ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE
Fakulta stavební
Katedra technických zařízení budov
Thákurova 7, 166 29 Praha 6

Public Seminar / Veřejná přednáška v anglickém jazyce

Water supply and Drainage for Buildings: System modelling for a safer, more efficient design

Date:

26 April 2012 (Thursday)

Time:

4:00 p.m. to 5:40 p.m.

Venue:

Room As135

CTU in Prague
Faculty of Civil Engineering
Thákurova 7, Prague 6

Evropský sociální fond
Praha & EU: Investujeme do vaší budoucnosti

Dr. Michael Gormley

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Abstract:

Research on air and water flows in water supply and drainage systems for buildings has led to a greater understanding of the aspects of design which contribute to both enhanced public health and pragmatic water conservation strategies. The study of airflows and the inevitable air pressure transients generated by naturally occurring phenomena within building drainage systems, has led to the development of unique surge alleviation devices in order to protect fixture water trap seals, the main protection between the public sewer and habitable space. This focus on pressure transient analysis has also contributed to the development of a 'sonar like' device for assessing the status of water trap seals and curtailing the possibilities of infection spread via the building drainage system. While these phenomena affect the safety of people from sewer borne pathogens, the supply of water still represents a significant cost and challenge to supply authorities. The contribution of fixtures such as WCs, baths and showers represent significant usage of potable water delivered to a building; in the UK, WCs use 1/3 of the total potable water processed. Numerical modelling of flows has assisted in formulating strategies for good design practice, and is conducive to 'whole system modelling' to ensure public health safety and water supply security is maintained, economically and efficiently.

About the Speaker:

Dr. Michael Gormley has been an Engineer for over 25 years. He has worked in the fields of electronics engineering, building services engineering, public health engineering and has been an academic at Heriot-Watt University since 2000. His research interests lie in numerical modelling of water and air flows in building drainage systems. He holds patents for devices relating to improving public health and works closely with industrial partners for commercialisation purposes. He has a keen interest in international development and has worked in Africa and Asia on water supply and sanitation. A lecturer in the Architectural Engineering discipline, he is also the international exchange coordinator for the School of the Built Environment at Heriot Watt University.