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Rouya Hdeib, Chadi Abdallah, François Colin, Luca Brocca, Roger Moussa

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**Constraining coupled hydrological-hydraulic flood
model by past storm events and post-event
measurements in data-sparse regions**

Rouya Hdeib ^a, Chadi Abdallah^a, François Colin ^b, Luca
Brocca^c, Roger Moussa ^d

^a *CNRS-RS, Lebanese National Council for Scientific Research,
Remote Sensing Center, Beirut, Lebanon*

^b *UMR LISAH, Univ. Montpellier, Montpellier SupAgro,
Montpellier, France*

^c *Research Institute for Geo-Hydrological Protection, National
Research Council, Perugia, Italy*

^d *UMR LISAH, Univ. Montpellier, INRA, Montpellier, France*

Abstract

Flood modelling in data-sparse regions have been always limited to empirical, statistical and geomorphic approaches that are suitable to produce regional hazard maps. Such coarse resolution maps are not adapted for basin scale applications, small to medium sized basins (<1000 km²), especially when detailed estimates of flows and water levels of a particular event is required and hence cannot replace the hydrological/hydraulic modelling. The latter is a challenging task in data-sparse regions characterized by floods of typical duration times of a few hours which offer little opportunity for real-time recording by traditional

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