



CONTACT | DIRECTIONS

MoLaS
Mobile Laser Scanning | Technology Workshop

Fraunhofer
IPM

FRAUNHOFER INSTITUTE FOR
PHYSICAL MEASUREMENT TECHNIQUES IPM

NOVEMBER 14–15, 2018

MoLaS Technology Workshop 2018

Key Technology Drivers in Mobile Laser Scanning

Registration

Registration is possible starting March 1, 2018.
Please register online: www.molas-workshop.org

Participation fees

- »Early Bird« registration until Sept. 16, 2018: 200 EUR
 - Participants: 250 EUR
 - Students: 150 EUR (valid student card required)
- Payment upon invoice (for further details see website).

Accommodation

We have reserved a limited amount of single rooms for workshop participants from November 14 to 15, 2018.

- **Hotel Stadt Freiburg** | www.hotel-stadt-freiburg.de
Rooms at 90 EUR per person per night (incl. breakfast)
- **Hampton by Hilton Freiburg** | www.hiltonhotels.de/deutschland/hampton-by-hilton-freiburg
Rooms at 99 EUR per person per night (incl. breakfast)
- **Intercity Hotel Freiburg** | www.intercityhotel.com
Rooms at 80 EUR per person per night (incl. breakfast)

Please book your room directly with the hotel
(keyword »MoLaS«).

Venue

Fraunhofer Institute for Physical Measurement Techniques IPM
Heidenhofstraße 8, 79110 Freiburg, Germany

Chair

Alexander Reiterer, Fraunhofer IPM

Organization

Tanja Hagios
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Directions

www.ipm.fraunhofer.de/directions

Registration and further information

www.molas-workshop.org



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Key note by
Leica Geosystems
Special session:
Underwater sensing



PROGRAM

Technological trends in mobile laser scanning

Mobile laser scanning technology has made significant progress since the last MoLaS workshop in 2016. This applies to both measuring technology and data interpretation, the latter being of growing importance. The amount and quality of data generated are continuously increasing, with researchers trying to find ways to extract the most out of it. At the same time, mobile laser scanners are expanding into new fields of application such as underwater scanning.

The Third International MoLaS workshop focuses on technological trends in mobile laser scanning. Twelve internationally renowned experts will present key technology drivers and future applications in the field of 3D mapping with mobile laser scanners. Four sessions cover the entire spectrum of laser scanning technology:

- ▶ **Sensors**
- ▶ **Calibration**
- ▶ **Data interpretation and visualization**
- ▶ **Applications** (special focus on underwater laser scanning)

The workshop is aimed at scientists, service providers, manufacturers and users of the technology.

We are looking forward to meeting you at MoLaS 2018!

WEDNESDAY, NOVEMBER 14		
12:30 h	Registration	
13:30 h	Opening	
13:45 h	Limits to calibration: Engineers against nature's stubbornness <i>Stefan Schwarzer, Department of Object and Shape Detection, Fraunhofer IPM, Freiburg</i>	Sensors and calibration
14:15 h	On intensity-based stochastic models for terrestrial laser scanners <i>Daniel Wujanz, technet GmbH, Berlin</i>	
14:45 h	Development of laser scanning systems <i>Antero Kukko, Finnish Geospatial Research Institute, Helsinki</i>	
15:15 h	Coffee break / Poster session	
16:00 h	BIM modelling of an existing highway based on mobile mapping <i>Dirk Ebersbach, Alexander Bräunlich VIA IMC GmbH, Berlin</i>	Applications
16:30 h	Laser-based tunnel inspection <i>Edouard Lamboray, Amberg Technologies AG, Regensburg</i>	
17:00 h	Laserscanning – A game-changing technology <i>Jürgen Mayer, Leica Geosystems, Heerbrugg</i>	Key note
18:30 h	Get-together	

THURSDAY, NOVEMBER 15		
09:00 h	Fully-automated 3D-data interpretation by deep learning <i>Katharina Wäschle, Department of Object and Shape Detection, Fraunhofer IPM, Freiburg</i>	Data interpretation and visualization
09:30 h	Contemporary point cloud visualization methods <i>Christoph Müller, Faculty of Digital Media, Furtwangen University</i>	
10:00 h	Coffee break / Poster session	
10:45 h	Optical underwater sensing – Challenges in hydrography <i>Harald Sternberg, Chair of Engineering Geodesy, HafenCity University Hamburg</i>	Underwater sensing
11:15 h	Mobile mapping of partially submerged structures using structured light laser scanning <i>Andreas Nüchter, Informatics VII – Robotics and Telematics, Julius-Maximilians-University, Würzburg</i>	
11:45 h	Real-time and full-color 3D inspection of underwater structures using the SeaVision system <i>Jakob Schwendner, Kraken Robotik GmbH, Bremen</i>	
12:15 h	Underwater time-of-flight laser scanning <i>Christoph Werner, Department of Object and Shape Detection, Fraunhofer IPM, Freiburg</i>	
12:45 h	Conclusion	
13:00 h	Workshop end	