

Pre-registration is open!

Pre-registration is open from 15/03/2024 until 15/05/2022. The candidates will provide a CV, a motivation letter and, for Ph D students and Post Docs, a recommendation letter from their supervisor. Candidatures will be examined shortly and decision will be sent by June 1st, to allow enough time for candidates to prepare their travel. More on:

http://ebeam2024.org/

Topics & school styles

http://ebeam2024.org

The eBEAM school focuses on electron spectroscopies for nano-optics.

Courses will cover: the basics of electron instrumentation and spectroscopies; electron-matter-light interaction; electron spectroscopies of optical material; time, space, and quantum coherence in electron spectroscopy; advanced EELS, CL and PINEM; photoemission ... The school is aimed at Ph. Ds, Post Docs and any researchers willing to dive in this new field. Due to the limited number of places (80), applicants will be selected with a CV and motivation letter at pre-registration time.

A series of 11 lectures lasting 3 hours (broken by a 30 min. pause) will be given. Each lecturer is asked to give a 30 min. seminar on their own research topic in addition to the lecture. Simulations and data analysis hands on tutorials are organized in small groups.

Pre-recorded demos on advanced electron microscopy techniques will be given. 2 posters sessions will be organized.



Venue & fees

The school will be organized

in Aussois, in the french Alps. All participants will be accommodated in the Paul Langevin CNRS site. The fees will be $1500 \in$; this includes a double room, all meals (from dinner on Sunday 1st night to lunch on Friday 13rd) and two gala dinners. Extra fee of $200 \in$ applies for single rooms

Generously sponsored by





Organization

The school is organized in the framework of the eBEAM – Electron Beams Enhancing Analytical Microscopy FET Proactive programme

Programme committee: A. Polmann (AMOLF, the Netherland), J. Garcia de Abajo (ICFO, Spain), O. Stéphan (Univ. Paris-Saclay, France), A. Feist (Univ. Göttingen, Germany), C. Ropers (Univ. Göttingen, Germany), W. Albrecht (AMOLF, the Netherland), T. T. Coenen (DELMIC, the Netherland), J. Verbeeck (EMAT, Belgium) Local organization: L. Tizei, M. Kociak (chairmen), S. Hoarau, Y. Auad, JD Blazit, X. Li

Contact : contact@ebeam2024.org

Important dates

Pre-registration start: 15th April Pre-registration end: 15th May Acceptance notification: 1st June Registration end: 7th August School start: 1st September School end: 13th September



FIRST WEEK	Sunday 1st	/ 1st Monday 2nd		Tuesday 3rd		Wednesday 4th		Thursday 5th Fr		lay 6th
9:00-10:30		Lecture I		Lecture II		Lecture III		Lecture IV Lec		ture VI
		R. Grange		Daniel Ugarte		Gerald Kothleitne	r	S. Collins	А. К	(onečná
10:30-11:00		Pause		Pause		Pause		Pause	Pau	ise
11:00-12:30		Lecture I		Lecture II		Lecture III		Lecture V	Lect	ture VI
		R. Grange		D. Ugarte		G. Kothleitner		D. Kepaptsoglou	А. <i>К</i>	(onečná
12:30-14:00		Lunch		Lunch		Lunch		Lunch	Lun	ich
14:00-16:00		Free time		Free time		Free time		Free time	Free	e time
16:00-16:45	16:00-16:45 Arrival		Talk I		Talk II		Talk III		Talk IV Talk	
		R. Grange		D. Ugarte		G. Kothleitner		S. Collins	А. К	(onečná
16:45-17:30	Arrival	Demo I		Demo II		Lecture D.		Talk V	Den	no IV
		S. Fiedler		G. Kothleitner		J. Laehnemann		D. Kepaptsoglou	D. K	(epaptsoglou
17:30-18:00	Arrival	Pause		Pause		Pause		Pause	Pau	ise
18:00-19:00	Arrival	Lecture S.		Demo III		Tutorials g1, g2		Tutorials g3, g4	Tuto	orials g5, g6
		A. Konečná		A. Yankovich						
19:00-20:30	Dinner	Dinner		Dinner		Dinner (Special I)		Dinner	Dinner	
20:30-22:30		Poster I		Poster II						
			-					1 40.1		
SECOND WEEK	Monday 9	Oth	Tues	day 10th	Wedı	nesday 11th	Thu	ırsday 12th		Friday 13rd
SECOND WEEK 9:00-10:30	Monday 9 Lecture VI	9th I	Tues Lect	day 10th ure VIII	Wed Lectu	nesday 11th re IX	Thu Lec	irsday 12th ture X	•	Friday 13rd Lecture XI
SECOND WEEK 9:00-10:30	Monday 9 Lecture VI L. Reining	Pth I	Tues Lect G. Ja	day 10th ure VIII acopin	Wedu Lectu <i>A. Lu</i>	nesday 11th Ire IX bk	Thu Lec H. L	irsday 12th ture X .ourenço-Martins		Friday 13rd Lecture XI W. Pfeifer
SECOND WEEK 9:00-10:30 10:30-11:00	Monday S Lecture VI L. Reining Pause	9th I	Tues Lectr G. Ja Paus	aday 10th ure VIII acopin	Wedu Lectu A. Lu	nesday 11th re IX bk	Thu Lec <i>H. L</i> Pau	irsday 12th ture X .ourenço-Martins ise		Friday 13rd Lecture XI <i>W. Pfeifer</i> Pause
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30	Monday 9 Lecture VI <i>L. Reining</i> Pause Lecture VI	Pth I	Tues Lectr <i>G. Ja</i> Paus Lectr	aday 10th ure VIII acopin se ure VIII	Wedu Lectu A. Lui Pause Lectu	nesday 11th re IX bk e re IX	Thu Lec <i>H. L</i> Pau Lec	arsday 12th ture X .ourenço-Martins Ise ture X		Friday 13rd Lecture XI <i>W. Pfeifer</i> Pause Lecture XI
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining	Pth I	Tues Lectr G. Ja Paus Lectr G. Ja	sday 10th ure VIII se ure VIII ure VIII scopin	Wedu Lectu A. Lu Pause Lectu A. Lu	nesday 11th re IX bk e re IX bk	Thu Lec <i>H. L</i> Pau Lec <i>H. L</i>	irsday 12th ture X .ourenço-Martins ise ture X .ourenço-Martins		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30 12:30-14:00	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining Lunch	Pth	Tues Lectr G. Ja Paus Lectr G. Ja	sday 10th ure VIII acopin se ure VIII acopin ch	Weda Lectu A. Lua Pause Lectu A. Lua Lunch	nesday 11th re IX bk e re IX bk	Thu Lec <i>H. L</i> Pau Lec <i>H. L</i>	ture X .ourenço-Martins se ture X .ourenço-Martins		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer Lunch
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30 12:30-14:00 14:00-16:00	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining Lunch Free time	Pth I	Tues Lecti G. Ja Paus Lecti G. Ja Luna	sday 10th ure VIII se ure VIII ure VIII scopin sh time	Wedi Lectu A. Lui Pause Lectu A. Lui Lunch Free	nesday 11th re IX bk e re IX bk time	Thu Lec <i>H. L</i> Pau Lec <i>H. L</i> Lun Free	arsday 12th ture X .ourenço-Martins ise ture X .ourenço-Martins ich e time		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer Lunch Departure
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30 12:30-14:00 14:00-16:00 16:00-16:45	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining Lunch Free time Talk VII	Pth	Tues Lectr G. Ja Paus Lectr G. Ja Luna Free Talk	sday 10th ure VIII acopin se ure VIII acopin sh time VIII	Wedu Lectu A. Lu Pause Lectu A. Lun Lunch Free t	nesday 11th re IX bk e re IX bk time X	Thu Lec H. L Pau Lec H. L Lun Free Talk	arsday 12th ture X .ourenço-Martins ture X .ourenço-Martins ich e time		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer Lunch Departure
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30 12:30-14:00 14:00-16:00 16:00-16:45	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining Lunch Free time Talk VII L. Reining	Pth	Tues Lectr G. Ja Lectr G. Ja Lunc Free Talk G. Ja	sday 10th ure VIII acopin se ure VIII acopin time VIII acopin	Wedn Lectu A. Lui Pause Lectu A. Lui Lunch Free S Talk I. A. Lui	nesday 11th	Thu Lec H. L Pau Lec H. L Lun Free Talk H. L	Irsday 12th ture X .ourenço-Martins ise ture X .ourenço-Martins ich e time < X .ourenço-Martins		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer Lunch Departure
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30 12:30-14:00 14:00-16:00 16:00-16:45 16:45-17:30	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining Lunch Free time Talk VII L. Reining Demo V	Pth	Tues Lectr G. Ja Lectr G. Ja Lunc Free Talk G. Ja	sday 10th ure VIII acopin se ure VIII acopin time VIII acopin ao VI	Wedn Lectu A. Lun Pause Lectu A. Lun Free t Talk I A. Lun Demo	nesday 11th re IX bk e re IX bk time X bk o VII	Thu Lecc H. L Pau Lecc H. L Lun Free Talk H. L	Irsday 12th ture X .ourenço-Martins ise ture X .ourenço-Martins ich e time c X .ourenço-Martins mo VIII		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer Lunch Departure
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30 12:30-14:00 14:00-16:00 16:00-16:45 16:45-17:30	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining Lunch Free time Talk VII L. Reining Demo V F. Castion	Pth	Tues Lecti G. Ja Lecti G. Ja Luna Free Talk G. Ja Dem J. Ve	sday 10th ure VIII acopin se ure VIII acopin time VIII acopin to VI rbeeck	Weda Lectur A. Lun Pause Lectur A. Lun Free T Talk I A. Lun Demo	nesday 11th re IX bk e re IX bk time X bk bk b v VII ist	Thu Lec H. L Pau Lec H. L Lun Free Talk H. L Der A. L	arsday 12th ture X .ourenço-Martins ise ture X .ourenço-Martins ch e time c X .ourenço-Martins mo VIII .ubk		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer Lunch Departure
SECOND WEEK 9:00-10:30 10:30-11:00 11:00-12:30 12:30-14:00 14:00-16:00 16:00-16:45 16:45-17:30 17:30-18:00	Monday S Lecture VI L. Reining Pause Lecture VI L. Reining Lunch Free time Talk VII L. Reining Demo V F. Castioni Pause	Pth	Tues Lectr G. Ja Lectr G. Ja Lunc Free Talk G. Ja Dem J. Ve	sday 10th ure VIII acopin se ure VIII acopin time VIII acopin to VI rbeeck se	Weda Lectur A. Lun Pause Lectur A. Lun Free y Talk I A. Lun Demo A. Fer Pause	nesday 11th re IX bk	Thu Lec H. L Pau Lec H. L Lun Free Talk H. L Der A. L Pau	Irsday 12th ture X .ourenço-Martins ise ture X .ourenço-Martins ich e time c X .ourenço-Martins mo VIII .ubk		Friday 13rd Lecture XI W. Pfeifer Pause Lecture XI W. Pfeifer Lunch Departure

1 1.0		
i in	ntroduction to nanophotonics	Rachel Grange (ETH, Switzerland)
ll Tra	ransmission Electron Microscope: basic instrumentation concepts	Daniel Ugarte (Unicamp, Brazil)
III Ele	lectron microscopy and spectroscopy basics	Gerald Kothleitner (TU Graz, Austria)
IV En	nergy loss spectroscopy of absorption processes I: Visible and UV	Sean Collins (Leeds University, UK)
V En	nergy loss spectroscopy of absorption processes II: Infrared	Demie Kepaptsoglou (Superstem, UK)
VI O	ptical excitations in the TEM	Andrea Konečná (CEIT, Czech Republic)
VII Ele	lectronic structure calculations: from first principles to the spectroscopy of	Lucia Reining (CNRS, France)
m	naterials	
VIII OF	ptical emission spectroscopy in semiconductors by electron excitations	Gwénolé Jacopin (CNRS, France)
IX Sp	patial coherence in the TEM	Axel Lubk (IFW, Germany)
X Ti	ime and Quantum coherence in the TEM	Hugo Lourenço-Martins (CNRS, France)
XI UI	Itrafast PEEM	Walter Pfeiffer (Bielefeld University, Germany)
S Sir	imulations	Andrea Konečná (CEIT, Czech Republic)
D Da	ata analysis	J. Laehnemann (PDI, Germany)
Tutorials Tit	itle	Lecturer
S Ele	lectromagnetic simulations for EELS, CL and PINEM using MNPBEM	Andrea Konečná (CEIT, Czech Republic)
		& Hugo Lourenço-Martins (CNRS, France)
D Da	ata analysis for EELS, CL and PINEM using Hyperspy	J. Laehnemann (PDI, Germany) & Sean Collins (Leeds University, UK)
Demos Tit	itle	Demonstrator
1 Co	ontinuous and time-resolved cathodoluminescence in a SEM	Saskia Fiedler (AMOLF, the Netherlands)
11 Al	lignment, aberration correction, monochromated EELS and direct detection I	Gerald Kothleitner (TU Graz, Austria)
III Al	lignment, aberration correction, monochromated EELS and direct detection II	Andy Yankovich (Chalmers uni. Sweden)
IV AI	lignment, aberration correction, monochromated EELS and direct detection III	Demie Kepaptsoglou (Superstem, UK)
V ns	s Coincident EELS and CL in a STEM	Florian Castioni & Yves Auad (CNRS, France)
VI Ph	hase shaping in a TEM	Johan Verbeeck (EMAT, Belgium)
VII Ho	olography	Axel Lubk (IFW, Germany)
VIII TR	R-EM and PINEM	Armin Feist (Göttingen univ., Germany)

Dinner

Dinner

19:00-20:30

Dinner

W. Pfeifer

Dinner (Special II)