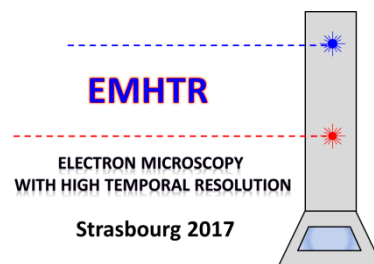


PROGRAM



Monday, May 29th

08:30 – 09:00 **Registration**

09:00 – 09:15 **Opening**

Session 1 Chair: Bradley Siwick

09:15 – 09:45 **John Spencer Baskin** (California Institute of Technology, USA)
4D Ultrafast Electron Microscopy at Caltech: Completing the Scientific Legacy of Ahmed Zewail

09:45 – 10:15 **Dayne Plemmons** (University of Minnesota, USA)
Coherent Photoexcited Structural Dynamics in Nanostructured and Nanoscale Materials

10:15 – 10:45 **Renske van der Veen** (University of Illinois, USA)
Ultrafast core-level spectroscopy in 4D-electron microscopy

10:45 – 11:15 *Coffee break*

Session 2 Chair: Oh Hoon Kwon

11:15 – 11:45 **Nigel Browning** (Pacific Northwest National Laboratory, USA)
Observations of Dynamic Processes in Liquids – Combined Hardware and Software Solutions for Increasing Image Speed

11:45 – 12:15 **Peter Baum** (LMU University of Munich, Germany)
Electron Microscopy of Electromagnetic Waveforms

12:15 – 12:45 **Claus Ropers** (University of Göttingen, Germany)
Ultrafast Transmission Electron Microscopy facilitates Free-Electron Quantum Optics

12:45 – 14:15 *Lunch*

Session 3 Chair: Peter Baum

14:15 – 14:45 **Jonas Weissenrieder** (KTH Royal Institute of Technology, Sweden)
Influence of Cathode Geometry on Electron Dynamics in an Ultrafast Electron Microscope

14:45 – 15:15 **Bradley Siwick** (McGill University, Canada)
Ultrafast Electron Diffraction Probes More Than Just Lattice Structure

15:15 – 15:30 **Sascha Schäfer** (University of Göttingen, Germany)
Time-resolved nanoscale mapping of strain tensor fields in ultrafast transmission electron microscopy

15:30 – 15:45 **Ulrich Lorenz** (Ecole Polytechnique Fédérale de Lausanne, Switzerland)
Mechanical properties of nanoconfined lead

15:45 – 16:15 *Coffee break*

Session 4 Chair: Bryan Reed

16:15 – 16:30 **Ido Kaminer** (Technion Haifa, Israel)

Ultrafast electron-plasmon interactions in 2D materials

16:30 – 16:45 **Giovanni M. Vanacore** (Ecole Polytechnique Fédérale de Lausanne, Switzerland)

Unraveling the ultrafast dynamics of spatially confined phonons and plasmons in low-dimensional nanosystems

16:45 – 17:00 **Dao Xiang** (Shanghai Jiao Tong University, China)

Status of the single shot MeV ultrafast electron microscope at Shanghai Jiao Tong University

17:00 – 19:00 **Poster Session**

Tuesday, May 30th**Session 5** Chair: Peter Denes

- 09:00 – 09:30 **Eric Stach** (Brookhaven National Laboratory, USA)
Quasi-real time analysis of nanoparticle coarsening and ripening using a direct electron detector
- 09:30 – 10:00 **Velimir Radmilović** (University of Belgrade, Serbia)
STEM Diffraction Mapping of Silver Nanowire Welds
- 10:00 – 10:30 **Damien McGrouther** (University of Glasgow, UK)
Enabling high temporal resolution for unmodified TEMs
- 10:30 – 10:45 **Hidehiro Yasuda** (Osaka University, Japan)
Analysis of crystallization process in amorphous Sb nanoparticles by fast dynamic ultra-high voltage electron microscopy observations

10:45 – 11:15 *Coffee break*

Session 6 Chair: Velimir Radmilović

- 11:15 – 11:45 **Peter Denes** (Lawrence Berkeley National Laboratory, USA)
Direct Electron Detection for Time-Resolved Microscopies
- 11:45 – 12:15 **Bryan Reed**: (IDES Inc., Pleasanton, USA)
Temporal Compressive Sensing in Transmission Electron Microscopy
- 12:15 – 12:30 **Armand Béch ** (University of Antwerp, Belgium)
Compressed Sensing In (S)TEM: Imaging Materials With Optimized Electron Dose
- 12:30 – 12:45 **Thomas Schachinger** (Technical University of Vienna, Austria)
Exploring the possibilities and limitations of vortex filter EMCD

12:45 – 14:15 *Lunch*

Session 7 Chair: Thomas LaGrange

- 14:15 – 14:45 **Arnaud Arbouet** (CEMES, Toulouse, France)
Towards ultrafast TEM based on a modified cold-field emission TEM
- 14:45 – 15:00 **Alberto Tagliaferri** (Politecnico di Milano, Italy)
Charge carrier dynamics by secondary electron detection in ultrafast scanning electron microscopy
- 15:00 – 15:15 **Makoto Kuwahara** (Nagoya University, Japan)
Coherence of picosecond bunched electrons emitted from a semiconductor photocathode in transmission electron microscope
- 15:15 – 15:30 **Jasper F. M. van Rens** (Eindhoven University, The Netherlands)
RF-cavity based Ultrafast Electron Microscopy

15:30 – 16:00 *Coffee break*

Session 8 Chair: Claus Ropers

16:00 – 16:30 **Javier Garcia de Abajo** (Barcelona Institute of Science and Technology, Spain)
Theoretical description of the ultrafast interaction between electron beams and plasmonic nanostructures

16:30 – 17:00 **Matthieu Kociak** (CNRS, Université Paris Sud, France)
New directions in the study of optical properties of nanostructures with free electron beams

17:00 – 17:15 **Jo Verbeeck** (University of Antwerp, Belgium)
How does the phase of an electron beam interact with a surface plasmon?

19:00 **Conference Dinner**
Restaurant « *Maison Kammerzell* »
16 Place de la Cathédrale, 67000 Strasbourg

Wednesday, May 31st**Session 9** Chair: Renske van der Veen

- 09:00 – 09:30 **Oh Hoon Kwon** (Ulsan National Institute of Science and Technology, Korea)
Ultrafast Electron Microscopy at UNIST
- 09:30 – 10:00 **Thomas LaGrange** (Ecole Polytechnique Fédérale de Lausanne, Switzerland)
Perspectives on Ultrafast and Dynamic Transmission Electron Microscopy Instrumentation
- 10:00 – 10:15 **Yossi Lereah** (Tel Aviv University, Israel)
Fast (24 and 300 fps) TEM of Nanoparticles Quasi Melted State
- 10:15 – 10:30 **Buddhika G. Mendis** (Durham University, UK)
Carrier lifetime measurement at grain boundaries in CdTe thin-film solar cells
- 10:30 – 10:45 **Parlapalli Satyam** (University of Bhubaneswar, India)
Real Time In-situ Electron Microscopy High Temperature Studies across metal-semiconductor interfaces and in Filled CNTs

10:45 – 11:15 *Coffee break*

Session 10 Chair: Florian Banhart

- 11:15 – 11:35 **Guillaume Brunetti** (JEOL Paris, France)
Development of a New Generation Multi-Purpose Electron Microscope: JEOL F2
- 11:35 – 11:55 **Daniel Masiel (IDES Inc., Pleasanton, USA)**
Relativity - The technology behind IDES' new temporal compressive sensing system
- 11:55 – 12:10 **Yoann Zaouter** (Amplitude Systems, France)
New generation of ultrafast lasers for the generation of photoelectrons
- 12:10 – 12:45 **Final discussion, concluding remarks**

12:45 – 14:00 *Lunch*

- 14:00 **Discussions**
- Laboratory tour**
- Meetings with exhibitors**

LIST OF POSTERS

Nora Bach (University of Göttingen, Germany)

Highly coherent femtosecond electron pulses for ultrafast transmission electron microscopy

Gabriele Berruto (Ecole Polytechnique Fédérale de Lausanne, Switzerland)

Probe magnetism in a dynamical transmission electron microscope: a study on skyrmions in FeGe

Kerstin Bücker (Institut de Physique et Chimie des Matériaux de Strasbourg – CNRS, France)

The electron dynamics in ultrafast stroboscopic TEM

Robert Bücker (Max Planck Institute for the Structure and Dynamics of Matter, Germany)

Imaging Biological Systems with Ultrabright Electron Pulses

Armin Feist (University of Göttingen, Germany)

Spatio-Temporal Probing of Lattice Dynamics in Graphite by Ultrafast TEM

Rajeswari Jayaraman (Ecole Polytechnique Fédérale de Lausanne, Switzerland)

Skyrmion dynamics studied by cryo-Lorentz transmission electron microscopy

Ivan Madan (Ecole Polytechnique Fédérale de Lausanne, Switzerland)

Directional plasmon emission and sub-femtosecond plasmon dynamics by zero-loss suppression PINEM

Marian Mankos (Electron Optica, Inc., Palo Alto, USA)

Novel Electron Mirror Pulse Compressor for UED and DTEM

Sang Tae Park (Integrated Dynamic Electron Solutions, Inc., Pleaston, USA)

Numerical Study on the Electron Propagation in UTEM

Matthieu Picher (Institut de Physique et Chimie des Matériaux de Strasbourg – CNRS, France)

The characteristics of electron pulses in single-pulse dynamic TEM

Renaud Podor (Université de Montpellier, France)

First stage of sintering of ThO₂ microspheres: a HT-ESEM and HT-TEM study.

Enrico Pomarico (Ecole Polytechnique Fédérale de Lausanne, Switzerland)

Ultrafast imaging and spectroscopy of plasmonic fields upon infrared excitation

Pooja Rani (Indian Institute of Technology, India)

Liquid like nucleation in nanoscale thin films

Christopher Rathje (University of Göttingen, Germany)

Coherent control of free-electron beams for temporal shaping on the attosecond time scale

Norbert Schönenberger (University Erlangen-Nürnberg, Germany)

Setup and characterization of a pulsed scanning electron microscope for ultrafast experiments with electrons

Murat Sivis (University of Göttingen, Germany)

Quantitative Nanoscale Mapping of Strongly-Localized Optical Near Fields in Ultrafast Transmission Electron Microscopy

Jeremy Sloan (University of Warwick, UK)

In Situ Electron Beam Amorphization of Sb₂Te₃ nano-Confined Phase Change Material within Single Walled Carbon Nanotubes

Wouter Verhoeven (Eindhoven University of Technology, The Netherlands)

A novel method for time-resolved electron energy loss spectroscopy using TM₀₁₀ cavities as longitudinal lenses