ISPRS Hannover Workshop 2017

HRIGI - High-Resolution Earth Imaging for Geospatial Information
CMRT - City Models, Roads and Traffic
ISA - Image Sequence Analysis
EuroCOW - European Calibration and Orientation Workshop

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Sensor calibration, image orientation, object extraction and scene understanding from images and image sequences are important research topics in Photogrammetry, Remote Sensing, Computer Vision and Geoinformation Science. Within these areas, both geometry and semantics play an important role, and high quality results require appropriate handling of all these aspects. While individual algorithms differ according to the imaging geometry and the employed sensors and platforms, all mentioned aspects need to be integrated in a suitable workflow to solve most real-world problems.

This observation led to the launching of one common event for a number of well-established scientific meetings, under the roof of the ISPRS Hannover Workshop. While HRIGI and EuroCOW are more on the geometric side, CMRT and ISA have a legacy in automatic object reconstruction and trajectory computation. The aim of this common event is to seek, exploit and deepen the synergies between geometry, semantics and sensor modelling, and to give the different scientific communities the possibility to discuss with, and to learn from, each other. The joint event addresses experts from research, government, and private industry. It consists of high quality papers, and provides an international forum for discussion of leading research and technological developments, as well as applications in the field.

The following ISPRS Working Groups from three ISPRS Commissions cooperated in the workshop:

WG I/2	LiDAR, air- and spaceborne optical sensing
WG I/4	Calibration and Validation of Satellite Sensors
WG I/8	Satellite constellations for remote sensing
WG I/9	Integrated sensor orientation, calibration, navigation and mapping
WG I/10	Sensor systems verification, benchmarks, evaluation
WG II/4	Scene reconstruction and analysis
WG II/5	Dynamic scene analysis
WG II/6	Large-scale machine learning for geospatial data analysis
WG III/3	SAR-based surface generation and deformation monitoring
WG III/7	Land use and land cover change detection
IC WG I/IV	Robotics for urban modeling and indoor mapping
IC WG II/III	Pattern analysis in remote sensing

Prospective authors were invited to submit either full papers or abstracts. In total, we received 57 full paper and 121 abstract submissions from around the world. All full papers underwent a rigorous double blind peer review process. As a result, 30 of these contributions were accepted for the ISPRS flagship proceedings series, the *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, corresponding to an acceptance rate of about 53%. 26 submissions were redirected to *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, which publishes papers based on abstract review, and one submission was rejected. From the 121 abstracts received, 110 were accepted for the Archives proceedings series based on abstract review, 11 were rejected. For various reasons some contributions were withdrawn after acceptance. Finally, 30 papers were received for the Annals and 99 papers for the Archives.

Altogether, the ISPRS Hannover Workshop 2017 featured 10 oral sessions, 4 poster sessions and 4 invited talks, namely an opening key note entitled

- *Wide Area Surveillance and Camera Networks* by Mubarak Shah, Center for Research in Computer Vision, University of Central Florida, Orlando, FL, USA

as well as three key note presentations on

- *Monitoring the recovery of tsunami damaged areas after the Japan Earthquake* by Kohei Cho, Tokai University, Tokyo, Japan,
- *Multi-temporal Probabilistic Models for Crop Recognition* by Raul Queiroz Feitosa, Pontifical Catholic University of Rio de Janeiro, Brazil, and
- *On the blessing and curse of maps for automated driving* by Christoph Stiller, Karlsruhe Institute of Technology, Germany.

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