

The 2011 John Adjeleian Lecture

The 2011 John Adjeleian Lecture, titled **Building Science, Green Buildings, and the Future of the World** will be delivered by Dr. John Straube, P.Eng Associate Professor, University of Waterloo, Dept. of Civil Engineering & School of Architecture on Tuesday, March 22, 2011 5:30 – 7:30 p.m. in the Senate Room, 6th Floor, Robertson Hall (RO). A reception will follow the lecture.

Building Science, Green Buildings, and the Future of the World

Dr. John Straube

Synopsis of the Lecture

Sustainability and Energy Supply are two widely overlapping megatrends that will shape our future world. The rapidly growing and urbanizing world population is demanding more and more resources, which are becoming increasingly scarce. Through the lens of building science, this lecture will examine the role of civil engineering -specifically the interplay of buildings with their infrastructure needs- against the backdrop of sustainability and energy issues. The future challenges and opportunities facing civil engineering, both professional and academic, will be discussed, along with some brief case studies of building science research and practice.

About Dr. Straube

Dr. Straube is an Associate Professor at the University of Waterloo where he holds joint appointments in the Department of Civil Engineering and the School of Architecture, teaching building science, structural design and material science to both disciplines. Dr. Straube is one of the world's leading experts in building science engineering and for many years has been deeply involved in the areas of whole-building performance, moisture physics and building enclosure design as a consultant, researcher, and educator.

Energy-efficient, healthy, durable and sustainable building designs are a general goal of his research which is supported by full-scale natural exposure performance monitoring, laboratory testing and computer simulation. Dr. Straube has consulted to many major building product manufacturers, government agencies (CMHC, NRC/IRC, UN, NRCAN, DOE, EPA), and a range of design professionals and building owners.

He has broad experience in the building industry, having been involved in the design, construction, repair and restoration of buildings in Canada, the United States, Europe, Asia, New Zealand, and the Caribbean. His building science expertise has been applied to applications as diverse as moldy roofs, failed masonry, leaky walls, insulating Mongolian yurts, wet basements, rotting crawlspaces and attics, historically sensitive retrofits, commercial office towers, manufactured housing and sustainable strawbale homes.

Dr. Straube has given hundreds of presentations to many thousands of professionals across North America, Europe and Asia through short-courses, web-based learning modules and customer-tailored education programs. He has also been involved in the preparation of design and construction guides for numerous organizations. He has published dozens of technical papers in academic peer-reviewed conferences and journals as well as trade journals and magazines.