



Light-Matter Interaction: Recent Advances in Theory

Thursday, 30 January 2020

The meeting will comprise 6 talks on the respective theory advances in atomic, molecular, solid state physics, warm-dense-matter and plasma research. Participation will be open to all interested users of photon science facilities, attending the EuXFEL and DESY Photon Science Users' Meetings.

Organizers: **Beata Ziaja-Motyka (Executive), Sang-Kil Son, Ralph Welsch & Robin Santra (CFEL-DESY Theory Group)**

Contact: matthias.kreuzeder@desy.de

PROGRAMME

14:00 Session 1 (Chairman: Sang-Kil Son, CFEL, DESY)

14:00	'Welcome Address'	Beata Ziaja-Motyka	CFEL, DESY Hamburg
14:15	'Strong-field control in the XUV domain'	Ulf Saalman	MPIPKS, Dresden
14:45	'Polaritonic chemistry and materials: changing properties of matter by engineering the photon vacuum'	Michael Ruggenthaler	CFEL, MPSD, Hamburg
15:15	'Electron decay mediated charge redistribution in clusters'	Kirill Gokhberg	Univ. of Heidelberg

15:45-16:15 Coffee break (30 Min.)

16:15 Session 2 (Chairman: Ralph Welsch, CFEL, DESY)

16:15	'Free electron degeneracy in collisional-radiative simulations'	Howard Scott	LLNL, USA
16:45	'Essentially Exact Molecular Dynamics with Quantum Chemistry and Machine Learning'	Alexandre Tkatchenko	Univ. du Luxembourg
17:15	'New insights into nonlinear optical response with x-rays'	Daria Gorelova	CFEL, DESY, Hamburg & Univ. of Hamburg
17:45	'Closing Remarks'	Robin Santra	CFEL, DESY Hamburg

18:00 End of the workshop