Erice 2018

ELECTRON CRYSTALLOGRAPHY

Course schedule

	Saturday 2 June	Sunday 3 June	Monday 4 June	Tuesday 5 June	Wednesday 6 June	Thursday 7 June	Friday 8 June	Saturday 9 June
8:30-9:00	Introduction to both courses (Annalisa, Paola, Erin, Joke, Lukas, Andy, Piero, Dylan)							
9:00-9:45	Joke Hadermann: Fundamental Crystallography essential for TEM users	Joke Hadermann:Introduction to space group symmetry	Peter Müller: Crystal structure refinement by least squares I	Peter Müller: Crystal structure refinement by least squares II	Laurie Marks: Transmission electron microscopy and high-resolution TEM	Tatiana Gorelik: Pair Distribution functions	Louisa Meshi: Sample preparation for various imaging and diffraction techniques	**Workshop:** Interpretation and simulations STEM (Christophe Koch) / **Workshop:** Parallel session Interpretation and simulations HRTEM (Laurie Marks)
9:45-10:30	Lou Massa: Quantum Crystallography, an historical introduction	Ute Kolb: Spot Diffraction and the principles of Electron Diffraction Tomography	Philip Nakashima: Quantitative convergent beam electron diffraction QCEB I	Philip Nakashima: Quantitative convergent beam electron diffraction QCEB II	Laurie Marks: Transmission electron microscopy and high-resolution TEM	Alexander Eggeman: Scanning diffraction techniques	Ray Withers: Diffuse scattering	
10:30-11:00	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
11:00-11::45	Jan Pieter Abrahams: General theory of diffraction	Mauro Gemmi: Difraction data processing for crystallographic applications	Damien Jacob: Symmetry determination by convergent beam electron diffraction	Lukas Palatinus: Crystal structure refinement from specifically electron diffraction data: kinematic and dynamic	Christoph Koch: Scanning transmission electron microscopy	Andrew Stewart: Electron diffraction from soft matter	Xiaodong Zou: Combination of electron diffraction with powder diffraction	**Workshop:** Serial Electron Diffraction (Stef Smeets) / **Workshop:** Dynamical refinement from ED (Lukas)
11:45-12:30	Jan Pieter Abrahams: General theory of diffraction	Lukas Palatinus: Crystal Structure solution methods	Damien Jacob: Symmetry determination by convergent beam electron diffraction	Lukas Palatinus: Crystal structure refinement from specifically electron diffraction data: kinematic and dynamic	Christoph Koch: Scanning transmission electron microscopy	Quentin Ramasse: Spectroscopic techniques	Jan Pieter Abrahams: Diffraction tomography of proteins	
12:30-14:30	**Lunch**	**Lunch**	**Excursion**	**Lunch**	**Lunch**	**Excursion**	**Lunch**	**Lunch**
14:30-15:15	Dirk Van Dyck: Dynamical diffraction theory	**Workshop:** Electron diffraction tomography (Lukas) / **Workshop:** Automated Electron diffraction tomography (Andy)		**Workshop:** Crystal structure refinement by Peter Muller / **Workshop:** Structure solution and kinematical refinement (Lukas)	**Workshop:** Structure solution and kinematical refinement (Lukas) / **Workshop:** Crystal structure refinement by Peter Muller		**Workshop:** Parallel session Interpretation and simulations HRTEM (Laurie Marks) / **Workshop:** Interpretation and simulations STEM (Christophe Koch)	**Workshop:** Serial Electron Diffraction (Xiaodong Zou) / **Workshop:** Pair distribution function analysis (Tatyana Gorelik)
15:15-16:00	Dirk Van Dyck: Dynamical diffraction theory							
16:00-16:30	**Coffee Break**	**Coffee Break**		**Coffee Break**	**Coffee Break**		**Coffee Break**	**Coffee Break**
16:30-17:15	Fundamental crystallography and indexing (exercises on paper) (Joke and Louisa)	**Workshop:** Automated Electron diffraction tomography (Andy) / **Workshop:** Electron diffraction tomography (Lukas)		**Workshop:** Quantitative CBED (Philip Nakashima) / **Workshop:** Qualitative CBED: symmetry determination (Damien Jacob)	**Workshop:** Qualitative CBED: symmetry determination (Damien Jacob) / **Worshop:** Quantitative CBED (Philip Nakashima)		**Workshop:** Dynamical refinement from ED (Lukas) / **Workshop:** Pair distribution function analysis (Tatyana Gorelik)	Future of Electron Crystallography Discussion
17:15-18:00	Workshop introduction and signup							Closing Remarks
18:00-18:30	Introduction to Erice (Martin Schmidt)	Poster Session 1			Poster Session 2			
20:00	**Sicilian Dinner**							**Farewell Party**