



Universität Stuttgart



Programme

Advancement in
Photogrammetry,
Remote Sensing
and
Geoinformatics

56th Photogrammetric
Week

www.ifp.uni-stuttgart.de/phowo

Monday, September 11, 2017

- from 7:30 Registration of participants
- 9:00 **Opening of the 56th Photogrammetric Week**
Welcome Addresses
Brief Lectures by the OpenPhowo Partners
- 9:20 **Hartmut Rosengarten, Leica Geosystems, Heerbrugg, Switzerland**
RealWorld - RealCity - RealTerrain
Airborne Reality Capture – The Integral World of Leica Airborne Solutions
- 9:50 **Alexander Wiechert, Vexcel Imaging, Graz, Austria**
News from Vexcel Imaging
- 10:10 **Andreas Ullrich, Riegl, Horn, Austria**
Advances in RIEGL's Waveform-LiDAR Technology and Waveform-LiDAR Products
- 10:30 Break
- 11:00 **Philipp Grimm, IGI, Kreuztal, Germany**
News from IGI
- 11:20 **Ronald Bisio, Trimble, Stuttgart, Germany**
Beyond Surveying & Mapping - Employing AUS, Image Processing & Feature Extraction to Improve Agricultural Production
- 11:40 **Konrad Wenzel, nFrames, Stuttgart, Germany**
Large Scale Airborne City Capturing - Challenges and Opportunities
- 12:00 **Martin Rehak, Pix4D, Lausanne, Switzerland**
Photogrammetric Innovations for Industry Applications
- 12:20 **Announcements**
Lunch Break
- 14:30 **Demonstrations**
- in groups according to separate schedule (in D & E)
- 17:00
- 17:00 **Ice Breaker Party**
- in the Conference Building K2 (Foyer Lecture Hall)
- 20:00

Tuesday, September 12, 2017

1st Topic: "Sensors"

- 8:45 **Michele Crosetto, CTTC, Castelldefels, Spain**
Deformation Monitoring by Means of Ground-based and Satellite SAR
- 9:30 **Andreas Reigber, German Aerospace Center (DLR), Oberpfaffenhofen, Germany**
DLR's Airborne F-SAR System
- 10:00 Coffee Break
- 10:30 **Boris Jutzi, Karlsruhe Institute of Technology, Germany**
Less Photons for More LiDAR? A Review from Multi-Photon-Detection to Single-Photon-Detection
- 11:00 **Ralf Reulke, German Aerospace Center (DLR), Berlin, Germany**
Hyperspectral Systems: Recent Developments and Low Cost Sensors
- "Cultural Heritage"**
- 11:30 **Chance Coughenour, Google, London, UK**
Google Arts & Culture
- 12:00 **The Carl Pulfrich Award 2017 Ceremony**
- Jürgen Dold, Hexagon Geosystems, Heerbrugg, Switzerland (Introduction)
- The Carl Pulfrich Awardee
- 12:30 Lunch Break
- 14:30 **Demonstrations**
- in groups according to separate schedule (in D & E)
- 17:00
- 18:00 **Reception by the City of Stuttgart**
City Hall

Wednesday, September 13, 2017

2nd Topic: "Autonomous Driving and Photogrammetry"

- 8:45 **Martin Haueis, Daimler, Sindelfingen, Germany**
Mapping the World - Vehicle Localization for Autonomous Driving
- 9:30 **Stefan Hinz, Karlsruhe Institute of Technology, Germany**
Visual SLAM with Multi-Fisheye Camera Systems
- 10:00 **Thomas Luhmann, Jade University of Applied Sciences Oldenburg, Germany**
Dense Pointclouds from Combined Nadir and Oblique Imagery by Object-based Semi-global Multi-image Matching
- 10:30 Coffee Break
- 11:00 **Torsten Sattler, ETH Zürich, Switzerland**
Out with the Old? Convolutional Neural Networks for Feature Matching and Visual Localization
- 11:30 **Franz Rottensteiner, Univ. Hannover, Germany**
Which Data Do We Need for Training? Domain Adaption and Learning Under Label Noise
- 12:00 **Werner Bösemann, AICON 3D Systems, Braunschweig, Germany**
Industrial Photogrammetry for Applications in Automotive and Aerospace Industry
- 12:30 Lunch Break
- 14:30 **Demonstrations**
- in groups according to separate schedule (in D & E)
- 17:00

Thursday, September 14, 2017

3rd Topic: "Precision Farming and Remote Sensing"

- 8:45 **Dimitris Paraforos, Institute of Agricultural Engineering, University of Hohenheim, Germany**
Precision Farming - Technology for Highly Efficient Production Systems
- 9:25 **Arno Ruckelshausen, University of Applied Sciences Osnabrück, Germany**
Imaging Sensor Systems - Key Technology for Innovative and Sustainable Agricultural Systems
- 10:05 **Anja Klisch, Universität für Bodenkultur (BOKU) Wien, Austria**
The Arrival of a Game Changer: Sentinel-2 and Possible Applications for Vegetation Monitoring in Forestry and Agriculture
- 10:35 Coffee Break
- 11:05 **Peter Krzystek, Department of Geoinformatics, University of Applied Sciences, Munich, Germany**
LiDAR-based 3D Mapping of Forests
- 11:35 **Gottfried Mandlbürger, University of Stuttgart, Germany**
Bathymetry from Active and Passive Airborne Remote Sensing - Looking Back and Ahead
- 12:05 **Herbert Brockmann, German Federal Institute of Hydrology (BfG), Koblenz, Germany**
From Applied Research to Application - Remote Sensing Products for Waterway Management
- 12:35 Lunch Break
- 14:30 **Demonstrations**
- in groups according to separate schedule (in D & E)
- 17:00

Evening: **Get-Together Night at Alte Kelter in Fellbach**
18:00 Busses will leave for Get-Together and PhoWo Dinner Party
19:00 Get-Together Night and PhoWo Dinner Party, Alte Kelter, Fellbach
Return at about 22:30

Friday, September 15, 2017

4th Topic: "BIM and GIS"

- 8:45 **Andre Borrmann, TU Munich, Germany**
BIM - The Digitalization of the Construction Industry
- 9:30 **Uwe Stilla, TU Munich, Germany**
Process Monitoring of Construction Sites by Photogrammetric Point Clouds and 4D Building Information Models (BIM)
- 10:00 **Jakob von Heyl, University of Stuttgart, Germany**
Lean Production Controlling and Progress Tracking Using Digital Methods
- 10:30 Coffee Break
- 11:00 **Stephan Nebiker, FHNW, School of Architecture, Civil Engineering and Geomatics, Muttenz, Switzerland**
3D Imagery for Infrastructure Management - Mobile Mapping Meets the Cloud
- 11:30 **Thomas Kersten, HafenCity University Hamburg, Germany**
Virtual Monuments and Virtual Museums in a Game Engine – An Immersive Experience Using the VR System HTC Vive
- 12:00 **Closing Session**
- 12:30 **Farewell Drink**

Demonstrations of the OpenPhoWo Partners (in groups according to separate schedule)

- A** Leica RealWorld & RealCity - The Future of 2D and 3D Airborne Mapping (**Leica Geosystems**)
- B** Leica Airborne LiDAR Solutions Update - from Bathy to SPL (**Leica Geosystems**)
- C** Learning to See - Trimble Workflows for Multi-head Data and Neural Networks (**Trimble**)
- D** IGI – Integrated Geospatial Innovations (**IGI**)
- E** Vexcel Imaging, UltraCam and UltraMap (**Vexcel Imaging**)
- F** Large Scale DSM, True Ortho and Mesh Production with SURE (**nFrames**)
- G** Efficient and Versatile RIEGL Waveform-LiDAR Technology for Airborne and Terrestrial Data Acquisition (**Riegl**)
- H** Photogrammetric Innovations for Industry Applications (**Pix4D**)