Schedule of the MML Workshop at Dreikönigskirche Dresden

February 13th to 15th 2019

Wednesday, February 13th

Time	Title	Speaker	Duration
Plenaries			
14:00	Welcome	Roland Sauerbrey	15'
14:15	MML: Introduction and New Developments	Thomas Stöhlker	25`+ 5`
14:45	XFEL: Status Report and First Experiments	Robert Feidenhans'l	50`+ 10`
15:45	Coffee break		
16:15	New at MML: Astrophysical Magnetohydrodynamics	Frank Stefani	35`+ 5`
16:55	New at MML: Particle Therapy and Space Radiation Biophysics	Claudia Fournier	35`+ 5`
17:35	Strategy of Materials Research at Helmholtz	Andreas Stierle	20`+ 10`
18:05	Dinner (Buffet)		

Thursday, February 14th

Time	Title		Speaker	Duration
Parallel Sessions: Research Topics (presentations: 20 min each, incl. discussions)				
9:00	Matter (RT 1)	Materials (RT 2)	Life (RT 3)	1h40`
10:40	Coffee break			
11:10	Matter (RT 1)	Materials (RT 2)	Life (RT 3)	1h40`
12:50	Lunch			
14:00	Research Field "Matter"		Helmut Dosch	30`+15`
15:00 – 17:00	Poster Session including Coffee (about 100 posters)			
Parallel Sessions: Research Topics (presentations: 20 min each, incl. discussions)				
17:15 - 19:15	Matter (RT 1)	Materials (RT 2)	Life (RT 3)	2h00`

Friday, February 15th

Time	Title	Speaker	Duration
Plenaries: “Matter and Technology” and its relevance for MML			
9:00	The ATHENA Project	Ralph Assmann	25`+5`
9:30	Distributed Detector Laboratory	Marc Weber	25`+5`
10:00	Data Management and Analysis	Michael Bussmann	25`+5`
10:30	Coffee Break		
Plenaries: Highlights from the Research Topics (for each RT one highlight)			
11:00	Extremely efficient nonlinear Terahertz light control in Dirac Materials	Sergey Kovalev	25'+5'
11:30	Magnetic Nanoparticles: Functionality through a combination of Quantum Materials with Soft Matter	Artem Feoktystov	25`+5`
12:00	Megahertz serial crystallography	Anton Barty	25`+5`
12:30	Concluding Remarks		15’
12:45	Light lunch will be provided		

Thursday, February 14th

Parallel Session: Research Topic 1

Time	Title	Speaker	Duration
9:00	Evidence of relativistic transparency in laser-plasma interactions	Vincent Bagnoud	15`+5`
9:20	Neon and sodium as tracers of the hot-bottom burning process in asymptotic giant branch stars	Daniel Bemmerer	15`+5`
9:40	Femtosecond response of atoms and molecules to ultra-intense hard x-rays	Sang-Kil Son	15`+5`
10:00	Hyperfine Puzzle	Rodolfo Sanchez	15`+5`
10:20	Creating and testing chirality – novel concepts from highly controlled molecules	Andrey Yachmenev	15`+5`
10:40	Coffee Break		
11:10	Molecular iron oxides: Iron in the unusual +7 oxidation state	Tobias Lau	15`+5`
11:30	Metastable silica high pressure polymorphs as structural proxies of deep Earth Silicate Melts	Elena Bykova	15`+5`
11:50	Energy loss measurements of light ions at the maximum of the stopping power	Abel Blazevic	15`+5`
12:10	High-purity x-ray polarimetry for precision tests of fundamental physics	Kai S. Schulze	15`+5`
12:30	Phase transition lowering in dynamically compressed silicon	Sven Toleikis	15`+5`
12:50	Lunch		
14:00	Research Field "Matter"	Helmut Dosch	30`+15`
15:00 – 17:00	Poster Session including Coffee		
17:15	Exploring hydrocarbon chemistry at planetary interior conditions	Dominik Kraus	15`+5`
17:35	Double Blind Holography of Attosecond Pulses	Andrea Trabattoni	15`+5`
17:55	A study of the water molecule using frequency control over nuclear dynamics in resonant X-ray scattering	Vinicius Vaz da Cruz	15`+5`
18:15	Segmented terahertz electron accelerator and manipulator (STEAM)	Dongfang Zhang	15`+5`
18:35	Heteronuclear Limit of Strong-Field Ionization: Fragmentation of HeH+ by Intense Ultrashort Laser Pulse	Philipp Wustelt	15`+5`
18:55	Observation of Ultrafast Solid-Density Plasma Dynamics Using Femtosecond X-Ray Pulses from a Free-Electron Laser”	Thomas Kluge	15' + 5'

Thursday, February 14th

Parallel Session: Research Topic 2

Time	Title	Speaker	Duration
9:00	Tailored bio-inspired nanochannels	Eugenia Toimil-Molares	15`+5`
9:20	Laminography - Dynamics of dislocation networks in damaged wafers	Merwe Kabukcuoglu	15`+5`
9:40	Structural changes in a single GaN nanowire under applied voltage bias	Sergey Lazarev	15`+5`
10:00	Ion beams for hyperdoping Si: From material preparation to atomic scale understanding	Mao Wang	15`+5`
10:20	Disorder quenching of the charge density wave in $ZrTe_3$	Moritz Hoesch	15`+5`
10:40	Coffee Break		
11:10	In situ high-energy X-ray diffraction analysis of a repair process for gamma-TiAl alloys	Katja Hauschildt	15`+5`
11:30	Polyelectrolyte membranes for fuel cells and electrolyzers	Olaf Holderer	15`+5`
11:50	Spectroscopy of interfaces in photovoltaics	Dirk Hauschild	15`+5`
12:10	Bi and Sb nanowire assemblies for thermoelectric applications	Michael Wagner	15`+5`
12:30	X-ray nanodiffraction for in situ mechanical studies in materials science	Anton Davydok	15`+5`
12:50	Lunch		
14:00	Research Field "Matter"	Helmut Dosch	30`+15`
15:00 – 17:00	Poster Session including Coffee		
17:15	Scientific opportunities with HFM-EXED: past, present and future	Karel Prokes	15`+5`
17:35	Focused-ion-beam assisted micropatterning for experiments under extreme conditions	Toni Helm	15`+5`
17:55	Exotic ground states and excitations in frustrated pyrochlore	Viviane Pecanha Antonio	15`+5`
18:15	Monitoring the Interaction of CO with graphene supported Ir clusters by vibrational spectroscopy and density functional theory calculations	Heshmat Noei	15`+5`
18:35	Magnetism in curved geometries	Attila Kakay	15`+5`
18:55	Light-induced spin crossover in an Fe(II) low-spin complex enabled by surface adsorption	Sebastian Rohlf	15`+5`

Thursday, February 14th

Parallel Session: Research Topic 3

Time	Title	Speaker	Duration
9:00	Molecular probes for RNAs and RNA-protein complexes	Markus Wahl	15`+5`
9:20	New opportunities in macromolecular crystallography	Anja Burkhardt	15`+5`
9:40	Facilities for Macromolecular Crystallography at the HZB	Manfred Weiss	15`+5`
10:00	Soft condensed matter probed over various time scales with X-ray Correlation Spectroscopy	Lara Frenzel	15`+5`
10:20	Soft X-ray Spectroscopy as a Probe for Gas-Phase Protein Structure	Sadia Bari	15`+5`
10:40	Coffee Break		
11:10	Probing Dynamics of liquid water and amorphous ice over 18 decades by speckle correlations	Felix Lehmkühler	15`+5`
11:30	Revealing the structure-function principle in spider attachment hairs	Silja Flenner	15`+5`
11:50	High-throughput 3D digitization of insect morphology	Thomas van de Kamp	15`+5`
12:10	Small animal 3D X-ray imaging for morphological, genetic and embryonic studies	Sabine Engelhardt	15`+5`
12:30	Image acquisition and analysis pipelines for small animal imaging	Alexey Ershov	15`+5`
12:50	Lunch		
14:00	Research Field "Matter"	Helmut Dosch	30`+15`
15:00 – 17:00	Poster Session including Coffee		
17:15	Live imaging of DNA repair proteins after heavy ion irradiations	Monika Dubiak	15`+5`
17:35	Galactic cosmic ray simulation at high energy accelerators	Christoph Schuy	15`+5`
17:55	Radiotherapy in combination with small molecules to harness an immune response in cancer therapy	Alexander Helm	15`+5`
18:15	Scaffolds for tissue engineering and 3D cell culturing	Angelica Cecilia	15`+5`
18:35	New insights into nanoparticle mediated drug delivery as revealed by cryo soft X-ray tomography	Jim McNally	15`+5`
18:55	Dose efficient Compton X-ray microscopy	Pablo Villeneuva-Perez	15`+5`