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TOWARDS CHANGE DETECTION IN URBAN AREA BY SAR INTERFEROMETRY AND RADARGRAMMETRY

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Abstract. Change detection in urban area is an active topic in remote sensing. However, well-dealt subject in optical remote sensing, this research topic is still at an early stage and needs deeper investigations and improvement in what concerns SAR and InSAR remote sensing. Due to their weather and daylight-independency, SAR sensors allow an all-time observation of the earth. This is determining in cases where rapid change detection is required after a natural – or technological – disaster. Due to the high resolution that can be achieved, the new generation of space-borne radar sensors opens up new perspectives for analysing buildings in urban areas. Moreover, due to their short revisiting cycle, they give rise to monitoring and change detection applications. In this paper, we present a concept for change detection in urban area at building level, relying only on SAR- and InSAR data. In this approach, interferometric and radargrammetric SAR data are merged in order to detect changes. Here, we present the overall workflow, the test area, the required data as well as first findings on the best-suited stereo-configurations for change detection.

[Conference Paper](#) (PDF, 6790 KB)

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