

PIER Graduate Week 2022

Interdisciplinary lecture
and workshop week for PhD
students



21 – 24
FEB 2022

ONLINE



Partnership of
Universität Hamburg and DESY



Course Overview Graduate Week 2022

Programme & registration:
graduateschool.pier-hamburg.de/gradweek2022

Morning sessions: Introductory courses

Time	Course	Monday, 21 FEB	Tuesday, 22 FEB	Wednesday, 23 FEB	Thursday, 24 FEB
09:00 – 10:30	/ A1 Introductory course Particle & Astroparticle Physics	Gregor Kasieczka, Universität Hamburg "Machine Learning in Particle Physics: Basics "	Gregor Kasieczka, Universität Hamburg "Machine Learning in Particle Physics: Anomaly Detection"	Tilman Plehn, Universität Heidelberg "Machine Learning in Particle Physics: Generative Machine Learning Models"	Artur Lobanov, Universität Hamburg "Machine Learning in Particle Physics: Machine Learning on FPGAs"
	/ A2 Introductory course Nanoscience	Irene Fernandez-Cuesta, Universität Hamburg "Nanofabrication techniques"	Helmut Schift, Paul Scherrer Institute "Nanoimprint and 3D lithography"	Stephan Sylvest Keller, Technical University of Denmark "Carbon micro- and nanofabrication for health tech, life science and energy applications "	Dorota Koziej, Universität Hamburg "Nanodevices and X-ray nanoimaging"
10:30 – 11:00	Coffee break				
11:00 – 12:30	/ B1 Introductory course Infection & Structural Biology	Baris Tursun, Universität Hamburg "Cellular safeguarding in the context of Reprogramming and Aging I"	Baris Tursun, Universität Hamburg "Cellular safeguarding in the context of Reprogramming and Aging II"	Stefan Hoth, Universität Hamburg "Plant pathogen defense meets structural biology I"	Stefan Hoth, Universität Hamburg "Plant pathogen defense meets structural biology II"
	/ B2 Introductory course Photon Science	Kartik Ayyer, MPSD Hamburg "Diffractive Imaging"	Kartik Ayyer, MPSD Hamburg "Diffractive Imaging"	Daniela Rupp, ETH Zürich "Diffractive imaging of nanoparticle structures and dynamics"	Marc Vrakking, MBI Berlin "Velocity Map Imaging"
12:30 – 14:00	Lunch break				

Time	Course	Monday, 21 FEB	Tuesday, 22 FEB	Wednesday, 23 FEB	Thursday, 24 FEB
14:00 – 15:30	/ C1 Focus course Particle & Astroparticle Physics	Georg Weiglein, DESY "Window to New Physics via the Precision Frontier"	Sven Heinemeyer, IFT (UAM/CSIC), Madrid "Window to New Physics via the Precision Frontier"	Sven Heinemeyer, IFT (UAM/CSIC), Madrid "Window to New Physics via the Precision Frontier"	Georg Weiglein, DESY "Window to New Physics via the Precision Frontier"
	/ C2 Focus course Photon Science	Karl K. Berggren, MIT, Cambridge "The Quantum Electron Microscope"	Karl K. Berggren, MIT, Cambridge "Superconducting Nanowire Single-Photon Detectors"	Daniela Rupp, ETH Zürich "Coherent Diffraction Imaging in the soft X-ray regime: a three-dimensional view on nanoparticles and their ultrafast dynamics"	Sebastian Trippel, DESY/Universität Hamburg "Advanced 3D Electron/Ion Detection"
	/ C3 Transferable skills	Alexander Britz "Basic Python for Scientific Computing" moved to 28 February - 2 March 2022			
	/ C4 Transferable skills	Alexander Britz "Advanced Python for Scientific Computing" moved to 2 + 3 March 2022			
15:30 – 16:00	Coffee break				
16:00 – 17:30	/ D1 Focus course Infection & Structural Biology	Jens Bosse, HPI/MHH / CSSB "How virus particles are assembled: Spatiotemporal orchestration of virus morphogenesis"	Christian Löw, EMBL / CSSB "Membrane protein structural biology"	Holger Sondermann, DESY/CSSB "Structural and functional microbiology"	Maya Topf, HPI/UKE/ CSSB & Jan Kosinski, EMBL/CSSB "Integrative Modeling"
	/ D2 Focus course Nano Science	Irene Fernandez-Cuesta, Universität Hamburg "Nanostructures and nanoimaging"	Victor Cadarso Busto, Monash University "Lab on a Chip" Changed lecture time: 8 - 9:30 p.m.	Silvan Schmid, TU Vienna "Nanodevices with resonators"	Ivan Vartaniants, DESY/NRNU "MEPhi" "Nanoimaging with coherent X-Rays"
	/ D3 Transferable skills	Nicola Findeis "Project management for PhD students" moved to 28 February + 1 March 2022			
	/ D4 Transferable skills	Nicola Findeis "Project management for PhD students" moved 3 + 4 March 2022			
17:30 – 18:00	End of event				
18:00 – 20:00					