

Autumn School on Digital Twins

Tuesday, November 14, 2023, Department Life, Light and Matter,
Albert-Einstein-Straße 25, 18059 Rostock, Seminar room 110

9:30 - 10:30 Arrival		
10:30 – 10:45	Opening	
Time	Title	Speaker
10:45 – 11:45	Keynote Lecture: Digital twins of electrical stimulation devices - translation from in vitro to in vivo	Julius Zimmermann (University of Pavia, Italy)
11:45 – 12:25	Integrating Experiment and Simulation: Impedance Spectroscopy application in Electric Cell-Substrate Impedance Sensing Chip	Lam Vien Che, Hennig Bathel, Nils Arbeiter (Electromagnetic Field Theory, University of Rostock)
12:25 – 13:05	Developing a multiphysics model to predict the effects of mechanical stimulation on stem cells	Pedram Azizi (Microfluidics, University of Rostock)
13:05 – 14:05	Lunch	
14:05 – 15:05	Keynote Lecture: The pulsating brain - a mathematical perspective	Marius Causemann (Numerical Analysis and Scientific Computing, Simula, Norway)
15:05 – 15:45	The Julia Programming Language	Simon Adrian (Computational Electromagnetics, University of Rostock)
15:45 – 16:15	Coffee Break	
16:15 – 17:30	Workshop on Digital Twins	Julius Zimmermann (University of Pavia, Italy)
17:30 – 18:30	Panel discussion moderated by Adelinde Uhrmacher	Liesbet Geris (University of Liège), Thomas Kirste (Ocean Technology Campus Rostock OTC), Julius Zimmermann (University of Pavia), NN (Fraunhofer Institute for Large Structures in Production Engineering IGP)
18:30	End of the first day	



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Wednesday, November 15, 2023, Department Life, Light and Matter,
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Time	Title	Speaker(s)
9:00 – 10:00	Keynote Lecture: tba	Liesbet Geris (Biomechanics and Computational Tissue Engineering, University of Liège, Belgium)
10:00 – 11:00	Poster Session	
11:00 – 11:15	Coffee Break	
11:15 – 11:55	Testing of implantable medical devices in vitro and in silico	Daniel Klüß (Biomechanics and Implant Technology, Rostock University Medical Centre)
11:55 – 12:35	Robotic neurosurgery in Rostock	Thomas Freimann (Department of Neurosurgery, Rostock University Medical Centre)
12:35 – 13:15	tba	Sascha Spors (Signal Theory and Digital Signal Processing, University of Rostock)
13:15 – 13:20	Closing Remarks	

