Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Institute of Environmental Engineering

Prof. Dr. Paolo Burlando
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SEMINAR ANNOUNCEMENT

27th January 2020, h 16:45
ETH Zurich
Room: ETH Hönggerberg HIT J 51

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STOCHASTIC MODELLING OF LOCAL RAINFALL PATTERNS

The characterization of rainfall spatial and temporal variability is a longstanding challenge. Stochastic rainfall models are one possible avenue to address this problem. They aim at generating realistic random rain events that reproduce, in a distributional sense, a set of key rainfall statistics derived from observations. For now, the resolution achieved in high-resolution stochastic rainfall models is of the order of 1 km x 1 km x 10 min. However, new rain measurements at very high resolution (e.g. from X-Band radars, disdrometers or high-resolution rain gauges) make it possible to image rainfall at a finer resolution. These new data require the refinement of existing stochastic rainfall models to account for the new patterns that emerge at the very fine scale. Here I will present a model designed specifically to reproduce these fine scale rainfall patterns. The potential of the model will be illustrated in the context of rain data enhancement, in particular for rain gauge data interpolation and radar image disaggregation.

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