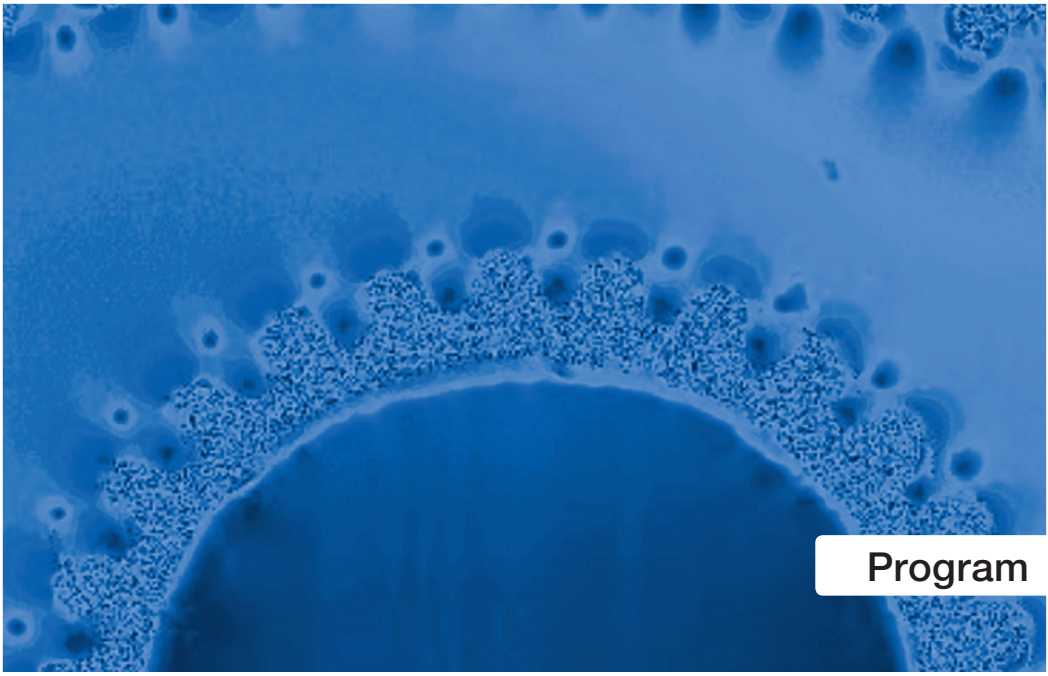


Program

OCT4NDT

SYMPOSIUM

First International Symposium on Optical Coherence Tomography for Non-Destructive Testing

13th – 14th of February 2013

www.oct4ndt.com

Wednesday, 13 February 2013 Timetable

09:00–09:15 **Michael Leitner** — Welcome

Introduction to the First International Symposium on OCT4NDT

RECENDT - Research Center for Non-Destructive Testing, Linz, Austria

09:15–09:20 **Martin Krah** — Welcome

Welcome Note From Thorlabs Inc.

Thorlabs, Germany

09:20–10:00 **David Stifter** — Keynote lecture

Aspects of Optical Coherence Tomography for Non-Destructive Testing

Johannes Kepler University Linz, Austria

10:00–10:20 **Igor Meglinski** — Talk

Application of Optical Coherence Tomography for Assessing the Internal Structure of Plants and Fresh Agricultural Products

University of Otago, New Zealand

10:20–10:40 **Pieter Verboven** — Talk

Optical Coherence Tomography for Apple Surface Structure Evaluation

KU Leuven, Belgium

10:40–11:10 **VSG - Visualization Sciences Group Coffee Break**

11:10–11:30 **Gereon Hüttmann** — Talk

Measuring Diffusion by FD-OCT

University of Lübeck, Germany

11:30–11:50 **Sven Meissner** — Talk

OCT as a New Tool for the Investigation of Boiling Phenomena

University of Technologies Dresden, Germany

11:50–12:10 **Chao Wang** — Talk

Near-100 MHz Optical Coherence Tomography at 800 nm

University of California, Los Angeles, Unites States

12:10–12:30 **Hendrik Spahr** — Talk

Imaging Temperature Distributions via Phase Sensitive Optical Coherence Tomography

University of Lübeck, Germany

12:30–14:00 **Lunch Break**

14:00–14:30 **Piotr Targowski** — Invited Talk

An Application of OCT for Examination of Artworks

Nicolaus Copernicus University, Torun, Poland

14:30–14:50 **Haida Liang** — Talk

OCT Dynamic Monitoring of Drying Droplets and Films

Nottingham Trent University, United Kingdom

14:50–15:10 **Marcin Sylwestrzak** — Talk

GPU Acceleration of Optical Coherence Tomography Data Processing for Real-Time Monitoring

Nicolaus Copernicus University, Torun, Poland

15:10–15:40 **Coffee Break**

15:40–16:10 **Tapio Fabritius** — Invited Talk

Optical Coherence Tomography for Flexible Electronics Characterization

University of Oulu, Finland

16:10–16:30 **Björn Fischer** — Talk

Analysis of Hidden Defects in Hollow Fiber Blood Dialyzers

Fraunhofer Institute for Non-Destructive Testing, Dresden, Germany

16:30–17:45 **Poster Session**

Alexander Chamorovskiy Superlum Diodes, Cork, Ireland: SLD-Based Broad-Band Light Sources With Bell-Shaped Spectra in the Range of 800-900 nm | **Andrii Prylepa** Johannes Kepler University Linz, Austria: Nonlinear Imaging with Interferometric SHG Microscopy Using a Broadband 1550 nm FS-Fiber Laser | **Elisabeth Leiss-Holzinger** RECENDT - Research Center for Non-Destructive Testing, Linz, Austria: Polarization Sensitive OCT for In-Situ Monitoring of Polymer Crystallization **Lev Matveev** Institute of Applied Physics Russian Academy of Sciences, Nizhniy Novgorod, Russia: Operability of Correlation-Stability Approach in OCT-Based Elastography: Numerical Simulations and in Vivo Demonstrations | **Sammy Cheung** Nottingham Trent University, United Kingdom: Ultra-High Resolution Optical Coherence Tomography for Paintings | **Sheng-Lung Huang** National Taiwan University, Taipei, Taiwan: Glass-Clad Crystalline Fibers Based Broadband Light Sources **Ulrich Marx** Fraunhofer Institute for Production Technology IPT, Aachen, Germany: GPU Based Processing of B-Scans and Quality Control of Skin Equivalents by Optical Coherence Tomography

Conference Dinner

18:00 Departure from venue. Transport to city center and walk through historic Linz.
19:00 Appetizer at Schlossrestaurant Linz, Schlossberg 1a, 4020 Linz
19:30 Dinner

Optical coherence tomography (OCT) applications in the field of non-destructive testing (NDT) have grown immensely over the past few years.
In order to pave the ground for a new OCT for NDT community we are pleased to announce the First International Symposium on OCT4NDT. The symposium is intended as a get-together for people working in this field and aims at initiating new ideas and projects.

Topics

- OCT applications in
  - non-destructive testing
  - quality control
  - device characterization
  - material investigation

  e.g. for:
  - characterization of polymers (foils, GFC, organic solar cells, …)
  - pharmaceutical applications
  - detection of forgery
  - investigation of artwork
  - and many further industrial applications

- Instrumentation and algorithms
  - system design
  - novel and innovative light sources
  - fiber technology
  - probe design
  - spectrometers
  - data analysis
  - signal processing
  - system integration and automation
  - in-line applications

- Advanced techniques
  - Polarization-sensitive OCT
  - Doppler OCT
  - spectroscopic OCT
  - multi-modal techniques (e.g. combination with PAI, Raman, …)

Uni-Center | JKU

Conference Language

English

Venue

The symposium will be held at the “Uni-Center” of the Johannes Kepler University Linz, Altenberger Straße 69, 4040 Linz
http://goo.gl/maps/xdw5

Contact

For more detailed information please visit our website www.oct4ndt.com or contact us via info@oct4ndt.com

Talks

Invited talks: 25 min. + 5 min. discussion
Regular talks: 15 min. + 5 min. discussion

Scientific Programme Committee

- Eva Breuer
  (RECENDT* GmbH, Linz, Austria)
- Michael Leitner
  (RECENDT* GmbH, Linz, Austria)
- Haida Liang
  (Nottingham Trent University, Nottingham, UK)
- Igor Meglinski
  (University of Otago, Dunedin, New Zealand)
- Sven Meißner
  (Technical University Dresden, Germany)
- David Stifter
  (Johannes Kepler University, Linz, Austria)
- Karin Wiesauer
  (RECENDT* GmbH, Linz, Austria)

*) Research Center for Non-Destructive Testing

Commercial product exhibition

Thorlabs, Agilent, AMS Technologies, Bayspec, NKT Photonics

Thursday, 14 February 2013 Timetable

09:00–09:30 Pablo Ruiz — Invited Talk

Tomographic Imaging of All Orthogonal Components of the Displacement Field in Weakly Scattering Materials Using Wavelength Scanning Interferometry

Loughborough University, United Kingdom

09:30–09:50 Arthur Nitkowski — Talk

Nanophotonics: An Enabling Technology for OCT4NDT Applications

Tornado Spectral Systems, Ithaca, United States

09:50–10:10 Lars Thrane — Talk

Optical Coherence Tomography (OCT) as a 3-dimensional Imaging Technique for Non-Destructive Testing of Roll-to-Roll Coated Polymer Solar Cells

Technical University of Denmark, Roskilde, Denmark

10:10–10:30 Marcin Strakowski — Talk

Advanced Polarization Sensitive Analysis in Optical Coherence Tomography for Birefringent Materials Examination

Gdańsk University of Technology, Poland

10:30–11:00 Coffee Break

11:00–11:20 Carla Carmelo Rosa — Talk

White Light Interferometry Measurements of PET Preforms

University of Porto, Portugal

11:20–11:40 Stefan Hölters — Talk

Optical Coherence Tomography for the Inline Measurement of Translucent Multilayer Structures

Fraunhofer Institute for Laser Technology ILT, Aachen, Germany

11:40–12:00 Eli Rosen — Talk

Non-Destructive Evaluation of Gas Turbine Thermal Barrier Coatings

Southwest Sciences Inc, Santa Fe, United States

12:00–12:20 Helen Ford — Talk

OCT for Non-Destructive Testing: Surface Profiling and Adhesive Cure Monitoring

Cranfield University, United Kingdom

12:20–14:00 Lunch Break

14:00–14:20 Peter Westenberger — Talk

AvizoFire for Automated NDT in Large-Scale Production

Visualization Sciences Group, Düsseldorf, Germany

14:20–14:40 Mikhail Kirrilin — Talk

Monte Carlo Simulations in OCT for Quality Inspection of Materials

Institute of Applied Physics RAS, Novgorod, Russia

14:40–15:00 Hubert Welp — Talk

Qualitative Spectral Analysis of OCT Data

TFH Georg Agricola Bochum, Germany

15:00–15:30 Coffee Break

15:30–15:50 Rong Su — Talk

Enhancement of Probing Depth and Measurement Accuracy of Optical Coherence Tomography for Metrology of Multi-Layered Ceramics

KTH Royal Institute of Technology, Stockholm, Sweden

15:50–16:10 Daniel Markl — Talk

Optical Coherence Tomography for Non-Destructive Tablet Coating Characterization

RCPE - Research Center Pharmaceutical Engineering, Graz, Austria

16:10–16:30 Stefan Schausberger — Talk

Full Field Optical Coherence Microscopy: Techniques and Applications

Johannes Kepler University Linz, Austria

16:30–16:50 Jorge Torga — Talk

3D OCT Imaging for Noncontact Metrology of Materials

Universidad Tecnológica Nacional, Buenos Aires, Argentinia

17:00 Michael Leitner — Closing Session

Closing of OCT4NDT

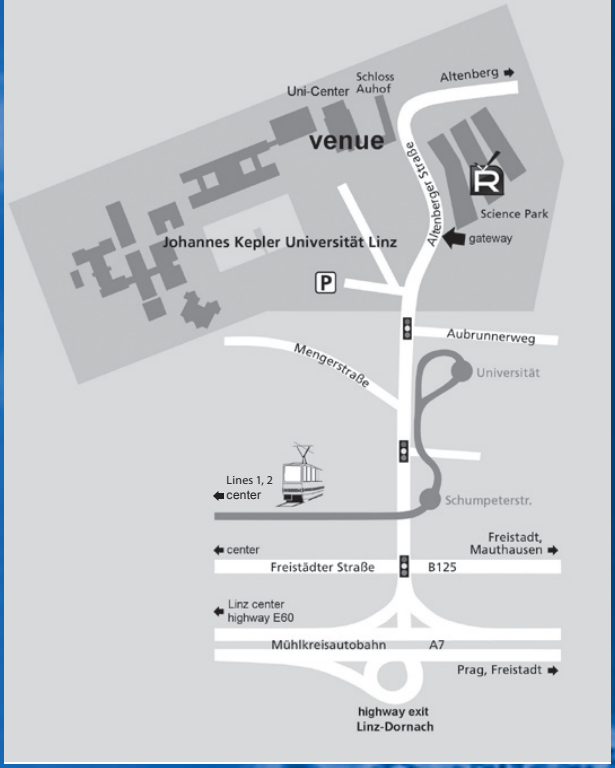
RECENDT - Research Center for Non-Destructive Testing, Linz, Austria

Organizer and Host

RECENDT – Research Center for Non-Destructive Testing GmbH

Austria, 4040 Linz, Altenberger Straße 69, Science Park 2/2nd floor

http://www.recendt.at



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Host

RECENDT
RESEARCH CENTER NON DESTRUCTIVE TESTING

Regio 13
Impulse für OÖ
Regionale Wettbewerbsfähigkeit OÖ 2007–2013

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image sources: RECENDT, City of Linz