

# CINSaT SPRING COLLOQUIUM 2023



Verlinkung zur Website cinsat.de mit Programm

*Link to the website cinsat.de with program*

Thursday, February 23<sup>rd</sup>, 2023

## **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 – 11:45)**

### **3-dimensional Nanostructures**

**Chair: H. Hillmer**

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

10:20 **D. Gallina (Theory of Nanostructured Materials)**  
*3D magnetic nanoparticles*

10:40 **B. Elsaka (Technological Electronics)**  
*Investigation of the Influence of Sublayer Thickness on Pairing of Metallic MEMS  
Shutter Blades*

## **11:00 In-Session Break (5 minutes)**

11:05 **R. Donatiello (Technological Electronics)**  
*Improvement of clear view through MEMS micromirror arrays by reducing diffraction effects*

11:25 **S. Liu (Technological Electronics)**  
*MEMS microshutter arrays for laser safety goggles: design, fabrication and characterization*

## **11:45 Break (10 minutes)**

**Session II (11:55 – 12:45)**

**Multiscale Bioimaging**

**Chair: A. Müller**

11:55     **A. Müller (Developmental Genetics)**  
*Overview focal point Multiscale Bioimaging*

12:05     **E. Gheisari (Developmental Genetics)**  
*Detangling directional cell migration during embryogenesis of *Drosophila Melanogaster**

12:25     **A. Schneider (Animal Physiology)**  
*Neuromodulation provides stability and flexibility to the output of neural circuits*

**12:45     Lunch (1 h 15 minutes)**

14:00     **Prof. Dr. Adrian Mellage (Hydrogeology Research Group)**  
*Capturing and quantifying reactive transport in groundwater: The ‘invisible’ rock-water interface*

**15:00     Break (10 minutes)**

**Session III (15:10 – 16.00)**

**Chiral Systems**

**Chair: P. Demekhin**

15:10     **P. Demekhin (Theoretical Atomic and Molecular Physics)**  
*Overview focal point Chiral Systems*

15:20     **E. Kutscher (Theoretical Atomic and Molecular Physics)**  
*Photoelectron circular dichroism in fenchone by short coherent broadband laser pulses*

15:40     **F. Peterß (Laboratory Astrophysics)**  
*Cavity ring down measurements on propylene oxide*

**16:00     Break (10 minutes)**

**16:10     Group Photo (ca. 10 min)**

**Hiking Tour with all participants (16:20 – 18:00)**

**18:00     Dinner (1 h 15 minutes)**

**Poster Session (open end)**

19:15     **All Contributors**  
*Presentation of poster contributions and discussions*

Friday, February 24<sup>th</sup>, 2023

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

**Session IV (09:00 – 09:50)**

**Photonics**

**Chair: P. Lehmann**

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

*Overview focal point Photonics*

09:10 **M. Künne (Measurement Technology)**

*High NA Linnik interferometry with ring apertures*

09:30 **L. Wolfram (Physical Chemistry of Nanomaterials)**

*Generating wrinkling structures via Monte-Carlo-Simulation using a Truchet-Ising-Model*

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

**Session V (10:00 – 11:10)**

**Nanomaterials**

**Chair: B. Middendorf**

10:00 **B. Middendorf (Construction Materials and Chemistry)**

*Overview focal point Nanomaterials*

10:10 **D. Kosenko (Construction Materials and Chemistry)**

*Microscopic tracking of superplasticizer adsorption in alkali activated materials*

10:30 **S. Goldie (Physical Chemistry of Nanomaterials)**

*Controllable nanosheet separation using centrifugation*

10:50 **T. Nowack (Physical Chemistry of Nanomaterials)**

*Aggregation-induced emission*

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

11:20 **Prof. Dr. Guido Falk von Rudorff (Computational Chemistry of Nanomaterials)**

*Computational material design and the curse of dimensionality*

**12:20 Lunch (1h 10 minutes)**

**Session VI (13:30 – 14:20)**

**Quantum Technology**

**Chair: K. Singer**

13:30 **K. Singer (Light-Matter-Interaction)**

*Overview focal point Quantum Technology*

- 13:40 **M. Bhardwaj (Light-Matter-Interaction)**  
*Towards quantum control of Ca<sup>+</sup> ions for the use in molecular spectroscopy*
- 14:00 **S. Lang (Macroscopic Quantum Electrodynamics)**  
*Quantisation of a dissipative dielectric with a finite-width lorentzian resonance*

**Session VII (14:25 – 15:25)**

**Individual Focal Point Sessions**

**Chair:** Focal point speakers

**End of Event**

- 15:25 **J. P. Reithmaier (Head of CINSaT, Technological Physics)**  
*Closing speech*