

Annnonce de conférence

Jeudi 02.juin.2016 à 16:00, **GC B1 10 (génie civil)**

Dubravka Pokrajac

Professor, School of Engineering University of Aberdeen, Scotland, United Kingdom

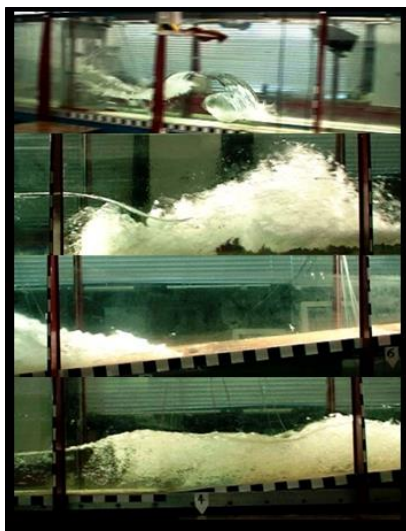
What lies beneath?

Surface-subsurface interactions in fluvial and coastal environments

Turbulent boundary layer flow in the natural environment commonly occurs over permeable layers such as river beds and coastal beaches. The fluids within these permeable layers exchange mass, momentum and any dissolved or suspended substance with the surface flow. These exchange processes, collectively called surface-subsurface interactions, affect flow and therefore sediment transport close to the bed. The details of the complex mechanisms of surface-subsurface interactions are not yet fully understood, primarily due to the difficulties in measuring flow velocities within the permeable materials. However, in the past couple of decades non-intrusive experimental technologies such as Particle Image Velocimetry and Laser-Induced Fluorescence have made it possible to measure the detailed flow field above and within porous materials that are exposed to turbulent flow over their surface. This seminar presents the theoretical background and a series of experimental and numerical results which clarify the role of surface-subsurface interactions in the fluvial and coastal environment.

Dubravka studied Civil Engineering at University of Belgrade, Belgrade, Yugoslavia where she obtained a BSc (Honours) degree with major in Hydraulic Engineering in 1982, and MSc in Hydraulic Engineering in 1987. She did her PhD on modelling groundwater flow and transport at the same university. Dubravka worked at the University of Belgrade before joining the lecturing staff of Aberdeen University Engineering Department in 1998 as a lecturer. She was promoted to Senior Lecturer in 2005 and Professor in 2014. Besides the topic of the seminar, which has been central to Dubravka's research over the past 15 years, her research interests include double-averaging methodology, porous media flows and unsteady turbulent flows over rough walls. She has attracted external funding of around £2.6m (~£1.4m as the PI) from the EPSRC, Oil & Gas Academy of Scotland, Proof of Concept, UNESCO, and NERC. Dubravka has supervised 17 PhD students (11 graduated so far) and authored or co-authored over 100 journal and conference papers. She regularly reviews manuscripts for over 15 international journals, and serves as an Associate editor for AGU journals Water Resources Research and Hydrological Processes.

The conference will be given in English. Duration is of approximately 30 minutes followed by discussion.



Prof. Dr. Anton SCHLEISS & Dr. Mário J. FRANCA