984 Bourquin, P.A.-1990 Bouthillette, R.-1994 Bovay, H.E., Jr.-1981 Boyce, D.K.-2009 Boyd, R.L.-1967 Bradley, T.W.-1989 Brager, G.S.—2002 Brambley, M.R.-2009 Brandemuehl, M.J.-2009 Branson, D.J.-2013 Braun, J.-2005 Braun, R.H.-1990 Brickman, H.—1987 Bridgers, F.H.-1973 Briede, J.D.-1994 Briley, G.C.-1991 Broadbent, C.R.-2015 Brown, A.M.—1987 Brown, C.R.—1991 Brown, F.L.-1985 Brown, J.S.-2013 Brown, L.N.-1977 Brown, M.R.-1993 Brown, S.W.-1967 Bruechert, C.J.-1982 Brundrett, G.W.-1998 Bruning, S.F.—1996 Bryant, D.C., Sr.-1981 Buck, W.J.—1993 Buckley, J.B.-1981 Buckley, N.A.-1992 Bullard, C.W.-2002 Bullock, C.E.-1996 Bunn, R. A.-2006 Burch, R.M.—1995 Burdick, R.S.—1993 Burgett, L.W.-2000 Burkhardt, R.G.-2001 Burr, G.C., Jr.-1977 Burr, R.W.—1994 Burroughs, H.E.-1994 Bushby, S.-2008 Bushnell, J.-2016 Butcher, T.A.-2013 Butkus, A.S.-2018 Butler, D.S, Sr.—1992 Calm, J.M.-1997 Campbell, H.J., Jr.-1988 Capehart, B.L.-2012 Carlson, J.A.-2017

Carroll, J.R.-1972 Carter, D.E.-2012 Carter, H.C.-1980 Cavallini, A.-2007 Cavestri, R. C.-2006 Cawley, R.E.—2002 Chaddock, J.B.-1971 Chakroun, W.-2010 Chan, J.V., Jr.-2005 Chang, J.C.-2019 Charles, R.A.-1992 Charneux, R.-2005 Chato, J.-2004 Chee, Y.P.-2004 Chen, Q.-2005 Chen, T.L.-2004 Chiriac, F.-2006 Choat, E.E.—1989 Chongvatana, P.-2006 Chou, S.K.-2005 Chow, T.-2008 Chow, W.K.-2015 Christensen, P.B.-1954 Chu, Chun-Ying-2003 Chuah, Yey K.-2003 Claridge, D.-2007 Clark, E.M.-1999 Clark, J.A.-1999 Clark, K.M.—1994 Clark, R.J.-1999 Clavijo, F.-2019 Cleland, D.J. -2009 Clements-Croome, D.J.-1998 Cloke, T.H., Jr.—1974 Coad, W.J.-1980 Coggins, J.L.-1999 Cogil, C.A.-2020 Cohen, R.—1977 Cohen, W.-1982 Colborne, W.G.-1979 Cole, R.A.—1991 Collins, W.J., Jr.-1966 Colliver, D.G.-1995 Colvin, T.-2016 Conley, H.E.-1983 Cooper, K.-2005 Cooper, W.S.-1997 Copeland, C.C.-1991 Corley, J.H.—1998 Costa, Antonio-2014 Costantino, M.-1985 Coughlin, R.J.—1997 Coward, C.W., Jr.-1996 Cox, J.E.-1993 Cox, W.A., Jr.-1982 Coyne, G.G.-1986 Crawford, J.G.-2001 Crawley, D.B.-2009 Cromer, C.J.-2009 Crosland, R.B.-1983 Culp, C.— 2005

Cummings, J.B.-2010 Cummings, S.D., Jr.-1994 Dale, K.W.-1984 Dalugoda, C-2019 Daly, E.A.-1994 Davidson, L.A.-2007 Davis, W.J.-1984 Dean, B.W.—1983 Decker, H.E.-1983 Deltz, P.N.-1994 Depew, C.A.-1995 DeSaram, J.A.-2019 DesChamps, N.H.-1999 Deshpande, S.D.-2015 Dharkar, P.-2014 Didion, D.A.-1991 Dieryckx, M.-2020 DiGiacomo, W.A.-1986 Dillon, M.E.—1993 Dobbosi, J.S.-2019 Domanski, P.A.-2007 Donley, W.L.-1977 Donoso, J.E.-2010 Dorgan, C.B.-2010 Dorgan, C.E.-1985 Downing, L.-1991 Downing, R.C.-1968 Doyle, D.-2019 Driscoll, D.J.—1982 Duda, S.W.-2013 Dunlap, J.-2016 Dunnavant, B.K.-2017 DuPernell, P.C.-1994 Durkin, T.H.-2012 Dussault, R.E.-1992 Dwyer, T.-2008 Dzelzitis, Egils-2014 Eichelberger, E.C, Jr.-2020 Ellis, B.E.-2020 Elmahdy, A.H.-2009 Eley, C.N.—2018 Elovitz, D.M.-1996 Elovitz, K.-2018 Emery, A.F.-2007 Emmerich, S.-2016 Ensor, David-2003 Ervin, D.A., Jr.—1975 Evans, G.F.-1987 Evans, L.D.—1995 Evans, R.A.-1993 Evans, R.J.-1979 Fanger, P.O.—1980 Farina, D.-1990 Fencl, F.B.-2009 Fenton, D.L.-2020 Ferdelman, T.J.-1998 Fernandes, E.O.-1997 Ferreira, F.-1993 Field, J.-2008 Fiorino, D.P.-2001 Fischer, H.C.—1979

Fisher, D.-2009 Fisk, W.-2005 Fitzner, K.-1999 Flaniken, Bruce-2014 Fleming, W.S.—1991 Fly, M.W.-2012 Fogelman, S.R.—1981 Fox, J.H.—1965 Francisco, P.-2018 Frankfurt, W.W.-1977 Freeman, G.A.-1983 Friberg, E.E.-1983 Friedman, D.-1982 Friedman, G.-2012 Gabrielsson, J.E.-1984 Gage, Cynthia—2006 Gallagher, M.-2019 Galson, E.L.—1988 Ganta, Ravisanka-2014 Garbarino, A.-2005 Gardner, M.D.-1997 Garrett, F.T., Jr.-1992 Gates, A.S., Jr.-1966 Gatley, D.P.-1984 Gendler, G.L.-1973 Gerstler, W.D.-2015 Ghaddar, N.-2019 Ghosh, D.-2017 Gilbertson, T.A.-1991 Gilbo, C.F.-1991 Gilmore, C.F.-1996 Gilson, P.D.-1991 Gipson, D.W.-1990 Gladstone, J.-1989 Glaser, D.L.-1995 Glicksman, L.-2008 Goldberg, N.-1988 Goldman, R.F.-1983 Goldschmidt, V.W.-1985 Gong, Y.E.-2019 Gonzalez, D.J.-1977 Gonzalez, R.R.-1994 Goodman, H.D.-1989 Goodman, H.W., Jr.-1988 Gorton, R.L.-1990 Goswami, D.Y.-2013 Govan, F.A.-1983 Gowan, D.-2010 Gowri, K.-2016 Graber, E.-1982 Graef, P.T.-2007 Graham, J.B.—1969 Graham, Lois-1984 Grant, W.I.-1979 Grasso, M.-2007 Graves, J.R.-1983 Green, W.M.-1999 Greenberg, A.-1981 Greenwald, R.-1988 Grimsrud, D.-2005 Groff, G.C.-2004

Groll, E. A.-2006 Grondzik, W.T.-2007 Grossman, G.-2010 Grumman, D.L.—1991 Guimaraes, E.T.-2013 Guinn, G.R.—1993 Gulledge, C.-2019 Guntermann, A.E.—1992 Gupta, H.C.—1975 Gupta, V.P.-2011 Gupta, Vijay-2003 Gupton, G.W., Jr.-1981 Gusler, D.L.-1972 Guttman, K.-1981 Haag, W.L.-1999 Haberl, J. S.-2006 Hadley, L.G.-1984 Haghighat, F.-2007 Hague, J.T.-1998 Hahn, W.-2008 Haines, R.W.-1974 Hallstrom, A.D.-2000 Halyard, P.J.-2000 Hammack, K.G.-2017 Hamrick, B.A., Jr.-1995 Han, H.-2018 Handegord, G.O.P.-1984 Hanegan, T.A.-2017 Hanley, A.J.—1990 Hansen, E.G.—1993 Hansen, III, C.-1998 Hargan, M.R.-1996 Harmon, J.J.-1995 Harriman, L.G.-2009 Harrison, W.-2019 Harrison, W.D.-1982 Harrod, J.-2016 Hassan, I.-2020 Haves, Philip-2003 Hay, Donald J.-2014 Havakawa, T.G.-1982 Hayes, H.P.-1962 Hayter, R.B.-1991 Hayter, S.-2008 Heffron, D.B.-1977 Hegberg, R.A.-1999 Heiman, J.L.-1990 Heinemeier, K.-2015 Hellman, A.A.—1986 Henck, C.E.—1997 Hens, H.S.L.C.-2007 Hensen, J.L.M.-2007 Herbert, M.B.-1999 Herrmann, D.C.-2020 Hightower, G.B.-1977 Hill, J.E.—1992 Hiller, C.-2005 Hinge, A.W.-2017 Hirsch, S.R.-1951 Hittle, D.C.-1991 Hng, H.C.-1995

Hogeling, J.J.-2010 Holness, G.V.R.-1990 Holste, F.R.-1983 Hong, T.-2020 Hopper, R.E., Jr.—1993 Horstman, R.H.—2012 Horvay, J.B.-1977 Hosni, M.H.-2005 Hourahan, G.C.-2009 House, J.M.-2020 Houston, S.H.-1998 Howell, R.H.-1986 Hrnjak, P.S.-2005 Hu, Y.R.-2005 Hubard, B.-1988 Huergo, E.-2016 Hughes, D.-2008 Hunn, B.D.—1994 Hunt, E.—1994 Hunton, R.O.-1993 Hwang, H.-2018 Hydeman, M.-2006 Ibison, J.L.-1973 Int-Hout, D.-2007 Irwin, A.A.-2018 Jackins, G.A.-1993 Jacobi, A.M -2009 Jain, P.C.-1995 Jang, J. Y.-2006 Jarik. G.J.-1977 Jarnagin, R.-2017 Jensen, R.E.-1993 Jensen, R.N.-1981 Jia, S.-2017 Jimenez-Segovia, M.-2015 Johnson, G.E.-1991 Johnson, R.M.-1996 Jones, B.W.-2000 Jones, J.W.-1989 Jones, R.R.-1977 Jordan, C.H.-1984 Jordan, R.C.-1959 Jorgensen, R.-1977 Judkoff, R.-2020 Kadaba, P.V.-1993 Kamm, J.—2018 Kampmeyer, J.E.-1997 Kanan, K. S.-2006 Katipamula, S.-2009 Kato, S.-2007 Kavanaugh, S.-2003 Kazachki, G.-2003 Keeler, R.M.-2010 Keen, J.-2016 Keller, G.M.—1987 Kelley, W.-2000 Kelly, E.E.-1981 Kelly, G.E.-1991 Kelso, R.M.-1992 Kelter, S.L.-1995 Kennedy, E.C.-1985

Kennedy, J.M.-1979 Kenny, E.-1987 Kerschbaumer, H.G.-1989 Khalifa, H.E.—2009 Khalil, E.E.-2009 Khankari, K.-2015 Khattar, M.K.-2009 Kilkis, B.—2004 Kim, K.W.-2015 Kimball, W.R.-1994 Kimura, K.I.-1987 Kingsbury, H.F.-1982 Kirkwood, R.R.—1967 Kittler, R.-2001 Klassen, J.-1982 Klein, S.A.-1998 Klote, J.H.-1993 Knebel, D.E.—1995 Knight, M.D.-2013 Knutson, G.W.-2013 Koch, P.H.-1977 Kohlenberger, C.R.-1996 Kohler, J.A.-2017 Kohloss, F.H.-1973 Koptis, C.R.-1994 Korsgaard, V.-1987 Krafthefer, B.-2004 Kramer, D.E.-1979 Krapek, A.—1975 Kreisman, H.—1975 Kroll, M.N.—1996 Kruse, H.H.-1997 Kuehn, T.-2004 Kuehner, R.L.-1971 Kulkarni, R.S.-2010 Kurtz, N.D.-1987 Kusuda, T.—1976 Kwok Ping-Ki, A.—1991 L'Anglais, F.-2001 Lagomarsino, W. Luis-2014 Laksanakorn, W.-2008 Landman, W.J.-1989 Landsberg, D.R.-2015 Lang, J.T.—1996 Langebartel, E. J.-2017 Lawrence, T.-2016 Lawrie, L.-2019 Lawson, C.N.-2009 Lebrun, J.-2001 Lee, C.H.-1985 Lee, E.C.-2004 Lee-Thorp, V.D.—1995 Lehr, V.A.-1988 Leitsch, S.L.-1998 Lemire, N.-2019 Lesser, N.I.-1990 Levin, Hal-2003 Lewis, O.K.-1984 Lewis, R.H.-1996 Li, Y.—2006 Lim, C.L.-2010

Lin, C.H.-2013 Lindvall, T.-1995 Linstromberg, W.J.-1980 Lipshultz, M.—1989 Listijono, J.B.-2009 Liu, B.—2019 Lizardos, E.J.-1989 Lloyd, A.S.—1995 Lodge, R.H.-2004 Loewer, H.E.-1990 Logsdon, R.F.-1970 Lord, R.—2013 Lorf, G.O.G.—1988 Lorsch, H.G.-1986 Lortie, R.P.-1993 Lotz, W.A.-1992 Lovvorn, N.C.-2005 Lsitburek, J.—2005 Lu, O.—2017 Lum, F.Y.S.-1991 Lumlertpongpana, A.-2010 Mackie, E.I.-1990 MacPhee, C.W.-1979 Madison, R.D.-1960 Madsen, T.L.-1996 Magyar, Z.-2016 Manglik, R.J.-2017 Manning, B.R.-1993 Mariani, A.L.C.-2019 Markel, L.C.-2002 Markel, M.L.-1991 Marks, P.C.-2015 Marschall, P.J.-1960 Masters, R.E.-1985 Mathis, R.C-2020 Mathur, G.D.-2005 May, J.W.-1968 McCarry, B.T.-2002 McCloskey, W.D.-1997 McConahey, Erin-2014 McCoy, J.D.—2002 McDonald, T.W.-1996 McFall, J.D.-1992 McGuire, A.B.-2000 McKew, H.J. -2007 McLinden, M.O.-2017 McMillan, H.D.-2010 McNall, P.E., Jr.-1975 McNamara, T.-2008 McQuade, W.F.-2012 McQuiston, F.C.—1986 Meckler, M.—1986 Mehboob, F.-2010 Meitz, A.K.-1999 Melikov, Arsen-2003 Melton, B.J.-2012 Mendez, F.J.-1995 Mentzer, J.C.-2000 Meriwether, R.F.-1983 Mescher, Kirk-2014 Miclea, P.C.-2013

Miller, P.L.-1984 Miller, R.D.-1998 Millies, Jr., R.L -2017 Missimer, D.J.—1972 Mitchell, J.W.—1994 Moakes, R.-1992 Modera, M.-2011 Modgil, G.C.-2019 Monier, K.A.J.-1995 Montgomery, R.-2012 Morabito, B.P.-1979 Morris, D.J.-1991 Morrison, W.B.-1980 Morse, F.B.-1984 Moseley, T.D.-1981 Moses, W.G.-1983 Mumma, S.A.-1992 Munger, G.R.-1979 Murakami, S.-2001 Murphy, J.A.-2015 Murphy, W.E.-2004 Murray, H.G.S.-1979 Murray, W.A.-1998 Murthy, S.-2019 Nack, D.H.-1980 Nall, Daniel H.—2014 Naman, I.A.—1977 Nellis, G.F.-2013 Nesher, A.G.—1999 Nettleship, L.C. -1987 Newman, H.M.-2000 Newman, J.L.-2020 Ng, E.H.—2001 Ngan. P.L.-2019 Nichols, D.E.-1975 Nichols, L.-2005 Nielsen, P.V.-2004 Niess, R.C.—1992 Nishi, Y.-1994 Niu, J.—2013 Norman, J.H.-2007 Norris, R.W.-1979 North, F.H.-1985 Nottage, H.B.-1960 Novak, P.-1999 Novakovic, V.-2005 Nutter, D.W.-2011 Nye, G.-2008 O'Dell, L.J.—1991 O'Neal, D.L.-1999 Ohadi, M.-2004 Olesen, B.W.-2001 Olivieri, J.B.-1975 Olsen, E.J.-1999 Olsen, J.C.-1982 Olson, D.-2016 Opatrny, C.J.-1993 Ossi, Fareed-2000 Ostrander, W.S.-1983 Ow, C.S.—2002

Owen, K.-2018 Phetteplace, G.-2018 Pahwa, D.-2005 Palmizi, F.-1990 Pande, M.M.-1997 Panlener, R.J.-1954 Papar, R.A.—2015 Paranjpey, R.-2005 Parker, A.J., Jr.-1987 Patterson, N.R.-1984 Pavlak, R.-2016 Pearson, A.B.-2015 Pearson, F.J.-1987 Pearson, R.J.-1984 Peasce, F.-2019 Pedersen, C.O.-1987 Penney, G.W.-1981 Perea, C.W.K.—2019 Perisic, Z.B.-1999 Perkins, C.S.-1968 Perlman, M.—1992 Perry, R.P.-1979 Persily, A.K.-2004 Peterson, H.J.-1985 Petersen, K.-2006 Peterson, Ronal-2014 Petras, Dusan-2014 Pflug, I.J.-1975 Phaklides, W.J.—1982 Phatak, S.-2019 Phillips, C.W.-1972 Phillips, G.-2018 Phillips, H.-1991 Phoenix, T.H.-2011 Pietsch, J.A.-1977 Platt, D.M.-2020 Pouchak, M.-2018 Powell, F.J.—1982 Powell, J.V., Jr.—1985 Procell, C.J.—1992 Punsalan, L.-2006 Punwani, D.-2018 Queer, E.R.-1960 Rademacher, K.-2006 Rákóczy, T.-1997 Ram, D.N.-2007 Ranade, M.S.-2015 Rands, G.F.-1988 Ratai, W.-1983 Rawal, R.-2020 Reddy, A.-2007 Reedy, W.R -2005 Reig, J.A.-1996 Reindl, D.-2008 Reistad, G.M.-1992 Rengholt, U.N.-1993 Rhea, H.H.-1991 Rich, D.G.-1979 Richard, O.E.-1980 Richards, W.V.-1985 Richardson, G.-2002

Ridenour, S.M.-1992 Rishel, J.B.-1991 Rivers, R.D.-1993 Roberts, J.F., Sr.-1983 Robinson, K.E.-1972 Rock, B.—2005 Rodriguez, J.T.-1994 Rogers, B.T.--1988 Rohles, F.H., Jr.—1984 Romine, T.B., Jr.-1977 Rooley, R.H.-1986 Root, G.W., Sr.-1994 Rose, W.B.-2012 Rosen, S.-1991 Rosenberg, M.-2016 Ross, D.E.—1984 Roubal, J.P.-1996 Rountree, H.E.-1984 Rumsey, P.—2008 Salsburg, J.F.-1971 Sami, S.M.-2001 Sanchez, A.J.-1998 Sandelewski, A.-2017 Sandfort, J.F.-1971 Sankaran, S.-2005 Sanvordenker, K.S.-1982 Sarda, D.R.-2017 Sauer, H.J., Jr.-1980 Schmidt, W.A.-1982 Schoen, L.-2005 Schreiner, J.R.-1975 Schuchart, O.W.-1994 Schulze, J.L.-1999 Schumacher, E.W.-1995 Schuyler, G.-2005 Schwedler, M.-2015 Schwenker, E.H.-1998 Scofield, C.M.-2002 Scoggins, M.G.-2018 Scott, N.R.-1997 Scriven, J.A.—1989 Seiler, E.N.-1990 Sekhar, S.C.-2007 Seppänen, O.A.-1996 Sepsy, C.F.-1975 Sestak, G.J.-2001 Setty, B.S.-2002 Shadpour, F.-2005 Shah, M.M.-2000 Shanker, U.-2019 Shavit, G.-1991 Shedd, T.A.—2016 Shefferman, S.M.-1994 Sheikh, A.S.- 2011 Shelton, R.L.-2005 Shelton, S.V.-1988 Sherif, S.A.-2002 Sherman, M.H.-1995 Shitzer, A.-2005 Shiver, W.D.-1987 Siegel, J.A.-2017

Siganto, J.J.W.-1984 Simha, R.V.-1997 Simmonds, P.-2006 Simonson, C. J.-2016 Simpson, C.D.-2019 Singh, H.—1994 Singh, J.-2008 Sirjord, A.B., Jr.—1996 Sisti, M.F.-1988 Slayton, C.-2008 Smith, C.D.-2001 Smith, G.W.-1997 Smith, L.R.-1971 Smith, T.-1986 Somasundaram, S.-2006 Sosoka, J.R.-1989 Soumerai, H.P.-1969 Sowell, E.F.—1990 Spauschus, H.O.-1971 Speich, C.F.-1993 Spiegel, W.F.-1975 Spielvogel, L.G.-2000 Spitler, J.D.-2005 Stamper, E.-1977 Stanke, D.A.-2007 Stanzani, F.-1992 Starner, K.E.—1998 Stefanutti, L.F.-2017 Stefanutti, U.-1992 Steimle, F.W.-1990 Stern, R.M.-1983 Stockwell, R.-2017 Stoecker, W.F.-1974 Stone, D.T.-1996 Stotz, R.B.-1985 Straub, H.E.-1972 Strong, R.H.-2002 Sud. I.-2005 Suggs, R.M., III-1993 Sullivan, E.P.-1977 Sun, T.Y.—1984 Sun, W.-2017 Sundaresan, G.-2000 Surange, A.-2008 Swenson, C.A.-1984 Swygert, H.B., Jr.—1985 Synn, I.C-O.-1996 Tabunschikov, Y.A.-2001 Talbot, M.-2019 Tamblyn, R.T.—1975 Tan, S.C.L-2001 Tanabe, S.—2006 Taneja, O.-2015 Tao, E.-1986 Tao, W.K.-1977 Tapias, A.-1985 Tauby, J.R.-2018 Taylor, R.E.-1993 Taylor, S.-2004 Taylor, W.-1975 Thirakomen, K.-2009

Thomle, A.-2017 Thompson, C.A.-1989 Thornton, R.C.-1991 Tilney, R.B.—1975 Timmer, C.W.—1994 Todorovic, B.B.-1987 Todorovic, M.-2009 Torcellini, P.-2019 Toub, S.G.-2002 Towell, R.-2016 Townsend, T.E.-1997 Traboulsi, S.-2014 Trafton, P.-2016 Traugott, F.A.-1980 Tredinnick, S -2020 Tree, D.-2005 Tronville, P.-2019 Tse, V.K.C.-1996 Tully, R.E.—1980 Tumilty, J.E.-1983 Turaga, M.—1992 Underwood, T.D.-2007 Urban, R.A.-1980 Uselton, R.B.-2004 Utesch, A.L.-1986 Vaidyanathan, N-2012 Vallort, J.K.-2013 Vallort, R.P.-1997 Varley, J.—2020 Vechaphutti, T.-2004 Vener, A.S.—1990 Viessmann, H.—1989

Vijayakumar, R.-2016 Vineyard, E.A.-2011 Voelz, G.R.-1977 Vogel, C.T.-1990 Waeldner, W.J.-1993 Walker, I.S.-2011 Walkinshaw, D.-2008 Wallstrom, L.L.-1981 Walton, G.-2005 Wang, C.-2005 Wang, D.W.P-2002 Wang, F.-2016 Wang, X.-2019 Warwicker, B.-2011 Waterfill, R.W.-1971 Watson, T.-2008 Watt, J.R.-1992 Webb, R.L.—1998 Webb, W.A.-2002 Weld, G.B.-1986 Wells, R.D.-1996 Wells, W.P.-1977 Welsh, J.W.-1990 Wen, S.M.-1986 Wentz, T.G.-2005 Wepfer, W.J.-1996 Werden, R.G.—1965 Wessel, D.J.-1998 Wheeler, A.E.-1975 White, T.J.-1981 Zhivov, A.-2019 Whitescarver, C.K., Jr.-1982

#### Wildin, M.W.-1997 Williams, G.J.-2017 Williams, V.A.-1988 Willis, L.E.-1999 Wingfield, G.-2006 Winston, Donald-2014 Wischmeyer, W.F.—1974 Wolfberg, H.A.—1984 Wong, S.P.W.-1988 Wong, Y.W.-2002 Woodford, M.-2019 Woodroof, J.G.-1958 Woods, J.E.—1992 Woody, A.W.-2000 Worek, W.M.-2011 Wright, J.R.-1998 Yamamoto, G.S.-2000 Yang, K.-2006 Yang, X.-2011 Yoshino, H.-2006 Young, E.H.-1984 Yousoufian, H.H.-1997 Yu, P.C.H.-2018 Yuill, G.K.-1990 Zanders, R.W.-1988 Zha, S.—2019 Zhai, Z.-2019 Zhang, J.-2011 Zhang, Y.-2008

#### George B. Hightower Technical Achievement Award

Established in 2006, this award recognizes an individual for excellence in volunteer service in the area of TC/TG/TRG technical leadership and contribution.

2006	George C. Briley	2012	Donald L. Beaty	2017	Paul A. Lindahl, Jr.
2007-08	(No award given)	2013	Lucas B. Hyman	2018	Arthur Hallstrom
2009	Paul Miclea	2014	Gursaran D. Mathur	2019	David Moss
2010	Dharam V. Punwani	2015	John J. Carter	2020	Devin Abellon
2011	Gary Phetteplace	2016	Stephen W. Duda		

Wicks, K.W.-1985

#### **Government Affairs Award**

Established in 1988, this award recognizes an individual for outstanding effort and achievement in state, provincial, and local government activities in connection with technical issues important to the Society. Prior to January 2014, this award recognized the activities of an ASHRAE Chapter. In June 2015 the award name was changed to the Government Activities Award and in June 2018 it was changed to the Government Affairs Award.

1990	Orange Empire Chapter	2001	(No award given)	2011	Hong Kong Chapter
1991	St. Louis Chapter	2002	Northern Nevada Chapter	2012-14	(No award given)
1992	Orange Empire Chapter	2003	Puget Sound Chapter	2015	Ross Montgomery & Robert Craddock
1993	Arkansas Chapter	2004	Central Indiana Chapter	2016	Arthur Hallstrom
1994	Rocky Mountain & Minnesota	2005	Cleveland Chapter	2017	Sam C.M. Hui
	Chapters				
1995	Pittsburgh Chapter	2006	Detroit Chapter	2018	Roger Chang
1996	Spacecoast Chapter	2007	Puerto Rico Chapter	2019	Meghan K. McNulty
1997	Rochester Chapter	2008	(No award given)	2020	Elizabeth K. Tomlinson
1998-99	(No award given)	2009	Puerto Rico Chapter		

#### Homer Addams Award

Established in 1956 to perpetuate the memory of Homer Addams, Charter Member and Past President of ASHVE, this award recognizes a graduate student who has been engaged in an ASHRAE research project.

- 1957 Paul M. Chung; University of Minnesota
- 1958 W.E. Springer; University of Illinois
- 1959 John Y. Payton; University of California
- 1960 Frank D. Farrington; University of Arizona
- 1961 Alan B. Wagner; Case Institute of Technology
- 1962 Albert C. Kent; Kansas State University
- 1963 John M. Craig; University of Florida
- 1964 Joseph R. Gartner; University of Wisconsin
- 1965 Isaiah Kopelman; Michigan State University
- 1966 Eugene R. Michaud; Purdue University
- 1967 Norman G. Ziesse; Carnegie Institute of Technology
- 1968 Jon M. Rueck; Kansas State University
- 1969 James E. Shahan; University of Illinois
- 1970 Raymond E. Knotts; Ohio State University
- 1971 Donald R. Witt; Pennsylvania State University
- 1972 Thomas E. Bursey; University of Saskatoon
- 1973 Edward C. Skuchas; Duke University
- 1974 Fernando Duran; University of Pittsburgh
- 1975 Douglas C. Hamilton; Purdue University
- 1976 Kevin F. O'Brien; Oklahoma State University
- 1977 Douglas R. Bryant; University of Manitoba
- 1978 Sriram Somasundaram; Case Western Reserve University
- 1979 Gary L. Reynolds; Iowa State University
- 1980 Joseph P. Olivieri; Lawrence Institute of Technology
- 1981 Charles F. Rhein; University of Missouri-Rolla
- 1982 Shimao Ni; Concordia University
- 1983 Mean Shang Chen; Kansas State University
- 1984 Michael S. Sherber; Georgia Institute of Technology
- 1985 Steven M. Harris; Oklahoma State University
- 1986 Polyvious Eleftheriou; Tenn. Technological University
- 1987 James J. Baustian; Iowa State University
- 1988 John S. Schliesing; Texas A&M University

- 1989 Marc E. Fountain; University of California-Berkeley
- 1990 Ralph M. Diguilio; Georgia Institute of Technology
- 1991 S. Imam Haider; Pennsylvania State University
- 1992 Ernesto Embriz-Santander; University of Florida
- 1993 Zhenhai Li; University of Illinois
- 1994 Brian A. Fricke; University of Missouri
- 1995 Marianna Luoma; University of Michigan
- 1996 Donald J. Wolfe; University of Kansas
- 1997 Jeanne M. De Greef; Kansas State University
- 1998 James E. Bryan; Texas A&M University
- 1999 Jafar Darabi; University of Maryland
- 2000 William D. Gerstler; University of Minnesota
- 2001 Jelena Srebric; MIT
- 2002 Marija Radosevic; Danish Technological Institute
- 2003 (No award given)
- 2004 Shehab Ahmad; Texas A&M University
- 2005 Dongyi Xiao; Oklahoma State University
- 2006 Pankaj Hande; University of Missouri-Rolla
- 2007 (No award given)
- 2008 Bereket Nigusse; Oklahoma State University
- 2009 (No award given)
- 2010 Nathan Kotey; University of Waterloo
- 2011 Sebastian Herrman; University of Rostock
- 2012 Harrisn M. Skye; University of Wisconsin-Madison
- 2013 Ricardo J. Da Silva Lima; École Polytechnique Fédérale de Lausanne
- 2014 Ryan Tanner; University of Colorado Boulder
- 2015 Limin Zhou; University of Kentucky
- 2016 (No award given)
- 2017 Parham Azimi; University of Illinois
- 2018 Alireza Behfar; University of Nebraska-Lincoln
- 2019 Omer Sarfraz; Oklahoma State University
- 2020 Gabrielle McMorrow; University of Wyoming

#### **Honorary Member**

Honorary Members are elected by the Board of Directors and are defined as notable persons of preeminent professional distinction.

1936	F.G. Keyes	1966	L.M.K. Boelter	2016	Peter A. Hancock
1944	A.C. Fieldner	1969	Allen V. Astin	2016	Terry M. Manon
1951	Crosby Field	1972	Albert J. Nesbitt	2017	Stephen T. Ayers
1956	Herbert C. Hoover	1985	Andrew T. Boggs	2019	Bill Gates
1956	Milton S. Eisenhower	1995	Henry V. Heuser	2020	James Earl Carter, Jr
1963	W.H. McAdams	2015	Stefano Marino	2021	(No award given)

#### John F. James International Award

Established in 1983, this award recognizes ASHRAE members who have done the most to enhance the international presence of the Society.

1983	P. Ole Fanger	1996	Horst H. Kruse	2010	Leo P. Stambaugh
1984	(No award given)	1997-99	(No award given)	2011	Yua-Wei Wu
1985	Wilbert F. Stoecker	2000	Sukhdev S. Mathaudhu	2012	Edward Ka Cheung Tsui
1986	Raymond Cohen	2001	Richard B. Hayter	2013	Robert R. Aguilo

Spacecoast C

#### 2010 Missi

1987	Richard Rooley	2002	(No award given)	2014	(No award given)
1988	Mario Costantino	2003	Ashok K. Virmani	2015	Kent Peterson
1989	David Rickelton	2003	Samir R. Traboulsi	2016	Florentino Roson Rodriguez
1990	Alvaro Tapias	2004	David Arnold	2017	Gerald C. Groff
1991	Murray G. Thurston	2005	Moustafa M. Elsayed	2018	Timothy C. Dwyer
1992	Branislav B. Todorovic	2006	Constantinos A. Balaras	2019	Stephen C. Gill
1993	John F. James	2007	Ross D. Montgomery	2020	Farooq Mehboob
1994	Victor W. Goldschmidt	2008	Walid Chakroun	2021	Peter Simmonds
1995	Gunther M. Keller	2009	Prem C. Jain		

# Lincoln Bouillon Membership Award

Established in 1967 to commemorate the late Presidential Member Lincoln Bouillon's effort in recruiting new members, this award is presented to the individual who performs the most outstanding work in increasing Society membership during the course of the year.

1968	Wayne H. Allen	1985	Kevin Y.F. Chong	2003	Brian M. Tanner
1969	(No award given)	1986	Ross D. Montgomery	2004	Madan M. Pande
1970	Thomas H. Toler	1987	William C. Bissmeyer II	2005	Matthew J. Armey
1971	Clint D. Miller	1988	Louis E. Soltys	2006	Holly Townes
1972	Sam R. Fogleman	1989	John P. Gratiot	2007	(No award given)
1973	John F. Collins	1990	Dean S. Borges	2008	Alan Neely
1974	John R. Pate	1991	Francis D. Frudd	2009	Michelle Swanson
1975	Robert C. Mackay	1992	James E. Harrison	2010	Rajnish Joshi
1976	Jay N. Nelson	1993	Robert B. Stotz	2011	G. Ramesh Kumar
1977	Edward M. Naretto	1994	Edwin L. Dalpiaz	2012	David B. Farala
1978	Oliver K. Lewis	1995	Lisa Ann Duritsch	2013	George M. Waters, Sr
1979	Lewis E. Seagraves	1996	James M. Poole	2014	Ezekiel A. Bakare
1980	Gerald F. Morrow	1997	Wayne M. Hydeman	2015	Gregory A. Schnable
1981	Frederick E. Stone	1998	Dan P. Cason	2016	Jessica Mangler
1982	G. Allan Gaboric	1999	Paul T. Novak	2017	Jason Urso
1983	Lynn G. Bellenger	2000	Chad L. Edmondson	2018	Oscar Eduardo Ricaño
1984	Thomas A. Gorman III	2001	David R. Dinse	2019	Carlos Arguijo
1985	Craig M. Goodenow	2002	Raymond J. Forsthoefel	2020	Ryan Pinckard

#### Lou Flagg Historical Award

This award recognizes a Chapter Gold Ribbon Award winner for compiling information on outstanding historical projects or persons related to HVAC&R industry.

2002	John Gladstone	2009	Roderic S. Potter	2016	Faye C. McQuiston
2003	James M. Ritter	2010	J. Blaine Walker, Jr	2017	Charles Stoabs
2004	Morgan Jones	2011	Robert Bean, Bjarne Olesen, & Kwang Woo Kim	2018	Bruce Flaniken
2005	James M. Ritter	2012	Philip C.H. Yu	2019	Randy Schrecengost
2006	Michael Meteyer	2013	Alexander Weiss	2020	Bruce L Flaniken
2007	(No award given)	2014	Bruce L. Flaniken		
2008	Oswaldo Bueno	2015	(No award given)		

#### Louise and Bill Holladay Distinguished Fellow Award

Established in 1979, this award honors a Fellow of the Society for continuing preeminence in engineering or research work.

1979	Carlyle M. Ashley	1993	Donald R. Bahnfleth	2007	(No award given)
1980	John I. Yellott	1994	Preston E. McNall	2008	James E. Hill
1981	A. Pharo Gagge	1995	Milton W. Garland	2009	Wilbert F. Stoecker
1982	P. Ole Fanger	1996	Harold E. Straub	2010	(No award given)
1983	Daniel D. Wile	1997	Joseph B. Olivieri	2011	Byron W. Jones
1984	Frank H. Faust	1998	Frederick H. Kohloss	2012	Stanley A. Mumma
1985	Alwin B. Newton	1999	Harry J. Sauer, Jr.	2013	(No award given)
1986	John H. Fox	2000	George B. Hightower	2014	Kent W. Peterson
1987	Tamami Kusuda	2001	(No award given)	2015	Raymond Cohen
1988	Donald G. Rich	2002	Arthur E. Bergles	2016	Steven T. Taylor

1989	William J. Coad	2003	Olli A. Seppanen	2017	Zahid Ayub
1990	Frederick H. Rohles, Jr.	2004	(No award given)	2018	William Bahnfeth
1991	Thomas B. Romine, Jr.	2005	Prem C. Jain	2019	Predrag S. Hrnjak
1992	Ralph L. Goldman	2006	Max H. Sherman	2020	Charles C. Copeland

#### Lower-GWP Refrigeration and Air-Conditioning Innovation Award

Established in 2018, this award recognizes individuals who have developed or practiced innovative technological concepts applied in developing countries to minimize global warming potential (GWP) through refrigeration and air-conditioning management.

2019 Rajesh Kumar, Kean Wu, Samir Hamed Al Fetiany, Warot Lam, Rogerio Marson Rodrigues, Laura Beron

#### Milton W. Garland Commemorative Comfort – Process – Cold Chain Award for Project Excellence

Established in 1990, this award recognizes a non-comfort cooling refrigeration application which highlights innovation and/or new technologies. In 2021, the Milton W. Garland Commemorative Refrigeration Award for Project Excellence was combined with the Refrigeration Comfort Cooling Award for Project Excellence and renamed.

1991	Arthur P. Garbarino, Gulfstream Chapter	2003	(No award given)
1992	Howard M. Webb, Hampton Roads Chapter	2004	William Weinaug & Wade Conlan, Central Florida Chapter
1993	Eric C. Davis, Northeast Chapter	2005-08	(No award given)
1994	Gary W. James, Central Oklahoma Chapter	2009	Cesar Luis dL. Lim, Philippines Chapter
1995	Jason Grabowski, Southwest Florida Chapter	2010	Tom Dosch
1996	Eric Prive, North Piedmont Chapter	2011	John Bittner, Atlanta Chapter
1997	James L. Carver, Hampton Roads Chapter	2012	(No award given)
1998	Teddy S. Hansen, Florida West Coast Chapter	2013	Cameron E. Lowry, British Columbia Chapter
1999	Teddy S. Hansen, Florida West Coast Chapter	2014-15	(No award given)
2000	Teddy S. Hansen, Florida West Coast Chapter	2016	Claude Dumas, Montreal Chapter
2001	Glenn Friedman, Golden Gate Chapter	2017-20	(No award given)

2002 John Sanchez, Jr., Illinois Chapter

#### **Paper Awards**

This award (Best Paper, Symposium Paper, Technical/Symposium Paper, Transactions Paper, and Technical Paper) recognizes the best papers presented at a Society conference for the year.

#### 1973 Best Paper Award

- Best Applications Technical Paper: S. G. Talbert, L. J. Flanigan, & J. I. Eibling, "An Experimental Study of Ventilation Requirements of Commercial Electric Kitchens"
- Best Research Technical Paper: Donald G. Rich, "The Effect of Fin Spacing on the Heat Transfer and Friction Performance of Multi-Row, Smooth-Plate, Fin-and Tube Heat Exchangers"
- Best State-of-the-Art Paper: C. A. Pennington, C. A. Morrison, & R. Pena, Jr., "Effect of Inner Surface Air Velocity and Temperatures Upon Heat Loss and Gain Through Insulating Glass"
- Best Symposium Paper: P. R. DeCicco & R. J. Cresci, "Smoke and Fire Control in High-Rise Office Buildings"

#### 1974 Best Paper Award

- Best Applications Technical Paper: Dean E. McFeron, Donald F. Owens, & John Ramsay, "Cooling Load Increases for Windows Adjacent to Large Water Surfaces"
- Best Research Technical Paper: Ronald L. Dougherty & Harry J. Sauer, Jr., "Nucleate Pool Boiling of Refrigerant-Oil Mixtures from Tubes"
- Best State-of-the-Art Paper: Gerald S. Leighton, James L. Oplinger, Anthony J. Pennington, & Lawrence G. Spielvogel, "Economic Guidelines for Total Energy Systems"
- Best Symposium Paper: James F. Hamilton & Malcolm J. Crocker, "Noise Reduction by Vibration Isolation"

#### 1975 Best Paper Award

- Best Applications Technical Paper: J. E. Hill & T. Kusuda, "Dynamic Characteristics of Air Infiltration"
- Best Research Technical Paper: Hoy R. Bohanon, "Fan-Test Chamber Nozzle Coefficients"
- Best State-of-the-Art Paper: V. S. Manian & A. Juchymenko, "Energy Usage and Relative Utilization Efficiencies of Oil, Gas & Electric Heated Single Family Homes"
- Best Symposium Paper: Bayliss J. Erdelyi, "Test Results of a Ducted Stairwell Pressurization System in a High-Rise Building"

# 1976 Best Paper Award

- Best Technical Papers:
  - Professor Clayton A. Morrison, James M. Wheeler, Jr., & Dr. Erich A. Farber, "An Experimental Determination of Shading Coefficients for Selected Insulating Reflective Glasses and Draperies"
  - Theodore H. Benzinger, B. W. Mangum, & Dr. James E. Hill, "The Design, Construction and Operation of a Scanning Radiometer for Measurement of Plane Radiant Temperature in Buildings"
- Best Symposium Papers:
  - o Robert A. Macriss, "Selecting Refrigerant-Absorbent Fluid Systems for Solar Energy Utilization"
  - Carl D. Baird & Jerome J. Gaffney, "A Numerical Procedure for Calculating Heat Transfer in Bulk Loads of Fruits or Vegetables"

#### 1977 Best Paper Award

- Best Technical Papers:
  - Professor William Rudoy & L. M. Robins, "Comparison of Cooling Load Calculations"
  - o Professor William Rudoy & L. M. Robins, "Pulldown, Load Calculations and Thermal Storage During Temperature Drifts"
  - o Professor Wilbert F. Stoecker, "Methodology of Simulating the Performance of a Central Chilled-Water System"
- Best Symposium Papers:
  - Bela G. Liptak, "Reducing the Operating Costs of Buildings by Use of Computers"
  - o Durvasula V. Sriramamurty, "Application and Control of Commercial and Industrial Humidifiers"

#### 1978 Best Paper Award

- Best Technical Papers:
  - o George T. Tamura & Chia-Yu Shaw, "Experimental Studies of Mechanical Venting for Smoke Control in Tall Office Buildings"
  - o Istvan L. Ver, "A Review of the Attenuation of Sound in Straight Lined and Unlined Ductwork of Rectangular Cross Section"
  - Professor Faye C. McQuiston, "Correlation of Heat, Mass and Momentum Transport Coefficients for Plate-Fin-Tube Heat Transfer Surfaces with Staggered Tubes"
- Best Symposium Paper: Alwin B. Newton, "Using Controls to Reduce Component Size and Energy Needs for Solar HVAC"

#### 1979 Best Paper Award

- David J. Wilson, "Flow Patterns Over Flat-Roofed Buildings and Application to Exhaust Stack Design"
- Terrell D. Moseley, "Cost and Performance of Five Soalr Heating Systems Utilizing Wet Heat Pumps"
- George T. Tamura, "The Calculation of House Infiltration Rates"
- David T. Harrje, Gautam S. Dutt, & Jan E. Beyea, "Locating and Eliminating Obscure but Major Losses in Residential Housing"

#### 1980 Best Paper Award

- Paul Mehta & James E. Woods, "An Experimental Validation of a Radiant Model for Dynamic Responses of Buildings"
- Donald J. Mosshart, Jr., "A Contractor's View of HVAC Noise and Vibration Problems"
- Lewis S. Goodfriend "Indoor Sound Rating Criteria"
- Edward F. Sowell & George N. Walton, "Efficient Computation of Zone Loads"

#### 1981 Best Paper Award

- Best Technical Paper: Warren E. Blazier, Jr., "Noise Rating of Variable Air-Volume Terminal Devices"
- Best Symposium Papers:
  - o Deanna M. Munson, "The Effectiveness of Selecting Clothing for Comfort in the 18.3°C (65°F) Environment"
  - o Fracesco Pompei, "Air in Hydronic Systems: How Henry's Law Tells Us What Happens'

#### 1982 Best Paper Award

- Best Symposium Papers:
  - o David W. Low & Edward F. Sowell, "A Plan for Establishing Algorithms as ASHRAE Literature"
  - Craig D. Hollowell, Robert A. Young, James V. Berk, & Stephen R. Brown, "Energy Conserving Retrofits and Indoor Air Quality in Residential Housing"
  - o John E. Janssen, "Application of Building Thermal Resistance Measurement Techniques"

#### 1983 Best Paper Awards

- Best Symposium Papers:
  - o Martin W. Liddament, "The Air Infiltration Center's Program of Model Validation"
  - George T. Tamura, "Review of the DBR/NRC Studies on Control of Smoke from a Fire in High Buildings"
- Best Technical Paper: Richard B. Stewart, Richard T. Jacobsen, & John H. Becker, "Formulations for Thermodynamic Properties of Moist Air at Low Pressures as Used for Construction of New ASHRAE SI Unit Psychrometric Charts"

# 1984 Best Paper Award

- Best Symposium Papers:
  - R. E. Hough, A.L. Schuyler, & C. L. Reed, "Field Monitoring Results for Natural-Draft and Induced-Draft Gas-Fired Residential Furnaces"
  - o L. J. O'Dell & S. V. Sheppard, "System Design Guide for Air Pollution Control Equipment"
  - Branislav B. Todorovic & D. Curcija, "Calculative Procedure for Estimating Cooling Loads Influenced by Window Shading, Using Negative Cooling Load Method"

# 1985 Best Paper Award

- Best Symposium Paper: M. Ikeuchi, E. Ozaki, G. Yamanaka, & T. Yumikura, "Design and Performance of a High Temperature-Boost Absorption Heat Pump"
- Best Technical Papers:
  - Daniel L. Ewert, "The Development, Design and Performance Testing of a Single-Unit Dual-Source (SUDS) Heat Pump Evaporator"
  - Frederick H. Rohles, Jr., Joseph E. Laviana, Richard A. Wruck, & Wei Runbai, "The Human Response to Temperature Drifts in a Simulated Office Environment"

# 1986 Best Paper Award

- Best Technical Papers:
  - Ronald H. Howell, Harry J. Sauer, Jr., & Ralph D. Lahmon, "Influence of Upstream Disturbances on Correlation Coefficient for Vane Anemoters at Coil Faces"
  - o Nicholas Galanis & Richard Chatigny, "A Critical Review of the ASHRAE Solar Radiation Model"
  - Best Symposium Papers:
    - o Reino T. Huovilainen, "Study of the Application of Fluidized Bed Combustion"
    - Will K. Brown, Jr. & Charles A. Lynn, "Fundamental Clean Room Concepts"

# 1988 Best Paper Award

- Best Symposium Papers:
  - o James E. Braun, John W. Mitchell, Sanford A. Klein, & William A. Beckman, "Models for Variable-Speed Centrifugal Chillers"
    - Ronald M. Heck, Michael Durilla, Alan G. Bouney, & James M. Chen, "Commercial Regeneration Experience for Catalysts in Air Pollution Control Applications"
    - o Carl B. Fliermans & John A. Nygren, "Maintaining Industrial Cooling Ststems Free of Legionella Pneumophilia"
    - o John P. Kettler, "Efficient Design and Control of Dual-Duct Variable-Volume Systems"

#### 1989 Best Paper Award

- Edward A. Vineyard, James R. Sand, & Terry G. Statt, "Selection for Ozone-Safe Nonazeotropic Refrigerant Mixtures for Capacity Modulation in Residential Heat Pumps"
- Frederick J. Pearson, "Ice Storage can Reduce the Construction Cost of Office Buildings"
- George T. Tamura, "Stair Pressurization Systems for Smoke Control: Design Considerations"

#### 1990 Best Paper Award

- John H. Klote, "Fire Experiments of Zoned Smoke Control at the Plaza Hotel in Washington, DC"
- Dr. Edward A. Kush, "Detailed Field Study of a Water-Loop Heat Pump System"
- James R. Sand, Edward A. Vineyard, & Richard J. Nowak, "Experimental Performance of Ozone-Safe Alternative Refrigerants"
- Margaret Law, "Fire and Smoke Models Their Use in the Design of Some Large Buildings"

#### 1991 Best Paper Award

- Charles J. Weschler & Helen C. Shields, "The Impact of Ventilation and Indoor Air Quality in Electronic Equipment"
- Robert G. Harold, "Sound and Vibration Considerations in Rooftop Installations"
- Mark S. Lentz, "Adiabatic Saturation and VAV: A Prescription for Economy and Close Environmental Control"
- John H. Klote & George T. Tamura, "Design of Elevator Smoke Control Systems for Fire Evacuation"

#### 1992 Best Paper Award

- Dr. Abdelhakim Elmahdy, "Heat Transmission and R-Value of Fenestration Systems Using IRC Hot Box: Procedure and Uncertainty Analysis"
- Fred S. Bauman & Lucy P. Johnston, "Air Movement, Ventilation and Comfort in a Partitioned Office Space"
- Dr. Edwin I. Griggs & F. Khodabakhsh-Sharifabad, "Flow Characteristics in Rectangular Ducts"
- Nancy B. M. Stefanuk, Professor J. Dwight Aplevich, & Associate Professor Metin Renksizbulut, "Modeling and Simulation of a Superheat-Controlled Water-to-Water Heat Pump"

# 1993 Best Paper Award

- Best Symposium Papers:
  - Eric C. Rogers & Barbara A. Stefl, "Ethylene Glycol: Its Use in Thermal Storage and Its Impact on the Environment"
     James R. Sand, Edward A. Vineyard, & Van D. Baxter, "Laboratory Evaluation of an Ozone-Safe Nonazeotropic Refrigerant Mixture in a Lorenz-Meutzner Refrigerator Freezer Design"
  - Fred S. Bauman, Dr. Edward A. Arens, Charles C. Benton, & Zhang Hui, "Localized Comfort Control with a Desktop Task Conditioning System: Laboratory and Field Measurements"
  - o John H. Klote, "Design of Smoke Control Systems for Areas of Refuge"

# 1994 Best Paper Award

- Best Symposium Papers:
  - Dr. Arsen K. Melikov, Razmik S. Arakelian, Laila Halkjaer, & Dr. P. Ole Fanger, "Spot Cooling Part 2: Recommendations for Design of Spot-Cooling Systems"
  - o Fredric S. Goldner, "DHW System Sizing Criteria for Multifamily Buildings"
- Best Technical Papers:
  - o John E. Lovatt & A. Grant Wilson, "Stack Effect in Tall Buildings"
  - o Kazuo Watanabe, "Field Tests for Minimizing Legionella in Cooling Water in Japan"

# 1995 Best Paper Award

- Best Symposium Papers:
  - o Blair T. McCarry, "Underfloor Air Distribution Systems: Benefits and When to Use the System in Building Design"
  - o John P. Kettler, "Minimum Ventilation Control for VAV Systems: Fan Tracking vs. Workable Solutions"
- Best Technical Papers:
  - David S. Ensor, James T. Hanley, & Daryl D. Smith, "A Fractional Aerosol Filtration Efficiency Test Method for Ventilation Air Cleaners"
  - William K. Snelson, Jeffrey W. Linton, Andrew R. Triebe, & Patrick F. Hearty, "System Drop-In Tests of Refrigerant Blend R-125/R-143a//R-134a (44%/52%/4%) Compared to R-502"

#### 1996 Best Paper Award

- Best Symposium Papers:
  - Pedro F. de Abreu, Roydon A. Fraser, Harry F. Sullivan, & John L. Wright, "A Study of Insulated Glazing Unit Surface Temperature Profiles Using Two-Dimensional Computer Simulation"
  - Shane A. Moeykens & Dr. Michael B. Pate, "Effect of Lubricant on Spray Evaporation Heat Transfer Performance of R-134a and R-22 in Tube Bundles (RP-668)"
  - Anne V. Baughman & Dr. Edward A. Arens, "Indoor Humidity and Human Health Part I: Literature Review of Health Effects of Humidity-Influenced Indoor Pollutants"
  - Robert R. Bittle & Dr. Michael B. Pate, "A Theoretical Model for Predicting Adiabatic Capillary Tube Performance with Alternative Refrigerants"

#### 1997 Best Paper Award

- Best Symposium Papers:
  - Steve P. Rottmayer, Dr. William Beckman, & Dr. John W. Mitchell, "Simulation of a Single Vertical U-Tube Ground Heat Exchanger in an Infinite Medium"
  - o Dr. Gary D. Lougheed & Dr. George V. Hadjisophocleous, "Investigation of Atrium Smoke Exhaust Effectiveness"
- Best Technical Papers:
  - Dr. Ming-C. Chyu, Dr. Xin Zeng, & Liang Ye, "The Effect of Moisture Content on the Performance of Polyurethane Insulation Used on a District Heating and Cooling Pipe"
  - Dr. Francis A. L. Dullien, Will Kwan, Ann Collins, & Gerard W. Regier, "Removal of Suspended Fine Particles from Gases by Turbulent Deposition"

#### 1998 Symposium Paper Award

- Dr. Mohammad H. Hosni, Dr. Byron W. Jones, Jerry M. Sipes, & Yue Xu, "Total Heat Gain and the Split Between Radiant and Convective Heat Gain from Office and Laboratory Equipment in Buildings"
- Danny S. Parker, John R. Sherwin, Yu Joe Huang, Steven J. Konoacki, Lisa M. Gartland, & Lixing Gu, "Measured and Simulated Performance of Reflective Roofing Systems in Residential Buildings"
- Drury B. Crawley, "Which Weather Data Should You Use for Energy Simulations of Commercial Buildings?"
- Richard J. de Dear, "A Global Database of Thermal Comfort Field Experiments"

#### 1999 Technical/Symposium Paper Award

- Dr. Krzysztof Cena & Dr. Richard de Dear, "Field Study of Occupant Comfort and Office Thermal Environments in a Hot, Arid Climate"
- Dr. Melvin W. First, Dr. Edward A. Nardell, William Chaisson, & Dr. Richard Riley, "Guidelines for the Application of Upper-Room Ultraviolet Germicidal Irradiation for Preventing Transmission of Airborne Contagion Part II: Design and Operation Guidance"
- Dr. Xiaoxiong Yuan, Dr. Leon R. Glicksman, & Dr. Qingyuan Chen, "Performance Evaluation and Design Guidelines for Displacement Ventilation"
- Dr. Carey J. Simonson, Dustin L. Ciepliski, & Robert W. Besant, "Determining the Performance of Energy Wheels: Part I Experimental and Numerical Methods"

2000 Technical/Symposium Paper Award

- Jeanne M. Palmer & Kirby S. Chapman, "Direct Calculation of Mean Radiant Temperature Using Radiant Intensities"
- Gerald Riskowski & Farhad Memarzadeh, "Investigation of Static Microisolators in Wind Tunnel Tests and Validation of CFD Cage Model"
- Gerald Riskowski, Farhad Memarzadeh, & Andrew P. Manning, "Analysis of Air Supply Type and Exhaust Location in Laboratory Animal Research Facilities Using CFD"
- Alexandra Dragan, "Comparative Analysis of HVAC Systems That Minimize the Risk of Airborne Infectious Disease Transmission"

# 2001 Technical/Symposium Paper Award

- H. Fred Nelson, Harry J. Sauer, & Xianghong Huang, "High Temperature Properties of Moist Air"
- Robert R. Zarr, "A History of Testing Heat Insulators at the National Institute of Standards and Technology"
- Dr. David A. Didion, "The History of NIST's Refrigerants Program: Part I Zeotropic Mixture Cycles and Heat Transfer"
- Xinlei Wang, Steve E. Ford, L. L. Christianson, Gerald Riskowski, & Yuanhui Zhang, "Particle Separation Efficiency of a Uniflow Deduster with Different Types of Dust"

2002 Technical/Symposium Paper Award

- Steven T. Taylor, "Degrading Chilled Water Plant Delta-T: Causes and Mitigation"
- Simon J. Rees & Jeffrey D. Spitler, "An Analytical Verification Test Suite for Building Fabric Models in Whole Building Energy Simulation Programs"
- Sanford A. Klein, Douglas T. Reindl, & David Yu, "Investigation of Solid Absorbents for Humidity Control in Display Cases"

# 2003 Technical/Symposium Paper Award

- William J. Rahmeyer, "Pressure Loss Data for PVC Pipe Elbows, Reducers, and Expansions"
- Guan (Don) Yanzheng, Mohammad H. Hosni, Byron W. Jones, & Thomas Gielda, "Literature Review of the Advances in Thermal Comfort Modeling"
- Ali A. Jalazadeh-Azar, "A Parametric Analysis of a Grid-Independent BCHP System-Focusing on Impact of Technological Advancements"
- Edward A. Vineyard, Randall L. Linkous, & Evelyn Baskin, "Measured Performance of Conventional and High-Velocity Distribution Systems in Attic and Space Locations"

# 2004 Technical/Symposium Paper Award

- Yaw Asiedu, Ph.D., Robert W. Besant, P.Eng., & Carey J. Simonson, Ph.D., P.Eng., "Wheel Selection for Heat and Energy Recovery in Simple HVAC Ventilation Design Problems"
- Roger R. Schmidt, Ph.D., Christian Belady, Alan Classen, Tom Davidson, Magnus Herrlin, Shlomo Novotny, & Rebecca Perry, "Evolution of Data Center Environmental Guidelines"
- Arno Laesecke, Dr.-Ing., "Viscosity Measurements and Model Comparisons for the Refrigerant Blends R-410A and R-507A"
- Karl Peterman, P.E. & Emanuel Mouratidis, P.Eng., "Pressure Drop and Acoustical Application Guidelines for HVAC Plenums"

2005 Technical/Symposium Paper Award

- Charles S. Barnaby, Jeffrey D. Spitler, Ph.D., P.E., & Dongyi Xiao, "The Residential Heat Balance Method for Heating and Cooling Load Calculations"
- Didier J. Thevenard, Ph.D., P. Eng., & Robert G. Humphries, Ph.D., "*The Calculation of Climatic Design Conditions in the 2005 ASHRAE Handbook Fundamentals*"
- Charles S. Barnaby & Jeffrey D. Spitler, Ph.D., P.E., "Development of the Residential Load Factor Method for Heating and Cooling Load Calculations"
- David A. Springer, Leo I. Rainer, & Willard L. Dakin, P.E., "Development and Testing of an Integrated Residential Night Ventilation Cooling System"

# 2006 Technical/Symposium Paper Award

• Donald Fisher, P.Eng., Richard Swierczyna, & Paul Sobiski, "Effects of Appliance Diversity and Position on Commercial Kitchen Hood Performance"

- Paul Sobiski, Richard Swierczyna, & Donald Fisher, P.Eng., "Effects of Range Top Diversity, Range Accessories, and Hood Dimensions on Commercial Kitchen Hood Performance"
- Oyetope O. Abe, Carey J. Simonson, Ph.D., P.Eng., Robert W. Besant, P.Eng., & Wei Shang, Ph.D., "Relationship Between Energy Wheel Speed and Effectiveness and its Transient Response, Part I: Mathematical Development of the Characteristic Time Constants and Their Relationship with Effectiveness"
- Gregory T. Linteris, Ph.D., "Burning Velocity of 1, 1-Diflurorethane (R-152a)"

# 2007 Transactions Paper Award

- James E. Braun, Ph.D., P.E., "Impact of Control on Operating Costs for Cool Storage Systems with Dynamic Electric Rates"
- Joseph Firrantello, William P. Bahnfleth, Ph.D., P.E., Amy Musser, Ph.D., P.E., James D. Freihaut, Ph.D., & Joe-Weon Jeong, Ph.D., "Use of Factorial Sensitivity Analysis in Multizone Airflow Model Turning"
- Vladimir Vukovic & Jelena Srebric, Ph.D., "Applications of Neutral Networks Trained with Multi-Zone Models for Fast Detection of Contaminant Source Position in Buildings"
- William Tschudi, P.E. & Stephen Fok, "Best Practices for Energy Efficient Data Centers Identified Through Case Studies and Demonstration Projects"

# 2008 Transactions Paper Award

- John L. Wright, "Calculating Center-Glass Performance Indices of Glazing Systems with Shading Devices"
- Iain S. Walker, Ph.D. & Darryl J. Dickerhoff, "Field and Laboratory Evaluation of a New Ramping Technique for Duct Leakage Testing"
- Saeed Fathali Ph.D., P.E., & Andre Filiatrault, Ph.D., "Experimental Seismic Performance Evaluation of Integrated Isolation/Restraint Systems for Heavy HVAC Equipment"
- Kevin Rafferty, P.E., "Design Issues in Commercial Open-Loop Heat Pump Systems"

# 2009 Transactions Paper Award

- James A. Mathias, Ph.D., P.E. & Duane Mathias, "Energy Efficient, Cost Effective, Passive Solar House"
- Emilio C. Piesciorovsky & Warren M. White, Ph.D., "Building Heat Load Contributions from Medium and Low Voltage Switchgear, Part 2: Component and Overal Switchgear Heat Gains"
- Thomas Kuehn, Ph.D., P.E., Bernard A. Olson, Ph.D., James W. Ramsey, Ph.D., & Joshua M. Rocklage, "Grease Particle Emission Characterization from Seven Commercial Kitchen Cooking Appliances and Representative Food Products"
- Timothy C. Wagner, Ph.D., Neil P. Leslie, P.E., Richard S. Sweetser, & Therese K. Stovall, P.E., "Combined Heating and Power Using Microturbines in a Major Urban Hotel"

#### 2010 Transactions Paper Award

- Jeffrey D. Spitler, Ph.D., P.E. & Bereket A. Nigusse, Ph.D., "Refinements and Improvements to the Radiant Time Series Method"
- Michael S. Waring, Ph.D. & Jeffrey A. Siegel, Ph.D., "The Influence of HVAC Systems on Indoor Secondary Organic Aerosol Formation"
- Keisuke Sekiguchi, Shisei Waragai, Tsuneo Uekusa, & Kenji Yamasaki, "Development of a High-Efficiency Air Cooled Packaged Air Conditioner for Data Centers"

#### 2010 Technical Paper Award

• Christian A. Gueymard, Ph.D. & Didier Thevenard, Ph.D., P.Eng., "Updating the ASHRAE Climatic Data for Design and Standards"

# 2011 Technical Paper Award

- Jacob L. Edmondson, Dennis L. O'Neal, Ph.D., P.E., John A. Bryant, Ph.D., P.E., & Michael A. Davis, Ph.D., "Performance of Series Fan-Powered Terminal Units with Electronically Commutated Motors"
- Jacob L. Edmondson, Dennis L. O'Neal, Ph.D., P.E., John A. Bryant, Ph.D., P.E., & Michael A. Davis, Ph.D., "Performance of Parallel Fan-Powered Terminal Units with Electronically Commutated Motors"
- Kris Subbarao, Ph.D., Yafeng Lei, Ph.D., & T. Agami Reddy, Ph.D., P.E., "The Nearest Neighborhood Method to Improve Uncertainty Estimates in Statistical Building Energy Models"
- William M. Healy, Ph.D., Tania Ullah, & John Roller, "Input-Output Approach to Predicting the Energy Efficiency of Residential Water Heaters-Testing of Gas Tankless and Electric Storage Water Heaters"

#### 2012 Technical Paper Award

- John A. Bryant, Ph.D., P.E., Michael A. Davis, Ph.D., & Dennis L. O'Neal, Ph.D., P.E., "Modeling the Performance of ECM and SCR Parallel Fan-Powered Terminal Units in Single-Duct VAV Systems"
- John A. Bryant, Ph.D., P.E., Michael A. Davis, Ph.D., & Dennis L. O'Neal, Ph.D., P.E., "Modeling the Performance of ECM and SCR Series Fan-Powered Terminal Units in Single-Duct VAV Systems"
- Ananth N. Nalla & Stephen A. Idem, Ph.D., "Laboratory Testing of Saddle-Top Tees to Determine Loss Coefficients"
- Farhad Memarzadeh, Ph.D., P.E., "Literature Review of the Effect of Temperature and Humidity Viruses"

# 2013 Technical Paper Award

- Parham Eslami-nejad, Ph.D., & Michel Bernier, Ph.D., P.E., "A Preliminary Assessment on the Use of Phase Change Materials around Geothermal Boreholes"
- Warren Long & Darin W. Nutter, Ph.D., P.E., "Distribution Map of Multi-Walled Carbon Nanotubes in a Refrigerant and Oil Mixture within a 2.5 ton (8.8 Kw) Unitary Air-Conditioner"
- Iain S. Walker, Ph.D., David Faulkner, Darryl Dickerhoff, & Will Turner, Ph.D., "Energy Implications of In-Line Filtration in California Homes"
- L. Zhou, D.W. Herrin, P.E., Ph.D., & T. Li, Ph.D., "Measurement and Simulation of Acoustic Load Impedance for Boilers"

# 2014 Technical Paper Award

- Limin Zho, David W. Herrin, PE, Ph.D., & Tianxiang Li, Ph.D., "A Design Approach for Preventing and Solving Combustion Oscillation Problems"
- Tami M. Brown-Brandl, Morgan D. Hayes, Hongwei Xin, John A. Nienaber, Hong Li, Roger A. Eigenberg, John P. Smith, & Timothy Shepherd, "*Heat and Moisture Production of Modern Swine*"
- Scott Bucking, Andreas Athienitis, PE, Ph.D., & Radu Zmeureanu, PE, Ph.D., "Multi-Objective Optimal Design of a Near Net Zero Energy Solar House"
- Yang Zou, Hanfei Tuo, & Pega S. Hrnjak, Ph.D., "R410A Maldistribution Impact on the Performance of Microchannel Evaporator"

# 2015 Technical Paper Award

- James VanGilder, Zachary M. Pardey, Dustin W. Demetriou, Ph.D., H. Ezzat Khalifa, Ph.D., Hamza Salih Erden, Ph.D., & Roger R. Schmidt, Ph.D., P.E., "Proposal for Standard Compact Server Model for Transient Data Center Simulations"
- David Pommerenke, Ph.D., Xu Gao; Atieh Talebzadeh, David E. Swenson, Mahdi Moradian, Ph.D., & Yunan Han, Ph.D., "Dependence of ESD Charge Voltage on Humidity in Data Centers: Estimation of ESD Related Risk in Data Centers Using Voltage Level Extrapolation and Chebyshev's Inequality"
- Michael Case, Ph.D., Justine Yu, Richard Liesen, Ph.D., Alexander Zhivov, Ph.D., & Matthew Swanson, Ph.D., "Integration of Master Planning and Energy Planning: From Detailed to Conceptual Analysis"
- Dennis O'Neal, Ph.D., P.E., Douglas D. Ingram, & Carl L. Reid, "Modeling Fan-Powered Terminal Unit Fan/Motor Combinations Controlled by Silicon-Controlled Rectifiers"

# 2016 Technical Paper Award

- Dennis L. O'Neal, Ph.D., P.E., Carl L. Reid, & Peng Yin, "Characterizing the Performance of Fixed-Airflow Series Fan-Powered Terminal Units Using a Mass and Energy Balance Approach"
- James A. Milke, Ph.D., P.E., Christine Pongratz, & Arnaud Trouve, Ph.D., "A CFD Study to Identify Methods to Increase Maximum Velocity of Makeup Air for Atrium Smoke Control"
- Nicholas T. Gayeski, Stephen Samouhos, Ph.D., Sian Kleindienst, Ph.D., Ryan Cruz, Jaime Gagne, Ph.D., & Bradley Werntz, "Data and Interfaces for Advanced Building Operations and Maintenance"
- Kathleen Sturtevant, Alexandra Brogan, Zachary Valigosky, Vijay Gopalakrishnan, & Kelly Kissock, Ph.D., P.E., *"Improving Variable-Speed Pumping Control to Maximize Savings"*

#### 2017 Technical Paper Award

- Omar Abdelaziz, Ph.D. & Som S. Shrestha, Ph.D., "Evaluation of Alternative Refrigerants for Mini-Split Air Conditioners"
- Mohammad Rafati Nasr, Ph.D., & Carey Simonson, Ph.D., P.Eng., "Experimental Measurement of Frosting Limits in Cross-Flow Air-to-Air Energy Exchangers"
- Alejandro Rivas Prieto, Li Song, Ph.D., P.E., Wesley M. Thomas, & Gang Wang, Ph.D., P.E., "In-Situ Fan Curve Calibration for Virtual Airflow Sensor Implementation in VAV Systems"
- Bryan P. Rasmussen, Ph.D., P.E., Chao Wang, & Kyaw Wynn, "Experimental Comparison of Energy-Optimal Coordinated Control Strategies for Heat Pump Systems"

#### 2018 Technical Paper Award

- Peng Yin, Ph.D. & Carl Reid, Dennis L. O'Neal, Ph.D., P.E., "Modeling Variable-Airflow Series Fan-Powered Terminal Units with a Mass and Energy Balance Approach"
- Peng Yin, Ph.D., Dennis L. O'Neal, Ph.D., P.E., & Di Lu, "Annual Energy Performance Evaluation of Series and Parallel Fixed-Airflow Fan-Powered Terminal Units"
- Peng Yin, Ph.D. & Dennis L. O'Neal, Ph.D., P.E., "Modeling Variable-Airflow Parallel Fan-Powered Terminal Units with a Mass and Energy Balance Approach"
- Shima Shahahmadi, & Li Song, Ph.D., P.E., "Valve Flowmeter Enhancement through Computing Valve Dynamic Behaviors"

#### 2019 Technical Paper Award

- Di Lu, Dennis O'Neal, Ph.D., P.E., & Peng Yin, Ph.D., "A Comparison of the Annual Energy Use of Fixed and Variable Airflow Parallel Fan-Powered Terminal Units in a Small Office Building"
- Ngoc Dung (Rosine) Rohatgi, Ph.D., "Effects of System Materials towards the Breakdown of Lubricants and Low GWP Refrigerants"

- Douglas Reynolds, Ph.D. & Michael Schwob, P.E., "The Effect of Length on the Insertion Loss of Fiberglass Lined Sheet Metal Ducts, Part I: Rectangular Duct"
- Lisa Meline, P.E. & Steve Kavanaugh, Ph.D., "Geothermal Heat Pumps: Simply Efficient"

#### **Poster Presentation Award**

This award is for the best Poster Session Paper from each Annual and Winter Conference.

- 1998 Mr. A.D. Machin, Mr. D. Naylor, Dr. Stephen Harrison, & Dr. P.H. Oosthuizen, "Experimental Study of Free Convection at an Indoor Glazing Surface with a Venetian Blind"
- 1998 Mr. Chad B. Dorgan, P.E., Dr. Charles E. Dorgan, P.E., Dr. Marty S. Kanarek, & Mr. Alexander J. Willman, P.E., "Health and Productivity Benefits of Improved Indoor Air Quality"
- 1999 Mr. Francis R. Delafield, Ms. Angelita S. Ng, Mr. Krich Ratanaphruks, Mr. Michael Tufts, & Mr. James Jetter, "Composition Changes in Refrigerant Blends for Automotive Air Conditioning"
- 1999 Dr. Jelena Srebric, Dr. Qingyan Chen, & Dr. Leon R. Glickman, "Validation of a Zero-Equation Turbulence Model for Complex Indoor Airflow Simulation"
- 2000 Pirawas Chuangchid, Ph.D. & Moncef Krarti, Ph.D., P.E., "Parametric Analysis and Development of a Design Tool for Foundation Heat Gain for Coolers
- 2000 Dr. Steve P. Kavanaugh & Dr. Marita Allen, "Thermal Conductivity of Cementitious Grouts and Impact on Heat Exchanger Length for Ground Source Heat Pumps"
- 2001 Jelena Srebric, Ph.D. & Quingyan Chen, Ph.D., "A Method of Test to Obtain Diffuser Data for CFD Modeling for Room Airflow"
- 2001 Dr. Janet E. Stout, Ms. Yang Gao, Mr. Ping Zhou, Mr. Y. E. Lin, Ph.D., MBA, & Mr. Radisav Vidic, Ph.D., "Efficacy of DBNPA Against Legionella Pneumophilia: Experimental Results in a Model Water System"
- 2002 William Rahmeyer, Ph.D., P.E., "Pressure Loss Coefficients for Close- Coupled Pipe Ells"
- 2002 John Mitchell, Ph.D., P.E., William A. Beckman, Ph.D., P.E., & Paul Riemer, "The Use of Time Series Analysis in Fault Detection and Diagnosis Methodologies"
- 2003 Stephen C. Carpenter, P. Eng. & Christopher Schumacher, "Characterization of Framing Factors for Wood-Framed Low-Rise Residential Buildings"
- 2003 Ronald D. MacDonald, P. Eng., Mark E. Armstrong, P. Eng., & K.G. Boyd, P. Eng., "Evaluation of an Infrared Two-Stage Heating System in a Commercial Application"
- 2004 Ali A. Jalalzadeh-Azar, Ph.D., P.E., "A Comparison of Electrical and Thermal-Load Following CHP Systems"
- 2004 Paul A. Torcellini, Ph.D., P.E., Nicolas Long, & Ronald D. Judkoff, "Consumptive Water Use for U.S. Power Production"
- 2005 Wei Shang, Ph.D., & Robert W. Besant, P.E., "Determining Flow Channel Size Variations Using a Pressure Probe for a Typical Regenerative Wheel"
- 2005 Sang-Min Lee & Jin-Won Lee, "A New Local Ventilation System Using a Vortex Flow Generated with a Finned Rotating Annular Disk"
- 2006 Barbara H. McCrary, Stephen P. Kavanaugh, Ph.D., & Derek G. Williamson, Ph.D., "Environmental Impacts of Surface Water Heat Pump Systems"
- 2006 Vasile Minea, "Improved Supermarket Refrigeration and Heat Recovery Systems"
- 2007 Francis M. Farrell, Thomas M. Fitch, & Michael J. Morgan, "Development and Performance of a Retrofittable, High-Efficiency, Grease Filter System for Kitchen Hoods"
- 2007 Sherwood G. Talbert, P.E., Stephen Ricci, Ph.D., Matthew E. Goshe, Laura L. Aume, & Rodney L. Osborne, "Reentrainment of Building Exhaust Air by Packaged HVAC Units"
- 2008 Kee-Chiang Chung, Ph.D., Tsai Kuo-Pao, & You-Hsuan Wang, "Performance of Local Ventilated Hood 1: A General Ventilation Working Environment"
- 2008 Nesreen Ghaddar, Ph. D, Kamel Ghali, Ph.D., Ralph Saadeh, & Amer Keblawi, "Design for Combined Chilled Ceiling Displacement Ventilation System"
- 2009 Jelena Srebric, Ph.D. & Paulo Cesar Taberes Velasco, Ph.D., "The Role of Plants in the Reduction of Heat Flux Through Green Roofs: Laboratory Experiments"
- 2009 James A. Mathias, Ph.D., P.E. & Duane M. Mathias, "Energy Efficient, Cost Effective, Passive Solar House"
- 2010 Frank Lu, P.E., Matthew Sitzmann, P.E., & Steve R. Smith, P.E., "Effects of Dents in Condenser Fins on Air Conditioner Performance"
- 2011 Kimberly Goodrich, Charles Eley, P.E., John Arent, P.E., Randall Higa, P.E., & Devin Rauss, P.E., "*Rethinking Percent Savings The Problem with Percent Savings and zEPI: The New Scale for a Zero Net-Energy Future*"
- 2012 Jasmin Raymond, Alexandre Leger, P.E., Rene Therrien, Ph.D., Marc Frenette, P.E., & Eric Magnis, "Numerical Modeling of Thermally Enhanced Pipe Performances in Vertical Ground Heat Exchangers"
- 2013 Lorenzo Cremaschi, Ph.D., Shanshan Cai, Kasey Worthington, & Afshin J. Ghajar, Ph.D., P.E., "Measurements of Pipe Insulation Thermal Conductivity at Below Ambient Temperature Part 1: Experimental Methodology and Dry Tests"
- 2014 A poster session was not conducted at the 2013 Winter (Dallas) and Annual (Denver) Conferences

- 2015 Limin Zhou, David W. Herrin, PE, Ph.D., & Tianxiang Li, Ph.D., "A Design Approach for Preventing and Solving Combustion Oscillation Problems"
- 2016 A Poster session was not conducted at the 2015 Winter (Chicago) or 2015 Annual (Atlanta) Conferences
- 2017 Robert Hitchcock, Ph.D., John Butterfield, P.E., Elizabeth Ford Wilkins, P.E., & Francisco Forns-Samso, "BIM-Enabled Operations and Maintenance Work Processes"
- 2018 A Poster session was not conducted at the 2018 Winter (Chicago) or 2018 Annual (Houston) Conferences
- 2019 A Poster session was not conducted at the 2019 Winter (Atlanta) or 2019 Annual (Kansas City) Conferences

#### Ralph G. Nevins Physiology and Human Environment Award

Established in 1978, this award is presented annually to a promising investigator for significant accomplishment in the general area of man's response to the environment, which may include thermal, moisture, visual, acoustical, toxic, allergic, olfactory, vibrational, and microbiological effects on man's health, comfort, and well-being.

1978	James E. Woods	1993	Richard J. De Dear	2008	Henry C. Willem
1979	Larry G. Berglund	1994	Amanda K. Meitz	2009	(No award given)
1980	Yasunobi Nishi	1995	Marc E. Fountain	2010	Gwelen Paliaga
1981	Donald A. McIntyre	1996	William J. Fisk	2011	Jan Kaczmarczyk
1982	Bjarne W. Olesen	1997	Clifford C. Federspiel	2012	Lily M. Wang
1983	Richard R. Gonzalez	1998	(No award given)	2013	Stefano Schiavon
1984	Deanna M. Munson	1999	Jorn Toftum	2014	Benjamin Yan Bing
1985	Elizabeth McCullough	2000	Lei Fang	2015	Zhecho Bolashikov
1986	Lars Molhave	2001	Jerry M. Sipes	2016	Jovan Pantelic
1987	Richard B. Hayter	2002	Pawel Wargocki	2017	(No award given)
1988	Byron W. Jones	2003	Yanzheng Guan	2018	Dusan Licina
1989	Gail Ellen Schiller	2004	Zhang Hui	2019	Bin Cao
1990	Shin-ichi Tanabe	2005	Christopher Chao	2020	Shichao Liu
1991	Geo Henrik Clausen	2006	(No award given)		
1992	Kenneth C. Parsons	2007	Charlie Huizenga		
1983 1984 1985 1986 1987 1988 1989 1990 1991	Richard R. Gonzalez Deanna M. Munson Elizabeth McCullough Lars Molhave Richard B. Hayter Byron W. Jones Gail Ellen Schiller Shin-ichi Tanabe Geo Henrik Clausen	1998 1999 2000 2001 2002 2003 2004 2005 2006	(No award given) Jorn Toftum Lei Fang Jerry M. Sipes Pawel Wargocki Yanzheng Guan Zhang Hui Christopher Chao (No award given)	2013 2014 2015 2016 2017 2018 2019	Stefano Schiavon Benjamin Yan Bing Zhecho Bolashikov Jovan Pantelic (No award given) Dusan Licina Bin Cao

#### Science and Technology for the Built Environment Best Paper Award

Established in 2013, this award recognizes the best referred paper published in the volume year of Science and Technology for the Built Environment, the ASHRAE Journal, preceding the ASHRAE Winter Conference. The name of the award was changed from the HVAC&R Research Best Paper Award in June 2015.

- 2012 Bryan Rassmussen
- 2013 Arsen Melikov, Barbora Krejcirvova, Jan Kaczmarcyzk, Marcin Duszyk, & Tomonori Sakoi
- 2014 David Yashar, Piotr Domanski, & Hong Cho
- 2015 Sorin Bengea, Pengfei Li, Soumik Sarkar, Sergey Vichik, Veronica Adetola, Keunmo Kang, Teems Lovett, & Francesco Leonardi
- 2016 Nesreen Ghaddar, Bachir El Fil, & Kamel Ghali
- 2017 Daniel Bacellar, Vikrant Aute, Zhiwei Huang, & Reinhard Radermacher
- 2018 H. Burak Gunay, Weiming Shen, & Chunhseng Yang
- 2019 Mehdi Mehrabi & David P. Yuill

#### Service to ASHRAE Research Award

Established in 2006, this award recognizes an individual for excellence in volunteer service to the area of Society research.

2006	John W. Mitchell	2011	Steven T. Taylor	2016	(No award given)
2007	Zahib Ayub	2012	Drury B. Crawley	2017	Joseph B. Huber
2008	John W. Andrews	2013	Herman Behls	2018	Brian Silvetti
2009	Christopher K. Wilkins	2014	(No award given)	2019	Jianshun Zhang
2010	John A. Murphy	2015	Iain S. Walker	2020-21	(No award given)

#### **Standards Achievement Award**

Established in 1995, this award recognizes excellence in volunteer service for developing ASHRAE standards/guidelines.

1995	Michael Martin	2005	H. Michael Newman	2014	Max H. Sherman
1996	John I. Woodworth & Robert E. Cook	2006	(No award given)	2015	(No award given)

1997	George S. Yamamoto	2007	P. Ole Fanger	2016	Jerry Sipes
1998	Jim L. Heldenbrand	2008	Byron Jones	2017	Steven Bushby
1999	Robert H. Bushnell	2009	Charles Dorgan	2018	Gearld Kettler
2000-01	(No award given)	2010	Dennis Stanke	2019	Richard Hall
2002	Martha J. Hewett	2011	Michael Schwedler	2020	Paul A. Lindahl, Jr.
2003	(No award given)	2012	Steven T. Taylor		
2004	Andrew Persily & Thomas Watson	2013	Martha G. VanGeem		

#### **Student Activities Achievement Award**

Established in 1988, this award recognizes a Chapter Student Activities Chair for service related to the goals and growth of student activities at all levels.

2000	Charles D. Curlin, Jr., Southern Piedmont Chapter	2011	Clayton A. Lampman, Southern California Chapter & Harmohindar Singh, North Piedmont Chapter
2001	(No award given)	2012	(No award given)
2002	Paul Dreater, Anthracite Chapter	2013	Ather N. Siddiqui, I, Northern Pakistan Chapter
2003	Michel Bernier, Montréal Chapter	2014	Jared Larson, Regina Chapter
2004	Thomas McNamara, Illinois Chapter	2015	Adam Parker, Southern Piedmont Chapter
2005	Samir Traboulsi, Lebanese Chapter	2016	Ather Siddiqui, Northern Pakistan Chapter
2006	Carl McGartlin, Charleston Chapter	2017	(No award given)
2007	Jim Toda, Tri-County Chapter	2018	Yumei Mata Hi, Monterrey Chapter
2008	Manuel Belino, Philippines Chapter	2019	Michel Hayek, Lebanese Chapter
2009	Ashish Kadam, Western India Chapter	2020	N. Kapilan
2010	Nicolas Lemire, Montreal Chapter		-

#### **Student Design Competition Award**

Established in 1987, this award recognizes outstanding student projects, encourages students to become involved in the profession, promotes teamwork, and allows students to apply their knowledge of practical design.

HVAC Design Calculations

- 2012: John Bisacquino, John Dennis, Travis Westover, Temple University
- 2013: Jayson Bursill, Natasha Palmer, Angela Walton, Gavin Wong, University of British Columbia
- 2014: Christopher Erickson, Ian Faulkner, Danny Marshall, Richard Suarez, Kristian Szmanski, Ju Yong Yu, University of Central Florida
- 2015: Kristin Hanna, Garrett Johnson, Mark Wilder, University of Nebraska
- 2016: Alexander Brosky, Samarth Joshi, Aubrey McNeill, Silvia Odaya, Cheng Yang, Ziran Yu, University of British Columbia
- 2017: Wilton Chang, Matthew Le, Aditya Mairal, Austin Stevenson, Suraj Thapa, San Jose State University
- 2018: Jack Buckley, Madeline Sampsel, Austin Seagren, Christopher Wozney, University of Nebraska Lincoln
- 2019: Beshoy Badr, George Mounir, John Victor, Kerollos Samir, Paula Wanis, Samaa Khaled, Ain Shams University
- 2020: Eslam Mohamed Ali, Ahmed Mohamed Soltan, Amr Gamal Fawzy, Moustafa Ahmed El-Saeid, Mark Magdy Fouad, Cairo University

HVAC System Selection

- 2002: Coury Revan, Jonathan Niksich, Rodney Cook, Scott Breuker, Bruce Calkins, Ferris State University
- 2003: Zachary Brown, Camien Chambers, Scott Houghton, Jason Izbicki, Scott Kaplan, Tom Tacey, Dean Weber, Ferris State University
- 2004: Larry Good, Scott Huber, Rebecca Mittel, Pennsylvania State University
- 2005: Nick Maffeo, III, Jason Kramer, Dave Peterson, Pennsylvania State University
- 2007: Justin Bern, Jon Gridley, Kevin Kaufman, Jessica Lucas, David Melfi and Yulien Wong, The Pennsylvania State University
- 2008: Kevin Chow, Brandon Damas, Jeremy Fowler, Brandon Frey, Brendon Gleason, Ben Willey, Kansas State University
- 2009: Chaowanaphan Leekham, Pakorn Nontiwatwanich, Wiroj Ekwongmunkong, Supayos Suveepattananont, Patarapol Puangkum, Chulalongkorn University
- 2010: Kelly Griffith, James Newman, Phillip Podlasek, Darren Rottinghaus, Kansas State University
- 2011: Lynn Gualtieri, Evan Oda, Kristin Porter, Navid Saiidnia, Jeffrey Wong, Cameron Young, California Polytechnic State University
- 2012: Adam Buck, Jami Harper, John May, Patrick MacBride, Alaina Williams, University of Nebraska
- 2013: Garrett Elder, Nathan Love, Nick Theimer, Kansas State University
- 2014: John Gaito, Katie Helmer, Lexie Oliver, Alex Pint, Megan Walkowiak, Gordon Zimmerman, Kansas State University
- 2015: Brianna Brass, Matthew Easlon, Mary Kleinsasser, Ben MacKenszie, Rachel Obenland, University of Nebraska
- 2016: Christian Garcia, Sevan Hovsepian, Asped Khachatoorian, Tade Mirzakhanyan, Miro Zaroukian, California State Polytechnic University

- 2017: Dagmara Cwiek, Tomasz Kolsicki, Karolina Kowal, Barttomiej Tokarzewski, Warsaw University of Technology
- 2018: Kevin Clark, Madison Hopfinger, Evan Reese, Whitney Luck, Andres Saldivar, Kansas State University
- 2019: Mitch Mallett-Hiatt, Colin Miller, Samuel Underwood, University of Nebraska
- 2020: Ashley Everitt, John Kramer, Jessica Lee, Mitchael Sieh, University of Nebraska

Integrated Sustainable Building Design

- 2010: Troy White, Edward Wood, Jaime Gonsalves, Ivan Fernandes, Seneca College
- 2011: Zhang Qiqi, Qi Te, Chen Yuanyi, Tianjin University
- 2012: Dustin Altschul, Prathamesh Chakradeo, Ravik Chandra, Saikrishna Ganesan, Timothy Hertel, Varun Krishnan, Charles Tratton, University of Cincinnati
- 2013: Jiayi Qiu, Dalin Si, Yakai Wu, Zhongzhe Wu, Ruijun Zhang, Zhiang Zhang, Xuyang Zhong, The University of Nottingham UK
- 2014: Elyse Casper, Theresa Lindenau, Terra Moran, Mary Peterson, Martin Reaves, Montana State University
- 2015: Krestina Aziz, Adam Buchholz, Lee Han, Joel Joiner, Osman Kucuk, Blake Reynolds, Natalie Sherwood, Huy Tran, Alex Wilson, Portland State University
- 2016: Austin Christianson, Logan Harrell, Gerald Hornik, Travis Kalikapersaud, Jeremy Palavecino, University of Central Florida
- 2017: Itza Beltran, Matthew Coalson, Karena Edminister, Toby Miles, Samad Syed, Woranart Timsuwan, University of Central Florida
- 2018: Vasilerios Filis, Myrto Ananida, Alexandre Hugo Matthieu, Technical University of Denmark
- 2018: William McCann, Salvador Ordorica, Ashutosh Ojiha, Marie Rottschaefer, Siddharth Swaminathan, Gbadebo Tobi, The Pennsylvania State University
- 2019: Greeshma Bindu-Nandakumar, Vijay Chithambaram, Hope Tique Organista, Joshua Vasudevan, Loughborough University
- 2020: Alekhya Yalamanchili, Amr Suliman, Jacob George, Mohamad Abdul Gaffoor Seyad, Loughborough University

The Setty Family Foundation Applied Engineering Challenge (known as The Applied Engineering Challenge from 2013-16)

- 2013: Brian Kaufman, Nick Leeburg, Tony Lin, Micah Reich, San Jose State University
- 2014: Juan Silva, Nelson Echeverry, California Polytechnic State University
- 2015: Miren Aizpitarte, Cinthya Mendez, Julia Stone, Willis Tang, California Polytechnic State University
- 2016: Bradley Lulik, Eva Rennie, Brent Yeske, University of Regina
- 2017: Sunghoon Chung, Austin Hochstetler, Sean Bybee, Antonio De Jesus Aguayo, California Polytechnic State University
- 2018: Iik Wahyu Anggara, Katon Vembriarto Widayaswara, Yoga Hutomo Putra, Mohammad Ilham Akbar, Fahmi Rizaldi, Bandung Institute of Technology
- 2019: Samuel Bean, Alexander Sparks, Jacob Scarpino, Sarah Mayer, University of New Hampshire
- 2020: R Muhammad Nadhir Nasrudin Tanujiwa, Alpinus Raditya Dewangga, Kamilita Hening Musono, Reza Dzikri Khusaini, Hilman Prakoso, Selvia Diwanty, Bandung Institute of Technology Wetonia

#### Previous categories

Architectural Design

- 2001: Andrew Herland, Troy Jacoby, University of Wisconsin
- 2003: Jacobi Gastile, Angelica Gordon, Ronnie Pride, Jr., North Carolina A&T State University
- 2005: Michael Oranchak and Keith W. Bryan, Lawrence Technological University
- 2006: Scott Poloney and Dan Guith, Lawrence Technology University
- 2007: Sonia Carias and Alissa Ogen, Savannah College of Art & Design
- 2008: Stuart Johnson and Grant Helmkamp, Lawrence Technology University
- 2009: Alexandra Gibson, Bazigha Tufail, Justina Jones, University of Kansas

#### HVAC System Design

- 2001: John Damoth, Leon Greiner, Brian Holton, Sam Lampe, Martin McDonough, John Quilitzsch, Glenn Remington, Steve Turnbull, Ferris State University
- 2001: Leye Adegbite, Jason Cooper, Kevin Dettling, Ken Frieling, Bill Hoch, Troy Milan, Jeff Oosting, Adrian Subryan, Jeremy Tell, Christopher Weaver, Adam Wilson, Ferris State University
- 2002: James R. Mallory, Joseph Laws, Michael J. Hahn, Michael J. Laws, Nathaniel Mielke, Ferris State University
- 2003: David Begin, Wayne Belka, Tim Eller, Bill Kangas, Mary Kladder, Troy Milks, Matthew Pedler, Brian Reneker, Ferris State University Applied Technology Center
- 2004: Jesse Bigelow, Andy Geem, Gerard Harris, Bob Krieg, Nathon Klein, Mike Sweeney, Ferris State University
- 2005: Brad Green, Bhushan Joshi, John Lindman, Trevor Fink, Ray Wrobel, Joseph Borders, Ferris State University
- 2006: Jesse Fisher and Amy Pastor, The Pennsylvania State University
- 2007: Justin Bern, Jon Gridley, Kevin Kaufman, Jessica Lucas, David Melfi and Yulien Wong, The Pennsylvania State University
- 2008: Gary Schrader, Jeremy Saddison, Ryan Larson, Chad Gydesen, Ferris State University

- 2009: Alyssa Adams, Calvin Douglas, James Gawthrop, Jr., Justin Herzing, Amy Leventry, Michael Smith, The Pennsylvania State University
- 2010: Elyse Widin, William Raschefsky, Chan Kim, Brian Sybesma, Craig Allen, California Polytechnic State University
- 2011: Holly Brink, Michael Crabb, James Dougherty, Andrew Gilliam, Gina Halbom, University of Nebraska Lincoln

Refrigeration System Design

• 2006: Thammarat Wittayakerkkrai, Chaiwat Puttanuntadech, and Kittipong Sookchai, Chulalongkorn University

# **Technology Awards**

The Award of Engineering Excellence was created in 1989 to recognize a first place winner of the Society-level Technology Award Competition for an outstanding application of innovative design and effective energy utilization. It is awarded at the judges' discretion.

# Award of Engineering Excellence

- 2000 Byron H. Bakenhus for Lincoln Electric System, Rokeby Ice Storage Project, Lincoln, NE
- 2005 Frederic Genest for the Mountain Equipment Co-op, Montreal, Canada
- 2013 Joe Tai for Research Support Facility, NREL, San Francisco, CA
- 2014 Peter Rumsey for the Packard Foundation Net Zero Energy Headquarters, Oakland, CA
- 2018 Johnathan Rumohr and Jesse Hendershot for Heritage Hall Alumni Center, Kalamazoo, MI
- 2020 Susumu Horikawa, Kosuke Sato, & Eri Kataoka for Shogakukan Building, Tokyo, Japan
- 2021 Ned Greene for OHSU Knight Cancer Research Building, Portland, OR

Established in 1981, the Technology Awards recognize successful applications of innovative design, which incorporate ASHRAE standards for effective energy management, indoor air quality, and mechanical design management technology.

#### Commercial Buildings - New

- 1999: Sukhdev S. Mathaudhu for the City of Riverside Public Utilities Operations Center, Riverside, California
- 2005: Frederic Genest for the Mountain Equipment Co-op, Montreal, Canada
- 2005: Jeffrey P. Blaevoet for the Big Rock Ranch, Lucas Films, Nicasio, California
- 2005: Steven T. Taylor & Jeffrey R. Stein for the Electronic Arts II, Redwood City, California
- 2008: Albert R. Barifeld for Springhill Suites, Pensacola Florida
- 2008: Steven Jones for the Kern Schools Federal Credit Union Administration Building, Bakersfield, California
- 2010: Michael J. Hedrick, Thomas J. Marseille, & Long Lam for The Terry Thomas, Seattle, Washington
- 2010: Stephan L. Weidner for 100 Howe Building, Covington, Kentucky
- 2011: Peter H. Rumsey for The David Brower Center, Oakland, California
- 2011: David Grassl for Johnson Controls Corporate Headquarters, Milwaukee, Wisconsin
- 2012: Roland Charneux for Mountain Equipment Coop, Montreal, Quebec, Canada
- 2012: Jonathan Heller for Northwest Maritime Center, Seattle, Washington
- 2012: Olivier Brodeur for Cartierville Y Centre, Longueuil, Quebec, Canada
- 2012: Daniel P. Robert for Bell Campus, Phases 1 & 2, Laval, Quebec, Canada
- 2012: Prem Mehrotra for Evelyn Pease Tyner Interpretive Center, Oak Park, Illinois
- 2013: Joe Tai for Research Support Facility, NREL, San Francisco, California
- 2013: Peter French Alspach for Bill & Melinda Gates Foundation Headquarters, Seattle, Washington
- 2013: Thiam Leong Chen for The Energy Commission HQ (Diamond Building), Petaling Jaya, Selangor, Malaysia
- 2013: Prem Jain for Eco Commercial Building Greater Noida, Noida, India
- 2013: Stephen Carpenter for A Grander View, Kitchener, Ontario, Canada
- 2013: Nuno Duarte for Walmart Burlington Geo-Exchange, Toronto, Ontario, Canada
- 2014: Peter Rumsey for the Packard Foundation Net Zero Energy Headquarters, Oakland, California
- 2014: Scott Bowman for the Iowa Utilities Board, Office of Consumer Advocate Office Building, Des Moines, Iowa
- 2014: Shengwei Wang for the International Commerce Center, Hong Kong, China
- 2014: Pierre Levesque for the Jonxion 4905 Lapiniere, Longueil, Quebec, Canada
- 2014: Jacques Lagacé for La Maison du Developpement Durable, Montreal, Quebec, Canada
- 2015: Benjamin Frank Gozart, Charles Chaloeicheep, Tom J. Marseille, & Tom C. Boysen for Federal Center South Building 12021, Seattle, Washington
- 2015: Aaron Robert Smith for 100 Venture Run, Halifax, Nova Scotia
- 2015: Jacques Lagaće for Commission de la Construction du Quebec, Montreal, Quebec
- 2016: Benjamin A. Skelton for the Walgreens Net Zero Store (Store #15364), Chicago, Illinois

- 2017: Kitaro Mizuide for YKK80 Building, Osaka, Japan
- 2017: Brian Rose & Tracy Steward for Cincinnati District 3 Police HQ NZE Building, Cincinnati, Ohio
- 2017: Brian Coffield for Chesapeake Bay Foundation Brock Environmental Center, Washington, D.C.
- 2018: Roland Charneux for Moutain Equipment Co-Op Head Office, Vancouver, BC, Canada
- 2018: Devin G. Cheek & Jeremy Smith for CMTA Lexington Office, Lexington, Kentucky
- 2018: Hiromasa Tanaka, Susumu Horikawa, & Kouji Sugihara for Daikin Technology and Innovation Center, Settsu, Osaka, Japan
- 2019: Dwight Schumm & Timothy Lentz for Indian Creek Nature Center Amazing Space, Cedar Rapids, Iowa
- 2019: Steve Gross, Hormoz Janssens, & Shawn Wilson for Marine Way (Building 20), Mountainview, California
- 2020: Susumu Horikawa, Kosuke Sato, & Eri Kataoka for Shogakukan Building, Tokyo, Japan
- 2020: Matthew Longsine, Tom Marseille, Charles Chaloeicheep, & Zach Stevens for Department of Enterprise Services, Facility Professional Services, Seattle, Washington
- 2021: Shana Scheiber & Roger Lautz for American Family Insurance "The Spark", Madison, Wisconsin

#### Commercial Buildings - Existing

- 1999: Bruce T. Votta for the Admiral Fell Inn, Baltimore, Maryland
- 2001: Sukhdev S. Mathaudhu for County Administrative Center, Riverside, California
- 2003: David M. Schaefer & Gerry Noorts, Gruman/Butkus Associates, Evanston, Illinois
- 2004: Jeffrey Blaevoet for Hamilton Landing Hanger 3, 4, 5, and 6, Novato, California
- 2008: Pierre Roussel for the Complexe les Ailes, Montreal, Quebec, Canada
- 2009: Kenneth Sonmor for 4200 St. Laurent Office Tower, Montreal, Quebec, Canada
- 2010: Caroline Paquet for National Bank Tower, Montreal, Quebec, Canada
- 2010: Peter H. Rumsey for IDeAs Design Facility, San Jose, California
- 2010: Roland Charneux for Place Desjardins, Inc. Office Towers Energy Retrofit, Montreal, Quebec, Canada
- 2011: Roland Charneux for 1801 McGill College, Montreal, Quebec, Canada
- 2011: Peter Bailey, Walter Joneas, & Gregory Dodge for Hybrid Refrigeration Chiller, Huntington, Vermont, Cazenovia, New York, Billerica, Massachusetts
- 2011: Alexander Butkus & Gerry Noorts for Grand Hyatt Kauai Resort and Spa, Evanston, Illinois
- 2011: Micheal Sotura for Boeing 18-26, Seattle, Washington
- 2012: Ken Sonmor for IKEA Brossard Distribution Center, Montreal, Quebec, Canada
- 2012: Murdoch MacPherson for AODBT Office Space Renovation, Regina, Saskatchewan, Canada
- 2012: Bruce Davis for Deere and Company Retrofit-East Office, Moline, Illinois
- 2012: Barry Jim On & Min Zhong for SSFM Office Solar Cooling System, Honolulu, Hawaii
- 2013: Shawn Oram for Rice Fergus Miller Office & Studio, Seattle, Washington
- 2013: Youming Chen for Fault Detection and Diagnosis for VAV in Cambridge House, Changsha, Hunan, China
- 2013: Peter Rumsey for Integral Group Deep Green Office, Oakland, California
- 2013: Mehrdad Alipour for Marvell Building 4, Data Center Economizer, San Jose, California
- 2014: David Budd for the SIERR Building at McKinstry Station, Seattle, Washington
- 2014: Shanti (Shawn) Oran for the King County Housing Authority, Seattle, Washington
- 2015: Roger (Jui-Chen) Chang for the Wayne N. Aspinall Federal Building & US Courthouse, Washington DC
- 2015: Perry Hausman for Corporation Hall, Kalamazoo, Michigan
- 2015: Stanley Katz for Complex Southwest One, Laval Quebec, Canada
- 2015: Donald J. McLauchlan for the Sun Life Assurance Company 29 North Wacker Renovation Project, Hillside, Illinois
- 2016: Dylan T. Connelly for DPR Construction's San Francisco Net Positive Energy Office, San Francisco, California
- 2017: Shannon M. Allison for 435 Indio Way, Oakland, California
- 2017: Russell Charles Pratt for CSHQA Office Building, Boise, Idaho
- 2017: Seck Pong Chan for MGM Macau, NAPE Macau
- 2018: Mark C. Hersch & Holly Stevens for Market One, Des Moines, Iowa
- 2018: Hsu-Cheng Chiang & Ming-Shan Jeng for IEK Center Building, Chutung, Hsinchu, R.O.C.
- 2018: Abdul Razaak Syed Mubarak & Paul Mikii Abuel for Sands China Ltd. (COTAI Strip), Taipa, Macau
- 2019: Hiroki Kawakami, Hiroaki Takai, Kazuki Wada, & Koji Tanaka for TaAKENAKA Corporation Higashikanto Branch Office Renovation, Koutou-ku, Tokyo, Japan
- 2019: Daniel Robert & Stanley Katz for Complex de Gaspé, Montreal, Quebec, Canada
- 2019: John Andary & Josh Brincks for LinkedIn Zero Net Energy Office Retrofit, Sunnyvale, California
- 2021: Tomoaki Ushio, Harunori Yoshida & Shigemi Mori for Kyoto Station, Osaka, Japan
- 2021: Dave Chan, Kenneth Lee, Pan Lee & Franco Mok for 28 Hennessy Road, Hong Kong

# Commercial Buildings - EBCx

• 2019: John Tsingas & David Eldridge for 801 Grand, Des Moines, Iowa

- 2020: Kelley Whalen, Jason Brooks, & Tony Horton for Adtran's East Tower Chilled Water System Optimization, Huntsville, Alabama
- 2021: Kwai Ping Lau & Raymond Yau for Two Pacific Place, Hong Kong

Institutional Buildings - New

- 1999: Stephen W. Tweedie for the Nova Institution, Truro, Nova Scotia, Canada
- 2001: Roland Charneux for the President Kennedy Building, Universite du Quebec a Montreal, Montreal, Quebec, Canada
- 2001: Peter A. Potvin for Saint John's University Science Building, Minneapolis, Minnesota
- 2001: Jonathan P. Friedan for Henry P. Rowan Hall, Rowan University School of Engineering, Philadelphia, Pennsylvania
- 2002: A. Boyd Morgenthaler & David F. Shumway for Fish and Game Hunter Education Building, Fairbanks, Alaska
- 2004: David C. Inghram for Des Moines Area Community College-West Campus, Des Moines, Iowa
- 2005: Nicolas Lemire for the Concordia University Science Complex, Montreal, Canada
- 2005: Wayne E. Kerbelis for the Allegan High School New Natatorium & Theater Additions, Allegan, Michigan
- 2005: Antonio Costa for the Race Hall at Santa Rosa Junior College, Santa Rosa, California
- 2008: Craig A. Watts for the Fossil Ridge High School, Fort Collins, Colorado
- 2008: Stephane Sirard for the Centre de Formation Professionnelle l'Horizon, Mont-Tremblant, Quebec, Canada
- 2009: Jacques de Grace for Normand Maurice Building, Montreal, Quebec, Canada
- 2009: Eric Kirkland for NREL ST&F, Golden Colorado
- 2009: David Williams for Two Harbors High School, Two Harbors, Minnesota
- 2009: Stephane Sirard for CEROM, St. Mathieu-de-Beloeill, Quebec, Canada
- 2010: Surrander Naganathan for Deer Ridge Correctional Institution, Madras, Oregon
- 2010: Stephen C. Roberts for Kirsch Center for Environmental Studies, Cupertino, California
- 2010: Donald J. McLauchlan, Steven D. Maze, & David Lavan for Richard J. Klarchek Information Commons Building, Chicago, Illinois
- 2010: Robert N. Roop for New Whitmore Lake High School, Whitmore Lake, Michigan
- 2010: Rejean Blais for Post de Police de la Surete a Vaudreuil Dorion, Vaudreuil Dorion, Quebec, Canada
- 2010: Nicolas Lemire for Kahnawake Survival School, Kahnawake, Quebec, Canada
- 2011: Amit Khanna for Jerry Yang and Akiko Yamazaki Environment and Energy Building, San Francisco, California
- 2011: Jean Molina & Laurier Nichols for Saint-Johns High School, Montreal, Quebec, Canada
- 2011: Derek Crowe for Ann Arbor New Skyline High School, Troy, Michigan
- 2011: Antonia Costa for College of Siskiyous Emergency Services Training Center, Napa, California
- 2011: Robert Thompson for Mesa Community College Physical Sciences Building, Gilbert, Arizona
- 2011: Jeffrey Blaevoet for Valley Hi North Laguna Library, San Francisco, California
- 2011: Heric Holmes for Regina Provincial Corrections Centre, Regina, Saskatchenwan, Canada
- 2012: Wayne E. Kerbelis for SVSU Health and Human Services Building, Troy, Michigan

#### Institutional Buildings - Existing

- 2001: Jeffrey Celuch for Capital University Hybrid Chilled-Water Plant, Columbus, Ohio
- 2001: James C. Paul for Energy Loop, Saginaw Valley State University, University Center, Michigan
- 2005: Gilles Desmarais for the Jean-de-Brebeuf College, Montreal, Canada
- 2006: Lev H. Zvenyach for Chicago Center for Green Technology, Chicago
- 2009: Thomas Durkin for HVAC Renovations G.W. Carver Elementary School, Indianapolis, Indiana
- 2010: Brett J. Kelley & Charles T. Meagher for cGMP Cell Therapy Facility, Chicago, Illinois
- 2010: Mark M. Hydeman & Molly E. McGuire for Stanford University Stauffer Building I Laboratory VAV Conversion, Stanford, California
- 2010: Genevieve Lussier for Pavilion Envirotron, Quebec City, Quebec, Canada
- 2011: David Porter & Branden Farnsworth-Weinblatt for Campus Wide Satellite Boilers, Rochester, New York
- 2011: Marco Freitas & Simon Pelletier for Cowansville Courthouse, Montreal, Quebec, Canada
- 2013: Sean Abbott for Seattle Fire Station #2, Lynwood, Washington
- 2019: Eric Solrain & Kathryn Lee for San Francisco Art Institute at Fort Mason Center Pier 2, San Francisco, California

#### Educational Facilities - New

- 2012: René Dansereau for Université de Sherbrooke-Campus de Longueuil, Longueuil, Quebec, Canada
- 2012: Jeffrey Blaevoet for the Tanimura & Antle Family Memorial Library, San Francisco, California
- 2013: Mark Owen Koller for Portland State University Academic & Student Recreation Center, Portland, Oregon
- 2013: Louise Grace Smith for Vancouver Island University Cowichan Campus, Victoria, British Columbia, Canada
- 2013: Hormoz Janssens for City College of San Francisco Ocean Campus Academic Multi-Use Building, San Francisco, California
- 2013: Brian Haugk for Machias Elementary School, Seattle, Washington
- 2014: Stephen Hamstra for the 300 Davis Street Building, Zeeland, Michigan
- 2014: Timothy McGinn for the University of Calgary, EEEL Project, Calgary, Alberta, Canada

- 2014: Glenn Friedmann & Brent Eubanks for the Oakland Unified School District, La Escuelita Education Center, Alameda, California
- 2014: Stephanie Febles for Locust Trace AgriScience Farm, Lexington, Kentucky
- 2015: Brian A. Haugk & Brian B. Cannon for Valley View Middle School, Seattle, Washington
- 2016: Nicolas Lemire for Anne-Marie Edward Science Building John Abbott College, Sainte-Anne-de-Bellevue, Quebec, Canada
- 2016: Steve Daley for Sandy Grove Middle School, Lumber Bridge, North Carolina
- 2017: Bradford Crowley for Johns Hopkins University, Undergraduate Teaching Laboratories, Philadelphia, Pennsylvania
- 2017: Nate Eppley for Millikan Laboratory and Andrew Science Hall, Oakland, California
- 2017: George P. Karidis for Oakland University Engineering Center, Detroit, Michigan
- 2018: Raymond L. Beaufait for Discovery Elementary School, Arlington, Virginia
- 2018: Regan T. Moffat for Taylor Institute for Teaching & Learning University of Calgary, Calgary, Alberta, Canada
- 2018: Stet Allen Sanborn & Tyler Bradshaw for University of California Santa Cruz Cowell Ranch Historic Haybarn, Santa Cruz, California
- 2018: Brian L. Coffield for American University Washington College of Law, Washington, District of Columbia
- 2019: Michael P. Sherren for Wilde Lake Middle School, Columbia, Maryland
- 2020: Henry Johnstone for Environmental and Natural Resources II, Tucson, Arizona
- 2020: Benjamin Hobbs for Fayette County Public Schools, Lexington, Kentucky
- 2020: David Shumway, Bart Semmler, & Matt Olson for University of Alaska Fairbanks (UAF) Engineering Learning & Innovation Facility, Anchorage, Alaska
- 2020: Alec Carnes, Rick Pavlak, & John O'Brien for Cope Environmental Center, Dayton, Ohio
- 2020: Benjamin Hobbs for BCTC Newtown Campus Science Education Center, Lexington, Kentucky
- 2021: Aaron Smith, Denis Morris, & Andrew Bartlett for Dalhousie IDEA and Design Buildings, Halifax, Nova Scotia, Canada
- 2021: Bryan Harrelson, Brice Watson, Brian Turner, & Ray Beaufait for Alice West Fleet Elementary, Arlington, Virginia

#### Educational Facilities - Existing

- 2012: Wayne E. Kerbelis for SC4-North Building HVAC Renovation, Troy, Michigan
- 2012: Ryan Thorson for Northwestern High School, Duluth, Minnesota
- 2013: Thomas Durkin for Hamilton Heights Elementary School HVAC, Indianapolis, Indiana
- 2013: Laurier Nichols for McGill University McIntyre Pavillion, Montreal, Quebec, Canada
- 2014: Nicolas Lemire for the McGill University, Otto Maass Building, Montreal Quebec, Canada
- 2016: Eric Yang for Strawbridge Elementary School, Virginia Beach, Virginia
- 2017: Adam M. Pierce for Cox's Creek Elementary School, Prospect, Kentucky
- 2018: Jonathan Rumohr & Jesse Hendershot for Heritage Hall Alumni Center, Kalamazoo, Michigan
- 2019: Morgan Heater for Westside School, Seattle, Washington
- 2020: Chad Luning, Michael McDermott, Eric Huber, & David Nelson for University of Illinois at Urbana-Champaign, Frederick Seitz Materials Research Laboratory, Renovation, Evanston, Illinois
- 2020: André-Benoit Allard for Université du Québec à Trois-Rivières (UQTR), Québec City, Québec City, Canada
- 2021: Brian Rose for Historic Mercy High School Renovation / CPS Gamble Montessori, Cincinnati, Ohio
- 2021: Teresa Laurence & Jess Farber for Harvard University Massachusetts Hall, Framingham, Massachusetts

#### Other Institutional - New

- 2012: Matthew Longsine for Battelle Biological Sciences Facility, Seattle, Washington
- 2012: Michael J. Lawless for Stout-Jarvis Hall Science Wing Renovation & Addition, Madison, Wisconsin
- 2013: Jonathan Heller for Eastside Fire & Rescue Station 72, Seattle, Washington
- 2013: Abdel Darwich for Segundo Services Center, San Francisco, California
- 2014: David Shumway for the Alaska Scientific Crime Detection Laboratory, Anchorage, Alaska
- 2014: Hajime Yoshida for the Green Technology Training and Enterprise Center, Madison, Wisconsin
- 2015: Matthew William Longsine & Henry Di Gregorio for the Tacoma Center for Urban Waters, Seattle, Washington
- 2015: Eric William Shaw for the Upper Thames River Conservation Authority, London, Ontario, Canada
- 2016: Frank Shadpour for Miramar College Police Substation and Parking Structure, San Diego, California
- 2017: John Patrick McDonald for J. Craig Venter Institute, Oakland, California
- 2017: Martin Roy for Bibliothéque Ville de Mont-Royal, Deux-Montagnes, Quebec, Canada
- 2017: Caroline R. Kelty for Deep Green Residence Hall, Lexington, Kentucky
- 2018: Steven T. Taylor, Todd Gottshall, David Heinzerling, & Allan Daly for San Francisco Musuem of Modern Art, San Francisco, California
- 2018: Martin Roy for Bibliothèque Raymond-Lévesque, Longeuil, Quebec, Canada
- 2018: Robert Harold Thompson, Eric L. Kirkland & Fletcher J. Clarcq for NREL Energy Systems Integration Facility (ESIF), Golden, Colorado
- 2019: David Meyer, Jaimee Wilson, Eric LePore, & Alfred Rodgers for Koffman Southern Tier Incubator, Binghamton, New York

• 2020: Ryan Idema & Jesse Hendershot for Gerald R Ford International Airport Consolidated Checkpoint and Marketplace, Grand Rapids, Michigan

# Other Institutional - Existing

- 2015: Kateri Héon & Pietro Guerra for the Centre Civique de Dollard-des-Ormeaux, Montreal, Quebec, Canada
- 2016: Lisa J. Sombart for the St. Louis Public Library-Central Branch Renovation, St. Louis, Missouri

# Other Institutional - EBCx

• 2017: Adam C.S. Wheeler for UCSF PSSRB MBCx, San Francisco, California

# Health Care Facilities - New

- 2000: Michael K. Larson for Quality Living Inc. East Campus Development, Omaha, Nebraska
- 2002: Warren L. Lloyd for Great River Medical Center New Medical Campus, West Burlington, Iowa
- 2005: Jeffrey P. Blaevoet for the Kaiser Geary Medical Office Building, San Francisco, California
- 2007: Matt Younger for the Washington Department of Veterans Affairs, Retsil, Washington
- 2010: Paul B. Switenki for Kaiser Permanente Template Hospitals. Oakland, California
- 2010: Don M. Iverson for Harborview Medical Center New Norm Maleng Building, Seattle, Washington
- 2010: Michael T. Stark for Northwestern Memorial Hospital New Prentice Women's Hospital, Chicago, Illinois
- 2011: Matt Volgyi for Kaiser Downey Medical Center, Garden Grove, California
- 2012: Paul Marmion for Abbotsford Regional Hospital and Cancer Centre, West Vancouver, British Columbia, Canada
- 2012: Olivier Brodeur for CLSC Chateauguay, Longueuil, Quebec, Canada
- 2012: Steve Guttmann for Health & Wellness center, UC-Davis, San Francisco, California
- 2013: Jeremy McClanathan for Swedish Issaquah Hospital, Lynnwood, Washington
- 2013: Michael Lawless for Aurora Medical Center Grafton Wisconsin, Madison, Wisconsin
- 2014: Pascal Michaud for the Expansion of Notre Dame of St. Rosary Convent, Rimouski, Quebec, Canada
- 2015: Mark Stavig for Peace Island Medical Center, Lynnwood, Washington
- 2017: Kurt Monteiro for Humber River Hospital, Toronto, Ontario, Canada
- 2019: Daniel Robert & Stanley Katz for Ullivik Health Centre, Montreal, Quebec, Canada
- 2020: Kurt Monteiro & Kevin Sharples for Peel Memorial Centre, Toronto, Ontario, Canada
- 2020: John Pappas & Eric Dupuis for Lucile Packard Children's Hospital Stanford, San Francisco, California

# Health Care Facilities - Existing

- 1999: Laurier Nichols for Sacre-Coeur Hospital, Montreal, Quebec, Canada
- 2001: Arthur G. Veneklase for Blodgett Memorial Medical Center Chiller Replacement, East Grand Rapids, Michigan
- 2008: Laurier Nichols, Rejean Blais, Simon Pelletier, Oanh Nguyen, Jean Molina, & Marco Freitas for Rehabilitation of Honore-Mercier Hospital, Saint-Hyacinthe, Quebec, Canada
- 2011: Gilles Demarais for Rehabilitation Pierre-Boucher Hospital, Montreal, Quebec, Canada
- 2011: Jack Kafesdjian for Louis H-Lafontaine-Hospital, Laval, Quebec, Canada
- 2011: Michael Murphy & Greg Noorts for Advocate Lutheran General Hospital, Evanston, Illinois
- 2011: Jeffrey Blaevoet for Marin Health & Wellness Center, San Francisco, California
- 2013: Bruce L. Flaniken for Methodist Hospital Central Utility Plant, Houston, Texas
- 2013: Eric Fullerton for TMC Phase 2 Cooling, Little Rock, Arkansas
- 2015: Jean-Philippe Morin for CSSS Pointe-de-l'île Energy Conservation Project, Longueuil, Quebec, Canada
- 2018: Pierre-André Tremblay for CHU de Quebec Integrated Energy Efficiency Project, Quebec City, Canada
- 2021: Reece Kiriu & Jeff Stein for Kaiser Vallejo Medical Offices, Alameda, California

#### Health Care Facilities - EBCx

• 2018: Eric M. Fullerton, Alam McElderry, & Andrew Jester for Pineville Enterprise Energy Management System Phase 1, Charlotte, North Carolina

#### Industrial Facilities or Processes - New

- 2000: J. Howard Van Boerum for Salt Lake Organizing Committee, Utah Winter Sports Park Bobsled/Luge Track, Bear Hollow (Park City), Utah
- 2005: Jeffey D. Celuch for the LaFarge Gypsum Drywall Plant, Cincinnati, Ohio
- 2007: Pierre Roussel & Jacques Lagace for the Pierre-Elliott Trudeau Airport Thermal Plant, Montreal, Quebec, Canada
- 2008: Apichit Lumlertpongpana & Wichai Rungruangprug for Charoen Pokphan Foods Public Company Ltd.
- 2008: Christopher Rauch for the Aramark Chicago Industrial Laundry, Chicago, Illinois
- 2010: Jonathan M. Mesik for Oak Park Public Works Center, Oak Park, Illinois

- 2010: Ronald Gagnon & Louis Racicot for Logistik Unicorp, St-Jean sur Richelieu, Quebec, Canada
- 2010: Martin Roy for Sobey's Warehouse, Trois-Rivieres, Quebec, Canada
- 2012: Blake E. Ellis for Thermal Energy Corporation-Thermal Energy Storage, Kansas City, Missouri
- 2012: Curtis Cady for Watsonville Water Resources Center, San Leandro, California
- 2013: Blake Ellis for Thermal Energy Corporation East Chilled Water Building, Kansas City, Missouri
- 2013: Patrick Klanac for Verizon Wireless Twinsburg Data Center, Akron, Ohio
- 2014: Mukesh Khattar for the Breakthrough Innovation for Data Center Cooling Efficiency, Redwood City, California
- 2014: Charles E. Gulledge, III for the Caterpillar Axle Manufacturing Plant, Greensboro, North Carolina
- 2015: Charles E. Gulledge, III for the Caterpillar MHE-STTT Assembly Plant, Greensboro, North Carolina
- 2015: Brett Mason Griffin for Digital Realty Data Campus, Chicago, Illinois
- 2015: Terry G. Autry for the NCAR Wyoming Supercomputing Center, Lakewood, Colorado
- 2016: Mike Smith for Sea-Tac Airport Pre-Conditioned Air, Seattle, Washington
- 2016: Abdel K. Darwich for the Jess Jackson Sustainable Winery Building, Davis, California
- 2017: Julien Allard for STM Construction du Centre de transport de Stinson, Montreal, Quebec, Canada
- 2020: Paul Finch for Kao Data Campus, Harlow, Essex, United Kingdom

# Industrial Facilities or Processes - Existing

- 1999: Donald P. Fiorino for Texas Instruments Central Steam Boiler Plant Replacement, Dallas, Texas
- 2000: Byron H. Bakenhus for Lincoln Electric System, Rokeby Ice Storage Project, Lincoln, Nebraska
- 2002: Arthur Wesley Adler for the Alpha Gary Central Chilled Water Plant, Leominster, Massachusetts
- 2005: Evans J. Lizardos for the Port Authority of New York and New Jersey, New York, New York
- 2007: Daniel Pare for IBM, Bromont, Quebec, Canada
- 2010: Mukesh K. Khattar for High Density Data Center Cooling/Heat Containment, Austin, Texas
- 2011: Yan Ferron for Buanderie Central de Montreal, Montreal, Quebec, Canada
- 2011: Philip Spagnolo for Scot Forge Compressed Air System, Park Ridge, Illinois
- 2012: Luc Simard for Arena Marcel Dutil, Les Coteaux, Quebec, Canada
- 2013: Robert Sloan for TCS Data Center, Seattle, Washington
- 2013: Robert Turner for High Purity Standards Renovation, Charleston, South Carolina
- 2014: Gheorghe Mihalache for Fromagerie des Basques, Montreal, Quebec, Canada
- 2015: William C. Weinaug, Jr., Wade H. Conlan, & Damon Lynn for Antarctica: Empire of the Penguin, Maitland, Florida
- 2016: Eric K. Miller for the Erie County Medical Center-Chilled Water Plant Improvements, Buffalo, New York
- 2017: Dominic J. Cacolici for Tampa International Airport-Passenger Boarding Bridge Cooling, Tampa, Florida
- 2020: Chun Kei Ng, Colin Chung, Michael Sung, & Mark KK Lam for Implementation of District Cooling System for Stables Compound and Adjacent Buildings, Sha Tin Racecourse, Hong Kong

#### Public Assembly - New

- 2005: Jeffrey L. Ewens & Blake E. Ellis for the SBC Center, San Antonio, Texas
- 2006: Martin Roy for TOHU's Capiteau Des Arts, Montreal
- 2008: Rick L. Grove for Firstenburg Community Center, Vancouver, Washington
- 2008: David Kistler for Environmental Discovery Center, Springfield Township, Michigan
- 2008: Martin Roy for Canadian Amateur Musician Musiciens Amateurs Canadien, Harrington, Quebec, Canada
- 2009: Laurier Nichols for Centre Communautaire de Mistissini, Montreal, Quebec, Canada
- 2011: Yury Lui & Charles Eggert for Jewish Reconstructionist Congregation, Chicago, Illinois
- 2013: Caroline Paquet for Biodiversity Pavillion, Montreal, Quebec, Canada
- 2015: Arthur Gilbert Sutherland for the Westhills Recreation Centre, Victoria, British Columbia
- 2018: Samuel Paradis for Amphithéâtre Multifonctionnel de Québec (Centre Videotron), Quebec, Quebec, Canada
- 2019: Sarah Bersteh & Scott Lichy for Ramsey County Library Shoreview, Shoreview, Minnesota
- 2019: Martin Roy for Résidences funéraires Goyer, Ste-Thérèse, Quebec, Canada
- 2020: Leighton Deer & Kevin Kaufman for Tennessee State Museum, Minneapolis, Minnesota
- 2020: Seck Pong Chan for MGM Cotai, Macau
- 2021: Lawrin Ellis, Cory Duggin, Carmine Rende & Alyssa Faircloth for Southwest Florida Community Foundation, Fort Myers, Florida

#### Public Assembly - Existing

- 1999: Claude Dumas for City of Montreal Skating Rinks, Montreal, Quebec, Canada
- 2002: Peter H. Rumsey for The Oakland Museum, Oakland, California
- 2012: Timothy Gasper for The North Carolina Museum of Art, Raleigh, North Carolina
- 2013: Andre-Benoit Allard for Montreal Biodome, Quebec City, Quebec, Canada

- 2013: Olivier Paquette St-Jean for Olympia Arena, Montreal, Quebec, Canada
- 2015: Jason Troy LaRosh for the Janesville Ice Arena Addition and Renovation, Janesville, Wisconsin
- 2018: Matt Branham, Adam Pierce, & Jess Farber for Kentucky Exposition Center, Louisville, Kentucky
- 2019: Dominic Desjardins, Maurice Landry, & André-Benoît Allard for Montreal Olympic Park's Integrated Performance Contracting Project, Montreal, Quebec, Canada
- 2020: Mary On for Audain Art Museum, Vancouver, British Columbia, Canada

#### Residential - New

- 2000: Marc Rosenbaum for Hanover House, Hanover, New Hampshire
- 2010: University of California Merced Sierra Dormitory Buildings I & II, Merced, California
- 2013: Tom (Shimin) Ren for Whistler Athlete's Village, New Westminster, British Columbia, Canada
- 2013: Scott Koehn for Brentwood Net Zero Affordable Housing Project, Edmonton, Alberta, Canada
- 2013: Goran Ostojic for The Village on False Creek, Vancouver, British Columbia, Canada
- 2014: Darren Dageforde for the Dageforde Residence, Blair, Nebraska
- 2014: Ariel Levy for the Ramona Apartments, Portland, Oregon

# Residential – Existing

- 2012: Steven D. Maze for 525 W. Hawthorne Mechanical Upgrade Project, Chicago, Illinois
- 2012: Pierre Lévesque for Condominium "Les Verriéres sur le Fleuve," La Prairie, Quebec, Canada

# **Residential**

- 2016: Jonathan M. Heller for the Stack House Apartments, Seattle, Washington
- 2016: Tom J. Marseille for the Greenfire Campus, Seattle, Washington
- 2016: Sarah Elizabeth Berseth for the Bishop Henry Whipple Building, Fort Snelling, Minnesota
- 2016: Daniel Robert for the Altoria/Aimia Tower, Montreal, Quebec, Canada

# Alternative and/or Renewable Energy Use

- 1999: Paul A. Torcellini for National Renewable Energy Laboratory Thermal Test Facility, Golden, Colorado
- 2001: Paul A. Torcellini & Otto Van Geet, for Otto Van Geet Residence, Idaho Springs, Colorado
- 2002: William (Lanny) Severn Joyce for Lake Source Cooling, Cornell University Utilities Department, Ithaca, New York
- 2003: Alexander S. Butkus, Jr. & Shirish Maniar, Gruman/Butkus Associates, Evanston, Illinois
- 2006: Laurier Nichols for Ecole Du Tournant, Saint-Constant, Québec

#### William J. Collins, Jr. RP Award

Established in 1985, this award honors the Chapter RP Chair who excels in raising funds for ASHRAE's RP Campaign.

1985	Ralph M. Mattison	1997	T. Randall Jones	2009	Rob Craddock
1986	Bob A. McAlister	1998	Jitendra T. Shah	2010	Bobby Vermillion
1987	Herbert L. Bregman	1999	Spencer N. McDonald	2011	George "Billy" Austin, Jr.
1988	Robert P. Barschel	2000	Allan Bruns	2012	Nicolas Lemire
1989	Ronald W. Keller	2001	Eric T. Jenison	2013	Christopher M. Donovan
1990	Robert J. Meredith	2002	Timothy B. Boyles	2014	Ken Stoppel
1991	Jeffrey D. Brouillette	2003	Michael B. Balko	2015	Robert Kunkel
1992	A. Timothy Waugh	2004	Mike Middleton	2016	Kimberly Thompson
1993	James M. Porter	2005	T. David Underwood	2017	Patrick Huang
1994	Tom A. Willis	2006	Rick Sellers	2018	Adam Graham
1995	Tony Moore	2007	Brian Hamilton	2019	Daniel Redmond
1996	Roger W. Dieffenbach	2008	John Sealy	2020	Reed Coggins

#### Willis H. Carrier Award

Established in 1960, the Willis H. Carrier Award, sponsored by the Carrier Corporation, is awarded for the best published paper of outstanding quality presented at a Society conference by a member of any grade who was 32 years of age or less at the time of presentation of the paper.

1959-60	Aaron L. Brody	1992	Lars J. Nilsson
1960-61	Carl F. Speich	1993	Nancy J. Banks
1961	J. Richard Wright	1994	Barbara A. Stefl
1962-66	(No award given)	1995	Frederic B. Morris

1967	Charles E. Bullock	1996	Chad B. Dorgan
1968	George D. Huffman	1997	Shane A. Moeykens
1969	Richard E. Barrett	1998	Steve P. Rottmayer
1970	Yosunobu Nishi	1999	Brian W. Lee
1971	Douglas E. McDuffie, Jr.	2000	Carey J. Simonson & Dustin L. Ciepliski
1972	(No award given)	2001	Andrew Manning
1973	Stanley A. Mumma	2002	Xianghong Huang
1974	(No award given)	2003	Dongyi Xiao
1975	Douglas M. Burch	2004	Guan Yanzheng
1976	Merle F. McBride	2005	Nicolas Long
1977	Stephen M. Sessler	2006	(No award given)
1978	A.F.M. Ali	2007	Barbara H. McCrary
1979	Sudhir K. Sastry	2008	Joseph Firrantello & Alexander P. Michaud
1980	Stephen E. Selkowitz	2009	Paulo Cesar Taberes Velasco, Ph.D.
1981	Amir L. Ecker	2010	Michael S. Waring
1982	Francesco Pompei	2011	Jacob L. Edmondson
1983	Van D. Baxter	2012	Daniel C. Gibbs
1984	Nancy J. MacDonald Banks	2013	Paul Glanville, P.E., Douglas Kosar, & Jason Stair
1985	Frank E. Jakob	2014	Morgan D. Hayes
1986	Joseph E. Laviana	2015	Dustin W. Demetriou & Hamza Salih Erden
1987	Robert W. Rasmussen	2016	Carl L. Reid & Peng Yin
1988	Alain P. Fobelets	2017	Mohammad Rafati
1989	Joseph H. Eto	2018	Carl L. Reid & Peng Yin
1990	Anil K. Trehan	2019	Emily Oldham
1991	Andreas K. Athienitis & Jiangang Shou		

#### YEA Award of Individual Excellence

Established in 2013, this award recognizes YEA members for superior efforts during the preceding Society year in the promotion of YEA and representation of the 35 and under demographic of ASHRAE.

- 2014 Stephanie Kunkel, Rupesh Iyengar, Jake Kopocis
- 2018 Wesley Stanfill, Pun Mun Wai, Bryce Buchanan2019 Anuj Gupta, Emma Wildeman

Abhishek Kurana, Badri Patel, Sarah Toy

- 2015 Nathaniel Boyd, John Constantinide, Eric Sturm
- 2016 Hao Luo, Kris Tan, Rachel Romero
- 2017 Erica Moser, Alyse Falconer, Mitesh Kumar

#### YEA Inspirational Leader Award

2020

Established in 2020, this award recognizes a Young Engineer in ASHRAE (YEA) member who has gone above and beyond to make contributions to the industry and community.

2021 Vanessa Freidberg

#### Youth Outreach Award

Established in 2013, this award recognizes the outstanding effort of a member who actively engages a youth audience in their country, region, or local community through science, technology, engineering and mathematics (STEM) activities.

2014	(No award given)	2017	James Paul Martin	2020	Elise Kiland
2015	Eric Heinrich	2018	Heather Schopplein		
2016	Eric Heinrich	2019	Cinthya Cecilia Carillo Mendez		

#### **Previous Awards**

# ASHRAE-ALCO Medal for Distinguished Public Service

Established in 1965 by Presidential Member John E. Dube and sponsored by the Alco Valve Company, this award recognized a member of the Society who performed outstanding public service in their community, and in doing so, helped to improve the public image of the engineer.

1981 Howell E. Adams, Jr.

1966	(No award given)	1982	Warren G. Moses	1996	Harry M. Will
1967	(No award given)	1983	William W. Gay, Sr.	1997	(No award given)
1968	W.L. Davis	1984	(No award given)	1998	William S. Bodinus
1969	George A. Linskie	1985	Realto E. Cherne	1999	Evans J. Lizardos
1970	Carlyle M. Ashley	1986	Otto A. Tenant	2000	Jerry G. Bartos
1971	Harry E. Bovay, Jr.	1987	Joseph S. Kearney, Sr.	2001	(No award given)
1972	Robert W. Flanagan	1988	Howard O. Ward	2002	Richard B. Hayter
1973	Bruce L. Evans	1989	John F. Germ	2003	Eugene Stamper
1974	George B. Hightower	1990	John I. Levenhagen	2004	Richard F. Vermillion
1975	Earle K. Wagner	1991	Ellsworth F. Cassing	2005	Laurance Staples, Jr.
1976	Alwin B. Newton	1992	Kenneth W. Wicks	2006	Alfred Greenberg
1977	(No award given)	1993	William P. Chapman	2007	David McKenney
1978	Cullen E. Parmelee	1994	Carl J. Opatrny	2008	Clark W. Bullard
1979	Henry J. Campbell, Jr.	1995	John H. Stanley		
1980	(No award given)	1994	Carl J. Opatrny		

#### **Chapter Program Star Award**

Established in 2004, this award recognized the outstanding performance of an individual in the planning and programming of meeting programs at the chapter level which resulted in a significant improvement in the local meeting attendance. In January 2019 this award was discontinued and incorporated into the Dan Mills Programs Star Award.

2005	Frank Heine, Twin Tiers Chapter	2013	Eric M. Fullerton, Arkansas Chapter
2006	Dave Shugars, Western Michigan Chapter	2014	Heather Schopplein, San Diego Chapter
2007	Tom Lewis, Nebraska Chapter	2015	William P. Lee, Hawaii Chapter
2008	Don Hay, Monterrey Chapter	2016	(No award given)
2009	Robert Laneve, Cleveland Chapter	2017	Chun-Sing Wong, Hong Kong Chapter
2010	Christopher Ahne, Arkansas Chapter	2018	Abhishek Khurana, Toronto Chapter
2011	Keith H. Reihl, Houston Chapter	2019	Joe Chow, Hong Kong Chapter
2012	Marco Ottavino, Toronto Chapter		

#### **Comfort Cooling Award for Project Excellence**

Established in 2004, this award recognized the designer and the owner of a comfort cooling application which highlights innovation and/or new technologies. In January 2016, the name of the award was changed from the Refrigeration Comfort Cooling Award for Project Excellence. In 2021 this award was discontinued and incorporated into the Milton W. Garland Commemorative Refrigeration Award for Project Excellence.

2006 Mark Blazis, Kevin Dolder, & Karl Miller 2012	Eric M. Fullerton
2007-08 (No award given) 2013-15	(No award given)
2009 Russell L. Heiken 2016	Andrew B. Pearson
2010-11 (No award given) 2017-20	(No award given)

#### Joseph F. Cuba Award for Energy Research

The Joseph F. Cuba Award for Energy Research was presented by the ASHRAE Research and Technical Committee to honor significant accomplishment by a graduate student in energy conservation or renewable energy research.

1705 Melinau Macinel & Daniel L. Ewelt 1707 Larry W. Kostuk 1707 Janes E	1985	Meinrad Machler & Daniel L. Ewert	1987 Lar	ry W. Kostiuk	1989	James E. Braur
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#### **Klixon Award**

The Klixon Award was presented from 1957-1968 to the author of the best paper published by the Society during a calendar year on a subject relating to electric motors or controls. The award was sponsored by the Metals and Controls Division, Texas Instruments, Inc.

1958	Raymond T. Divers	1961	C.V. Downing, Jr.	1966	G.L. Rodgers
1959	H.O. Spauschus & R.S. Olsen	1962-64	(No award given)	1967	(No award given)
1960	C.B. Sonnino & John F. Harris	1965	J. Mowry	1968	David B. Dibble & Russell E. Wood

**Wolverine-ASHRAE Diamond Key Award** 

Presented from 1940 to 1970 by the Wolverine Tube Division, Calumet & Hecla, Inc., this award was given to the author of the best paper published by the Society during the previous calendar year.

- 1940 Henry P. Pownall
- 1941 Paul F. McDermott
- 1942 Charles N. Deverall
- 1943 John G. Bergdoll, Jr.
- 1944 David L. Fiske
- 1945 Daniel D. Wile
- 1946 Clarence E. Lund
- 1947 Richard H. Swart
- 1948 Lloyd A. Staebler
- 1949 Milo M. Bolst & Richard C. Jordan 1
- 1950 William L. Holladay

- 1951 Daniel D. Wile
- 1952 Daniel C. Schiavone
- 1953 Neil E. Hopkins & John J. Seelaus
- 1954 Ferruccio Rasori
- 1955 (No award given)
- 1956 Dale J. Missimer
- 1957 James Threlkeld & Tamami Kusuda
- 1958 Jack B. Chaddock
- 1959 Harold M. Henddrickson
- 1960 Perry H. Ziel & John S. Blossom
- 1961 Bruno Morabito

- 1962 William L. Bryan
- 1963 Charles A. Whitehurst
- 1964 William F. Kerka
- 1965 T.J. Csermely & C.M. Bosworth
- 1966 G.P. Mitalas
- 1967 Dr. Hans O. Spauschus & G.C. Doderer
- 1968 Peter K. Baade
- 1969 Colin G. Gordon
- 1970 Frank R. Biancardi & D.P. Darrow