







StEM Workshop at Ringberg Castle, Lake Tegernsee, Germany
July 3 - 5, 2019

Programme

Wednesday, July 3 rd , 2019	
14:50 – 15:00	Opening and Welcome Peter A. van Aken
	Magnetism Chair: Peter van Aken
15:00 – 15:30	Joe Zweck <i>Differential phase contrast: Probing potential gradients from micrometer to picometer resolution</i>
15:30 – 16:00	Knut Müller-Caspary <i>Overview of recent results on</i> - <i>First moment imaging and electric field in 2D materials</i> - <i>Polarization measurement in wurtzite nitrides</i> <i>Comparison of 4D STEM with electron holography</i>
16:00 – 16:30	Coffee break and posters 
	Chair: Josef Zweck
16:30 – 17:00	Felix Schwarzhuber Performance of a new fast COM detector for differential phase contrast microscopy
17:00 – 17:30	Jörg Lindner <i>DPC imaging with an 8-fold segmented detector in the STEM: Recent applications and limits</i>
17:30 – 18:00	Kayla Fallon <i>Quantitative investigations of skyrmionic multilayer materials using Lorentz microscopy</i>
18:30	Dinner

Thursday, July 4 th , 2019	
	Magnetism I Chair: Knut Müller-Caspary
09:00 – 09:30	Simon Pöllath <i>LTEM and DPC imaging of magnetic skyrmions</i>
09:30 – 10:00	Klaus Leifer <i>Towards EMCD atomic resolution using converged electron probes</i>
10:00 – 10:15	Devendra Negi <i>Probing magnetism at nano and atomic length scale by Electron Magnetic Circular Dichroism (EMCD)</i>
10:15 – 10:45	Coffee break and posters 
	Mixed topics I Chair: Wilfried Sigle
10:45 – 11:15	Eva Olsson <i>Low Loss EELS of 2D material structures and nanowires</i>
11:15 – 11:45	Lewys Jones <i>Processing of 4D time-series (5D data) and non-rigid registration of same</i>
11:45 – 12:00	Yi Wang <i>Dynamics of electron propagation inside perovskite and Ruddlesden-Propper oxides</i>
12:00 – 12:15	Hongguang Wang <i>Aberration-corrected STEM Observations on the Interfacial Structure and Strain Fields of Patterned SrRuO3 Artificial Atoms</i>
12:30	Lunch

Thursday, July 4 th , 2019	
	Plasmonics Chair: Vesna Srot
14:00 – 14:30	Javier Garcia de Abajo <i>Optimizing the coupling between electron beams and optical fields</i>
14:30 – 15:00	Christoph Lienau <i>Two-dimensional electronic spectroscopy: How does it work and what can it tell us about the motion of electrons and nuclei in nanostructures</i>
15:00 – 15:30	Nahid Talebi <i>Electron-Light Interaction from Semi-classical Perspective</i>
15:30 – 15:45	Robin Lingstädt <i>Wedge polaritons interacting with engineered defects in the hyperbolic material Bi₂Se₃</i>
15:45 – 16:15	Coffee break and posters 
	Plasmonics Chair: Christoph Lienau
16:15 – 16:45	Franz-Philipp Schmidt <i>Electron beam direction dependent light emission</i>
	Mixed topics II
16:45 – 17:15	Gabriel Sanchez Santolino <i>Direct visualization of electric and magnetic field structures using differential phase contrast STEM</i>
17:30 – 18:00	Guided Castle Tour
18:30	Bavarian buffet dinner

Friday, July 5 th , 2019	
	Magnetism II Chair: Jörg Lindner
09:00 – 09:30	Eberhard Goering <i>Magnetism on short length scales</i>
	Mixed topics III
09:30 – 10:00	Vahagn Mkhitarian <i>Optimum coupling between beam electrons and optical modes</i>
10:00 – 10:15	Yu-Mi Wu <i>Strain-driven charge ordering transition in LiV₂O₄</i>
10:15 – 10:30	Xu Chen <i>Fuel Cell catalyst characterization by advanced STEM</i>
10:30 – 11:00	Coffee break and posters 
	Mixed topics IV Chair: Yi Wang
11:00 – 11:15	Vesna Srot <i>Improved sample preparation of beam-sensitive ultra-thin cuprate films</i>
11:15 – 11:30	Y. Eren Suyolcu <i>Customizing complex oxide heterostructures: On the interface sharpness and functionalities</i>
11:30 – 11:45	Wilfried Sigle <i>TEM analyses of BaZrO₃ for fuel cells and -- some old-hat magnetism</i>
11:45 – 12:00	Julia Deuschle <i>Towards Correlative Microscopy: Sample preparation and analytics in the FIB-SEM</i>
12:00	Discussion and Closing
12:15	Lunch
13:15	Departure

Some more information concerning the workshop

Venue

Schloss Ringberg
Conference Site of the Max Planck Society e. V. (MPG)
Schlosstraße 20
83708 Kreuth

Tel.: +49 (0) 8022-279-0
Fax: +49 (0) 8022-279-259
e-mail: Ringberg@rzg.mpg.de

Conference office
Tel. +49 (0) 8022-279-218

(for more information such as how to get there please have a look at their home page:
<http://www.schloss-ringberg.mpg.de/>)

Bus Shuttle Service

We will arrange for a bus shuttle service to take participants from train station Tegernsee to Ringberg Castle. Taxi Kaufmann (5555) will pick you up at 2:30 pm in front of the station. The StEM group will travel by bus from Stuttgart to Ringberg Castle.

Talks

Duration of talks: 15 or 30 minutes. **Please leave at least 3 minutes for discussion.**

Presentation/Abstract

A beamer will be available. Please have your presentation on USB stick for easy transfer.

Posters

Posters can be shown during the coffee breaks

Food

Please inform us (office-stem@fkf.mpg.de) in case you prefer vegetarian food or if you are suffering from any allergies

Departure

Friday, July 5th, 2019 (after lunch)