



SPEAKERS:

Dr. Cynthia Cruickshank, B.A.Sc., Ph.D., is a Full Professor at Carleton University, Director of Carleton's Solar Energy Systems Laboratory and newly established Centre for Advanced Building Envelope Research. Her research focuses on the design and optimization of advanced building energy systems, including research related to high performance building envelopes, energy efficient insulation materials, solar-assisted heat pumps, solar absorption cooling, and thermal storage. She has supervised 43 graduate students in advanced building energy research and secured over \$8M in research support since 2009 as well as produced over 109 refereed publications. Dr. Cruickshank has been the recipient of several research and teaching awards. Furthermore, as Carleton's Ambassador for Engineers Canada's 30 by 30 initiative, Dr. Cruickshank has become a visible, active leader at the university and nationally for initiatives in support of women in STEM.

BRAG: Carleton University Centre for Advanced Building Envelope Research (CABER) The Centre for Advanced Building Envelope Research is the latest addition to Carleton University's Building Performance Research Centre boasting 10 professors and 60 graduate students. In collaboration with CanmetENERGY-Ottawa, Drawing upon advances in super-thin insulation materials, prefabricated construction and panelized retrofits, CABER will develop new approaches to constructing building envelopes that are thinner and cheaper, and new methods for renovating existing buildings with less cost and less disruption. The \$5.1 million in funding from the NRCan supports the construction of large-scale building envelope test equipment, including a state-of-the-art, two-storey guarded hot box with pressurized spray rack, capable of testing full-scale residential and building facades, and a materials characterization lab. The new infrastructure will enable researchers to study how heat, air and moisture move through materials and highly insulated wall systems, and how these elements contribute to occupant health, comfort and building science risks, including condensation, mold growth and rot. This research will create innovation opportunities for Canada's manufacturing, construction and renovation industries and provide new technical solutions to cut heat loss in buildings and reduce the cost associated with net zero ready and deep energy retrofit construction. CABER will also foster knowledge mobilization by training the workforce that will ultimately put this research into practice..

Rick Quirouette, B. Arch is a senior building science specialist with four decades of experience in building science and technology. He is a life member of the Alberta Building Envelope Council (ABEC) and a past-president of the National Building Envelope Council (NBEC). Operating as Quirouette Building Specialists Ltd., he can be reached at rick.quirouette@gmail.com.

BRAG: Right Place at the Right Time, Rick Quirouette is a pioneer in building envelope science and technology with over forty years of experience at NRCC and the private sector. He specialized in building envelope investigations, including commercial, institutional, industrial and residential buildings. He has undertaken numerous research and development assignments for government and manufacturers. He is an accomplished communicator through the many clinics, workshops and seminars presented across Canada and the US. He has written extensively on most topics related to building envelope design, performance and durability to include rain penetration control, condensation control, air leakage control, the dynamic buffer zone (DBZ) and energy conservation.