

XTOP 2026 – Program

Sunday, 20.09.2026			Monday, 21.09.2026			
08:30-08:45			08:30-08:45	Registration		
08:45-09:00			Tutorial Opening			
09:00-09:15			Vincent Favre-Nicolin			Coherent X-rays and Applications: CDI and Ptychography
09:15-09:30						
09:30-09:45			Coffee Break			
09:45-10:00			Julia Herzen			Phase-Contrast and Dark-Field Imaging for Biomedical Applications
10:00-10:15						
10:15-10:30			Julie Villanova			X-ray Microscopy Techniques
10:30-10:45						
10:45-11:00			Lunch Break			
11:00-11:15			Tobias Schüllli			Diffraction Imaging at Synchrotron Light Sources: From Topography to Coherent Nanoprobes
11:15-11:30						
11:30-11:45			Stefan Kowarik			X-ray Scattering by Nanostructure
11:45-12:00						
12:00-12:15			Tutorial Closing			
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20:00-20:15	Welcome Reception - Finger Food & Drinks					
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Tuesday, 22.09.2026				
08:30-08:45	Registration		Conference Opening	
08:45-09:00				
09:00-09:15		I: Diffraction & Scattering - 1/2 Chairs: Stefan Kowarik & Jörg Grenzer	Ivan Zaluzhnyy	Nanodiffraction for Spatially-Resolved Studies of Complex Materials
09:15-09:30			Steffen Tober	XRR with Nanometre Beams - Characterising Micrometre Surfaces
09:30-09:45			Martin Zimmermann	X-ray Reflectivity and Reciprocal Space Mapping with a Micro-Focus Rotating Anode: From Micron-Sized Beams to Fractional-Order Bragg Peaks
09:45-10:00			Michał Kamiński	Real-Time Manipulation of Ag Thin Film Growth Studied by GISAXS
10:00-10:15			Ivan Vartanians	Structure of Protein Cage Supercrystals Revealed by Angular X-ray Cross-Correlation Analysis
10:15-10:30			Coffee Break	
10:30-10:45				
10:45-11:00				
11:00-11:15	II: X-ray Microscopy Chairs: Julie Villanova & Irina Snigireva	Saša Bajt	Novel Imaging Modalities Enabled by Multilayer Laue Lenses	
11:15-11:30		Benjamin Apeleo Zubiri	Electron-Tomography-Informed Super-Resolved Nano X-ray Computed Tomography	
11:30-11:45		Benedikt Rösner	Supersampling Scanning Transmission Microscopy: Unlocking Sub-10 nm STXM Resolution	
11:45-12:00		Maik Becker	Crystallographic and Defect Analysis of Colloidal Photonic Supraparticles Using Zone-Axis Wide-Field XRM and NanoCT	
12:00-12:15		Mathias Hurst	Hard X-ray Holographic Projection Microscopy Using Multilayer Laue Lenses for Hierarchical 3D Imaging	
12:15-12:30			Lunch Break	
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14:00-14:15	III: New Instrumentation Chairs: Tobias Schülli & Cristian Mocuta	Patrik Vagovič	MHz X-ray Tomoscopy: Rotation-Free 4D Imaging with Diamond Bragg Beam-Splitter Optics at the European XFEL	
14:15-14:30		Angel Rodriguez Fernandez	Shear Wave Propagation Imaged Inside Crystalline Semiconductors After Below Melting Threshold Using Diffraction Near Field X-ray Microscopy	
14:30-14:45		Julia Rogalinski	Time-Resolved 3D Imaging Opportunities with XMPI at ForMAX	
14:45-15:00		Simon Bode	Synchrotron Laminography for Multimodal, Hierarchical, and in Situ 3D Imaging	
15:00-15:15		Tilman Donath	Advancing Synchrotron Imaging Using Next-Generation Hybrid Photon Counting Detectors	
15:15-15:30		Caori Organista	FaXToR: The First Fast Hard X-ray Micro-Tomography Beamline at the ALBA Synchrotron	
15:30-15:45		Coffee Break		
15:45-16:00				
16:00-16:15				
16:15-16:30	IV: Appl. & Ind. Res. Chairs: Mark Goorsky & Lutz Kiste	Tamzin Lafford	Development of X-ray Metrology for Advanced CFET Logic and 3D-DRAM Devices	
16:30-16:45		Marcello Fonda	Spectral Photon-Counting Micro-CT for Dental Implant Integrity and Infiltration Analysis	
16:45-17:00	Poster Session 1	Poster Session 1		
17:00-17:15				
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18:00-18:15		Dinner		
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20:30-20:45	Evening Lecture	Lars Krogmann, Director of the Natural History Museum Stuttgart "From Museum Collections to Digital Biodiversity Research"		
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Wednesday, 23.09.2026			
08:30-08:45	V: Phase-Contrast Imaging Chairs: Sasa Bajt & Mathias Hurst	Marina Eckermann	<i>Waves for Life Sciences: Characterization of Biomedical Structures with a Focus on X-ray Imaging</i>
08:45-09:00			
09:00-09:15		Oriol Roche	<i>Multimodal, Multi-Scale Imaging of Human Vagus Nerve at the 113-1 Coherence Beamline</i>
09:15-09:30		Martin Spiecker	<i>Dose-Efficient Propagation-Based X-ray Phase Contrast Imaging at High and Low Resolution by Bragg Crystal Optics</i>
09:30-09:45		Irina Snigireva	<i>Multilens X-ray Interferometry Based on Si Planar Compound Refractive Lenses</i>
09:45-10:00		Giovanni Lemma	<i>Phase-Contrast and Dark-Field Imaging and Tomography at OptImaTo Laboratory: Implementation and Optimization with Modulation-Based Technique</i>
10:00-10:15		Coffee Break	
10:15-10:30			
10:30-10:45	Vi: Diffraction & Scattering - 2/2 Chairs: Ivan Zaluzhnyy & Steffen Tober	Anna Kossoy	<i>High-Resolution XRD Characterization of Surface Guided Xanthine Derivatives for Optical Metamaterial Application</i>
10:45-11:00		Sarah Siraj	<i>Swelling Dynamics in Ultrathin Protein Films</i>
11:00-11:15		Ritwika Mandal	<i>Strain Waves as a Symmetry-Breaking Field in Photoexcited V₂O₃</i>
11:15-11:30		Aleksandra Wierzbicka	<i>Residual Effects in GaN Nanowires on Zn Buffer Layers Studied by XRD and Raman Spectroscopy</i>
11:30-11:45		Berkin Nergis	<i>In-Situ Synchrotron HRXRD Investigation of Epitaxial YSZ/Ti/Pt/BaFe₂O₁₉/Bi₃Ti₅FeO₁₅ Multiferroic Heterostructures on Si(111) for Non-Volatile Memory Applications</i>
11:45-12:00		Vladimir Kaganer	<i>X-ray Diffraction Profiles from Dislocations and Stacking Faults in a-Plane AlN Films</i>
12:00-12:15		Official Conference Group Photo	
12:15-12:30		Packed Lunch	
12:30-12:45			
12:45-13:00	Excursion	Excursion Heidelberg Castle & Old Town	
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Thursday, 24.09.2026			
08:30-08:45	VII: CDI & Ptychography Chairs: Dina Carbone & Felix Wittwer	Oleg Gorobtsov	<i>Diffraction Imaging of Mesostructure in Disordered Energy Materials</i>
08:45-09:00			
09:00-09:15		Dmitry Karpov	<i>Bridging Real and Reciprocal-Space Nanoimaging of Biogenic Calcite: Bragg Coherent Diffraction, Ptychography, and Cryo X-ray Fluorescence</i>
09:15-09:30		Aksel Mihaylov	<i>Bragg Coherent Diffraction X-ray Imaging of Nanoparticles with Unknown Orientation</i>
09:30-09:45		Johannes Ihli	<i>Dynamic In-Situ Ptychographic X-ray Tomography with Environmental Control</i>
09:45-10:00		Thomas Sarrazin	<i>Spectroscopic BCDI: Combined Chemical and Structural 3D Mapping of Bimetallic Nanocatalysts</i>
10:00-10:15		Anton Plech	<i>Photodynamics of Gold Nanorod Transformation Studied by Femtosecond Coherent Diffraction Imaging at the European XFEL</i>
10:15-10:30		Runqing Yang	<i>Challenges and Solutions of Diffraction Signal Numerical Separation in Multibeam Ptychography</i>
10:30-10:45		Coffee Break	
10:45-11:00			
11:00-11:15	VIII: Theory, AI & Algorithms Chairs: Vladimir Kaganer & Edwin Fohtung	Yuhe Zhang	<i>Deep Learning for Advanced 3D and 4D X-ray Image Reconstruction</i>
11:15-11:30		Warre Heylen	<i>Evolution-Based EUV Scatterometry Fuelled by Machine Learning Diffraction Predictions for 3D Nanoscale Semiconductor Structures</i>
11:30-11:45		Alexander Mikhalychev	<i>Sensitivity Maximization in XRR and HRHRD by Fisher Information: Search for the Most Informative Scan Points</i>
11:45-12:00		Adrien Toulouse	<i>Development of Algorithms and Modeling Tools for Low-Energy CD-SAXS Measurements</i>
12:00-12:15		Xiaoying Tan	<i>Conditional Machine Learning Model for Scalable Landmark Detection in Comparative Morphological Imaging of Medaka Inbred Lines</i>
12:15-12:30			
12:30-12:45		Lunch Break	
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14:00-14:15	IX: Diffraction Contrast Imaging - 1/2 Chairs: Carsten Detlefs & Carsten Richter	Mark Goorsky	<i>Diffraction Contrast Imaging of Ultra-Wide Bandgap Substrates and Structures for Hetero-Integration</i>
14:15-14:30		Albert Zelenika	<i>3D Mapping of Dislocation-Crack Tip Interactions in SrTiO₃ by Dark-Field X-ray Microscopy</i>
14:30-14:45		Ilhem Nadia Rabehi	<i>Sub-Grain Origin and Dynamics in Cast-Mono Silicon for Photovoltaic Solar Cells Revealed by X-ray Topography and Diffraction Rocking Curve Imaging</i>
14:45-15:00		Merve Pinar Kabukcuoglu	<i>Temporal Evolution of 3D Dislocation Structures in Silicon by Correlative X-ray Diffraction Imaging</i>
15:00-15:15		Lutz Kirste	<i>Revealing Growth Discontinuities in Ammonothermal GaN by Advanced Bragg Diffraction Imaging Techniques</i>
15:15-15:30		Tobias Schüllli	<i>Operando Spatio-Temporal Imaging of Devices and Functional Nanostructures by X-ray Nano Diffraction Imaging Methods</i>
15:30-15:45			
15:45-16:00		Coffee Break	
16:00-16:15			
16:15-16:30	X: Related Tech. Chairs: Oleg Gorobtsov & Ivan Vartanants	Sharon Shwartz	<i>Quantum X-rays: Emerging Opportunities for Imaging, Spectroscopy, and Metrology</i>
16:30-16:45		Jesper Wallentin	<i>In Situ Nanofocused Microsecond XPCS Enables Spatiotemporal Mapping of 8 nm-Diameter Nanoparticle Diffusion During Mesocrystal Assembly</i>
16:45-17:00			
17:00-17:15	Poster Session 2	Poster Session 2	
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18:00-18:15			
18:15-18:30	Conference Dinner		
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18:45-19:00		Transfer to ZKM	
19:00-19:15		Conference Dinner at ZKM Sponsored by DECTRIS Ltd.	
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22:00-22:15		Transfer to GenoHotel	
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Friday, 25.09.2026			
08:30-08:45	XI: High-Throughput, In Situ & Operando Chairs: Anton Plech & Christian Schlepütz	Christian Schlepütz	<i>Imaging Materials in Motion: From Sheared Foams to Human Middle Ear Mechanics</i>
08:45-09:00			
09:00-09:15		Leonardo Oliveira	<i>Imaging Pressure-Nucleated and Field-Erased BiFeO₃ Domains via In-Situ Nano-XRD</i>
09:15-09:30		Tomáš Faragó	<i>Towards Serial Computed Tomography</i>
09:30-09:45		Thomas Cornelius	<i>Shape Memory Zirconia-Based Ceramic Micropillars Studied by in Situ Laue Microdiffraction</i>
09:45-10:00		Aleksandr Galkhman	<i>Compact PLD Sample Environments for In-Situ X-ray Studies of Thin-Film Growth at Synchrotron Beamlines</i>
10:00-10:15		Hongjian Wang	<i>Neuromorphic X-ray Radiographic and Tomographic Imaging</i>
10:15-10:30		Coffee Break	
10:30-10:45			
10:45-11:00		Thomas van de Kamp	<i>High-Throughput Digitization of Insect Morphological Biodiversity</i>
11:00-11:15	XII: Diffr. Contrast Imaging - 2/2 Chairs: Nathalie Mangelinck-Noël & Tamzin Lafford	Guillaume Freychet	<i>Resonant Tender X-ray Scattering and Diffraction: A Key Tool to Reveal the Location of Counterions in Polymeric Organic Mixed Ionic/Electronic Conductors</i>
11:15-11:30		Konrad Prikozovich	<i>Effect of the Initial Strain State on the Evolution of the Average Elastic Strain Tensor for 2000+ Grains in Armco Iron During Elastic Loading</i>
11:30-11:45		Lucia Puertas Pelaez	<i>Multimodal 3D X-ray Imaging of Grain Boundary Migration at Triple Junctions</i>
11:45-12:00		Dina Carbone	<i>New Insight onto the Metal to Insulator Transition in Ca₂RuO₄</i>
12:00-12:15		Carsten Richter	<i>Evolution of Dislocations Throughout the Seeded Growth of AlN Crystals Investigated by 3D X-ray Diffraction Imaging.</i>
12:15-12:30		Carsten Detlefs	<i>From Grain Maps to Dislocation Dynamics: A Multimodal Diffraction Microscopy Framework for Bulk Microstructure Evolution</i>
12:30-12:45		Conference Closing	
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13:00-13:15		Packed Lunch	
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