

## Advanced Characterization of Materials at Micro-, Nano- and Atomic Scale

4 – 7 November 2024, ETH Zurich, Campus Höggerberg

Monday (Nov. 4 <sup>th</sup> )		Electrons
HIT E51		
08:30 – 08:45	Registration	
08:45 – 09:00	Welcome and Introduction	<b>Nicolas Blanc</b> (ETHZ)
09:00 – 09:45	Electron Diffraction	<b>Fabian Gramm</b> (ETHZ)
09:45 – 10:30	(S)TEM for Complex Microstructure Analyses. EDS.	<b>Alla Sologubenko</b> (ETHZ)
Short Break		
10:45 – 11:30	Analytical Electron Microscopy (EELS and EFTEM)	<b>Duncan Alexander</b> (EPFL)
11:30 – 12:15	Application of Electron Microscopy in modern science	<b>Alan Maigné</b> (ETHZ)
Lunch		
13:30 – 14:15	DPC and 4D-STEM	<b>Victor Boureau</b> (EPFL)
Short Break		
14:30 – 16:00	Instrument Visits	
16:15 – 17:45	Instrument Visits	
18:15 – 21:00	Apéro Riche at “Bella Vista”	

Tuesday (Nov. 5 <sup>th</sup> )		Electrons
HIT E51		
09:00 – 09:45	Aberration corrected TEM	<b>Rolf Erni</b> (EMPA Dübendorf)
09:45 – 10:30	TEM Image Simulations	<b>Robin Schäublin</b> (ETHZ)
Short Break		
10:45 – 11:30	Cryo Electron Microscopy	<b>Bilal Qureshi</b> (ETHZ)
11:30 – 12:15	Correlative Microscopy	<b>Miriam Lucas</b> (ETHZ)
Lunch		
13:30 – 14:15	Analytical SEM (EDX & EBSD)	<b>Karsten Kunze</b> (ETHZ)
Short Break		
14:30 – 16:00	Instrument Visits	
16:15 – 17:45	Instrument Visits	

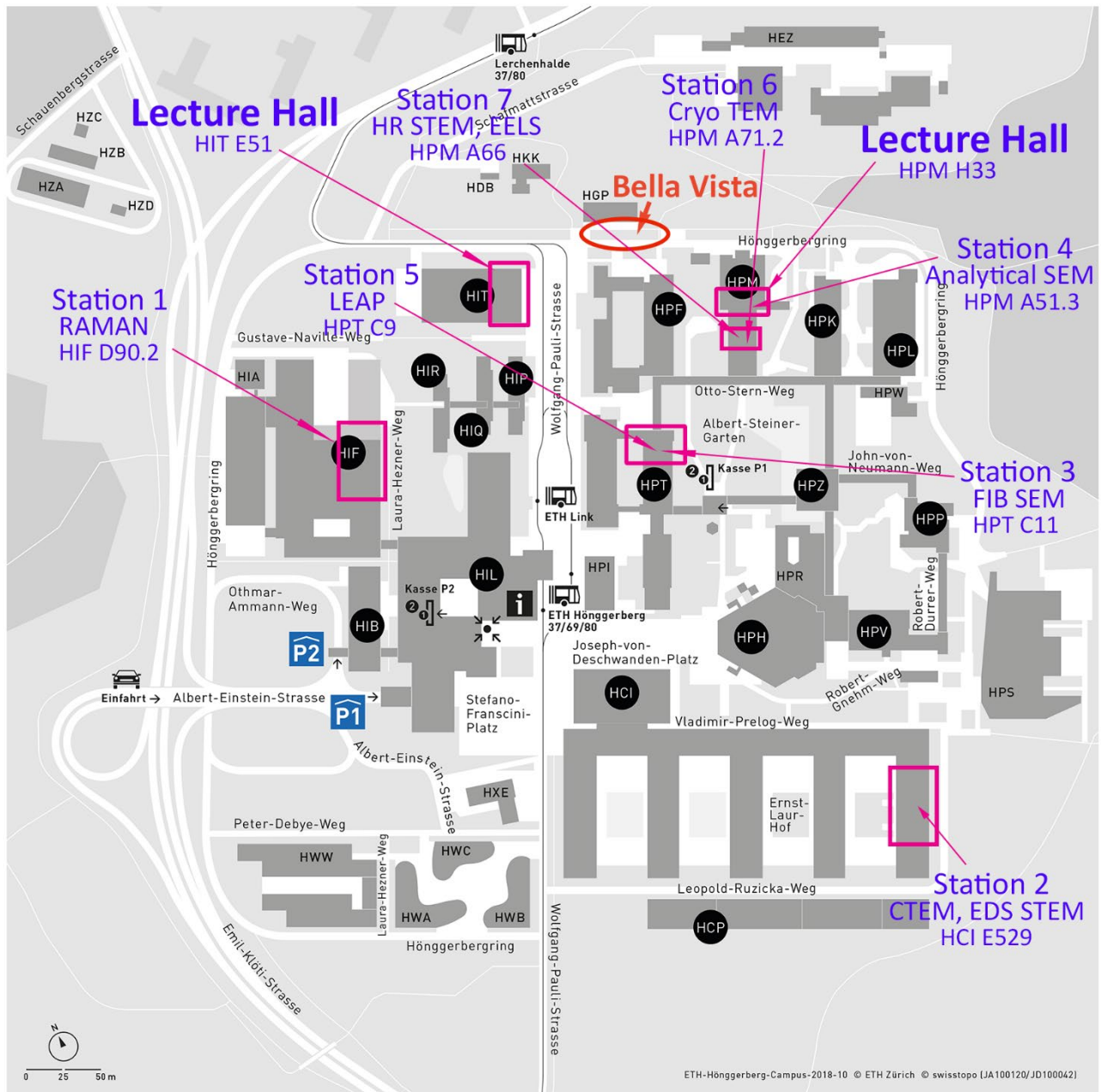
Wednesday (Nov. 6 <sup>th</sup> )		Ions, Photons
HIT E51		
09:00 – 09:45	Focused Ion Beam (FIB) Fundamentals and Applications	Joakim Reuteler (ETHZ)
09:45 – 10:30	Atom Probe Tomography	Stephan Gerstl (ETHZ)
Short Break		
10:45 – 11:30	Light Microscope, Fundamentals and Applications	Arne Seitz (EPFL)
11:30 – 12:15	Raman Instrument and Applications	Sung Sik Lee (ETHZ)
Lunch		
13:30 – 14:30	Questions & Answers (Q&A)	All lecturers
Short Break		
14:45 – 16:15	Instrument Visits	
16:30 – 18:00	Instrument Visits	

Thursday (Nov. 7 <sup>th</sup> )		Round-up and Exam
HPM H33		
09:00 – 10:30	Instrument Visits	
10:45 – 12:15	Instrument Visits	
Lunch		
13:30 – 13:45	Concluding remarks and Goodbye	
13:45 – 14:45	Written EXAM / ECTS credits	

All Instrument Visits take place at corresponding Station Locations. See the **Location Map**.

**Please, do not leave your items in the lecture room for Lunch Breaks and between Lecture - Instrument Visits.**

Location Map



## Stations

1 Raman	Horiba Raman	HIF D90.2	Sung Sik Lee
2 CTEM / EDS STEM	Talos F200X	HCI E529	Alla Sologubenko
3 FIB SEM	Helios 5 UX	HPT C11	Joakim Reuteler / Peng Zeng
4 Analytical SEM	Hitachi SU5000	HPM A51.4	Luiz Morales / Karsten Kunze
5 Atom probe	Atom Probe 4000HRX	HPT C9	Stephan Gerstl / Luiz Morales
6 Cryo EM	Krios I	HPM A71.2	Mirek Peterek / Bilal Qureshi
7 HR(S)TEM / EELS	GrandARM «Vortex»	HPM A66	Milivoj Plodinec

## Station Visit Schedule

Station	Location	Monday 4.11.2024		Tuesday 5.11.2024		Wednesday 6.11.2024		Thursday 7.11.2024	
		14:30 – 16:00	16:15 – 17:45	14:30 – 16:00	16:15– 17:45	14:45 – 16:15	16:30 – 18:00	09:00 - 10:30	10:45 - 12:15
1 Raman	HIF D90.2	1					3	2	
2 CTEM / STEM & EDS	HCI E529	2	1					3	1,2,3
3 FIB SEM	HPT C11	3	2	1					
4 Analytical SEM	HPM A51.4		3	2	1				
5 Atom probe	HPT C9			3	2	1			1,2,3
6 Cryo EM	HPM A71.2				3	2	1		
7 HR STEM & EELS	HPM A66					3	2	1	1,2,3