Volume XXXIX-B7

Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XXXIX-B7, 281-286, 2012
www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XXXIX-B7/281/2012/
doi:10.5194/isprsarchives-XXXIX-B7-281-2012

KERNEL-COMPOSITION FOR CHANGE DETECTION IN MEDIUM RESOLUTION REMOTE SENSING DATA

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Keywords: Change Detection, Classification, Landuse, multispectral, multitemporal, Landsat

Abstract. A framework for multitemporal change detection based on kernel-composition is applied to a multispectral-multitemporal classification scenario, evaluated and compared to traditional change detection approaches. The framework makes use of the fact that images of different points in time can be used as input data sources for kernel-composition – a data fusion approach typically used with kernel based classifiers like support vector machines (SVM). The framework is used to analyze the growth of a limestone pit in the Upper Rhine Graben (West Germany). Results indicate that the highest accuracy rates are produced by the kernel based framework. The approach produces the least number of false positives and gives the most convincing overall impression.

Conference Paper (PDF, 1079 KB)

Citation: Braun, A. C., Weidner, U., and Hinz, S.: KERNEL-COMPOSITION FOR CHANGE DETECTION IN MEDIUM RESOLUTION REMOTE SENSING DATA, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XXXIX-B7, 281-286, doi:10.5194/isprsarchives-XXXIX-B7-281-2012, 2012.

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