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PIA11

Photogrammetric Image Analysis

Munich, Germany
October 5 – 7, 2011

Editors
U. Stilla, F. Rottensteiner, H. Mayer, B. Jutzi, M. Butenuth

Organised by
Department of Photogrammetry and Remote Sensing,
Technische Universitaet Muenchen (TUM)

in Cooperation with
ISPRS WG I/2 – LiDAR, SAR and Optical Sensors
ISPRS WG III/1 – Pose Estimation and Surface Reconstruction
ISPRS WG III/4 – Complex Scene Analysis and 3D Reconstruction
ISPRS WG III/5 – Image Sequence Analysis

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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 of the International Society for Photogrammetry and Remote Sensing (ISRPS):

- 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 PIA11 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 Technische Universitaet Muenchen (TUM) in Munich, Germany, 5-7 October 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) was reviewed by two members of that 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%. From those 25 papers were published in printed form within the book series 'Lecture Notes in Computer Science' (LNCS) of Springer-Verlag and 5 papers are contained in this volume of the International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences. All contributions are listed in Part 1. Additionally, authors who intended to present application-oriented work particularly suitable for interactive presentation were invited to submit extended abstracts. Part 2 of this volume contains 24 of these papers.

Altogether, PIA11 featured 7 oral sessions, 2 poster sessions, and 2 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 of 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 to make 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.

Munich, October 2011

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U. Stilla F. Rottensteiner H. Mayer B. Jutzi M. Butenuth

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