

## Thursday 6 May

09:00 - 09:15	<b>Welcome and introduction to EBS</b>	<b>Harald Reichert</b> Director of research, ESRF
09:15 - 09:30	<b>Scopes and objectives of the workshop</b>	<b>Carsten Detlefs</b> ESRF
<b>Session 1 - Ferroelectrics and Functional Materials (Chair : Carsten Detlefs)</b>		
09:30 - 10:10	<b>Progress and perspectives on imaging ferroic domain structures with dark-field x-ray microscopy</b>	<b>Hugh Simons</b> Technical University of Denmark
10:10 - 10:30	Quantitative mapping of nanotwin variants and elastic energy in the bulk	<b>Jan Schultheiß</b> NTNU Trondheim
10:30 - 10:50	Recognition of ferroelastic domain patterns using high-resolution single crystal X-ray diffraction: potential for DFXM	<b>Semen Gorfman</b> Tel Aviv University
Coffee Break		
<b>Session 2 - Metallurgy I (Chair: Henning F. Poulsen)</b>		
11:10 - 11:40	<b>DFXM Mapping of Strain and Mosaicity in TiN and Cu Grains: Resolving Annealing-Induced Intergranular Changes in Ceramics and Metals</b>	<b>Jozef Keckes</b> University of Leoben
11:40 - 12:10	Local residual stresses in steels	<b>Yubin Zhang</b> Technical University of Denmark
Lunch Break		
<b>Session 3 - Ceramics and Biominerals (Chair Hugh Simons)</b>		
13:30 - 14:10	<b>Dislocations in ceramics: Opportunities and challenges in quantitative 3D imaging</b>	<b>Lukas Porz</b> Technical University of Darmstadt
14:10 - 14:30	Combining raster-scanning XRF and XRD with DFXM for the study of biominerals	<b>Philip Cook</b> ESRF
14:30 - 15:10	<b>Residual stresses and crystal orientation in biominerals revealed by Dark Field X-ray Microscopy</b>	<b>Vanessa Schoeppler</b> University of California, Berkeley
Coffee Break		
<b>Session 4 - Metallurgy II (Chair Can Yildirim)</b>		
15:30 - 16:10	<b>Quantifying microscale drivers for fatigue failure via coupled synchrotron X-ray characterization and simulations</b>	<b>Sven Gustafson</b> Purdue University
16:10 - 16:30	Three-dimensional mapping of local elastic strain	<b>Peter Reischig</b> Sci-Tech Daresbury

## Friday 7 May

<b>Session 5 - X-ray Diffraction Imaging I (Chair Tobias Schulli)</b>		
09:10 - 09:30	Fourier ptychographic DF-XRM	<b>Mads Carlsen</b> Technical University of Denmark
09:30 - 09:50	X-Ray Orientation Microscopy using Topo-tomography and multi-mode Diffraction Contrast Tomography	<b>Nicola Vigano</b> ESRF
09:50 - 10:10	Evidence of Charge Density Wave transverse pinning by x-ray microdiffraction	<b>Ewen Bellec</b> ESRF
Coffee Break		
<b>Session 6 - Structural Defects and Phase Transformations (Chair Wolfgang Ludwig)</b>		
10:50 - 11:30	<b>A multi-scale study of the interaction of Sn solutes with dislocations during recovery in Fe-Si alloys</b>	<b>Nikolas Mavrikakis</b> OCAS NV Gent
11:30 - 11:50	Toward In Situ Mapping of Crystal Selection during OFZ Crystal Growth	<b>Peter G. Khalifah</b> Stony Brook University
11:50 - 12:30	<b>Studying Thermomechanical Phase Transformations and Twinning in Metals with Dark-Field X-ray Microscopy</b>	<b>Ashley Bucsek</b> University of Michigan
Lunch Break		
<b>Session 7 - Time Resolved DFXM (Chair Alexander Rack)</b>		
13:50 - 14:30	<b>Visualizing the Dynamics of Subsurface Defects with Time-Resolved Dark-Field X-ray Microscopy</b>	<b>Leora Eve Dresselhaus-Marais</b> Lawrence Livermore National Lab
14:30 - 14:50	In-situ DFXM	<b>Tobias Schulli</b> ESRF
Coffee Break		
<b>Session 8 - X-ray Diffraction Imaging II (Phil Cook)</b>		
15:10 - 15:30	Development of large field-of-view high-resolution hard x-ray microscope using polymer optics at Advanced Photon Source	<b>Zhi Qiao</b> Advanced Photon Source
15:30 - 15:50	Darfix: A New DFXM Data Analysis Tool	<b>Julia Garriga-Ferrer</b> ESRF
15:50	<b>Closing Remarks</b>	<b>C. Detlefs and H. Reichert, ESRF</b>