



# Röntgen-Ångström International Summer School 2022

X-rays and Neutrons for a Sustainable Future - Advanced Materials, Climate Crisis, Human Health

August 14 - 21, 2022, Varberg, Sweden

Program, May 10, 2022



Time	Sunday, 14.8.	Monday, 15.8.	Tuesday, 16.8.	Wednesday, 17.8.	Thursday, 18.8.	Friday, 19.8.	Saturday, 20.8.	Sunday, 21.8.	
	Arrival	Where do we stand? Advanced Techniques and Applications	Advanced Techniques and Applications	Quantum Materials & Technical Materials	Thought-provoking Impulses Cultural Excursion	Climate Crisis & Environment	Human Health & Biomaterials	Departure	
08:00-09:00	Breakfast								
09:00-10:00	Arrival & Check-in (rooms available at 13:00h)	Opening Ceremony	L6: <b>Helmut Schober</b> Meeting high expectations: How ESS will provide unprecedented opportunities for materials research	L11: <b>Anders Nilsson</b> Water - the most mysterious liquid	L16: <b>Wim Leemans</b> Future world of plasma X-ray sources	L19: <b>Wolfgang Eberhardt</b> Design of the energy system to overcome climate change	L23: <b>Trevor Forsyth</b> Biomedical research with neutrons and X-rays		
10:00-11:00		L1: <b>Martin Mansson</b> Introductory Lecture	L7: <b>Yasmine Sassa</b> From ESCA to cutting-edge photoemission	L12: <b>Jan-Dierk Grunwaldt</b> Catalysis for a sustainable future: the key role of large scale facilities	L17: <b>Ralf Röhlsberger</b> When X-rays go quantum	L20: <b>Lars Kloo</b> New solar-cell technologies – role of materials interfaces and synchrotron-based techniques	L24: <b>Kartik Ayer</b> Diffractive imaging of ultrafast dynamics in nanoscale systems		
11:00-11:30		Coffee & Tea							
11:30-12:30		L2: <b>Anders Flodström</b> Managing and developing research infrastructures in Sweden and Germany with a touch of US	L8: <b>Christian Gutt</b> X-ray photon-correlation spectroscopy	L13: <b>Jens Birch</b> X-rays and neutrons in nano-materials science	L18: <b>Stephan Förster</b> Future world of compact neutron sources	Free Time			
12:30-13:30		Lunch				Lunch			
13:30-14:30		L3: <b>Frank Schreiber</b> Fundamentals of X-ray scattering	L9: <b>Per Eng-Johnsson</b> Attosecond sources and applications	L14: <b>Anders Ynnerman</b> Inside insights - volumetric visual exploration of scanned subjects and objects	Cultural Excursion with outside dinner		L21: <b>Claire Villeveille</b> Advanced operando investigation of batteries using neutrons and X-rays	L25: <b>Lizbé Koekemoer</b> XChem to COVID Moonshot: a fragment-based drug discovery story	
14:30-15:30		L4: <b>Harald Reichert</b> First Science from the ESRF-EBS	L10: <b>Felix Roosen-Runge</b> Dynamics of proteins and antibodies studied by scattering	L15: <b>Heinz-Eberhard Mahnke</b> Highlights in cultural-heritage research with x-rays and neutrons			L22: <b>Saskia Heumann</b> Hydrogen technology - energy storage and green fuel	L26: <b>Eva Malmström Jonsson</b> Wood as a feedstock for sustainable materials beyond paper and cardboard	
15:30-16:00		Coffee & Tea					Coffee & Tea		
16:00-17:00		L5: <b>Frank Schreiber</b> Fundamentals of neutron scattering	Tutorials day II		Tutorials day III		Tutorials days IV & V		Tutorials day VI
17:00-18:00		Tutorials day I		Preparation of SCIENCE SLAM & Cultural Evening		Free Time & Open Tutorials		SCIENCE SLAM Presentations	
18:00-19:00	Free Time			Free Time		Free Time		L27: <b>Lars Lejonborg</b> Keynote Lecture title tba	
19:00-20:00	Dinner				Dinner				
20:00-22:00	Welcome Barbecue & Social Gathering	Poster Session I	Poster Session II	Free Time		Cultural Evening arranged by participants		Closing Dinner & Awards	