

Preface

This book was published as conference GIS Ostrava 2015 compilation—Surface Models for Geosciences. The main aim of the conference was to present and discuss new methods, issues and challenges encountered in all steps of gradual development, maintenance and utilization of digital surface models and their integration with various spatial data and models. Almost 200 attendees from 15 countries discussed current research directions and applications of geoinformatics in these fields at Technical University of Ostrava, The Czech Republic. All contributions in this book have undergone proper double-blind peer-reviewed process of journal scientific standards.

Digital surface models are used in almost all geoinformatics applications, since the shape of the earth's surface affects many natural processes that are happening on the Earth. The applicability of height data is not only influenced by method of their acquisition, but also by methods of their processing.

Articles in this compilation present the latest technical equipment for acquiring of elevation data using unmanned aerial systems (e.g. RPAS—remotely piloted aircraft systems) brought the need to discuss ways and possibilities of their use.

There is also introduced the use of data from INSAR techniques, or the possibility of using data from laser scanning, e.g., for rockfall monitoring, or estimation of solar radiation.

A large number of articles focuses on the use of DSM in hydrology, where correcting elevation model directly influences the hydrological behaviour analysis, whether it is a flood modelling, or erosion modelling.

Evaluation of DSM and morphological formations accuracy plays a large part in further contributions.

In this book, you can also learn about geoinformatic applications, which are focused on the areas of geology, planned development, population distribution, visibility analysis and engineering. Possibilities of final presentation of models represent the article about 3D models printing.

Acknowledgments

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