

# Workshop on Evaluation and Benchmarking of Sensors, Systems and Geospatial Data in Photogrammetry and Remote Sensing

WARSAW 16-20.09.2019

Joint events organized in Warsaw University of Technology and University of Warsaw:

Workshop on Evaluation and Benchmarking of Sensors, Systems and Geospatial Data in Photogrammetry and Remote Sensing, 16-17 September 2019, Warsaw University of Technology

VOLTA - innoVation in geOspatial and 3D daTA Summer School, 18-20 September 2019, University of Warsaw

## ANNOUNCEMENT

The wide variety of sensors and systems available on the market for collecting spatial data makes the evaluation of provided information, calibration of sensors and benchmarking of systems and 3D data a critical task. It is also an important scientific issue for many professionals. In daily work, the assessment of tools for collecting spatial data resources is a crucial issue for National Mapping and Cadastral Agency officers and all professionals handling geospatial data. This Workshop is therefore appropriate for potential attendees who want to extend their knowledge in the fields of photogrammetry and remote sensing.

### Organizers:



International Society for Photogrammetry and Remote Sensing ISPRS  
Commission I WG I/10 in cooperation with  
Commission II



European Spatial Data Research EuroSDR



Polish Society for Photogrammetry and Remote Sensing

## Warsaw University of Technology

Warsaw University of Technology,  
Faculty of Geodesy and Cartography



UNIVERSITY  
OF WARSAW

University of Warsaw,  
Faculty of Geography and Regional Studies



German Society of Photogrammetry, Remote Sensing and Geoinformatics

## Supporters



Association of Polish  
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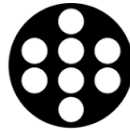


Polish Head Office of  
Geodesy and Cartography

## Main Sponsors



## Sponsors



VEXCEL  
IMAGING



HEXAGON

## For who?

- **Scientists** – to promote and announce your benchmarks, exchange your experience
- **NMCA representatives** – to get know new trends in sensor and geospatial data
- **Industry representatives** – to share your experience, to promote your solutions
- **PhD Students and students** – to gain experience during workshop, to publish your research and participate eventually in summer school

## General topics

- Validation of sensors and systems: methods, results
- Proposals for benchmarks considered for ISPRS/EuroSDR to be released
- Geometric calibration of sensors and systems
- Radiometric calibration of sensors
- Evaluation and comparison of geospatial data
- Influence of errors caused by sensors/systems in received data
- Other topics of relevance to the subject of the Workshop and Summer School

## Workshop registration fees

**Before 28.06.2019**

€ 100 regular attendees early bird

€ 50 students and summer school attendees

**After 28.06.2019**

€ 150 regular attendees

€ 100 students and summer school attendees

[Registration >>](#)

## Program of the Workshop

September 16, 2019 - Workshop Day 1

Warsaw University of Technology, Koszykowa 75, Warsaw, Poland, room 101, 1<sup>st</sup> floor

9.00 - 10.00 Registration

10.00 - 10.15 Workshop Opening

**10.15-11.00 Keynote presentation with discussion**  
**Dr. Gottfried Mandlbürger**  
*“Evaluation of Single Photon and waveform LiDAR”*

11.00 - 11.15 coffee/tea break

**11.15-12.00 Keynote presentation with discussion**  
**Dr. Isabella Toschi**  
*“Airborne oblique imaging: towards the hybrid era”*

12.00 Photo of workshop attendees

12.00 - 13.00 Lunch – Main Hall of Warsaw University of Technology

**13.00 - 15.00 Session #1** – Evaluation and benchmarking geodata and algorithms

K. Bakuła, J. P. Mills, F. Remondino  
*“Review on benchmarking in photogrammetry and remote sensing: preface”*

E. Özdemir, I. Toschi, F. Remondino  
*“A multi-purpose benchmark for photogrammetric urban 3D reconstruction in a controlled environment”*

A. Frenzel, N. Deckers, R. Reulke  
*“Quantitative comparison between neural network- and SGM-based stereo matching”*

G. Gabara, P. Sawicki  
*“Test field Kortowo for testing photogrammetric products accuracy – design and first evaluation”*

15.00 - 15.20 coffee/tea break

15:20 – 15:40 Sponsor’s presentation: P. Strzeliński , K. Kondracki – GISPRO Sp. z o.o.  
*“Multi-Sensor Aviation Diagnostic Station For Inventory of Forest Areas”*

15:40 – 16:00 Sponsor’s presentation: P. Nørgård – Hexagon / Leica Geosystems  
*“Choose the best LiDAR technology for the size of your projects”*

17.30 - 20.00 Social trip in Warsaw Old Town:  
Program: Tomb of the Unknown Soldier, Presidential Palace, A. Mickiewicz monument, Chopin's benches and walk through the streets of old city: King Sigismund's Column, Royal Castle, St. John's Cathedral, Old Town Square with monument of Warsaw Mermaid, house of birth Mary Skłodowska Curie, defensive walls with Barbican.

20.00 - 24.00 Ice-breaker Dinner in [Podwale 25](#) Restaurant

**September 17, 2018 - Workshop Day 2**  
**Warsaw University of Technology, Koszykowa 75, Warsaw, Poland, room 101, 1<sup>st</sup> floor**

- 8.30 – 9.00 News from INTERGEO 2019
- 9.00 - 10.30 Session #2** – Evaluation of data quality
- W. Izdebski, A. Andrzejewski, A. Bober  
*“Requirements for photogrammetric data collected in national geodetic and cartographic resource”*
- W. Ma, Y. Zhao, P. Zhang, S. Dong, F. Luo, C. Liu, X. Wu  
*“Research on quality supervision and spot checks technology for nationwide large-scale topographic maps in China”*
- P. Wiącek, K. Pyka  
*“The test field for UAV accuracy assessments”*
- 10.30 - 10.45 coffee/tea break
- 10.45 – 11.00 Main Sponsor’s presentation: Radomir Bałazy – Gispro Sp. z o.o.
- 11.00 - 12.30 Session #3** - Evaluation and benchmarking sensors and systems
- D. Iwaszczuk, Z. Koppányi, J. Pfrang, C. Toth  
*“Evaluation of a multi-sensor system for seamless outdoor and indoor mapping”*
- A. Warchoł  
*“The concept of LIDAR data quality assessment in the context of BIM modeling”*
- K. Bakuła, T. Kogut, W. Ostrowski  
*“A concept for LIDAR sensors benchmarking”*
- 12.30 - 13.30 Lunch – Main Hall of Warsaw University of Technology
- 13.30 – 13.45 Sponsor’s presentation: Jan Konieczny – Vexcel
- 13.45 – 14.00 Sponsor’s presentation: Joanna Mleczko – MGGP Aero
- 14.00 – 14:30 coffee/tea break
- 14.30 - 16.00 Session #4** – Evaluation of sensors and geodata in selected applications
- A. Abramowicz, R. Chybiorz  
*“Fire detection based on a series of thermal images and point measurements: the case study of coal-waste dumps”*
- M. Cavour, H.S. Duzgun, S. Kemec, D. C. Demirkan  
*“Land use and land cover classification of Sentinel-2A: St. Petersburg case study”*
- G. Kuc, J. Chormański  
*“Sentinel-1 and sentinel-2 data fusion for mapping and monitoring imperviousness in urban areas”*
- 16.00 - 16.30 Closing of Workshop

## Scientific Committee

Chair	Prof. Zdzisław Kurczyński	Warsaw University of Technology, Poland
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	Prof. Dorota Zawieska	Warsaw University of Technology, Poland
	Dr. Gottfried Mandlburger	Vienna University of Technology, Austria
	Dr. Isabella Toschi	Bruno Kessler Foundation, Italy

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	Ms. Magdalena Pilarska	Warsaw University of Technology, Poland
	Ms. Marlena Kycko	University of Warsaw, Poland
	Ms. Tatjana Van Huyck	EuroSDR

## Summer School (17-20.09.2019) University of Warsaw

This edition VOLTA Summer School is related to hyperspectral data, which is organized just after the Workshop (additional registration required). It is targeted at PhD Students, Masters Students, National Mapping and Cadastral Agency Officers, and other professionals working with image and range-based sensors collecting remote sensing data, either as separate sensors or in integrated systems. Summer school is organized within VOLTA project [more about Summer School program >>](#)

Information about workshop and summer school can be found at  
<http://ptfit.sgp.geodezja.org.pl/workshop2019/index.html>

Contact:

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