



Thursday April 25

Siemens Auditorium

09h00–09h30	Greetings & Registration – Siemens Auditorium Foyer	
09h30–10h00	Romain Stomp, Zurich Instruments	The multifaceted instrument: many modes for many probes
10h00–10h30	Christian Degen & Alex Eichler, ETH Zurich	A membrane-based AFM platform
10h30–11h00	Coffee break – Foyer HIT G Floor	
11h00–11h30	Martino Poggio, Universität Basel	New scanning probes for nanomagnetic imaging
11h30–12h00	Lukas Eng, Technische Universität Dresden	Seeing is believing – inspecting Bloch-, Néel- and Anti-Skyrmions by noncontact force microscopy
12h00–13h00	Lunch break – Siemens Auditorium Foyer	
13h00–14h00	Lab Tour – Department of Physics, ETH Zurich	
14h00–14h30	Tino Wagner, ETH Zurich	Measurement of electrostatic tip – sample interactions by time-domain Kelvin probe force microscopy
14h30–15h00	Jason Kilpatrick, University College Dublin	Nanoscale electrical measure- ments in liquids using advanced KPFM techniques
15h00–15h30	Iaroslav Gaponenko, Université de Genève	Unraveling the physical be- haviour of humidity-mediated surface charge dissipation on ferroelectric surfaces through machine learning
15h30–16h00	Coffee break – Foyer HIT G Floor	
16h00–16h30	Gabriel Puebla-Hellmann, QZabre	Starting up scanning NV microscopy
16h30–17h30	Parallel Tutorial Sessions – Topic 1 and Topic 2 (HIT F11.1 & HIT F 12)	
17h30–19h00	Poster Session – Foyer HIT G Floor	
19h00–19h30	Scenic Walk to the Restaurant	
19h30	Dinner – Restaurant Die WAID	

Friday April 26

Siemens Auditorium

09h00–09h30	Fabian Natterer, Universität Zürich	Methods for spin-polarized and electron spin resonance STM
09h30–10h00	Pietro Gambardella, ETH Zurich	Time- and spatially-resolved magnetization dynamics driven by electric currents
10h00–10h30	Tjerk Oosterkamp, Universiteit Leiden	MRFM with low stiffness high Q mechanical resonators at cryogenic temperatures: Is there a limit for the ZI-PLL?
10h30–11h00	Coffee break – Foyer HIT G Floor	
11h00–12h00	Parallel Tutorial Sessions – Topic 1 and Topic 3 (HIT F11.1 & HIT F 12)	
12h00–13h30	Lunch break – Restaurant Bella Vista	
13h30–14h00	Simon Diesch, Universität Konstanz	Scanning tunneling spectro- scopy to probe odd-triplet contributions to the long ranged proximity effect caused by spin-active interfaces
14h00–14h30	Thomas Ihn, ETH Zurich	Scanning gate microscopy in a viscous electron fluid
14h30–15h30	Parallel Tutorial Sessions – Topic 2 and Topic 3 (HIT F11.1 & HIT F 12)	
15h30–16h30	Closing remarks – Transfer to Zurich Instruments	
16h30	Zurich Instruments Company Tour (Optional)	

Topic 1

Detection

1. Principle of phase sen-
sitive measurements &
feedback loops
2. Optimisation of PLL &
AGC for NC-AFM
operation
3. Sideband detection with
KPFM as an example

Topic 2

Generation

1. Principle of IQ generation
with AWG
2. Pump-probe experiment
applied to KPFM & Swit-
ching-Spectroscopy PFM
3. Multi-channel AWG
for NV-center and MRFM
application

Topic 3

Acquisition

1. Principle of server-based
APIs
2. Example of python script
for data polling
3. Scan engine synchro-
nisation with DAQ, image
generation and file
format