



# OCM-2021 Conference Program

## March 17<sup>th</sup>, 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: Agricultur**

- 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 Weesepeel; 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-IIT
- 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**