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Introduction

This proceedings volume includes 53 papers that were presented at the SPIE conference, *Earth Resources and Environmental Remote Sensing/GIS Applications*. The conference took place in Warsaw, Poland, from 12-14 September 2017. It was the seventeenth conference with this topic since its inauguration in Toulouse, France, in 2001.

The conference sessions with presented papers and interactive posters were grouped into the following themes: Infrastructures and Urban Areas, Processing Methodologies, Hazard Mitigation Geologic Applications, and Environmental Monitoring.

Although the session topics seem to be rather diverse, the multidisciplinary community of this conference allows the discussion of important topics from several interesting points of view. More than six presented papers addressed hyperspectral imaging and its application in remote sensing tasks. This year, the Best Student Paper Award was assigned to paper 10428-16 (presented by Ridhi Saluya) which discusses the spectral discrimination of macrophyte species among different seasons. It is quite obvious that hyperspectral imaging is still relevant for our community and has potential.

In the last decades we witnessed the preservation of our cultural heritage endangered by natural hazards and man-made destruction. New hardware solutions in combination with specialized algorithms can extend our possibilities to preserve ore, and in some cases even reconstruct parts of our cultural heritage using digitalization. The interesting presentations dealing with this topic resulted in the idea to create a special session next year, with five papers already committed.

It also becomes more and more obvious that hot topics like machine learning and deep learning are more than relevant to our applications. Presentations addressing convolutional neural networks were given and will be emphasized next year's program.

We would like to thank the SPIE staff on-site for their responsiveness and support. We are also grateful to our Programme Committee for their help in reviewing manuscripts and the session compilation process.

Ulrich Michel
Karsten Schulz