

14th International Conference on Urban Drainage

September 10-15, 2017 | Prague, Czech Republic



Title of the Special Session: **Modeling of permeable pavements: hydrologic and water quality aspects**

Contact Person

Name: Patrizia Piro

E-mail: Patrizia.piro@unical.it

Convener

Name: Patrizia Piro

Affiliation: Università della Calabria

Co-convener 1

Name: Jiri Simunek

Affiliation: University of California, Riverside

Co-convener 2

Name: Radka Kodesova

Affiliation: Czech University of Life Sciences

Description of the Special Session topic: Permeable pavements have proven to a valuable Low Impact development technique. They are able to retain surface runoff volumes and reduce the pollutant loads through filtration and adsorption processes. Even though the benefits of permeable pavements on the hydrological cycle are large and well known, their adoption in the traditional urban planning is rather limited. One of the key limiting factor in the widespread use of such systems is the lack of accurate modeling tools able to describe the complex physical processes involved. Conceptual, empirical and mechanistic models have been extensively studied in the literature, however research in this direction appears to be fragmented and restricted to the academic world. The aim of this session is to give a comprehensive view of the state-of-art of modeling frameworks for permeable pavements. Topics will covers both modeling of the hydrological behavior of permeable pavements and numerical analysis of contaminants transport, with particular regards to sensitivity analysis, uncertainty quantification and parameter estimation algorithms. The audience will benefit from having an integrated and comprehensive framework of the different modeling approaches presents in the scientific community. The session will stimulate the discussion between participants and presenters in order to promote collaboration between researchers and end-users. The goal is to promote and raise awareness about modeling tools for the analysis of permeable pavements among practitioners.

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Congress Secretariat: C-IN
Prague Congress Centre, 5. května 65
140 21 Prague 4, Czech Republic
Tel: +420 261 174 301 or 304
Fax: +420 261 174 307
Website: www.c-in.eu
E-mail: info@icud2017.org



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Targeted group of participants: The session is targeted to researchers, PhD students, practitioners and companies. Researchers and PhD students can have a clear framework of the current state-of-art in permeable pavement modeling, and can exploit the session to strengthen collaborations between different research group. Software companies can identifies potential areas of interests for their business, in order to transfer results of the academic research into the market. Practitioners can become aware of the real state-of-art in permeable pavement modeling.

Proposed format of the Special Session including the duration: The special session will be divided in two sessions of 75 minutes of duration. The first session will include: - 1 Key note (30 minutes) - 1 Talk (15 minutes) - 1 Talk (15 minutes) - Questions and discussion (15 minutes) The second session will include: - Flash talks (total 30 minutes) - Poster session (45 minute)

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