

Eawag Seminar Invitation

Advanced Modelling of Surface Drainage Systems for Assessing Pluvial Flooding Risk in Urban Areas

Speaker **Prof. Giuseppe T. Aronica,**
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When **December 8, 11.00 – 12.00 a.m.**

Where **Forum Chriesbach, room C20, Eawag Dübendorf**

Abstract Pluvial flooding occurs because of high rainfall rates when surface runoff cannot be efficiently conveyed into the underlying artificial network (surface drainage deficiency) and/or when the storm water drainage system itself overflows (drainage system failure). Pluvial flooding is usually more frequent than inundation from natural water courses due to the selected return period of the design event for storm water drainage (generally lower than 10-years) and may involve only limited portions of the urban area. Because of surface drainage deficiencies, however, flooding events occur quite frequently because of rain events of lower intensity than the design one, even in case of proper dimensioning of the drainage system.

Assessment of the impact of surface drainage conditions and the related uncertainty on urban flooding is the general aim of the present seminar that will be focused in detail on the following topics:

- 1) Hydraulic modelling of pluvial flooding in urban areas
- 2) Optimal design of surface drainage devices
- 2) Pluvial flooding early warning systems
- 2) Role of high resolution topographic data in model analysis in pluvial flood modelling.