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ROAD REGION DETECTION IN URBAN AREAS COMBINING HIGH-RESOLUTION RGB IMAGE AND LASER SCANNING DATA IN A CLASSIFICATION FRAMEWORK

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Keywords: Artificial Neural Network, RGB Aerial Image, Normalized Digital Surface Model, Laser Pulse Intensity Image

Abstract. This paper addresses the problem of road region detection in urban areas using an image classification approach. In order to minimize the spectral superposition of the road (asphalt) class with other classes, the Artificial Neural Networks (ANN) image classification method was used to classify geometrically-integrated high-resolution RGB aerial and laser-derived images. The RGB image was combined with different laser data layers and the ANN classification results showed that the radiometric and geometric laser data allows a better detection of road pixel.

[Conference Paper](#) (PDF, 372 KB)

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