



University of Stuttgart
Germany



Programme

Advancement in
Photogrammetry,
Remote Sensing
and
Geoinformatics

59th Photogrammetric
Week

phowo.ifp.uni-stuttgart.de

Invitation

Advancement in Photogrammetry, Remote Sensing and Geoinformatics

The Institute for Photogrammetry and Geoinformatics of the University of Stuttgart and the OpenPhoWo partners would like to inform about the

59th Photogrammetric Week (PhoWo) in Stuttgart from Tuesday, April 1 to Friday, April 4, 2025.

The biennial event was initiated by Carl Pulfrich as a "vacation course in photogrammetry" in 1909; since 1973 it has been held at the University of Stuttgart. Over the years, remote sensing and geoinformatics together with photogrammetry have become the major subject areas of this conference. Today, the Photogrammetric Week enjoys international recognition as an upgrading seminar and a platform for the exchange of experience.

The lectures will focus on trends and achievements of the following topics:

- Sensors and Data Acquisition
- Photogrammetry, Computer Vision and Remote Sensing
- Geoinformatics

The presentations will be in English. Sufficient time will be allocated for discussions.

The programme will be supplemented with demonstrations and comments on practical examples in the afternoons. The fringe events will offer sufficient opportunity for personal contacts.

We look forward to meeting you in Stuttgart.

Prof. Dr.-Ing. Uwe Sörgel
Institute for Photogrammetry
University of Stuttgart

Topics of the Lectures

Photogrammetry, computer vision, remote sensing, and geoinformatics partly overlap in terms of research and practice. Therefore, in comparison to former Photogrammetric Weeks we now classify the topics of the lecture program into two key categories *Sensors and Data Acquisition and Methods and Applications*.

Sensors and Data Acquisition (Satellite, airborne, UAV, terrestrial)

- Camera Systems
- Laserscanning
- Synthetic Aperture Radar
- Georeferencing

Methods and Applications

- Mapping from airborne, terrestrial and under water platforms
- Machine learning for 3D Vision, mapping and point cloud processing
- Visual SLAM
- Agriculture, Forestry
- Augmented Reality

Programme

Tuesday, April 1, 2025

from 8:00 Registration of participants

8:45 **Opening of the 59th Photogrammetric Week**

Welcome Addresses

1st Topic: "Sensors, Mapping"

9:00 **Charles Toth, The Ohio State University, Columbus, USA**
Geospatial Sensor Georeferencing: A Changing World

9:45 **Gottfried Mandlbauer, TU Vienna, Austria**
Spaceborne and Airborne LiDAR - a Technology Overview

10:15 **Oliver Lang, Airbus, Potsdam, Germany**
Operational SAR Applications: Perspective of a Data and Service Provider

10:45 Coffee Break

11:15 **Michael Cramer, University of Stuttgart, Germany**
Large Format Airborne Imaging - Current Status

11:45 **Roland Stengele, EAASI**
Airborne Mapping in Europe – Quo Vadis?

12:15 **Vexcel**

12:30 **IGI**

12:45 **Announcements**
Lunch Break

14:30 **Demonstrations**
in groups according to separate schedule (in D & E)
-
17:00

- **Demo A - Vexcel Imaging**
- **Demo B - IGI**

17:15 **Ice Breaker Party**

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18:45

Wednesday, April 2, 2025

2nd Topic: "Photogrammetry, Machine Learning"

8:45 **Konrad Schindler, ETH Zurich, Switzerland**
3D Vision with only One Eye - The Silent Revolution of Monocular Depth Reconstruction

9:30 **Fabio Remondino, FBK, Italy**
Learning Methodologies in Support of Geospatial Problems – What Do We Miss?

10:00 **Markus Ulrich, KIT, Germany**
Photogrammetry in Machine Vision

10:30 Coffee Break

11:00 **Jonas Bostelmann, LGLN Hannover, Germany**
AI Building Detection - Cadastre Updates with Machine Learning

11:30 **Christoph Strecha, Pix4D, Lausanne, Switzerland**
Surveying with Mobile Phones, Opportunities and Current Limitations

12:00 **RiegI**

12:15 **Leica Geosystems**
The Carl Pulfrich Award 2025 Ceremony
- NN, Leica Geosystems, Heerbrugg, Switzerland (Introduction)
- The Carl Pulfrich Awardee

12:45 **Announcements**
Lunch Break

14:30 **Demonstrations**
in groups according to separate schedule (in D & E)
-
17:00

- **Demo C - Leica Geosystems**
- **Demo D - RiegI**

Thursday, April 3, 2025

3rd Topic: "Agriculture, Forestry, SLAM, Point Clouds"

8:45 **Anthony Stein, Uni Hohenheim, Germany**
Current Research Topics on AI-based Computer Vision for Digital Agriculture

9:30 **Philipp Schneider, SAM Dimension, Germany**
Mapping in Agriculture - A Practical Perspective on the Outlook and Technical Challenges

10:00 **Eija Honkavaara, NLS, Finland**
Towards Autonomous Use of Drone Technologies for Forestry Applications

10:30 Coffee Break

11:00 **Jun Zhang, TU Graz, Austria**
When Visual SLAM Meets Neural Radiance Fields

11:30 **George Vosselman, Uni Twente, Netherlands**
Deep Learning-based Point Cloud Classification and Change Detection

12:00 **Trimble**

12:15 **ESRI**

12:30 **Announcements**
Lunch Break

14:30 **Demonstrations**
-
in groups according to separate schedule (in D & E)
17:00

- **Demo E - Trimble**
- **Demo F - ESRI**

Evening: **Get-Together Night at Kursaal in Bad Cannstatt**

19:00 **Get-Together Night and PhoWo Dinner Party at Bad Cannstatt**

Return at about 22:30



Friday, April 4, 2025

4th Topic: "AR, Forensics, Underwater Photogrammetry, Crowd Sourcing"

- 8:45 **Dieter Schmalsteg, VISUS, University of Stuttgart, Germany**
Augmented Reality for Spatial Human-Computer Interaction
- 9:30 **Till Sieberth, Jade Hochschule, Oldenburg, Germany**
Forensic 3D - From Crime Scene Documentation to Court Visualisation
- 10:00 **Erica Nocerino, University of Sassari, Italy**
A Look Below the Surface: Challenges and Opportunities in Underwater Photogrammetry
- 10:30 Coffee Break
- 11:00 **Volker Walter, University of Stuttgart, Germany**
Precise Spatial Data Collection by Paid Crowdworkers Using the Principle of the Wisdom of Crowds
- 11:30 **Tbd**
- 12:00 **Closing Session**

Site of the seminar

Lectures and discussions will be held in the "Haus der Wirtschaft", Willi-Bleicher-Str. 19, 70174 Stuttgart.

Duration of the seminar

Beginning: Tuesday, April 1, 2025
End: Friday, April 4, 2025

Lectures and discussions

As in the past, the lectures and discussions will be held in the morning. The conference language will be English.

Demonstrations of instruments and systems

Demonstrations are scheduled for the afternoons. Working groups will be formed in accordance with the particular interests of each participant and the language spoken (English or German).

Fringe programme

A fringe programme will give all participants the opportunity for personal contacts and individual discussions.

Accommodation

Accommodation can directly be booked at Stuttgart Marketing GmbH by either **online** via our homepage or email: hotels@stuttgart-tourist.de

Registration and fees

Registration for the 59th Photogrammetric Week should be made by **online registration** (will be opened mid-September).

The participation fee is 600.00 Euro for registration and payment by **November 30, 2024** and 650.00 Euro after that date. For daily admission it is 300.00 Euro.

For Master and Bachelor students, under 27 the participation fee is 300.00 Euro. ID will be checked upon registration.

Contact

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Stuttgart is the state capital of Baden-Württemberg. It has a population of about 590000. Situated in the valley of Neckar river, between the hills of the Swabian Alb and the Black Forest, it is often called "the city between forests and vineyards". A large number of cultural highlights are to be found in the city including opera, ballet, theatres, concert and music halls, art galleries, and various famous museums. There is also a rich variety of sports events as well as many possibilities for individual activities such as mountain biking and hiking. Due to Stuttgart's central location, it is easy to visit neighboring countries like France, Switzerland, Italy, Austria, Czech Republic, Belgium and the Netherlands.

The Stuttgart region is one of the most attractive regions in Germany. It is well known for its high-tech industries such as car manufacturing, environmental technologies, machining tools, electronics and information and communication technology. Many internationally renowned companies such as Daimler, Porsche, Bosch, HP and IBM Germany have their headquarters and factories in the Stuttgart region. In addition, numerous smaller and medium sized technology-oriented companies are making their mark on the industrial and business environment.

