
Authors biography

Dr. Moncef Krarti, Professor, Building Systems Program, Civil, Environmental, and Architectural Engineering Department at the University of Colorado, has been very active in ASME from the last 25 years, especially in the ASME Solar Energy Division (SED). He has served both as Technical and Conference Chairs, and is a past president. He has been elected ASME Fellow in 2015 as testament of his leadership qualities within SED and ASME and also to his great research contributions in solar energy, energy efficiency in buildings and renewable energy systems modeling and analysis. He is the co-founder and the co-chair of the ASME Emergency Technologies Committee on Integrated Sustainable Building Equipment and Systems (ISBES) which initiated several activities including workshops, monographs, and handbooks. Prof. Krarti is considered a world expert in building energy management and has helped establish energy efficiency programs in several countries. He has been able to attract over \$15 million in sponsored research and has contributed enormously in the fields of energy efficiency and renewable energy through his publications, research supervision of graduate students and undergraduate teaching. In particular, Prof. Krarti has published over 250 technical journals in wide of fields related to sustainable energy technologies. He authored three textbooks on building energy management and has been an invited keynote speaker in several national and international forums and conferences.

Dr. Zhiqiang (John) Zhai is a Professor in the Department of Civil, Environmental and Architectural Engineering (CEAE) at the University of Colorado at Boulder (UCB). He has a unique and integrated background in both Mechanical and Architectural Engineering with a Doctor degree in Fluid Mechanics (Tsinghua University) and a Ph.D. in Building Technology (MIT). Dr. Zhai has been actively engaged in research activities in the field of fluid/thermal science and building/energy/environment technology since 1994. His particular research interests and expertise include: experimental and numerical study of building thermal and environmental systems; indoor/outdoor environmental quality; immune and sustainable building design and technology development. Dr. Zhai is an Associate Editor for Energy

and Buildings Journal and an Editorial Board Member of Building Simulation International Journal, Journal of Building Physics, Indoor and Built Environment Journal, Journal of Energy, Journal AIMS Energy, as well as invited guest editors for several international journals. Dr. Zhai received the Young Researcher Award (2007) and the Research Development Award (2010) from UCB-CEAE, as well as the University Sustainability Award of Green Faculty (2008). Dr. Zhai was granted the Best Paper Award of International Journal of Building Simulation (2008) and the William Mong Visiting Research Fellowship in Engineering from The University of Hong Kong (2009). He also received the Charles A. and Anne Morrow Lindbergh Foundation Project Award (2007) and the Distinguished Service Award of ASHRAE (2010) and was named Distinguished Lecturer by ASHRAE (2014). He was named the Distinguished “Changjiang Scholar” Professor by the Ministry of Education, China in 2016.

Dr. Benjamin Park is an analyst at Noresco, a part of United Technologies Corp.’s UTX UTC Building & Industrial Systems, Boulder, CO USA. He obtained a Ph.D. degree in Architectural Engineering from the University of Colorado Boulder in 2016. Dr. Park has an extensive experience and has published several peer-reviewed technical papers on his research. His expertise includes building physics, thermodynamics, numerical analysis, and thermally activated systems such as radiant heating/cooling slabs and hollow core ventilated slabs. He is passionate about the integration of HVAC system with building envelopes not only to improve building energy efficiency but also thermal comfort. His research interests include dynamic building envelope, adaptive optimal control strategies, and the integration of IoT with HVAC system.

Kathleen Menyhart recently graduated from the Building Systems Program of the Civil, Environmental, and Architectural Engineering Department at the University of Colorado Boulder with an M.S. degree. As part of her Master’s research work, she investigated the energy savings potential of Dynamic Insulation Materials in US residential buildings and has published a peer-reviewed technical paper on this topic. She also holds a B.S. degree in Physics from the University of Michigan.

Vinay Shekar is currently working as a Mechanical Engineer with the Buildings & Infrastructure division at Jacobs. He has obtained an MS degree from the Building Systems program of the Civil, Environmental, and Architectural Engineering Department at the University of Colorado at Boulder. As part of his Masters Project and research, he has been actively involved in the research of advanced and energy efficient buildings envelop technologies.

Jenna L. Testa is currently a practicing engineer in the Building Technology department at Simpson Gumpertz & Heger Inc. (SGH). She has been involved in a variety of projects involving investigation and design of historic building envelopes, new construction building enclosure design, and building science (hygrothermal and thermal analyses). She obtained a M.S. degree from the University of Colorado Boulder in 2016 in Architectural Engineering with an emphasis on building systems and sustainable design. As part of her M.S. research work, Ms. Testa evaluated the energy savings potential of dynamic cool roofing systems for various building types and climates.

Dr. Saleh Al-Saadi is an assistant professor and the program coordinator of the Architectural Engineering program at Sultan Qaboos University (SQU), Oman. He holds a Ph.D. in Architectural Engineering (Specialization: Building systems engineering) from the University of Colorado at Boulder (USA), a M.Sc in Architectural Engineering (Specialization: Building environmental control systems) from King Fahd University of Petroleum and Minerals (Saudi Arabia) and a Bachelor of Civil Engineering from Sultan Qaboos University (Oman). Dr. Saleh has a diversified work experience in industry and academia. His current research interests include modeling, design and analysis of building energy systems, energy conservation, energy auditing and retrofitting opportunities in existing buildings, renewable and sustainable energy applications for buildings. His research on PCM walls was selected by the U.S. National Academies and The Research Council of Oman among top Young Arab Engineers and Scientists to participate in the 2nd Arab-American Frontiers of Science, Engineering, and Medicine Symposium.

Dr. Mohamed El Mankibi is Research Director at Tribology and System Dynamics Laboratory (French CNRS joint research center).

He is also professor at ENTPE/university of Lyon (France). He is qualified as international expert by the French ministry of environment, energy and sea. He has a PhD degree (Hybrid ventilation control strategies design and assessment) and the accreditation to direct and manage research (equ Tenure). He is the manager and supervisor of building related courses of ENTPE and co-creator and co-manager of a "Green Building" Master degree. Highly evolved in ENTPE Green and Low Impact Buildings design and optimization program, El Mankibi has two major fields of research: one is related to the dynamic simulation of thermal and aeraulic phenomena in buildings; the other is related to the development multi-objective optimization. El Mankibi has also spent one year as invited researcher at the University of Colorado at Boulder and been involved in 6 tasks of the International Energy Agency (ECES and ECBCS programs). He has taken part to 8 national research projects as coordinator or partner and 3 European/International projects. He has developed several original models and experimental apparatus and initiated and led partnerships with the building industry. He has received grants from French Energy Agency, French research agency and European Union.

Robert Slowinski has worked professionally in buildings and energy since 2005. His expertise is in sustainable design, measurement and verification of Utility-level energy efficiency programs, renewable energy and the integrated design process. Robert earned a Master's Degree from the Building Systems Program and an MBA from the Leeds School of Business, both at the University of Colorado at Boulder.