

# CINSaT SPRING COLLOQUIUM 2022

Thursday, March 3<sup>rd</sup>, 2022

## **Opening of the Event (10:00 – 10:10)**

10:00 **J. P. Reithmaier (Head of CINSaT, Technological Physics)**  
*Opening speech*

10:05 **D. Merker (CINSaT)**  
*Administrative and Organizational Issues*

## **Session I (10:10 – 11:00)**

### **3-dimensional Nanostructures**

Chair: H. Hillmer

10:10 **H. Hillmer (Technological Electronics)**  
*Overview focal point 3-dimensional Nanostructures*

10:20 **M. H. Qasim (Technological Electronics)**  
*Color generation in ultrathin Ge on Al for functionalization of MEMS micromirror arrays*

10:40 **P. Kästner (Technological Electronics)**  
*MEMS ring shutter arrays with subfield addressing*

## **11:00 Break (10 minutes)**

## **Session II (11:10 – 12:00)**

### **Multiscale Bioimaging**

Chair: A. Müller

11:10 **A. Müller (Developmental Genetics)**  
*Overview focal point Multiscale Bioimaging*

11:20 **P. Rojas (Condensed Matter Physics and Ultrafast Phenomena)**  
*The SARS-CoV-2 spike protein is vulnerable to moderate electric fields*

11:40 **C. Sarpe (Femtosecond Spectroscopy and Ultra-fast Laser Control)**  
*Identifying malignant tissue using fs-LIBS and machine learning algorithms*

## **12:00 Lunch (1 h 15 minutes)**

**Session III (13:15 – 14:05)**

**Quantum Technology**

Chair: K. Singer

13:15 **K. Singer (Light-Matter-Interaction)**  
*Overview focal point Quantum Technology*

13:25 **S. Aull (Light-Matter-Interaction)**  
*Generation of chiral Rydberg states*

13:45 **B. Bauerhenne (Condensed Matter Physics and Ultrafast Phenomena)**  
*Materials modelling on different time- and length scales*

**14:05 Break (10 minutes)**

**Session IV (14:15 – 15:20)**

**Chiral Systems**

Chair: P. Demekhin

14:15 **P. Demekhin (Theoretical Atomic and Molecular Physics)**  
*Overview focal point Chiral Systems*

14:25 **H. Braun (Femtosecond Spectroscopy and Ultra-fast Laser Control)**  
*Circular Dichroism in the ion yield of chiral molecules*

14:45 **S. Buhmann (Macroscopic Quantum Electrodynamics) – CINSaT Applicant**  
*You want it darker – Quantum vacuum, dispersion forces, and energy transfer*

**15:45 Break (10 minutes)**

**15:55 Group Photo (ca. 10 min)**

**Hiking Tour with all participants (16:05 – 17:50)**

18:00 **Dinner (1 h 15 minutes)**

**Poster Session (open end)**

19:15 **All Contributors**  
*Presentation of Poster Contributions and Discussions*

Friday, March 4<sup>th</sup>, 2022

**07:00 Breakfast and Check-Out (2 h)**

**Session V (09:00 – 09:50)**

**Photonics**

**Chair: P. Lehmann**

09:00 **P. Lehmann (Measurement Technology)**

*Overview focal point Photonics*

09:10 **S. Bagatur (Physical Chemistry of Nanomaterials)**

*Two and three-dimensional photoinduced nanostructuring in thin azo layers*

09:30 **H. Serbes (Measurement Technology)**

*A novel measurement and signal processing strategy in optical coherence tomography (OCT)*

**09:50 Break (10 minutes)**

**Session VI (10:00 – 10:50)**

**Nanomaterials**

**Chair: T. Niendorf**

10:00 **T. Niendorf (Metallic Materials)**

*Overview focal point Nanomaterials*

10:10 **M. Horn (Physical Chemistry of Nanomaterials)**

*Mineralization of fish skin collagen scaffolds as potential materials for bone tissue regeneration*

10:30 **A. Winkel (Separating and Joining Manufacturing Processes)**

*Laser-nanostructuring and silicization of stainless steel for age-resistant adhesive bonds*

**10:50 Break (10 minutes)**

11:00 **C. Backes (Physical Chemistry of Nanomaterials) – CINSaT Applicant**

*2D materials in the liquid phase*

**12:00 Lunch (1h 15 minutes)**

13:15 **M. Stengl (Animal Physiology)**

*Overview research training group (RTG) "Multiscale Clocks" - Online*

**Session VII (13:45 – 14:45)**

**Individual Focal Point Sessions**

**Chair: Focal point speakers**

***End of the Event***

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14:45     **J. P. Reithmaier (Head of CINSaT, Technological Physics)**  
*Closing speech*