

Terahertz

spectroscopy tomography imaging
time domain continuous wave

www.thz-conference.com

Conference Location

The conference takes place in the heart of Carinthia. The surrounding invites you to explore the natural beauty of the mountains and lakes, historic towns and castles as well as cultural and culinary traditions. The location is also a perfect starting point for excursions to Italy (Venice, Trieste) and Slovenia (Ljubljana).



Holiday Inn/Villach

Europaplatz 1-2 Tel: + 43 4242 22522 0
9500 Villach Email: info@hi-villach.at
Austria Web: www.hi-villach.at

Participants are asked to book their accommodation directly at the hotel. A limited number of rooms have been reserved for conference participants at the Holiday Inn Villach available at reduced rates.



Registration Fee

The registration fee includes admission to the technical program, refreshments during coffee breaks, lunch and networking dinner.

- € 300,- Early bird registration on or before July 31st 2011
- € 340,- Registration on or before Sept. 30th 2011
- € 400,- Late / On-site registration

→ Please use the **online registration form** on www.thz-conference.com/registration.
Thank you!

For further information about the conference venue, traveling directions and registration please visit the conference website.

Call for Papers

Prospective authors are encouraged to submit extended abstracts related to the conference topics. Author guidelines and supplemental information are available at the conference website www.thz-conference.com. All submissions will be reviewed by the program committee. Full papers of the accepted abstract submissions will be published in the conference proceedings.

Important dates:

Submission deadline: **September 19th 2011**
Notification of acceptance: **September 30th 2011**
Camera-ready paper: **October 21st 2011**

Abstracts should be related to the following topics:

- Terahertz generation and detection
- Terahertz spectroscopy
- Terahertz imaging and imaging detectors
- Lasers and electronics for Terahertz setups
- Industrial Terahertz applications

Program Committee

- Karl Unterrainer, Vienna University of Technology, Austria
- Ernst Kessler, Institute of Photonic Technology Jena, Germany
- Andrei G. Stepanov, Institute for Spectroscopy RAS, Russia
- Luigi Bonacina, Université de Genève, Switzerland
- Raimund Leitner, Carinthian Tech Research AG, Austria

Information

Conference Organisation:

CTR Carinthian Tech Research AG
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Conference Chair:

Raimund Leitner
CTR Carinthian
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Austria



We are looking forward to welcome you in Carinthia.

Online registration:
www.thz-conference.com/registration

Scope

The conference aims at providing a platform for exchanging recent advances, results, problems and ideas between science and industry within the THz technology while acting as inspiration for innovative applications. The conference program comprises introductory talks on THz spectroscopy, tomography, imaging and emission microscopy as well as pilot implementations and potential industrial applications.



Technology

Terahertz combines the advantages and challenges of both optics and HF electronics. Its unique properties between the infrared and microwaves enable for instance:

- **spectroscopy** for investigating molecules and molecular bonds
- **tomography** to analyse material layers and layer thickness
- **imaging** for industrial inspection of inhomogeneous samples
- **characterisation** of semiconductors and photovoltaic materials

Altogether, Terahertz provides non-destructive 3-dimensional spectroscopic information without health risks – in contrast to x-ray.

Applications

THz has been shown to be useful for a wide range of applications, such as inspection of finished products or materials, quality control, biomedical imaging and diagnostics, counterfeit detection, characterisation of semiconductors and photovoltaic materials. Terahertz offers capabilities that in many cases cannot be matched by competing technologies, thus making new sensing applications possible.

Program

Thursday, November 24th, 2011

08:30	Registration
09:00	Introduction
09:15	THz photonics for non-destructive testing Juraj Darmo, Vienna University of Technology, Austria
09:40	Generation of up to 50 uJ THz pulses by optical rectification Luigi Bonacina, Université de Genève, Switzerland
10:05	Coffee break
10:40	Session I contributed papers
12:00	Lunch
14:00	Antenna-coupled air-bridge structures for uncooled THz detection Andreas Ihring, Institute of Photonic Technology Jena, Germany
14:25	Session II contributed papers
15:00	Coffee break
15:30	Session III contributed papers
17:30	Multi-Sensory Event
19:00	Networking Dinner

Friday, November 25th, 2011

09:00	Counterfeit detection using THz radiation Thomas Arnold, CTR AG, Austria
09:25	Full-electronic Terahertz systems for industrial quality control Holger Quast, SynView GmbH, Germany
09:50	State-of-the-art in photomixer-based systems for cw-THz spectroscopy Anselm Deninger, Toptica Photonics AG, Germany
10:15	Coffee break
10:45	Session IV contributed papers
12:30	Lunch
14:00	Closing of Conference

Polymer Industry
Ceramics Industry
Photovoltaics
Semiconductors
Food Processing
Pharmaceuticals
Cancer Detection
Diagnostic Endoscopy
Biomedical Imaging
Laboratory Diagnostics
Coating Analysis
Feed Inspection
Agricultural Yield Management

