

Summer School - 2023 Rome (Italy)

Summer School on Experimental Nano - and Micromechanics Program

Wi-Fi connection, two options:

1- EDUROAM

2- Rm3Wi-Fi (user: DICITA; PW: D8cDe4w)



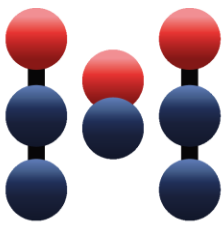
Meeting Venue: Università degli studi Roma Tre

Department of Civil, Computer and Aeronautical Engineering (Rome, Italy)

Main conference room: [Via Vito Volterra 62](#)

Monday, July 24th 2023

Start	End	Lecture	Trainer
13:00	14:00	Arrival of participants and registration	
14:00	14:05	Welcome from the head of Civil, Computer Science and Aeronautical Technologies Engineering Department	Alessandro Micarelli (Università degli studi Roma Tre, IT)
14:05	14:15	Welcome from prof. Benoit Merle, chair of COST MecaNano project	Benoit Merle (Kassel University, DE)
14:15	16:00	L1 - Dislocation-mediated Plasticity with a focus on size effects	Erik Bitzek (Max-Planck, MPIE, DE)
16:00	16:30	Coffee break	
16:30	18:30	L2 - Advanced SEM techniques for microstructural, strain/stresses and defect analyses combined with micro-mechanical testing	Xavier Maeder (EMPA, SWI)
18:30	19:30	Introduction of the participants	



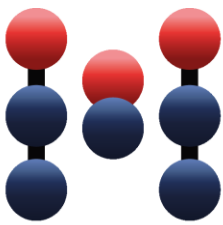
Summer School 2023 Rome (Italy)

Tuesday, July 25th 2023

Start	End	Lecture	Trainer
8:30	10:30	L3 - Discrete Dislocation Dynamics and introduction to continuum modelling	Marc Fivel (CNRS, SIMaP, FR)
10:30	11:00	Coffee break	
11:00	13:00	L4 - Measurement of mechanical properties at small scales by nanoindentation	George M. Pharr (Texas A&M University, USA)
13:00	14:00	Lunch break	
14:00	16:00	L5 - FIB based micromechanics: deformation mechanisms	Christoph Kirchlechner (KIT, DE)
16:00	16:30	Coffee break	
16:30	18:30	L6 - Nanoindentation at extreme conditions: high temperatures and high strain rates	Jon Molina (IMDEA, ES)
18:30	19:00	Administrative tutorial on COST travel refund rules (optional)	

Wednesday, July 26th 2023

Start	End	Lecture	Trainer
8:30	10:30	L7 - Fundamentals of atomistic modelling	Roman Gröger (The Czech Academy of Sciences, CZ)
10:30	11:00	Coffee break	
11:00	13:00	L8 - Transmission Electron microscopy: basics of imaging, including dislocations	Nadine Schrenker (EMAT, Univ. of Antwerp, BE)
13:00	14:00	Lunch break	
14:00	18:00	Free networking time	



Summer School 2023 - Rome (Italy)

Thursday, July 27th 2023

Start	End	Lecture	Trainer
8:30	10:30	L9 - Fracture mechanics: from the basics to spatially resolved measurements via nanoindentation	Edoardo Rossi (Università degli studi Roma Tre, IT)
10:30	11:00	Coffee break	
11:00	13:00	L10 - FIB based micromechanics: micro-fracture	Daniel Kiener (Montanuniversität Leoben, AT)
13:00	14:00	Lunch break	
14:00	14:45	Best practices of nanoindentation experimental protocols and data analysis (in the main classroom)	Marco Sebastiani (Università degli studi Roma Tre, IT)
15:00	17:15	Two options: a) Atomistic modelling exercise (Roman Gröger) b) Laboratory tour, including FIB practice, and mentoring with some of the trainers	
17:30	18:30	Career mixer	

Friday, July 28th 2023

Start	End	Lecture	Trainer
8:30	10:30	L11 - Basics of data science and ML	Stefan Sandfeld (Forschungszentrum Juelich, DE)
10:30	11:00	Coffee break	
11:00	13:00	L12 - Applications of data science and ML in small scale mechanics	Chris Eberl (Fraunhofer IWM, DE)
13:00	13:05	Farewell address	