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Photogrammetric Image Analysis

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Proceedings

Volume Editors

Uwe Stilla

Technische Universität München, Germany

E-mail: stilla@tum.de

Franz Rottensteiner

Leibniz Universität Hannover, Germany

E-mail: rottensteiner@ipi.uni-hannover.de

Helmut Mayer

Universität der Bundeswehr München, Neubiberg, Germany

E-mail: helmut.mayer@unibw.de

Boris Jutzi

Karlsruhe Institute of Technology, Germany

E-mail: boris.jutzi@kit.edu

Matthias Butenuth

Technische Universität München, Germany

E-mail: matthias.butenuth@bv.tum.de

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Preface

Automated extraction of objects from remotely sensed data is an important topic of research in photogrammetry, computer vision, remote sensing, and geoinformation science. PIA11 addressed researchers and practitioners from universities, research institutes, industry, government organizations, and private companies. The range of topics covered by the conference is reflected by the terms of reference of the cooperating working groups (WGs) of the International Society for Photogrammetry and Remote Sensing (ISPRS):

- Lidar, SAR and Optical Sensors (WG I/2)
- Pose Estimation and Surface Reconstruction (WG III/1)
- Complex Scene Analysis and 3D Reconstruction (WG III/4)
- Image Sequence Analysis (WG III/5)

After the successful series of ISPRS conferences on Photogrammetric Image Analysis in Munich in 1999, 2003, and 2007, in 2011 the PIA11 event again discussed recent developments, the potential of various data sources, and future trends in automated object extraction with respect to both sensors and processing techniques, focusing on methodological research. It was held at the Technische Universitaet Muenchen (TUM) in Munich, Germany, during October 5-7, 2011.

Prospective authors were invited to submit full papers of a maximum length of six A4 pages . We received 54 full papers coming from 18 countries for review. The submitted papers were subject to a rigorous double-blind peer-review process. Forty-two papers were reviewed by three members of the Program Committee, whereas the rest (12 papers) were reviewed by two members of the committee. In total we received 150 reviews from 29 reviewers. Altogether 30 papers were accepted based on the reviews, which corresponds to a rejection rate of 44%. Finally, 25 of the 54 papers (46%) were published in this book.

Additionally, authors who intended to present application-oriented work particularly suitable for interactive presentation were invited to submit extended abstracts. Altogether, PIA11 featured seven oral sessions, two poster sessions, and two invited talks, namely, “Convex Optimization Methods for Computer Vision” (Daniel Cremers) and “Exploiting Redundancy for Reliable Aerial Computer Vision” (Horst Bischof).

Finally, the editors wish to thank all contributing authors and the members of the Program Committee. In addition, we would like to express our thanks to the Local Organizing Committee, without whom this event could not have taken place. Ludwig Hoegner did a great job managing the conference tool. The final editing of all incoming manuscripts and the preparation of the proceedings by Michael Schmitt are gratefully acknowledged. Konrad Eder and Dorota Iwaszczuk did a great job organizing the social events and accomodation, Florian

Burkert in caring for the technical equipment, and Sebastian Tuttas in supervising the Local Organizing Committee assistants. We would also like to thank Christine Elmauer, Carsten Goetz, and Gabriele Aumann for their support in making PIA11 a successful event.

Last but not least we would like to thank our sponsors MVTec Software GmbH and INPHO GmbH - A TRIMBLE COMPANY, and our supporting institutions ISPRS, ASPRS, DGPF, EuroSDR, EARSeL, and IAG for their assistance, as well as the Springer Verlag for giving us the opportunity to publish selected papers of PIA11 in the LNCS series.

October 2011

Uwe Stilla
Franz Rottensteiner
Helmut Mayer
Boris Jutzi
Matthias Butenuth

Organization

PIA11 was organized by the Department of Photogrammetry and Remote Sensing, Technische Universitaet Muenchen (TUM), and sponsored by the International Society for Photogrammetry and Remote Sensing (ISPRS).



Cooperating ISPRS Working Groups:

- Lidar, SAR and Optical Sensors (WG I/2)
- Pose Estimation and Surface Reconstruction (WG III/1)
- Complex Scene Analysis and 3D Reconstruction (WG III/4)
- Image Sequence Analysis (WG III/5)

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Uwe Stilla

Franz Rottensteiner

Helmut Mayer

Boris Jutzi

Matthias Butenuth

Technische Universitaet Muenchen (TUM), Germany

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Universitaet der Bundeswehr Muenchen, Germany

Karlsruhe Institute of Technology (KIT), Germany

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ISPRS – International Society for Photogrammetry and Remote Sensing



ASPRS – American Society for Photogrammetry and Remote Sensing



DGPF – German Society for Photogrammetry, Remote Sensing and Geoinformation



EuroSDR – Spatial Data Research



EARSeL – European Association of Remote Sensing Laboratories



IAG – International Association of Geodesy

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