Natural Hazards
and Earth System
Sciences

Discussions

Interactive comment on "Brief Communication: Contrast stretching and histogram smoothness based flood detection" *by* F. Nazir et al.

Anonymous Referee #2

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The paper presents an advancement to and a comparison with an existing methodology of contrast stretching (Dellepiane and Angiati, 2012). It contributes to the field of SAR image processing for flood detection. The methodology which is based on contrast stretching of pre- and post-flood SAR images seems promising. It aims at visualizing the relevant information from the difference image of the two SAR acquisition dates in such a way to provide ready-to-use flood maps.

Generally, the paper is rather brief and in some parts it lacks a proper explanation and illustration of what the authors propose and what is the difference to the existing methodology on which their approach is based. The paper is sometimes difficult to read due to poor grammar and language. English language has to be revised and improved.

A few detailed comments and suggestions:

P5038 line 12: delete 'undated' –> the SAR acquisition should have a date so that it can be proved that it shows a non flooded state, whereas an undated image could also show a flood situation (not desirable); the sentence should be: 'to classify non flooded and flooded (inundated) areas...'

line 15: not true -> region growing techniques with empirical seed point selection are only one method that can be summarized as semi-automatic segmentation based flood detection techniques (see for example the method proposed by Martinis, Twele & Voigt, 2011)

Same line: flood detection techniques (plural)

line 17: delete 'monitoring' -> it should be either unsupervised flood classification or change detection

line 22: maps (plural)

line 25: 'Chain of processing based method'... what is meant here? Processing chain? What is the exact name of the cited method?

Line 26: include 'the', delete 'image'; suggestion: in the flood map.

P5039 line 5: difference images (plural). A (article) fast ready flood map...

line 7: show (without s); of the (article) proposed technique

P5041 line 5: to their respective RGB image (not 'in')

line 9: of the image (article)

line 14: at the right center of the image (article)

line 15: using the proposed technique (article)

References: Martinis, S.; Twele, A.; Voigt, S., 2011: Unsupervised extraction of flood-

induced backscatter changes in SAR data using Markov image modeling on irregular graphs, IEEE Transactions on Geoscience and Remote Sensing, 49 (1), 251-263.

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