

24 November 2016

BSE Seminar: Heat and Moisture Exchangers for Energy-Efficient Buildings
on 14 November 2016

The Department of Building Services Engineering (BSE) of The Hong Kong Polytechnic University (PolyU) was pleased to have invited Prof. Carey Simonson to deliver a CPD seminar on *Heat and Moisture Exchangers for Energy-Efficient Buildings* on 14 November 2016. This seminar attracted over 90 current students and professionals in the industry.

Dr. Linda Xiao, Associate Professor of BSE, gave a welcome speech introducing and expressing thanks to Prof. Simonson.



Dr. Xiao presenting a souvenir to Prof. Simonson



Prof. Simonson sharing his experience to participants

Prof. Simonson discussed Heat and Moisture Exchangers for Energy-Efficient Buildings. Energy-efficient buildings are important because the heating and cooling of buildings accounts for 30% to 50% of energy consumption and greenhouse gas emissions in developed countries. Furthermore, the demand for cooling is expected to increase by 30 times over this century due to climate change and increased demand in developing countries. Although this a major topic with major R&D efforts around the world, Prof. Simonson’s niche is moisture transfer in energy exchangers, which is important for frosting in cold climates and for cooling of buildings in warm and humid climates. The presentation covered some of the recent research supervised

by Prof. Simonson at the U of S, including research on membranes and liquid desiccants for HVAC applications, frosting in heat and moisture exchangers, fouling of energy exchangers and solid desiccants for energy wheels.



Students and professionals attending the seminar

Towards the end, the participants took the opportunity to raise meaningful questions during the Q&A session and provoke further discussions.

Prof. Simonson is a Professor of Mechanical Engineering at the University of Saskatchewan (U of S) in Saskatoon, Canada. He received Bachelor's (1991), Master's (1993) and Doctoral (1998) degrees in Mechanical Engineering from the U of S and has been a professor at the U of S since 2001. In 2007/08 and 2014/15, he was a visiting professor at the University of Oulu in Finland. Prior to becoming a faculty member at the U of S, he spent 4 years at the Technical Research Centre of Finland. Prof. Simonson is a Fellow of ASHRAE, an Associate Editor of the ASME Journal Thermal Science and Engineering Applications and an editorial board member of Energy and Buildings and the Journal of Building Physics. In February 2015, he received the Natural Sciences and Engineering Research Council of Canada (NSERC) Synergy Award for Innovation, which "recognize examples of collaboration that stand as a model of effective partnership between industry and colleges or universities". The nomination was titled "Venmar and University of Saskatchewan – Research and Development of a New, Revolutionary HVAC system".