OCM-2021 Conference Program

March 17th, 2021

12:30 Opening Ceremony
• Opening of the OCM-2021
  Prof. Dr. Jürgen Beyerer; Fraunhofer IOSB
• Keynote Speech
  Terahertz Imaging and Sensing with Silicon Integrated Circuits /
  Prof. Dr. Ullrich Pfeiffer; High-Frequency and Communication Technology
  University of Wuppertal

13:10 Session 1: Agriculture
• Phenoliner 2.0: RGB and near-infrared (NIR) image acquisition for an efficient
  phenotyping in grapevine research /
  Xiaorong Zheng; Julius Kühn-Institut
• Developing a handheld NIR sensor for the detection of ripening in grapevine
  Lucie Gebauer; Julius Kühn-Institut

14:00 Coffee Break

14:20 Session 2: Algorithms I
• Line Spectra Analysis: A Cumulative Approach /
  Achim Kehrein; Rhein-Waal University of Applied Sciences
• In-line process characterization for the production of pelletized materials /
  Sebastian Michlmayr; Johannes Kepler University Linz

15:10 Coffee Break
15:30  **Session 3: Food I**

- Towards universal assessment of dietary intake using spectral imaging solutions / Yannick Weesepoel; Wageningen Food Safety Research
- Classification and sorting of hazelnuts by free fatty acid content using a quantum cascade laser in mid infrared region / Thorsten Tybussek; Technical University of Munich

16:20  **Finish first day**
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09:00  Session 4: Food II

- Detection of pyrrolizidine alkaloids using hyperspectral imaging in the short-wave infrared / Julius Krause; Fraunhofer IOSB
- Evaluation of meat freshness and taste based on ATP metabolites / Nensi Kasvand; RW Estonian University of Life Sciences
- Exotic Fruit Ripening Based on Optical Characterization / Anton Scheibelmasser; Insort GmbH
- Are low-cost, hand-held NIR sensors suitable to detect adulterations of halal meat? / Judith Mueller-Maatsch; Wageningen Food Safety Research

10:25  Coffee Break

10:45  Session 5: Sensors

- Sub-Second Infrared Spectroscopic Ellipsometry for Comprehensive Material Characterization / Alexander Ebner; RECENDT GmbH
- Improvement of roughness measurement in sub-micron ranges using contrast-based depolarization field components / Franziska Pöller; Technical University of Munich
- Fiber-Coupled MEMS-based NIR Spectrometers for Material Characterization in Industrial Environments / Robert Zimmerleiter; RECENDT GmbH
- Multimodal OCT Imaging / Bettina Heise; RECENDT GmbH

12:10  Lunch Break
13:00  **Session 6: Applications & Recycling**

- Fine metal-rich waste stream characterization based on RGB data: Comparison between feature-based and deep learning classification methods / Nils Kroell; RWTH Aachen University-ANTS
- Improvement of Thermal Fringe Projection for Fast and Accurate 3D Shape Measurement of Transparent Objects / Martin Landmann; University Jena
- Measurement of the coefficient of linear thermal expansion based on subjective laser speckle patterns / Alexander Spaett; Johannes Kepler University Linz

14:15  **Coffee Break**

14:35  **Session 7: Algorithms II**

- Generation of artificial training data for spectral unmixing by modelling spectral variability using Gaussian random variables / Johannes Anastasiadis; KIT-IIIT
- A high-quality image stitching process for industrial image processing and quality assurance / Rolf Hoffmann; University Technology of Ilmenau

15:10  **Best Paper**

15:30  **Final Summary**