

ASHRAE Distinguished Lecturers

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Last Updated: Tuesday, October 5, 2021

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Devin A. Abellon, P.E.		1 Diversity, Equity, Inclusion and ASHRAE: Does it Really Matter?	Basic/Interm		
Uponor		2 Embedded Tube Radiant Systems to Maximize Energy Efficiency	Basic/Interm		ABELLON01
25404 North 52nd Avenue		3 Hydronic Piping with PEX: Pros and Pitfalls	Intermediate		
Phoenix, AZ 85083-4444		4 Radiant Heating and Cooling Control Strategies	Basic/Interm		
Tel: (760) 902-4879		5 Specifying Radiant Heating and Cooling Systems	Intermediate		
Email: devin.abellon@uponor.com		6 The (un)Ethical Engineer: a study in principle and practice	Basic		
HONORARIUM	LANGUAGES				
None	English				
Roberto R. Aguilo, P.E.		1 Cooling Loads Calculation	Intermediate		
Estudio Aguilo & Asociados		2 Protecting the Environment using Natural Refrigerants	Intermediate		
Tres Arroyos 2421		3 Refrigerant Flow Controls Methods in Industrial Refrigeration	Intermediate		
Buenos Aires, 1416		4 Refrigerants	Intermediate		
ARGENTINA		5 Supermarkets Refrigeration System & Sustainability	Intermediate		
Tel: (54911) 4148-2111		6 The Refrigeration Processes in the Food Industry	Intermediate		
Email: raguilo@yahoo.com		7 The Use of CO2 as Refrigerant	Intermediate		
HONORARIUM	LANGUAGES				
None	English Spanish				
William P. Bahnfleth, Ph.D., P.E.		1 Fundamentals of Ultraviolet Germicidal Irradiation for Air & Surface Disinfection	Basic/Interm	0920014267	BAHNFLETH04
Pennsylvania State University		2 HVAC and Airborne Infectious Diseases	Basic/Interm	0090003542	Bahnfleth06
1426 South Pugh Street		3 HVAC and Risk from Airborne Hazards	Basic/Interm	0920017326	Bahnfleth07
University Park, PA 16802		4 Integrating Indoor Air Quality and Energy Efficiency in Buildings	Intermediate	0920014269	BAHNFLETH02
Tel: (814) 863-2076		5 Thermal Energy Storage in the Era of Sustainability	Interm/Adv	0920014272	BAHNFLETH03
Email: wbahnfleth@psu.edu		6 Variable Primary Flow Chilled Water Systems	Interm/Adv	0920014275	BAHNFLETH05
HONORARIUM	LANGUAGES				
None	English				

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
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Giovanni Barletta

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 Barranquilla
 Colombia
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|---|--|--------------|
| 1 | ANALYSIS OF THE VARIABLES THAT HAVE AN IMPACT ON THE REFRIGERATION SYSTEM AND ON THE LIFECYCLE UNIT. *Available in Spanish | Basic/Interm |
| 2 | EVALUATION OF ARCHITECTURE ALTERNATIVES IN COMMERCIAL REFRIGERATION UNDER TEWI ANALYSIS. *Available in Spanish | Basic/Interm |
| 3 | GOOD PRACTICES IN LEAK CONTROL USING DIRECT AND INDIRECT METHODS *Available in Spanish | Basic/Interm |

HONORARIUM

LANGUAGES

Robert Bean, R.E.T., P.L.(Eng.)

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 Calgary AB T2R 0B5
 CANADA
 Tel: 403.560.5769
 Email: k9cave@gmail.com

- | | | |
|---|--|--------------|
| 1 | An Introduction to Thermal Comfort: The Human Factors of Sensation, Perceptions and Responses | Basic |
| 2 | Fundamentals of ASHRAE Standard 55: Thermal Environmental Conditions for Human Occupancy | Intermediate |
| 3 | Using Thermal Comfort Tools to Evaluate Discomfort Probabilities Due to Enclosure Design and Choices in HVAC Systems | Interm/Adv |
| 4 | What Should Drive the Sustainability Bus - Indoor Environmental Quality or Energy? | Interm/Adv |

HONORARIUM

LANGUAGES

English

Erich Binder

EBCL
 159 Douglasbank Drive SE
 Calgary AB T2Z1X7
 CANADA
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 Email: ebcl@shaw.ca

- | | | |
|---|---|--------------|
| 1 | ASHRAE - How You Can Get involved | Basic |
| 2 | ASHRAE Cold Climate Building Design – Updates from 2019 Revisions to Cold Climate Building Design Guide | Basic/Interm |
| 3 | Cold Climate Building Design | Basic |
| 4 | HVAC Building Pressurization Systems – Lessons Learned | Basic/Interm |
| 5 | HVAC Rules of Thumbs for Trouble Shooting | Basic/Interm |
| 6 | HVAC&R - A Risk Management System | Basic/Interm |
| 7 | Industrial Ventilation & Loss Prevention Engineering | Basic |

HONORARIUM

LANGUAGES

None

English

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
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Hoy R. Bohanon, Jr., P.E.
Hoy Bohanon Engineering PLLC
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Email: bohanoneng@gmail.com

HONORARIUM **LANGUAGES**
None English

1	Applying ASHRAE Standards to Existing Buildings	Basic		
2	ASHRAE Building Energy Quotient (bEQ)	Basic	0920020132	Bohanon05
3	Basic Requirements of ANSI/ASHRAE Standard 62.1-2019	Basic	0920020128	BOHANON09
4	Better HVAC Design Using New Options in ANSI/ASHRAE Standard 62.1-2019	Advanced		
5	Commissioning, Operating and Maintaining Air-to-Air Energy Recovery Systems	Advanced	0920020139	BOHANON01
6	Concerned About Viruses at Home? What's an ASHRAE Member to Do?	Basic		
7	How to Implement Demand Control Ventilation & Comply with ASHRAE Standards	Intermediate	0920020133	Bohanon02
8	Perception and Acceptance of Commissioning	Basic		
9	Retro-Commissioning for Energy Savings	Basic	0920020130	Bohanon03
10	Using ASHRAE Standard 62.1-2016 Multiple Space Equations	Intermediate	0920020131	Bohanon06
11	What Do You Need to Know About the ASHRAE IAQ Guide?	Basic		

Jeff Boldt
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HONORARIUM **LANGUAGES**

1	Acoustic Fundamentals & Building Acoustics	Basic		
2	ASHRAE 90.1-2019	Basic		
3	Building Moisture Management	Basic		

Patrick Brooks
SMACNA
Chantilly VA
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Email: pbrooks@smacna.org

HONORARIUM **LANGUAGES**

1	Duct System Acoustics	Basic/Interm		
2	Exhaust Duct Design	Basic/Interm		
3	Fitting Selection	Basic/Interm		
4	Supply Duct Design	Basic/Interm		
5	System Effect	Basic/Interm		

NAME		TOPICS	TOPIC CLASS	GBCI	AIA	
Fabio M. Clavijo Tecnaire Ltda. Calle 145 15-59, Apt. 204 Bogota 110121 COLOMBIA Tel: 317640 Email: presidencia@tecnaire.com		1	ASHRAE STANDARD 55	Interm/Adv		
		2	ASHRAE STD 62.1	Interm/Adv		
		3	ASHRAE STD 90.1	Interm/Adv		
		4	Dehumidification- Basic Concepts	Intermediate		
		5	Dehumidification Process	Advanced		
		6	ENERGY AUDITING PROCESS	Interm/Adv		
		7	Energy in Buildings - An HVAC Perspective for 21st Century	Intermediate		
		8	HVAC AND COVID-19 - SOLUTIONS AND TRENDS	Interm/Adv		
		9	HVAC DESIGN CONDITIONS FOR BUILDINGS IN TROPICAL EQUATORIAL REGION	Interm/Adv		
		10	Indoor Air Quality and Ultra-Violate (UVC) Technology	Interm/Adv		
HONORARIUM	LANGUAGES					
None.	English Spanish					
Douglas C. Cochran 4347 Palisades Lane Mississauga Ontario L4W 3X7 Canada Tel: 647 2726754 Email: dccashrae@gmail.com		1	Building EQ			
		2	Cold climate			
		3	Equipment Selection			
HONORARIUM	LANGUAGES					
Drury Crawley, Ph.D. Bentley Systems, Inc. 4539 Albemarle Street Washington, DC 20016 Tel: (202) 422-6464 Email: dbcrawley@gmail.com		1	Big, Smart, and Everything: Data, Technology, Buildings, Cities, and the Iota	Intermediate	0920020229	Crawley03
		2	Building Performance Simulation: What's in the Black Box	Basic/Interm/Adv	0920020230	Crawley07
		3	EnergyPlus, DOE's New Generation Building Energy Simulation Program	Basic/Interm/Adv	0920020231	Crawley04
		4	Getting From AEDGs to Zero-Energy Buildings	Basic/Interm	0920020232	Crawley06
		5	Going Digital – Modeling Infrastructure Resilience for Sustainable Urban Development	Intermediate	0920020233	CRAWLEY09
		6	Impacts of Climate Change & Urbanization on Future Building Performance	Basic/Interm	0920020234	Crawley05
		7	Standard 189.1 - Structure, Requirements & Energy Savings	Basic/Interm/Adv	0920020235	Crawley01
		8	Trends: Buildings, Technologies and Tools	Basic/Interm		Crawley02
HONORARIUM	LANGUAGES					
\$250 donation to ASHRAE Research	English					

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
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Chandana N. Dalugoda

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 Makuluduwa Piliyandala 10300
 SRI LANKA
 Tel: 94777785778
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HONORARIUM

None

LANGUAGES

English

1	Air Conditioning Systems for Tropical Humid Climates	Intermediate	0920020143	DALUGODA01
2	Applied Psychometrics for Air Conditioning Systems	Basic	0920020134	
3	Cooling Load Calculations ASHRAE CLTD/SCL/CLF Method	Basic	0920020139	
4	HVAC Air System Designs	Intermediate	0920020141	Dalugoda001
5	HVAC Water System Design	Intermediate		DALUGODA05
6	Reducing Carbon Footprint of Buildings in Developing Economies	Advanced		Dalugoda04
7	Sustainable HVAC Designs for Green Buildings	Advanced	0920020142	Dalugoda03

Julian R. de Bullet

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HONORARIUM

None

LANGUAGES

English

1	Centrifugal Chiller Fundamentals	Basic		
2	Chiller Plant Design Fundamentals	Basic		
3	Condenser Water Heat Recovery	Advanced		
4	Constant Flow Chiller Plant Design	Intermediate		
5	Green "Sustainable" HVAC Design	Intermediate		
6	Optimal Air - A Cool Solution	Intermediate		
7	Responsible Use of Refrigerants	Advanced		
8	Variable Flow Chiller Plant Design	Advanced		

Kyle DelPiano

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HONORARIUM

LANGUAGES

1	Modern Pump Selection for System Efficiency			
2	Variable-Speed Pumping Control Strategies			
3	VRF & Hydronics Systems: A Strategic Comparison			

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
Pamela Duffy, P.E. Tel: N/A Email: pam.duffy.ashrae@gmail.com	1 Ethical Dilemmas with Social Media in HVAC	Basic		
	2 Productive from Anywhere: Practical Tips to Get Stuff Done	Basic		
	3 You, But Online: Managing Your Online Presence	Basic		
HONORARIUM \$100 to the Pam and Ted Duffy Endowment Fund	LANGUAGES English			
Thomas H. Durkin, P.E., ASHRAE Fellow 6740 Spirit Lake Dr. #101 Indianapolis IN 46220 Tel: 317-402-2292 Email: thdurkin46@gmail.com	1 2-Pipe HVAC – Myths Debunked	Intermediate		
	2 Benefits of Technology Transfer – Six Steps to Winning a Technology Award	Basic		
	3 Energy Efficiency Relative to HVAC Design and Operations	Intermediate		
	4 Geothermal Central Systems	Intermediate		
	5 Heat Recovery Applications and Economics	Intermediate		
	6 Humidity Control	Basic		
	7 Low Temperature Heating Applications and Economics	Basic		
HONORARIUM English				
Mark W. Fly, P.E., Fellow ASHRAE 7016 S Chestnut Avenue Broken Arrow Ok 74011 Tel: 918-633-7900 Email: mfly@cox.net	1 Acoustics Basics for HVAC &R Designers	Basic/Interm		
	2 Failure is the Option - How failure, perseverance, and positive attitude lead to Innovation and success	Basic		
	3 Inside the Box – Fan Characteristics and Applications	Basic/Interm		
	4 Understanding Air-Conditioning and Heat Pump Ratings	Basic		
HONORARIUM English	LANGUAGES English			
	5 What's Loud - Understanding the Psychoacoustics of Hearing and Perception	Intermediate		
	6 What's Shakin' – Vibration Fundamentals and Human Perception	Intermediate		

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
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Victor W. Goldschmidt, Ph.D.

Dynamic Creativity Applications
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HONORARIUM

None

LANGUAGES

English
Spanish

1	Active Listening & Styles of Communication	Basic		
2	Air Conditioning: A Look Into the Past & a Guess into the Future	Basic		
3	Blessings and Curses of Computer Modeling	Basic		
4	Differing Perspectives into Global Warming	Basic		
5	Distinction between Leadership and Management and their Application	Basic		
6	Principles of Leadership & Change	Basic		
7	Principles of Leadership & Group Dynamics	Basic		
8	Problem Solving and Creativity	Basic		
9	Problem Solving in Engineering	Basic		
10	Releasing Individuals' Own Creativity	Basic		
11	Sustainability and Implications in the Context of Power Plants	Basic		
12	Thinking Like an Engineer and Societal Challenges	Basic		
13	Training Session - Leadership Principles	Basic		
14	Training Session - Problem Solving: Principles & Practices	Basic		
15	Training Session - Strategic Planning	Basic		

Patricia T. Graef, P.E., Fellow ASHRAE

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HONORARIUM

LANGUAGES

English

1	Business Ethics for the HVAC Professional	Basic		
2	The Logic of Dedicated Outside Air Systems and The Core Technologies That Make Them Effective	Basic/Interm		
3	The New Legionella Standard: ANSI/ASHRAE 188-2015 'Legionellosis: Risk Management for Building Water Systems'	Basic/Interm		

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
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Eckhard A. Groll, Dr. Eng.

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|---|--|----------|--|--|
| 1 | Recent Research of Novel Compression Concepts for Heat Pumping, A/C & Refrigeration Applications | Advanced | | |
| 2 | Update on Refrigerants: Past, Present and Future | Basic | | |

HONORARIUM	LANGUAGES
None	English

Charles E. Gulledge, III, P.E.

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- | | | | | |
|---|---|--------------|------------|------------|
| 1 | Design for Manufacture and Assembly (DfMA) - Modular Off-Site | Basic/Interm | | |
| 2 | Design-Build-Operate-Maintain: What Could Possibly Go Wrong? | Basic/Interm | 0920020144 | DBOM19 |
| 3 | Green Industrial HVAC Design | Basic/Interm | 0920020148 | GIHD19 |
| 4 | Integrated Building Design | Basic/Interm | 0920020145 | GULLEDGE01 |
| 5 | Lean Integrated Project Delivery | Basic/Interm | 0920020146 | LIPD19 |

HONORARIUM	LANGUAGES
None	English

Sheila J. Hayter, P.E.

NREL
 1425 Normandy Rd
 Golden, CO 80401
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- | | | | | |
|---|---|--------------|--|--|
| 1 | Integrating Renewable Energy Systems into Buildings | Basic/Interm | | |
|---|---|--------------|--|--|

HONORARIUM	LANGUAGES
None	English

Jan L. M. Hensen

Robijnring 30, 5629GK
 Eindhoven, Netherlands
 Tel: +31 6532 30 382
 Email: j.hensen@tue.nl

- | | |
|---|--|
| 1 | Building Performance Simulation - challenges and opportunities |
| 2 | Building Performance Simulation - mind the gap |

HONORARIUM	LANGUAGES
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NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Jorge E. Hernandez, P.E.		1 Basic Air Conditioning Concepts for beginning Engineers and Architects	Basic		
Regional Managers & Associates		2 Basic Concepts Of Evaporative Cooling	Interm/Adv		
12609 Oulton Circle		3 Basic Psychrometrics for Industrial Refrigeration Professionals	Basic		
Orlando, FL 32832		4 Critical Applications	Basic/Interm/Adv		
Tel: (305) 505-2906		5 Displacement Ventilation	Basic/Interm/Adv		
Email: angelica@regionalmanagers.com		6 Latest Developments in the HVAC world	Basic/Interm/Adv		
HONORARIUM	LANGUAGES	7 Psychrometrics of Displacement Ventilation	Advanced		
None	English Spanish Portuguese				
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Daniel Int-Hout, III		1 Connections	Basic		
Krueger		2 Methods of Effective Room Air Distribution	Intermediate		
1401 North Plano Road		3 Selecting VAV Products for Acceptable Environments	Intermediate		
Richardson, TX 75081		4 The Basics of Air Distribution	Basic/Interm		
Tel: (972) 497-0418		5 You Can't Afford Discomfort	Intermediate		
Email: daninthout@aol.com					
HONORARIUM	LANGUAGES				
None	English				
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Hank Jackson, P.E.		1 Beam Me Up Scottie! Transport Energy: Motors, Fans, & Pumps	Interm/Adv		
Sales O'Brien		2 Commissioning Critical Environment Facilities – Lessons Learned	Basic		
30 Morning Glory Lane		3 Green Buildings: Help or Hype?	Basic		
Weaverville, NC 28787		4 Introduction to Geothermal Heat Pump Systems	Basic		
Tel: (828) 691-0785		5 Just Do It! How to Get Started With an Energy Efficiency Survey	Basic/Interm		
Email: hjackson@juno.com		6 Overcoming Objections to Energy Efficiency Investments	Basic/Interm		
HONORARIUM	LANGUAGES	7 Transformers: Turning Existing Buildings Green	Basic		
None	English				

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Ronald E. Jarnagin 355 Falconridge Street Richland, WA 99352 Tel: (509) 430-4113 Email: ron.jarnagin@pnl.gov		1 Advanced Energy Design Guides – Going Beyond Minimum Standards	Basic		
		2 ASHRAE Headquarters Renovation – What Happens When Leaders try to do it Right	Basic		
		3 ASHRAE’s Building Energy Labeling Program, the Building Energy Quotient (bEQ)	Basic		
		4 Standard 90.1 – Past, Present and Future	Basic		
		5 Sustaining ASHRAE Through Leadership	Basic		
HONORARIUM	LANGUAGES				
None	English				
Julia A. Keen, P.E., Ph.D. Kansas State University 2062 Seaton Hall 920 N 17th St Department of Architectural Engineering Manhattan, KS 66506 Tel: (319) 230-8522 Email: jkeen@ksu.edu		1 ASHRAE bEQ – Building Performance vs Building Certification & Rating	Basic		
		2 ASHRAE's Impact in the Industry - Past, Present, and Future	Basic		
		3 Distinctly Different – Skillsets for Women to Succeed in STEM Fields	Basic		
		4 Ethical Decision Making – An Exercise in Application	Basic		
		5 Millenials – How to Manage the next Generation	Basic		
		6 Targeting Success – Improve Employee Satisfaction, Retention, and Profit	Basic		0920020149 TSIES19
HONORARIUM	LANGUAGES				
None	English				
Prof Dr. Adel Khalil Cairo University, Faculty Of Engineering Tel: Email: adelkhk@yahoo.com		1 Applications of Cryogenic Systems			
		2 Integration of Thermal and Electrical Energy Storage on Demand side for Energy Efficiency			
		3 Prospects of Solar Cooling			
HONORARIUM	LANGUAGES				

NAME		TOPICS	TOPIC CLASS	GBCI	AIA	
Thomas M. Lawrence, Ph.D., P.E. University of Georgia Driftmier Engineering Center Annex Room 106 Athens, GA 30602 Tel: (706) 542-4322 Email: lawrence@engr.uga.edu		1	ASHRAE Standard 189.1 and the International Green Construction Code	Intermediate	0920017334	LAWRENCE02
		2	CO2 Monitoring for Outdoor Airflow and Demand-Controlled Ventilation	Intermediate		
		3	High Performance Building Design – What the Future holds for the Direction for our Industry	Intermediate		
		4	Resilience in Building Design to Support a Resilient Society	Intermediate	0920017336	Lawrence05
		5	The 'Green Awakening': The Coming Carbon Economy & Determining Your Building's CO2 Footprint	Basic/Interm	0920020162	TGAW19
		6	The Integration of a Smart Grid and Smart Buildings	Intermediate		
		7	Thermal Comfort as Related to Energy Consumption: What is the Balance?	Basic	0920014298	LAWRENCE05
		8	What ASHRAE is Doing to Become a Global Society	Basic		
HONORARIUM	LANGUAGES					
None	English					
Karine Leblanc US Air Conditionings Distributors 16900 Chestnut St City of Industry, CA 91748 Tel: (310) 420-7066 Email: karine@leblancusa.com		1	10 leadership lessons to help you be that leader that everyone would follow for free			
		2	Everyone Communicates, Few connect	Basic		
		3	How to use Emotional Intelligence to become a better person professionally and personally	Basic		
		4	It's not too late; learn how to live to your full potential and watch the results!			
		5	Selling is like dating. Learn how to close without selling			
		6	Technical skills will get you the job, human skills will get more clients, increase your productivity and happiness			
HONORARIUM	LANGUAGES					
None	English French					
Luke C.H. Leung, P.E. Skidmore, Owings, & Merrill 224 S. Michigan Avenue 10th Floor Chicago, IL 60604 Tel: (312) 360-4121 Email: luke.leung@som.com		1	21st Century Tall Building Design	Interm/Adv	0920014332	LEUNG01
		2	Healthy Built Environment – Pandemic and Beyond	Basic/Interm/Adv		LEUNG02
		3	The New Carbon Standards: Net Zero Operational, Embodied, Whole Life and Upfront Energy (Carbon)	Interm/Adv		
		4	urj Khalifa – The Tallest Building in the World	Interm/Adv		
HONORARIUM	LANGUAGES					
None	English Chinese					

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
Andrey Livchak, Ph.D. Halton Group Americas 103 Industrial Drive Scottsville, KY 42164 Tel: (270) 237-5600 Email: andrey.livchak@halton.com	1 Active and Passive Beams	Intermediate	0920017337	Livchak02
	2 Emission Control for Commercial Kitchen Ventilation Systems			
	3 Energy Efficient Solutions for Commercial Kitchen Ventilation	Intermediate	0920014335	LIVCHAK01
	4 Fundamentals of Thermal Displacement Ventilation	Intermediate	0920017338	LIVCHAK03
	5 Restaurant ventilation design reducing spread of airborne contaminants			
HONORARIUM	LANGUAGES			
None	English			
R. Christopher Mathis MC2 Mathis Consulting Company P.O. Box 18055 Asheville, NC 28814 Tel: (828) 678-3500 Email: chris@mathisconsulting.com	1 A Window on the Future: The Role of Fenestration in Building Performance	Intermediate	0920017340	MATHIS02
	2 ASHRAE Is In The House: Past, Present and Future Initiatives in Residential Building Performance	Basic		
	3 Bringing ASHRAE 90.1 to the World: The Addition of Climate Zone 0	Basic		
	4 Building Science Lessons from the Honey Bee	Basic		
	5 Energy Efficiency in Commercial Buildings	Basic		
	6 Energy Efficiency in Residential Buildings	Basic		
	7 How Long Will it Last? Addressing the Challenge of Sustainability	Basic		
	8 Primary Energy in Commercial Buildings	Basic		
	9 Why Buildings Matter and the Role of ASHRAE 90.1	Basic		
HONORARIUM	LANGUAGES			
\$250 Donation to ASHRAE Research	English			
Erin McConahey 12777 West Jefferson Boulevard Los Angeles CA 90066 Tel: 310-578-4400 Email: Erin.McConahey@arup.com	1 An Inclusion Mindset	Basic		
	2 Cutting Carbon and Circular Diets: Total Net Zero Carbon Consciousness			
	3 Holistic Thinking for Multidisciplinary Design Solutions	Basic		
	4 Introduction to the UN Sustainable Development Goals for Mechanical Engineers			
	5 Material Concerns in HVAC Equipment			
	6 Principles of Museum Environmental Design	Basic		
	7 The Carbon Context for Mechanical Engineers			
	8 The Feasibility of Natural Ventilation	Basic/Interm		

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Frank Mills 7 Fylde Ave Leyland, Lancashire PR26 6RP NITED KINGDOM Tel: +44 1772 424124 Email: famills@low-carbondesign.com		1 ASHRAE Cold Climate Design Guide	Basic		
		2 Design of Atrium Buildings	Intermediate		
		3 Energy Savings in Pubs, Restaurants, and Hotels	Intermediate		
		4 Hot Climate Design Guide	Basic		
		5 Natural Ventilation	Basic		
		6 Net Zero Energy Buildings	Intermediate		
		7 Net Zero Hospitals	Intermediate		
HONORARIUM	LANGUAGES				
	English				
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Brian P. Monk, P.E. United Technologies Corporation 629 McCaffrey Montreal QC H4T 1N3 CANADA Tel: (514) 515-4822 Email: brian.monk@carrier.utc.com		1 Airborne Contaminant Control in Healthcare Environments	Intermediate		
		2 Current Trends in Design & Installation of Filtration Systems For Building HVAC Security	Intermediate		
		3 Dehumidification and Air Quality in Indoor Pool Environments	Basic/Interm		
		4 Design Concepts in DOAS: Balancing IAQ and Energy	Intermediate		
		5 Emergency Air Filtration and Air Pollution Control for Water Treatment Plants	Intermediate		
		6 Environmental and Emissions Filtration in Waste Water Treatment Facilities	Basic/Interm		
		7 Filtration for High Performing Buildings	Basic/Interm		
		8 Gas Phase Filtration for the Elimination of Corrosive, Odorous and Toxic Gases	Intermediate		
		9 IAQ and Cognitive Functioning in High Performing Buildings	Intermediate	0920017341	MONK04
		10 IAQ in Airports	Basic/Interm		
		11 The Use of Gas-Phase Air Filtration and ANSI/ ASHRAE Standard 62.1	Basic/Interm		
HONORARIUM	LANGUAGES				
None	English French				
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Ross Montgomery, P.E. QST 5309 Deer Forest Place Parrish, FL 34219 Tel: (941) 737-1401 Email: rossmont@aol.com		1 ASHRAE "Building EQ" Building Labeling Program and Energy related programs:	Intermediate	0920014510	MONTGOMERY02
		2 Building Commissioning in the Built Environment - Principles, Process, Procedures, and the Future	Intermediate	0920002610	MONTGOMERY01
		3 Energy Audits: The basics of setting up and executing energy audits in commercial buildings	Intermediate	0920020164	EAEHPD19
		4 Testing Adjusting and Balancing (TAB) – HVAC	Intermediate	0920020165	Montgomery07
HONORARIUM	LANGUAGES				
None	English				

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Christopher O. Muller Purafil, Inc. 2654 Weaver Way Doraville, GA 30340 Tel: (770) 662-8545, X349 Email: cmuller@purafil.com		1 Achieving your Indoor Air Quality Goals: Which Filtration System Works Best?	Basic		
		2 Air Quality Guidelines for Museums, Archives, and Libraries	Basic		
		3 Air Quality in Data Centers: People vs. the Machines	Basic/Interm		
		4 An Evaluation of Filtration and Air Cleaning Equipment Performance in Existing Installations with Regard to Acceptable IAQ Attainment	Intermediate		
		5 Application of Gas-Phase Air Filtration in Pharmaceutical, Biotechnology, and Life Science Manufacturing	Basic		
		6 Applying the IAQ Procedure of ASHRAE 62.1-2016 at K-12 Educational Facilities	Basic/Interm		
		7 ASHRAE Standard 62.1 and LEED: Using Enhanced Air Cleaning to Integrate IAQ and Energy Conservation	Advanced		MULLER01
		8 Beyond Ozone: Cleaning Outdoor Air for IAQ	Intermediate		
		9 Clearing the Air: Advances in Gas-Phase Air Filtration Technology, Standards, and Applications	Basic		
		10 Demonstration of ASHRAE IAQ-Procedure Effectiveness for Improved IAQ and Greater Energy Efficiency	Basic/Interm		
		11 Does Control of Indoor CO2 Levels Negatively Impact IAQ?	Intermediate		
		12 Improving Building IAQ Reduces HVAC Energy Cost	Basic		
		13 Moving Closer to Net Zero Buildings with the IAQ Procedure of ASHRAE Standard 62.1-2016	Basic/Interm		
		14 Proper Design and Use of Gas-phase Air Filtration System for the Control of Environmental Tobacco Smoke	Intermediate		
		15 Protecting Against Chemical Agents of War: Applying Internal Filtration	Intermediate		
		16 Specialized Filtration Required for Museums	Intermediate		
		17 Survival in the Digital Age: Reliability Concerns for Data Center IT Equipment and Effects on Mission Critical Facilities and Operations	Basic/Interm		
		18 The Control of Nitrogen Oxides from Motor Vehicle Exhaust for Improved Air Quality	Intermediate		
		19 The Role of Filtration and Air Conditioning in Sustaining Acceptable IAQ through Ventilation Replacement	Basic/Interm		
		20 There's No Such Thing as a Free Ride: The Real Costs of Free Cooling	Intermediate		

HONORARIUM

None

LANGUAGES

English

NAME		TOPICS	TOPIC CLASS	GBCI	AIA	
Daniel H. Nall, P.E. 80 Random Road Princeton, NJ 08540 Tel: 917.273.0264 Email: dannall@mindspring.com		1	Chilled Water Low Delta-T Syndrome		0920020168	CWLDT19
		2	Chiller Plant Low Delta-T Syndrome: What It Is and How to Avoid It	Advanced		
		3	Close Approach and High Delta-T: Powerful Strategies for Energy Efficiency	Advanced		
		4	Energy Efficient HVAC Strategies	Intermediate	0920014340	EEHS2017
		5	Energy Policy: An Engineering Perspective	Advanced	0920017350	EPEP2018
		6	Free and Passive Cooling	Basic	CourseBP	FPCPD2018
		7	HVAC for "Passive House" Buildings	Basic	0920020166	HVPHB19
		8	Hydronic System Design for Condensing Boilers	Advanced	0920020167	HDCB19
		9	Innovative Systems for Energy and Water Conservation: Four Corporate Headquarters	Intermediate	0920017352	ISEWC2018
		10	LEED v4 Energy and Atmosphere Credits	Basic	0920017353	L4EAC2018
		11	Making Buildings Resilient to Natural Disasters and Acts of Terror	Basic	0920017354	MBR2018
		12	Natural Ventilation Design for Commercial Buildings using Computational Fluid Dynamics	Intermediate	0920017355	NVCFD2018
		13	Sustainable Infrastructure for Green Communities	Interm/Adv	0920017356	SIGC2018
		14	The 2016 New York City Energy Conservation Code	Basic	0920017357	N16YECC
		15	The Advanced Energy Design Guide for Zero Energy K12 Schools	Intermediate	0920020171	AEDGK1219
		16	The Advanced Energy Design Guide for Zero Energy Office Buildings	Advanced	0920020169	AEDGZB19
		17	The Advanced Energy Design Guides	Basic	0920017358	TAEDG2018
		18	The Building Envelope	Intermediate	0920017359	BENV2018
		19	The Impact of Outdoor Air Ventilation	Intermediate	0920014342	IOAV2017
		20	Thermally Active Structures for Green Buildings	Interm/Adv	0920017409	TASGB2018
		21	Underfloor Air Distribution	Intermediate	0920017411	UAD2018
		22	Water Conservation in HVAC Design	Intermediate	0920017412	WCE2018

HONORARIUM

None

LANGUAGES

English

NAME		TOPICS	TOPIC CLASS	GBCI	AIA	
James L. Newman Newman Consulting Group, LLC 31134 Harmony Lane Farmington Hills, MI 48331-3136 Tel: (248) 626-4910 Email: jimn@newmanconsultinggroup.us		1	Energy and Sustainability in Existing Buildings - Being "Green" and Saving Green with Energy Audits	Intermediate		
		2	Energy Auditing, Commissioning, IAQ, bEQ, Sustainability and Other Good Stuff (2 hours)	Basic/Interm		
		3	Green & Sustainable Practices & ASHRAE Standards – How to Design a Healthier, More Profitable Building w/Better Coordination with Owners and their Teams	Intermediate	0920020172	GSPA19
		4	How ASHRAE's Building Energy Quotient (bEQ) Label Drives High Performance and Energy Savings in Facilities	Intermediate		
		5	Indoor Air Quality, Productivity, Health, Energy Conservation and Legal Liability: How to Avoid Problems, OR How Much Does a Lawsuit Cost Compared to Good IAQ	Intermediate		
		6	Transforming an Existing Building Into a High-Performing Facility	Intermediate	0920020174	TEBHP19
HONORARIUM \$125 Donation to ASHRAE Research	LANGUAGES English					
Bjarne W. Olesen, Ph.D. ICIEE-DTU Department of Civil Engineering Nils Koppels Alle DTU, Building 402 Kongens, Lyngby DK-2800 DENMARK Tel: (454) 525-4117 Email: bwo@byg.dtu.dk		1	Application of Radiant Heating and Cooling Systems in Buildings	Basic/Interm	0920017416	Olesen02
		2	Are women feeling colder than men in air-conditioning buildings	Basic		
		3	ASHRAE a global society for building technology: Past-Present-Future	Basic		
		4	Can we take into account diversity when specifying requirements for the indoor environment?	Basic		
		5	Clean Cooling of Buildings	Basic		
		6	How to meet the ventilation required in international standard in an energy efficient way	Basic/Interm		
		7	Indoor Environment - Health, Comfort & Prodcutivity	Basic/Interm	0920017414	Olesen01
		8	International Standards for the Indoor Environment - Where are we and do they apply worldwide?	Basic/Interm	0920017417	
		9	The European Approach to Decrease Energy Consumption in Buildings	Basic		
		10	The influence of occupant behaviour on indoor environment and energy use in buildings	Basic/Interm	0920017415	
HONORARIUM	LANGUAGES English German Danish					
Thomas H. Phoenix, P.E., FASHRAE Clark Patterson Lee 328 E. Market St Suite 200 Greensboro, NC 27401 Tel: 336.232.5755 Email: tphoenix@clarkpatterson.com		1	Advanced Energy Design Guide for K-12 School Buildings: Achieving Zero Energy	Intermediate		
		2	Improving Building Performance	Intermediate		
		3	Passion and Performance	Basic		
		4	The Value of ASHRAE's bEQ	Intermediate		
HONORARIUM	LANGUAGES English					

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
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Rajan Rawal

CEPT University
 K.L.Campus, Navarangpura, Ahmedabad
 380 009
 India
 Tel: +91 79 6831 0000
 Email: rajanrawal@cept.ac.in

- | | | | | |
|---|--|--------------|--|--|
| 1 | Adaptive Thermal Comfort - Theory and Practices | Basic/Interm | | |
| 2 | Net-Zero Energy Buildings - Nuances of Design, Construction, and Operation | Basic/Interm | | |
| 3 | Personal Thermal Comfort Systems - Concepts and Approaches | Basic/Interm | | |

HONORARIUM

LANGUAGES

Douglas T. Reindl, Ph.D., P.E.

University of Wisconsin-Madison
 432 North Lake Street
 Madison, WI 53706
 Tel: (608) 262-6381
 Email: dreindl@wisc.edu

- | | | | | |
|---|--|--------------|------------|----------|
| 1 | An Introduction to Ammonia Refrigeration Systems | Basic | 0920014344 | REINDL01 |
| 2 | ASHRAE Standard 15- A Review and Update | Basic/Interm | 0920014345 | REINDL02 |
| 3 | Powering with Renewable Resources: Thermal Energy Storage | Basic/Interm | | |
| 4 | Refrigerant Safety - Inside and Outside the Machinery Room | Basic/Interm | | |
| 5 | Understanding Safety Relief Systems | Intermediate | | |

HONORARIUM

LANGUAGES

None

English

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Terry L. Rodgers 599 Union St S. Concord NC 28015 Tel: 704-942-1185 Email: TerryLee.Rodgers@am.JLL.com		1 ASHRAE Standards Development Process	Basic		
		2 Characteristics of Cultures of Excellence	Basic		
		3 Commissioning Data Centers	Basic		
		4 Commissioning of Facilities Management Processes	Intermediate		
HONORARIUM LANGUAGES English	5 Commissioning Team Roles & Responsibilities	Basic	0920020173	CTRR19	
	6 Design Reviews Save Money and Improve Quality	Basic			
	7 Designing for the Worst Case	Intermediate			
	8 Differentiating Critical vs Non-Critical	Basic			
	9 Document Control and Retention Programs	Basic			
	10 Effective Communication	Basic			
	11 Embedding O&M Best Practices in the Owners Project Requirements	Basic			
	12 Emergency Preparedness for Critical Facilities	Intermediate			
	13 Enterprise Migration to Colocation Data Centers	Intermediate			
	14 Equipment Startup and Checkout	Basic			
	15 Existing Building Commissioning	Intermediate			
	16 Facilities Management Staffing & Training	Basic			
	17 Implementing Computerized Maintenance Management Systems (CMMS)	Basic			
	18 Integrated Training Program Development	Basic			
	19 Integrating Facility Staff and Building Management Systems (BMS)	Intermediate			
	20 Integrating IT and Facilities Management Through Work-Flow Processes	Intermediate			
	21 Integrity (How to Respond When Things Go Wrong)	Basic			
	22 Managing Building Monitoring & Control Systems	Intermediate			
	23 Managing Critical Operations Via Facility Management Firms	Basic			
	24 Operating & Maintenance Costs and Determining Equipment Lifespan	Intermediate			
	25 Optimizing Staff Resources	Intermediate			
	26 Performance Based Training Programs	Basic			
	27 Reliability vs Complexity	Basic			
	28 Service Level Agreements	Basic			

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
	29 Site Assessments	Basic		
	30 Site-Specific Industry Best Practices	Basic		
	31 Stranding and Recovering Capacity (and Assets)	Intermediate		
	32 The Inefficient Pursuit of Energy Efficiency	Basic		
	33 The Value of Corporate Standards	Basic		
	34 The Value of Factory Witness Testing	Basic		
	35 The Value of Good Specifications	Basic		
	36 The Value of Institutional Knowledge	Basic		
	37 True Innovation - Solid State Switching	Intermediate		
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Richard H. Rooley Project Management Partnership Greenways Church Lane Stoke Poges, Bucks SL2 4PB UNITED KINGDOM Tel: (44) 1753-648040 Email: richard@rooley.com	1 Leadership and Management for Engineers – How to achieve profit – for whom?	Basic		
	2 Quality of the Internal Workplace and Worker Productivity: A Look beyond Engineering	Basic		
	3 RCM (Reliability Centred Maintenance) in Maintenance and Design	Intermediate		
	4 Sick Building Syndrome – Reality or Myth	Basic		
	5 Sublime chaos in construction: Each profession and trade as a strange and dominant attractor	Basic		
	6 Worst Practise in Design and Operation	Basic		
HONORARIUM None	LANGUAGES English			
<hr/>				
David N. Schurk 12808 Queensbury Ln E533 Houston TX 77024 Tel: 920-530-7677 Email: david.schurk@globalplasmason.com	1 Air Conditioning for the Environment of Care			
	2 Air-Cooled Chillers, Efficiency, Affordability and Life Cycle Cost Advantages for Healthcare			
	3 Air-Handling Systems for Hospitals			
	4 Curbing Hospital Energy Costs, Heat-Recovery Chillers for Healthcare			
	5 Keeping Doc's Cool, Dry & Happy in the Operating Room...Can it be Accomplished?			
	6 Understanding the ASHRAE Advanced Energy Design Guide for Large Hospitals, Achieving 50% Energy-Savings			
HONORARIUM	LANGUAGES			

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Michael (Mick) Schwedler		1	Advanced Energy Design Guide for K-12 School Buildings – Achieving Zero Energy		
Trane		2	Advanced Energy Design Guide Overview		
3600 Pammel Creek Rd		3	Building Decarbonization	920024723	0920020207
La Crosse WI 54601-7599		4	Chilled Water System Decisions		
Tel: 608-787-4339		5	Chilled Water Systems for YEA Members Part 1	0920020201	CWSD19
Email: mschwedler@trane.com		6	Chilled Water Systems for YEA Members Part 2	0920020202	CWSDYEA1
HONORARIUM	LANGUAGES	7	Chilled Water Systems for YEA Members: What the Baby Boomers and Gen Xers Have Done WRONG!!!	0920020203	CWSDYEA2
	English	8	Ethics Case Studies		
		9	High Performance Chilled Water Systems	0920020204	HPCWS19
		10	The Advanced Energy Design Guide for Hospitals – Reducing energy consumption by 50%	0920020205	AEDGH5019
		11	Upgrading Existing Chilled Water Systems	0920020206	UECWS19
		12	Variable Primary Flow (VPF) Systems	920024719	0920020208
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Chandra Sekhar, Ph.D.		1	Advanced room air distribution strategies for effective airborne infection control		
National University of Singapore		2	An overview of ASHRAE Standard 62.1		
Dept. of Building		3	Bedroom Ventilation – What do we know and what are the current standards telling us?		
4 Architecture Drive		4	Emerging HVAC technologies for energy efficient healthy buildings in hot and humid climates		
Singapore, 117566		5	Indoor Air Quality Audit in Buildings – System Zone Concept		
SINGAPORE		6	Oversized air-conditioning systems and overcooled buildings in hot and humid climates		
Tel: (65) 65163479		7	Sustainability and Resiliency - A paradigm shift in HVAC system design and operation during a pandemic and beyond		
Email: bdgscs@nus.edu.sg					
HONORARIUM	LANGUAGES				
None	English				

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
Max H. Sherman, Ph.D. Lawrence Berkeley Laboratory 1 Cyclotron Rd MS 90-3074 Berkeley, CA 94720 Tel: (925) 917-0267 Email: mhsherman@lbl.gov	1 ASHRAE Is In The House: Past, Present and Future Initiatives in Residential Building Performance	Basic/Interm/Adv		
	2 ASHRAE's Residential Ventilation Standards	Basic/Interm/Adv		
	3 Dr. Duct Tape	Basic/Interm/Adv		
	4 Smart Ventilation and IAQ Metrics	Basic/Interm/Adv		
	5 Ventilation: The Once and Future King	Basic/Interm/Adv		
HONORARIUM	LANGUAGES			
None	English			
Rajinder Singh PUSA INSTITUTE OF TECHNOLOGY 24/24-B Tilak Nagar New Delhi 110018 India Tel: 9868246628 Email: rajindersingh1102@gmail.com	1 Applied Psuchrometry for Air - Conditioning Engineers			
	2 Best Practices for Operation and Preventive Maintenance of HVAC Systems in Green Buildings			
	3 Use of Green Secondary Refrigerant (Ice Slurry) for Refrigeration and Air-Conditioning			
	4 Vapour Absorption Refridgeration System			
HONORARIUM	LANGUAGES			
Henry H. Slack, P.E. 139 Erie Ave. Decatur, GA 30030 Tel: (404) 217-4229 Email: henry.h.slack@gmail.com	1 After the Mold Rush: Solving Mold Problems	Basic		
	2 Climate Change: How ASHRAE Members Can Prepare	Basic		
	3 Fixing the Great Indoors: HVAC and Indoor Air Quality	Basic		
	4 How Can Climate Change Impact Indoor Air Health?	Basic		
	5 Indoor Air Disasters: Stories of Recovery from Katrina, Hurricanes, Wildfires, and Other Disasters	Basic	0920020208	IAD19
	6 Ventilation Research: Is More Air Better for Us	Basic		
HONORARIUM	LANGUAGES			
None	English			

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
Wei Sun, P.E. Engsysco, Inc. 1665 Highland Drive Ann Arbor, MI 48108 Tel: (734) 274-4022 Email: wsun@engsysco.com		1 Cleanrooms and HVAC Systems Design Fundamentals	Intermediate		
		2 Design of Pressurization Systems – Technologies in Room/Suite Pressure Control, Performance Evaluation and Design Practices	Intermediate		
		3 Fan Energy Conservation in Cleanrooms – Airflow Modeling and Demand Flow Control	Intermediate		
		4 HVAC Systems Design for Airborne Infection Control Spaces in Healthcare Facilities	Intermediate		
		5 Laboratories and HVAC Systems Design Fundamentals	Intermediate		
		6 Primary, Secondary & Tertiary Air Handling Systems Design Strategies for Controlled Environments	Intermediate		
HONORARIUM	LANGUAGES				
None	English				
E. Mitchell Swann, P.E. MDC Systems, LLC 1800 E. Lancaster Ave. Paoli, PA 19301 Tel: (610) 640-9600, ext.19 Email: swann@mdcsystems.com		1 “Can’t We All Just Get Along?” – Keeping Your Eye on the Prize Despite Getting Poked in it (Alternative Dispute Resolution in Construction)	Intermediate		
		2 ...and you may ask yourself “How did I get here?” Forensic Engineering and Forensic Project Management	Intermediate		
		3 Are We There Yet? What is "Substantial Completion" ? (...and how do we know when we get there?)	Basic/Interm		
		4 Connecting Green Building Outcomes to Enterprise Sustainability Programs	Advanced		
		5 Design – Build and the Standard of Care: Under which Standard? Under whose Care?	Intermediate		
		6 Design Build – Executing the Project (based on the ASHRAE Design Build Survival Guide)	Basic/Interm		
		7 Design Build for Green Buildings – Integrated Delivery of an Integrated Idea	Basic/Interm		
		8 Don't let your BIM go "BOOM"! Dealing with the potential liability issues of BIM	Basic/Interm		
		9 Green Design and Sustainability – Un-definable Success in a Defined World	Intermediate		
		10 Jedi Mind Tricks for IPD (First, you've got to want to...)	Basic/Interm		

NAME		TOPICS		TOPIC CLASS	GBCI	AIA
Stephanie Taylor, M.D., M. Arch.		1	Engineers are the Physicians of the Future	Basic		
Taylor Healthcare Commissioning, Inc PO Box 593 Stowe VT 05672-0593 Tel: (860) 501-8950 Email: MD@taylorcx.com		2	Health as a Building Performance Metric	Basic		
		3	Healthcare-associated Infections and Hospital Indoor Air Quality	Basic		
		4	Learn to love Microbes	Basic		
		5	The Impact of the Built Environment on Cognitive Functioning and Worker Productivity	Basic		
HONORARIUM	LANGUAGES					
None	English					
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Paul Torcellini		1	Creating a World of Zero Energy Buildings	Basic	0920020211	CWZEB1
NREL(National Renewable Energy Laboratory) 15013 Denver West Parkway Golden CO 80401 Tel: +1 (303) 384-7528 Email: Paul.Torcellini@nrel.gov		2	On-site Renewable Energy: What to know and what are the myths?	Basic		
		3	Performance Based Procurement for Outstanding Energy Performance	Basic		
		4	The Advanced Energy Design Guide for Zero Energy Buildings	Basic		
HONORARIUM	LANGUAGES					
None	English					
<hr/>						
Terry E. Townsend, P.E.		1	Advanced Energy Conservation & IEQ Design Guidance & Applications	Basic		
Townsend Engineering, Inc. P.O. Box 23526 Chattanooga, TN 37422 Tel: (423) 855-1184 Email: terry@townsend-engineering.com		2	ASHRAE: Leading the World to an Independent & Sustainable Future	Basic		
		3	Building Performance – Tools, Metrics & Protocols for Global Applications	Basic		
		4	Energy Goals and Integrated Design	Basic		
		5	Solutions for Existing Buildings having Performance + IEQ Problems	Basic		
HONORARIUM	LANGUAGES	6	Steps to Making Existing Commercial Buildings More Efficient, Healthy and Comfortable	Basic	0920017431	TOWNSEND01
None	English	7	Sustainable Applications That Work	Basic		
		8	What's Hot in Sustainability?	Basic		

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
Samir R. Traboulsi City Stadium Blvd. SALAME CENTER P.O.BOX 15 5400 Beirut LEBANON Tel: 00961 3 382960 Email: traboulsi.samir@gmail.com	1 Ethics & the Built Environment	Basic	0920020217	EBE19
	2 Net Zero Energy Buildings in 2050, Way to Go	Basic		
	3 Net Zero Energy: Part 1	Basic		NZEP1
	4 Net Zero Energy: Part 2	Basic		NZEP2
	5 Net Zero Energy: Part 3	Basic		NZEP3
HONORARIUM	LANGUAGES			
Paolo Tronville, Ph.D. Corso Mediterraneo 140 Torino, TO 10129 ITALY Tel: +390110904477 Email: paolo.tronville@polito.it	1 HVAC Air Filter System Design Tools: What is Available and How to Use Them	Intermediate		
	2 Introduction to Particulate Matter (PM) Measurement for General Ventilation Applications	Intermediate		
	3 Standardization Activity in the Field of Air Cleaning Equipment	Intermediate		
	4 Understanding Air Filter Test Report Data	Intermediate		
HONORARIUM	LANGUAGES			
	English			
	Italian			
James Vallort Mortenson 1621 18th Street, Suite 400 Denver CO 80202 Tel: (630) 846-9574 Email: jvallort@esdgglobal.com	1 Achieving a Green Data Center: More than a Good Design Is Needed	Intermediate		
	2 Building Automation System Master Planning - Take Control of Your Facility's Future	Basic		
	3 Critical Facilities New Construction Commissioning and Existing Building Commissioning	Basic		
	4 Intelligent Buildings – Technology is changing what is possible in the built environment	Intermediate		
	5 Primary Heating/Cooling Plant Strategies & How to Maximize the Energy & Financial Savings	Advanced		
HONORARIUM	LANGUAGES			
	English			
Timothy G. Wentz University of Nebraska-Lincoln 8012 Dougan Circle Lincoln NE 68516 Tel: (402)-770-3973 Email: tim.wentz@windstream.net	1 A Human Behavior Approach to Net Zero Energy Buildings			
	2 Back to the Future: Our Industry in 2030	Basic		
	3 The Ethics of Disputes: Managing the Construction Claim Process	Basic		
	4 The Ethics of Money: Bidding, Payment Applications and Change Orders	Basic		
	5 The Interface Between Risk and Ethics	Basic		
HONORARIUM	LANGUAGES			

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
Theresa Weston The Holt Weston Consultancy, LLC 2015 Westover Hills Blvd. Richmond VA 23225 Tel: (804) 241-6246 Email: Holtweston88@gmail.com	1 ASHRAE Standard 90.2-2018 and the Pathway to High-Performance Residential Buildings			
	2 Defining and Assessing Resilience			
	3 Women and STEM: Enhancing Innovation and Sustainability through Diversity			
HONORARIUM	LANGUAGES			
Marwa Zaatari 56 Thorndike Street Brookline MA 02446 Tel: 512-203-2204 Email: mzaatari@enverid.com	1 Air Cleaning (Particulate Filtration, Portable and In-Duct Air Cleaners, Coil Cleaning) and Airborne Infectious Diseases			
	2 ASHRAE Standard 62.1 IAQP			
	3 Basic Requirements of ASHRAE Standard 62.1			
	4 Going Beyond the Minimums			
	5 How to Implement Demand Control Ventilation and Comply with ASHRAE Standards			
	6 V in HVAC – Energy Efficient HVAC Systems Design			
	7 V in HVAC - Energy Savings using the Indoor Air Quality Procedure			
HONORARIUM	LANGUAGES			
	English			
Douglas F. Zentz Ferris State University 20616 Madison Avenue Big Rapids, MI 49307-9755 Tel: (231) 591-3052 Email: zentzd@ferris.edu	1 Applied Psychrometrics	Intermediate		
	2 ASHRAE Standard 189 AIA-CES-UBGI Version		0920020242	SDHPB19
	3 ASHRAE Standard 189.1 – “Standards for the Design of High Performance Buildings; except Low-Rise Residential”	Advanced		
	4 Doing More With Less	Interm/Adv		
	5 How to Communicate Technically in a Professional World with Technical Information	Intermediate		
	6 HVAC and Energy Efficiency	Basic		
	7 Sustainable Building Operation via Standard 189.1	Intermediate	0920020259	SBOAS19
	8 Sustaining ASHRAE Through Leadership, Mentoring Our Future	Intermediate		
	9 What’s Your EUI?	Interm/Adv	0920020240	WEUI19
HONORARIUM	LANGUAGES			
None	English			