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Ulrich Michel
Karsten Schulz
Editors

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Introduction

This Proceedings volume is a collection of papers based on the invited and contributed presentations from the SPIE conference, Earth Resources and Environmental Remote Sensing/GIS Applications, formerly titled, Remote Sensing for Environmental Monitoring, GIS Applications, and Geology. The conference took place in Berlin, Germany 11–13 September 2018. It was the eighteenth conference on this topic after its inauguration in Toulouse, France, in 2001. Approximately 40 papers were presented at this conference.

The conference sessions with presented papers and interactive posters were grouped into the following themes: Infrastructures and Urban Areas; Hazard Mitigation Geologic Applications; Sensors and Platforms; Environmental Monitoring Concepts; and two new fields, Machine Learning for Remote Sensing; and Preservation of Cultural and Natural Heritage. Lively discussions often continued into the coffee breaks, especially on the latter topics. Although the session topics seem to be rather diverse, the multidisciplinary community of this conference allows discussion of important topics from several interesting points of view. After all, there was strong support from the audience to continue these themes for future conferences and following the suggestions, we will try to organize a special session dealing with methods and assessment of Preservation of Cultural and Natural Heritage again. The topic of machine learning, and especially deep learning, will be present in the future in our conference. The keynote presentation concerning machine learning attracted attention and it is planned to look for further opportunities to intensify this topic in our conference.

The paper submission and review processes were again perfectly organized by the SPIE staff. We like to thank the SPIE staff on-site for their responsiveness and support. We are also grateful to our program committee for their help in the reviewing and session compilation process.

Ulrich Michel
Karsten Schulz