

# ASHRAE Distinguished Lecturers

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Last Updated: Friday, January 10, 2020

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

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Robert Bean, R.E.T., P.L.(Eng.)</b> 2206, 901-10th Ave SW Calgary AB T2R 0B5 CANADA Tel: 403.560.5769 Email: <a href="mailto:k9cave@gmail.com">k9cave@gmail.com</a>	1	An Introduction to Thermal Comfort: The Human Factors of Sensation, Perceptions and Responses		
	2	Fundamentals of ASHRAE Standard 55: Thermal Environmental Conditions for Human Occupancy		
	3	Using Thermal Comfort Tools to Evaluate Discomfort Probabilities Due to Enclosure Design and Choices in HVAC Systems		
	4	What Should Drive the Sustainability Bus - Indoor Environmental Quality or Energy?		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English	Basic Intermediate Interm/Adv Interm/Adv		
<b>Erich Binder</b> EBCL 159 Douglasbank Drive SE Calgary AB T2Z1X7 CANADA Tel: 403-836-0832 Email: <a href="mailto:ebcl@shaw.ca">ebcl@shaw.ca</a>	1	ASHRAE - How You Can Get involved		
	2	ASHRAE Cold Climate Building Design – Updates from 2019 Revisions to Cold Climate Building Design Guide		
	3	Cold Climate Building Design		
	4	HVAC Building Pressurization Systems – Lessons Learned		
	5	HVAC Rules of Thumbs for Trouble Shooting		
	6	HVAC&R - A Risk Management System		
	7	Industrial Ventilation & Loss Prevention Engineering		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English	Basic Basic/Interm Basic Basic/Interm Basic/Interm Basic/Interm Basic		
<b>Hoy R. Bohanon, Jr., P.E.</b> Hoy Bohanon Engineering PLLC 8236 Arbor Ridge Lane Clemmons, NC 27012 Tel: (336) 972-1626 Email: <a href="mailto:bohanoneng@gmail.com">bohanoneng@gmail.com</a>	1	Applying ASHRAE Standards to Existing Buildings		
	2	ASHRAE Building Energy Quotient (bEQ)		0920020132 Bohanon05
	3	Basic Requirements of ANSI/ASHRAE Standard 62.1-2019		0920020128 BOHANON09
	4	Commissioning, Operating and Maintaining Air-to-Air Energy Recovery Systems		0920020139 BOHANON01
	5	How to Implement Demand Control Ventilation & Comply with ASHRAE Standards		0920020133 Bohanon02
	6	Perception and Acceptance of Commissioning		
	7	Retro-Commissioning for Energy Savings		0920020130 Bohanon03
	8	Using ASHRAE Standard 62.1-2016 Multiple Space Equations		0920020131 Bohanon06
	9	What Do You Need to Know About the ASHRAE IAQ Guide?		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English	Basic Basic Basic Advanced Intermediate Basic Basic Intermediate Basic		

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Thiam Leong Chen, P.E., CEng.</b> Primetech Engineers, Sdn Bhd 19B & 21B, Jalan 17/45 Petaling Jaya Selangor, 46400 MALAYSIA Tel: (601) 22159813 Email: <a href="mailto:tichen55@gmail.com">tichen55@gmail.com</a>	1	A Selection of Common HVAC Design Problems for Hot & Humid Climate Application		
	2	Beyond Refrigerants: What's in store after HFOs & Naturals?		
	3	Chilled Slab Cooling in Hot & Humid Climate Application		
	4	Disconnect between DCS Provider & End User: Need for an Equitable & Sustainable Solution		
	5	DO's & DON'Ts in Efficient HVAC Design, Installation, Commissioning, Operation & Maintenance		
	6	The Green Building Index (GBI) - A Green Building Rating Tool for the Tropics		
	7	Tropicalisation of High Performance Strategies for Hot & Humid Climate Applications		
	8	UFAD and LLD (TDV) in Hot & Humid Climate Application		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			
<b>Fabio M. Clavijo</b> Tecnaire Ltda. Calle 145 15-59, Apt. 204 Bogota 110121 COLOMBIA Tel: 317640 Email: <a href="mailto:presidencia@tecnaire.com">presidencia@tecnaire.com</a>	1	Climate Design Conditions in Tropical Equatorial Regions		
	2	Dehumidification- Basic Concepts		
	3	Dehumidification Process		
	4	Energy in Buildings - An HVAC Perspective for 21st Century		
	5	Indoor Air Quality and Ultra-Violate (UVC) Technology		
	6	Stepping on ASHRAE Standard 90.1		
	7	Understanding ASHRAE 62.1		
<b>HONORARIUM</b> None.	<b>LANGUAGES</b> English Spanish			
<b>Drury Crawley, Ph.D.</b> Bentley Systems, Inc. 4539 Albemarle Street Washington, DC 20016 Tel: (202) 422-6464 Email: <a href="mailto:dbcrawley@gmail.com">dbcrawley@gmail.com</a>	1	Big, Smart, and Everything: Data, Technology, Buildings, Cities, and the Iota		
	2	Building Performance Simulation: What's in the Black Box		
	3	EnergyPlus, DOE's New Generation Building Energy Simulation Program		
	4	Getting From AEDGs to Zero-Energy Buildings		
	5	Going Digital – Modeling Infrastructure Resilience for Sustainable Urban Development		
	6	Impacts of Climate Change & Urbanization on Future Building Performance		
	7	Standard 189.1 - Structure, Requirements & Energy Savings		
	8	Trends: Buildings, Technologies and Tools		
<b>HONORARIUM</b> \$250 donation to ASHRAE Research	<b>LANGUAGES</b> English			
			0920020229	Crawley03
			0920020230	Crawley07
			0920020231	Crawley04
			0920020232	Crawley06
			0920020233	CRAWLEY09
			0920020234	Crawley05
			0920020235	Crawley01
				Crawley02

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Chandana N. Dalugoda</b> Chandana Dalugoda Consultants 12/9, Maharagama Road Makuluduwa Piliyandala 10300 SRI LANKA Tel: 94777785778 Email: <a href="mailto:chandana_cnd@sltnet.lk">chandana_cnd@sltnet.lk</a>	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 Dalugoda01
	5	Reducing Carbon Footprint of Buildings in Developing Economies	Advanced	Dalugoda04
	6	Sustainable HVAC Designs for Green Buildings	Advanced	0920020142 Dalugoda03
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			
<b>Julian R. de Bullet</b> de Bullet Consulting 5993 Piney Grove Way Gainesville, VA 20155 Tel: (703) 483-0179 Email: <a href="mailto:julian@debullet.com">julian@debullet.com</a>	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	
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			
<b>Pamela Duffy, P.E.</b> Tel: N/A Email: <a href="mailto:pam.duffy.ashrae@gmail.com">pam.duffy.ashrae@gmail.com</a>	1	Promoting the HVAC Industry for a Sustainable Future	Basic	
	2	Take it from a Millennial: Generation Differences in the Workforce	Basic	
	3	Time Management for the Perpetually Busy Engineer	Basic	
<b>HONORARIUM</b>	<b>LANGUAGES</b> English			

NAME		TOPICS	TOPIC CLASS	GBCI	AIA	
<b>Thomas H. Durkin, P.E., ASHRAE Fellow</b> 6740 Spirit Lake Dr. #101 Indianapolis IN 46220 Tel: 317-402-2292 Email: <a href="mailto:thdurkin46@gmail.com">thdurkin46@gmail.com</a>		1 2-Pipe HVAC – Myths Debunked	Basic			
		2 Benefits of Technology Transfer – Six Steps to Winning a Technology Award	Basic			
		3 Deep Energy Efficiency and Holistic Energy Efficiency Applications	Intermediate			
		4 Energy Efficiency Relative to HVAC Design and Operations	Basic			
	<b>HONORARIUM</b>	<b>LANGUAGES</b>	5 Geothermal Central Systems	Intermediate		
		English	6 Heat Recovery Applications and Economics	Intermediate		
			7 Humidity Control with and without Reheat	Intermediate		
			8 Low Temperature Heating Applications and Economics	Intermediate		
<b>James C. Edmondson</b> James M. Pleasants Co. Inc. P.O. Box 16992 Greensboro, NC 27416 Tel: (336) 580-3399 Email: <a href="mailto:chrise@jmpco.com">chrise@jmpco.com</a>		1 7-Key Impacts of ASHRAE Standards on Waterside Construction and Design	Basic/Interm/Adv			
		2 A Review of Primary Secondary Systems	Basic/Interm/Adv			
		3 An Introduction to Ice Storage Systems	Basic/Interm/Adv			
		4 Cooling Tower & Condenser Piping	Basic/Interm/Adv	090008322		
	<b>HONORARIUM</b>	<b>LANGUAGES</b>	5 Is It Raining in Your Boiler?	Basic/Interm/Adv		
	None	English	6 Manual Versus Automatic Balance of Hydronic Systems	Basic/Interm/Adv	090006858	
			7 The Primary Secondary Versus Variable Primary Debate	Basic/Interm/Adv		

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

Dynamic Creativity Applications  
P.O. Box 423  
Northport, MI 49670  
Tel: (231) 386-9058  
Email: [creating2@earthlink.net](mailto:creating2@earthlink.net)

**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**

Munters Corporation  
17710 Nalle Road  
N. Ft. Myers, FL 33917  
Tel: (239) 218-8030  
Email: [pat.graef@att.net](mailto:pat.graef@att.net)

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		

**HONORARIUM**

**LANGUAGES**

English

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Eckhard A. Groll, Dr. Eng.</b> Purdue University, Ray W. Herrick Labs 177 S. Russel Street West Lafayette, IN 47907 Tel: (765) 496-2201 Email: <a href="mailto:groll@purdue.edu">groll@purdue.edu</a>	1 Recent Research of Novel Compression Concepts for Heat Pumping, A/C & Refrigeration Applications	Advanced		
	2 Update on Refrigerants: Past, Present and Future	Basic		
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
None	English			
<b>Charles E. Gulledge, III, P.E.</b> AC Corporation 301 Creek Ridge Road Greensboro, NC 27406 Tel: (336) 271-6323 Email: <a href="mailto:cgulledge@accorporation.com">cgulledge@accorporation.com</a>	1 Design-Build-Operate-Maintain: What Could Possibly Go Wrong?	Basic/Interm	0920020144	DBOM19
	2 Green Industrial HVAC Design	Basic/Interm	0920020148	GIHD19
	3 Integrated Building Design	Basic/Interm	0920020145	GULLEDGE01
	4 Lean Integrated Project Delivery	Basic/Interm	0920020146	LIPD19
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
None	English			
<b>Sheila J. Hayter, P.E.</b> NREL 1425 Normandy Rd Golden, CO 80401 Tel: (303) 384-7519 Email: <a href="mailto:sheila.hayter@nrel.gov">sheila.hayter@nrel.gov</a>	1 Integrating Renewable Energy Systems into Buildings	Basic/Interm		
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
None	English			
<b>Jorge E. Hernandez, P.E.</b> Regional Managers & Associates 12609 Oulton Circle Orlando, FL 32832 Tel: (305) 505-2906 Email: <a href="mailto:angelica@regionalmanagers.com">angelica@regionalmanagers.com</a>	1 Basic Air Conditioning Concepts for beginning Engineers and Architects	Basic		
	2 Basic Concepts Of Evaporative Cooling	Interm/Adv		
	3 Basic Psychrometrics for Industrial Refrigeration Professionals	Basic		
	4 Critical Applications	Basic/Interm/Adv		
	5 Displacement Ventilation	Basic/Interm/Adv		
	6 Latest Developments in the HVAC world	Basic/Interm/Adv		
	7 Psychrometrics of Displacement Ventilation	Advanced		
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
None	English Spanish Portuguese			

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
<b>Daniel Int-Hout, III</b> Krueger 1401 North Plano Road Richardson, TX 75081 Tel: (972) 497-0418 Email: <a href="mailto:daninthout@aol.com">daninthout@aol.com</a>		1 Connections	Basic		
		2 Methods of Effective Room Air Distribution	Intermediate		
		3 Selecting VAV Products for Acceptable Environments	Intermediate		
		4 The Basics of Air Distribution	Basic/Interm		
		5 You Can't Afford Discomfort	Intermediate		
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
None	English				
<hr/>					
<b>Rupesh Iyengar, Ph.D.</b> Services Consultants 1306, 29th B Cross 13th Main, 4th Block (East) Jayanagar Bengaluru 560011 INDIA Tel: +91 9742342880 Email: <a href="mailto:rupesh_iyengar@yahoo.com">rupesh_iyengar@yahoo.com</a>		1 The Unstructured and Unsustainable Growth Phenomena of Cities in Developing Countries	Basic		
		2 Decentralised Cooling and Ventilation	Basic/Interm		
		3 Net Positive Energy Design	Basic		
		4 The Art of Cooling and Ventilating spaces using the Buoyancy Effect	Basic/Interm		
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
None	English Hindi				
<hr/>					
<b>Hank Jackson, P.E.</b> Sales O'Brien 30 Morning Glory Lane Weaverville, NC 28787 Tel: (828) 691-0785 Email: <a href="mailto:hjackson@juno.com">hjackson@juno.com</a>		1 Beam Me Up Scottie! Transport Energy: Motors, Fans, & Pumps	Interm/Adv		
		2 Commissioning Critical Environment Facilities – Lessons Learned	Basic		
		3 Green Buildings: Help or Hype?	Basic		
		4 Introduction to Geothermal Heat Pump Systems	Basic		
		5 Just Do It! How to Get Started With an Energy Efficiency Survey	Basic/Interm		
		6 Overcoming Objections to Energy Efficiency Investments	Basic/Interm		
		7 Transformers: Turning Existing Buildings Green	Basic		
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
None	English				



NAME		TOPICS	TOPIC CLASS	GBCI	AIA
<b>Ronald E. Jarnagin</b> 355 Falconridge Street Richland, WA 99352 Tel: (509) 430-4113 Email: <a href="mailto:ron.jarnagin@pnl.gov">ron.jarnagin@pnl.gov</a>		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		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English				
<b>Julia A. Keen, P.E., Ph.D.</b> Kansas State University 2062 Seaton Hall 920 N 17th St Department of Architectural Engineering Manhattan, KS 66506 Tel: (319) 230-8522 Email: <a href="mailto:jkeen@ksu.edu">jkeen@ksu.edu</a>		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
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English				
<b>Kishor Khankari, Ph.D.</b> AnSight LLC 3814 Mill Pond Lane Ann Arbor, MI 48108 Tel: (734) 327-4079 Email: <a href="mailto:kishork@ansight.com">kishork@ansight.com</a>		1 Airflow Management Best Practices for Data Centers	Basic/Interm/Adv	0920014296	KHANKARI04
		2 Airflow Management for Cleanroom Facilities	Basic/Interm	0920020151	AMCF19
		3 Airflow Management for Healthcare Facilities	Basic/Interm/Adv	0920020151	AMHCF19
		4 Airflow Management for Laboratory Facilities	Intermediate	0920014291	KHANKARI06
		5 Applications of Computational Fluid Dynamics (CFD) for Built Environment	Basic/Interm/Adv	0920014282	KHANKARI01
		6 Basics of Air Change Rates (ACH): Facts versus Fiction	Basic/Interm	0920020150	BACR19
		7 Design and Analysis of Natural Ventilation Systems	Basic/Interm/Adv	0920014283	KHANKARI02
		8 Stratified Air Ventilation Systems	Basic/Interm/Adv	0920014292	KHANKARI03
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English Hindi Marathi				

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>M. Dennis Knight, P.E.</b> Whole Building Systems, LLC P.O. Box 1845 Mt. Pleasant SC 29464 Tel: (843) 437-3647 Email: <a href="mailto:dknight@wholebuildingsystems.com">dknight@wholebuildingsystems.com</a>	1 ASHRAE Building Energy Quotient (bEQ)	Basic		
	2 ASHRAE Standard 62.1 – the IAQ Procedure and LEED	Basic/Intern		
	3 Building Information Modeling for the Mechanical Disciplines	Basic		
	4 Building Performance Analysis for Building Performance Rating Systems	Intermediate	0920004628	KNIGHT03
	5 Conducting A Commissioning Kick-Off Meeting	Intermediate	0920017332	
	6 Developing an Integrated Personal Management System to help Get Things Done	Basic	0920004588	KNIGHT02
	7 Health and Wellness In The Built Environment – An Introduction	Basic	0920017333	
	8 Integrated Building Design and Building Information Modeling	Intermediate	0920004589	KNIGHT01
<b>HONORARIUM</b> <b>LANGUAGES</b> None                                      English				
<b>Thomas M. Lawrence, Ph.D., P.E.</b> University of Georgia Driftmier Engineering Center Annex Room 106 Athens, GA 30602 Tel: (706) 542-4322 Email: <a href="mailto:lawrence@engr.uga.edu">lawrence@engr.uga.edu</a>	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	0920020152	CO2DCV19
	3 High Performance Building Design – What the Future holds for the Direction for our Industry	Intermediate		
	4 International Energy Efficiency Standards and Guidelines	Basic		
	5 Resilience in Building Design to Support a Resilient Society	Intermediate	0920017336	Lawrence05
	6 The Coming Age of a Smart Grid and Smart Buildings	Intermediate	0920014297	LAWRENCE01
	7 The 'Green Awakening': The Coming Carbon Economy & Determining Your Building's CO2 Footprint	Basic	0920020162	TGAW19
	8 Thermal Comfort as Related to Energy Consumption: What is the Balance?	Basic	0920014298	LAWRENCE05
	9 What ASHRAE is Doing to Become a Global Society	Basic		
<b>HONORARIUM</b> <b>LANGUAGES</b> None                                      English				
<b>Karine Leblanc</b> US Air Conditionings Distributors 16900 Chestnut St City of Industry, CA 91748 Tel: (310) 420-7066 Email: <a href="mailto:karine@leblancusa.com">karine@leblancusa.com</a>	1 Everyone Communicates, Few connect	Basic		
	2 How to use Emotional Intelligence to become a better person professionally and personally	Basic		
<b>HONORARIUM</b> <b>LANGUAGES</b> None                                      English French				

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Luke C.H. Leung, P.E.</b> Skidmore, Owings, & Merrill 224 S. Michigan Avenue 10th Floor Chicago, IL 60604 Tel: (312) 360-4121 Email: <a href="mailto:luke.leung@som.com">luke.leung@som.com</a>	1 21st Century Tall Building Design	Interm/Adv	0920014332	LEUNG01
	2 Burj Khalifa: Engineering the World's Tallest Building	Interm/Adv		
	3 Live Long, Healthy and Low Energy	Basic/Interm/Adv		LEUNG02
	4 Net-Zero Building vs. Net-Zero District	Interm/Adv		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English Chinese			
<b>Marlene L. Linders</b> Philders Group International 801 International Parkway 5th Floor Heathrow, FL 32746 Tel: (407) 562-1625 Email: <a href="mailto:mlinders@phildersgroup.net">mlinders@phildersgroup.net</a>	1 De-Mystifying Healthcare: Three Critical Keys in doing Business with the American Healthcare System	Intermediate		
	2 Overview of Risk Management for Infection Control During Health Care Construction	Intermediate	0920020163	OICDI19
<b>HONORARIUM</b> \$250	<b>LANGUAGES</b> English			
<b>Andrey Livchak, Ph.D.</b> Halton Group Americas 103 Industrial Drive Scottsville, KY 42164 Tel: (270) 237-5600 Email: <a href="mailto:andrey.livchak@halton.com">andrey.livchak@halton.com</a>	1 Active and Passive Beams	Intermediate	0920017337	Livchak02
	2 Demand Controlled Ventilation for Commercial Kitchen Applications	Intermediate		
	3 Energy Efficient Solutions for Commercial Kitchen Ventilation	Intermediate	0920014335	LIVCHAK01
	4 Fundamentals of Thermal Displacement Ventilation	Intermediate	0920017338	LIVCHAK03
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			
<b>Mark M. MacCracken, P.E.</b> CALMAC Mfg. Corp. 3-00 Banta Place Fair Lawn, NJ 07410 Tel: (201) 906-8020 Email: <a href="mailto:mm@calmac.com">mm@calmac.com</a>	1 Energy Storage, Smart Grid and Zero Energy Buildings: Building Capacitance Together	Intermediate	0920017339	MacCracken01
	2 TES Myths	Intermediate		
	3 Thermal Energy Storage and LEED	Intermediate		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			

NAME	TOPICS	TOPIC CLASS	GBCI	AIA	
<b>Ryan MacGillivray</b> Daniels-Wingerak Engineering Ltd. 3022 Louise Street Saskatoon SK S7J 3L8 CANADA Tel: 306-477-0678 Email: <a href="mailto:ryan.macgillivray@dwel.com">ryan.macgillivray@dwel.com</a>	1	Ethics and Professionalism			
			Basic		
	2	Fundamentals of Air System Design			
			Basic/Interm		
	3	Fundamentals of Water System Design			
		Basic/Interm			
	4	Hydronic System Heat Transfer			
		Basic/Interm			
	5	Overview of HVAC Engineering			
		Basic			
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
	English				
<b>R. Christopher Mathis</b> MC2 Mathis Consulting Company P.O. Box 18055 Asheville, NC 28814 Tel: (828) 678-3500 Email: <a href="mailto:chris@mathisconsulting.com">chris@mathisconsulting.com</a>	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			
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
\$250 Donation to ASHRAE Research	English				
	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			
<b>Erin McConahey</b> 12777 West Jefferson Boulevard Los Angeles CA 90066 Tel: 310-578-4400 Email: <a href="mailto:Erin.McConahey@arup.com">Erin.McConahey@arup.com</a>	1	An Inclusion Mindset			
			Basic		
	2	Holistic Thinking for Multidisciplinary Design Solutions			
			Basic		
	3	Principles of Museum Environmental Design			
		Basic			
	4	The Feasibility of Natural Ventilation			
		Basic/Interm			
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
	English				

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
<b>Frank Mills</b> 7 Fylde Ave Leyland, Lancashire PR26 6RP NITED KINGDOM Tel: +44 1772 424124 Email: <a href="mailto:famills@low-carbondesign.com">famills@low-carbondesign.com</a>		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		
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
	English				
<b>Brian P. Monk, P.E.</b> United Technologies Corporation 629 McCaffrey Montreal QC H4T 1N3 CANADA Tel: (514) 515-4822 Email: <a href="mailto:brian.monk@carrier.utc.com">brian.monk@carrier.utc.com</a>		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		
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
None	English French				
<b>Ross Montgomery, P.E.</b> QST 5309 Deer Forest Place Parrish, FL 34219 Tel: (941) 737-1401 Email: <a href="mailto:rossmont@aol.com">rossmont@aol.com</a>		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
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
None	English				

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Christopher O. Muller</b> Purafil, Inc. 2654 Weaver Way Doraville, GA 30340 Tel: (770) 662-8545, X349 Email: <a href="mailto:cmuller@purafil.com">cmuller@purafil.com</a>	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		

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
<b>Daniel H. Nall, P.E.</b> 80 Random Road Princeton, NJ 08540 Tel: 917.273.0264 Email: <a href="mailto:dannall@mindspring.com">dannall@mindspring.com</a>		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
<b>HONORARIUM</b>	<b>LANGUAGES</b>				
None	English				

NAME	TOPICS	TOPIC CLASS	GBCI	AIA	
<b>James L. Newman</b> Newman Consulting Group, LLC 31134 Harmony Lane Farmington Hills, MI 48331-3136 Tel: (248) 626-4910 Email: <a href="mailto:jimn@newmanconsultinggroup.us">jimn@newmanconsultinggroup.us</a>	1	Energy and Sustainability in Existing Buildings - Being "Green" and Saving Green with Energy Audits			
	2	Energy Auditing, Commissioning, IAQ, bEQ, Sustainability and Other Good Stuff (2 hours)			
	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
<b>HONORARIUM</b> \$125 Donation to ASHRAE Research	<b>LANGUAGES</b> English				
<b>R. Mark Nunnally, P.E.</b> Nunnally & Associates, Inc. 3603 Pine Lane SE, Suite A Birmingham, AL 35242 Tel: (205) 425-0060 Email: <a href="mailto:munnally@nunnallyengineering.com">munnally@nunnallyengineering.com</a>	1	A Designer's Introduction to Commercial Desiccant Systems	Intermediate		
	2	Desiccant Dehumidification in the Healthcare Setting	Intermediate		
	3	Desiccant Dehumidification Technologies - When & Where to Apply	Basic		
	4	Designing for Absolute Moisture Control	Intermediate		
	5	Humidity Control for Commercial Buildings	Basic		
	6	Psychrometrics, Dehumidification Equipments & their Application	Basic		
	7	Understanding the Basics of Psychrometrics	Basic		
	8	Why is it Raining in my Surgery Suite?	Intermediate		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English				



NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Bjarne W. Olesen, Ph.D.</b> ICIEE-DTU Department of Civil Engineering Nils Koppels Alle DTU, Building 402 Kongens, Lyngby DK-2800 DENMARK Tel: (454) 525-4117 Email: <a href="mailto:bwo@byg.dtu.dk">bwo@byg.dtu.dk</a>	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	
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English German Danish			
<b>Raymond E. Patenaude, P.E.</b> Holmes Engineering Group, LLC 1117 Pinellas Bayway S. Apt. 404 Tierra Verde, FL 33715 Tel: (727) 369-0881 Email: <a href="mailto:ray@theholmesagency.com">ray@theholmesagency.com</a>	1 Fundamentals of Building Envelopes and Humidity Control in Hot & Humid Climates	Basic		
	2 Fundamentals of Building Envelopes in Hot & Humid Climates	Basic		
	3 Humidity Control in Buildings	Intermediate		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			
<b>Thomas H. Phoenix, P.E., FASHRAE</b> Clark Patterson Lee 328 E. Market St Suite 200 Greensboro, NC 27401 Tel: 336.232.5755 Email: <a href="mailto:tphoenix@clarkpatterson.com">tphoenix@clarkpatterson.com</a>	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		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Heather L. Platt Gullede, P.E., MBA</b> Dewberry 2610 Wycliff Road, Suite 410 Raleigh NC 27607-3073 Tel: 7169033400 Email: <a href="mailto:hplatt@mazzetti.com">hplatt@mazzetti.com</a>	1 Design vs. Facilities Maintenance 2 Details of a Risk Management Program for Healthcare Water Systems	Basic/Interm Basic/Interm		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			
<b>Douglas T. Reindl, Ph.D., P.E.</b> University of Wisconsin-Madison 432 North Lake Street Madison, WI 53706 Tel: (608) 262-6381 Email: <a href="mailto:dreindl@wisc.edu">dreindl@wisc.edu</a>	1 An Introduction to Ammonia Refrigeration Systems 2 ASHRAE Standard 15- A Review and Update 3 Back to Basics: How does a liquid chiller work? 4 Refrigerant Safety - Inside and Outside the Machinery Room 5 Thermal Energy Storage Technology to Enable Microgrids with Renewable Energy Generation 6 Understanding Safety Relief Systems	Basic Basic/Interm Basic Basic/Interm Intermediate Intermediate	0920014344 0920014345	REINDL01 REINDL02
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
<b>Terry L. Rodgers</b> 599 Union St S. Concord NC 28015 Tel: 704-942-1185 Email: <a href="mailto:trodgers@primaryintegration.com">trodgers@primaryintegration.com</a>		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		
		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		
<b>HONORARIUM</b>	<b>LANGUAGES</b> English				

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		

**Richard H. Rooley**

Project Management Partnership  
Greenways  
Church Lane  
Stoke Poges, Bucks SL2 4PB  
UNITED KINGDOM  
Tel: (44) 1753-648040  
Email: [richard@rooley.com](mailto:richard@rooley.com)

**HONORARIUM**

None

**LANGUAGES**

English

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		

NAME	TOPICS	TOPIC CLASS	GBCI	AIA	
<b>Michael (Mick) Schwedler</b> Trane 3600 Pammel Creek Rd La Crosse WI 54601-7599 Tel: 608-787-4339 Email: <a href="mailto:mschwedler@trane.com">mschwedler@trane.com</a>	1	Advanced Energy Design Guide for K-12 School Buildings – Achieving Zero Energy			
	2	Advanced Energy Design Guide Overview			
	3	Chilled Water System Decisions	Intermediate	0920020201	CWSD19
	4	Chilled Water Systems for YEA Members Part 1	Basic	0920020202	CWSDYEA1
	5	Chilled Water Systems for YEA Members Part 2	Basic	0920020203	CWSDYEA2
	6	Chilled Water Systems for YEA Members: What the Baby Boomers and Gen Xers Have Done WRONG!!!	Basic		
	7	Ethics Case Studies	Basic		
	8	High Performance Chilled Water Systems	Intermediate	0920020204	HPCWS19
	9	The Advanced Energy Design Guide for Hospitals – Reducing energy consumption by 50%	Intermediate	0920020205	AEDGH5019
	10	Upgrading Existing Chilled Water Systems	Intermediate	0920020206	UECWS19
	11	Variable Primary Flow (VPF) Systems	Intermediate		
<b>Greg Scrivener</b> Cold Dynamics 10060 Jasper Ave Tower 1, Suite 2020 Edmonton AB T5J 3R8 CANADA Tel: (306) 230-5429 Email: <a href="mailto:greg.scrivener@colddynamics.com">greg.scrivener@colddynamics.com</a>	1	Canadian Refrigeration Safety Code	Basic/Interm		
	2	CO2 Refrigeration and Heat Pumping	Intermediate		
	3	Refrigeration Energy Essentials	Intermediate		
	4	Understanding Failure – Fernie Memorial Arena Case Study	Basic		
	5	What if the Rules are Wrong?	Intermediate		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English				

NAME		TOPICS	TOPIC CLASS	GBCI	AIA
<b>Chandra Sekhar, Ph.D.</b> National University of Singapore Dept. of Building 4 Architecture Drive Singapore, 117566 SINGAPORE Tel: (65) 65163479 Email: <a href="mailto:bdgscs@nus.edu.sg">bdgscs@nus.edu.sg</a>		1 Advanced Room Air Distribution Strategies for Effective Airborne Infection Control - 1 Hour	Advanced	0920017421	sekhar06
		2 Advanced Room Air Distribution Strategies for Effective Airborne Infection Control - 2 Hour	Advanced	0920017431	Sekhar02
		3 An overview of ASHRAE Standard 62.1	Basic/Interm		
		4 Building Resilience – The Role of HVAC Systems	Basic/Interm		
		5 Decoupled Ventilation Strategies for Enhanced IAQ – “Demand Cooling” and “Demand Ventilation”	Basic/Interm		
		6 Emerging HVAC Technologies for Energy Efficient Healthy Buildings in Hot and Humid Climates - 1 Hour	Basic/Interm	0920017418	Sekhar05
		7 Emerging HVAC Technologies for Energy Efficient Healthy Buildings in Hot and Humid Climates - 2 hours	Basic/Interm	0920017423	Sekhar04
		8 Emerging HVAC Technologies for Energy Efficient Healthy Buildings in Hot and Humid Climates - 3 hours	Interm/Adv	0920017422	Sekhar03
		9 Integrated IAQ and Energy Case Studies in the Tropics	Interm/Adv		
		10 International Ventilation and IAQ Standards	Basic/Interm		
		11 Oversized Air-Conditioning Systems and Overcooled Buildings in Hot & Humid Climates	Basic	0920017548	SEKHAR07
		12 Oversized Air-Conditioning Systems and Overcooled Buildings in Hot & Humid Climates	Basic/Interm/Adv	0920020207	OASOB19
		13 Ventilation, IAQ and Energy Issues in Hot Humid Climates – Past, Present and Future	Basic/Interm		
<b>Gordon P. Sharp</b> Aircuity, Inc. 39 Chapel Street Newton, MA 02458-1010 Tel: (617) 641-8821 Email: <a href="mailto:gsharp@aircuity.com">gsharp@aircuity.com</a>		1 A Holistic Overview of Technologies and Strategies to Achieve Deep Energy Reductions in Laboratories	Basic/Interm/Adv		
		2 Building a Net Zero Lab in the United Arab Emirates: Mission Impossible?	Basic/Interm/Adv		
		3 Healthy, Airside Solutions to Significantly Reduce Your Carbon Footprint	Basic/Interm/Adv		
		4 Make Buildings Smarter to Maintain their Energy Efficiency Entitlement	Basic/Interm/Adv		
		5 New Approaches to Slash Building Energy Use and Improve Indoor Environmental Quality	Basic/Interm/Adv		
		6 Slashing Lab and Vivarium Building Energy Use by up to 50%	Basic/Interm/Adv		

NAME	TOPICS	TOPIC CLASS	GBCI	AIA	
<b>Max H. Sherman, Ph.D.</b> Lawrence Berkeley Laboratory 1 Cyclotron Rd MS 90-3074 Berkeley, CA 94720 Tel: (510) 486-4022 Email: <a href="mailto:mhsherman@lbl.gov">mhsherman@lbl.gov</a>	1	ASHRAE Is In The House: Past, Present and Future Initiatives in Residential Building Performance			
	2	ASHRAE's Residential Ventilation Standards			
	3	Dr. Duct Tape			
	4	Smart Ventilation and IAQ Metrics			
	5	Ventilation: The Once and Future King			
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English				
<b>Henry H. Slack, P.E.</b> 139 Erie Ave. Decatur, GA 30030 Tel: (404) 217-4229 Email: <a href="mailto:henry.h.slack@gmail.com">henry.h.slack@gmail.com</a>	1	After the Mold Rush: Solving Mold Problems			
	2	Catching Your Breath; Is Your Outside Air Always Safe to Breathe?			
	3	Climate Change: How ASHRAE Members Can Prepare			
	4	Fixing the Great Indoors: HVAC and Indoor Air Quality			
	5	How Can Climate Change Impact Indoor Air Health?			
	6	Indoor Air Disasters: Stories of Recovery from Katrina, Hurricanes, Wildfires, and Other Disasters		0920020208	IAD19
	7	Ventilation Research: Is More Air Better for Us			
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English				
<b>Wei Sun, P.E.</b> Engsysco, Inc. 1665 Highland Drive Ann Arbor, MI 48108 Tel: (734) 274-4022 Email: <a href="mailto:wsun@engsysco.com">wsun@engsysco.com</a>	1	Cleanrooms and HVAC Systems Design Fundamentals			
	2	Design of Pressurization Systems – Technologies in Room/Suite Pressure Control, Performance Evaluation and Design Practices			
	3	Fan Energy Conservation in Cleanrooms – Airflow Modeling and Demand Flow Control			
	4	HVAC Systems Design for Airborne Infection Control Spaces in Healthcare Facilities			
	5	Laboratories and HVAC Systems Design Fundamentals			
	6	Primary, Secondary & Tertiary Air Handling Systems Design Strategies for Controlled Environments			
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English				

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>E. Mitchell Swann, P.E.</b> MDC Systems, LLC 1800 E. Lancaster Ave. Paoli, PA 19301 Tel: (610) 640-9600, ext.19 Email: <a href="mailto:swann@mdcsystems.com">swann@mdcsystems.com</a>	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		

**HONORARIUM**

Negotiable

**LANGUAGES**

English



NAME		TOPICS	TOPIC CLASS	GBCI	AIA	
<b>Om Taneja, FASHRAE, Ph.D., P.E.</b> Associated Consulting Company 118 Henderson Rd Kendall Park, NJ 08824 Tel: (908) 604-8689 Email: <a href="mailto:taneja.om@gmail.com">taneja.om@gmail.com</a>		1	Facing the Realities and Challenges of Urbanization, Smart Cities, Smart Infrastructure & Smart Buildings for Greater Sustainability & Resilience	Intermediate		
		2	Leveraging Innovative Technologies for Life Cycle Operational Efficiency and Improved Indoor Environment Quality	Intermediate		
		3	An Approach to Facilities Operational Improvements: Train O&M Staff and Provide Tools to Measure, Track & Adjust Equipment and Systems	Intermediate		
		4	An approach to Improved Indoor Air Quality and Operations of Buildings: Adopt Smart Buildings Technologies and Train Operations and Maintenance Staff for Required Competencies	Intermediate		
		5	Analytical, Performance & Prescriptive codes & Measure for Life Cycle assessment of Sustainability & Energy Efficiency Projects	Intermediate	0920020209	MASEP19
		6	Analytical, Performance & Prescriptive Measure for Life Cycle assessment of Facilities Projects	Intermediate		
		7	Bridging the Knowledge, Technology and personnel Gap for High Performance Buildings from Concept through Operations	Intermediate		
		8	Framework For Structured Transformation to Future of Facilities to Foster Innovation , Operational Excellence & Resilience -Bridging The Gap In Performance From Concept Though Operations	Intermediate		
		9	Geo-collaborative Infrastructure & associated skills development for smart cities Utilities, Mechanical and Electrical Systems	Intermediate		
		10	Improved Operations & Maintenance Measures for better Energy Performance and Environmental impact of HVAC & chiller plants	Intermediate		
		11	Improved Operations & Maintenance Measures for better Energy Performance and Environmental impact of HVAC & chiller plants	Intermediate		
		12	Myth or Reality Series on Astuteness in Technology Adoption, Building Automation System, Performance Contracting, Energy Efficiency Based Commissioning, Operations & Maintenance	Intermediate		
		13	Operations & Maintenance Measures for Improving Performance of HVAC Systems & chiller plants	Intermediate		
		14	Sustainability & Energy Efficiency - Bridging The Gap In Performance From Concept Though Operations	Intermediate		
		15	Sustainability & Energy Efficiency - Bridging The Gap In Performance From Concept Though Operations	Intermediate		
<b>HONORARIUM</b>	<b>LANGUAGES</b>					
None	English Arabic					
<b>Stephanie Taylor, M.D., M. Arch.</b> Taylor Healthcare Commissioning, Inc PO Box 593 Stowe VT 05672-0593 Tel: (860) 501-8950 Email: <a href="mailto:MD@taylorcx.com">MD@taylorcx.com</a>		1	Engineers are the Physicians of the Future	Basic		
		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		
<b>HONORARIUM</b>	<b>LANGUAGES</b>					
None	English					

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Paul Torcellini</b> NREL( National Renewable Energy Laboratory) 15013 Denver West Parkway Golden CO 80401 Tel: +1 (303) 384-7528 Email: <a href="mailto:Paul.Torcellini@nrel.gov">Paul.Torcellini@nrel.gov</a>	1	Creating a World of Zero Energy Buildings		
			Basic	0920020211 CWZEB1
	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	
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
None	English			
<b>Terry E. Townsend, P.E.</b> Townsend Engineering, Inc. P.O. Box 23526 Chattanooga, TN 37422 Tel: (423) 855-1184 Email: <a href="mailto:terry@townsend-engineering.com">terry@townsend-engineering.com</a>	1	Advanced Energy Conservation & IEQ Design Guidance & Applications	Basic	
	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	
	6	Steps to Making Existing Commercial Buildings More Efficient, Healthy and Comfortable	Basic	0920017431 TOWNSEND01
	7	Sustainable Applications That Work	Basic	
	8	What's Hot in Sustainability?	Basic	
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
None	English			
<b>Samir R. Traboulsi</b> City Stadium Blvd. SALAME CENTER P.O.BOX 15 5400 Beirut LEBANON Tel: 00961 3 382960 Email: <a href="mailto:traboulsi.samir@gmail.com">traboulsi.samir@gmail.com</a>	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
<b>HONORARIUM</b>	<b>LANGUAGES</b>			

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Paolo Tronville, Ph.D.</b> Corso Mediterraneo 140 Torino, TO 10129 ITALY Tel: +390110904477 Email: <a href="mailto:paolo.tronville@polito.it">paolo.tronville@polito.it</a>	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		
<b>HONORARIUM</b>  <b>LANGUAGES</b> English Italian				
<b>T. David Underwood, P.Eng.</b> 607-100 Lakeshore Road E Oakville, Ontario L6J 6M9 CANADA Tel: (416) 948-8902 Email: <a href="mailto:dunderwood@hvacrtdu.com">dunderwood@hvacrtdu.com</a>	1 Application of Standard 189.1-2014	Basic		
	2 ASHRAE Approach to Resiliency	Basic/Interm		
	3 Building Energy Quotient	Intermediate		
	4 Career Opportunities for Students in ASHRAE	Basic		
	5 Ethics and Morality ASHRAE's perspective	Basic		
	6 How Does the Government Affairs Committee (GAC) Serve Humanity and Promote a Sustainable world?	Intermediate		
	7 The Smart Grid and ASHRAE Standard 201	Intermediate	0920017437 UNDERWOOD04	
	8 Tips, Tricks, and Techniques of Commissioning	Intermediate		
<b>HONORARIUM</b> None	<b>LANGUAGES</b> English			
<b>James Vallort</b> Environmental Systems Design Inc 50 Solstice Ct Erie CO 80516 Tel: (630) 846-9574 Email: <a href="mailto:jvallort@esdglobal.com">jvallort@esdglobal.com</a>	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		
<b>HONORARIUM</b>	<b>LANGUAGES</b> English			

NAME	TOPICS	TOPIC CLASS	GBCI	AIA
<b>Timothy G. Wentz</b> University of Nebraska-Lincoln 8012 Dougan Circle Lincoln NE 68516 Tel: (402)-770-3973 Email: <a href="mailto:tim.wentz@windstream.net">tim.wentz@windstream.net</a>	1 Back to the Future: Our Industry in 2030	Basic		
	2 The Ethics of Disputes: Managing the Construction Claim Process	Basic		
	3 The Ethics of Money: Bidding, Payment Applications and Change Orders	Basic		
	4 The Interface Between Risk and Ethics	Basic		
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
<b>Jack Zarour</b> 18825 Allaendale Ave Saratoga CA 95070-5238 Tel: 408.781.6662 Email: <a href="mailto:j.zarour@comcast.net">j.zarour@comcast.net</a>	1 Filtration	Basic		
	2 GMP Manufacturing Environments	Advanced		
	3 HVAC Psychometrics	Basic		
	4 Natural Refrigerant Alternatives	Intermediate		
	5 Pressurization	Advanced		
	6 Sustainability	Intermediate		
	7 What is a Clean Room?	Intermediate		
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
	English Arabic			
<b>Douglas F. Zentz</b> Ferris State University 20616 Madison Avenue Big Rapids, MI 49307-9755 Tel: (231) 591-3052 Email: <a href="mailto:zentzd@ferris.edu">zentzd@ferris.edu</a>	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
<b>HONORARIUM</b>	<b>LANGUAGES</b>			
None	English			