



Registration and conference site:

Please register via email until October 16, 2022.

Ruhr-Universität Bochum
ZGH building, room 03/121

Conference phone: 0234-32 29332
advanced-discussions@icams.rub.de

ADVANCED DISCUSSIONS

Advanced models for microstructure evolution –
process-microstructure-property relationships

October 26, 2022

ICAMS
INTERDISCIPLINARY CENTRE FOR
ADVANCED MATERIALS SIMULATION

Advanced models for microstructure evolution – process-microstructure-property relationships



8:30-8:50	Welcome / Coffee	13:45-15:05	Session 3
8:50-9:00	Alexander Hartmaier, Markus Stricker, ICAMS, Ruhr-Universität Bochum <i>Opening</i>	13:45-14:15	Bai-Xiang Xu, TU Darmstadt <i>Process-microstructure-property relation of additive manufactured polycrystalline materials via phase-field and multiscale simulations</i>
9:00-10:20	Session 1	14:15-14:45	Damien Tourret, IMDEA Materials, Madrid, Spain <i>Modeling of microstructure formation and evolution in advanced manufacturing of metals</i>
9:00-9:30	Mathis Plapp, Laboratoire PMC – École Polytechnique, Palaiseau Cedex, France <i>Phase-field modeling of microstructure evolution with connections to smaller or larger length scales</i>	14:45-15:05	Anna Grünebohm, ICAMS <i>Ferroelectric switching: The role of point defects and domain walls</i>
9:30-10:00	Daniel Schneider, Karlsruhe Institute of Technology, Karlsruhe <i>Chemo-mechanical multiphase-field modeling of microstructural processes</i>	15:05-15:35	Break
10:00-10:20	Oleg Shchyglo, ICAMS <i>Recent developments in phase-field modeling at ICAMS</i>	15:35-16:45	Session 4
10:20-10:50	Break	15:35-16:05	Long-Quing Chen, The Pennsylvania State University, State College, USA <i>Thermodynamics of phase-field method of ferroelectric domain structures and properties</i>
10:50-12:20	Session 2	16:05-16:25	Irina Roslyakova, Matplus, Wuppertal <i>Integrated information system for effective storage, management and analysis of heterogeneous materials data</i>
10:50-11:20	Yunzhi Wang, The Ohio State University, Columbus, USA <i>Computer-aided design of compositionally and microstructurally modulated materials for structural and functional applications</i>	16:25-16:45	Fathollah Varnik, ICAMS <i>Chemically triggered shape memory polymers and their potential for applications: Experiments and theory</i>
11:20-11:50	Reza Darvishi Kamachali, Bundesanstalt für Materialforschung und -prüfung, Berlin <i>Grain boundary segregation design using CALPHAD-integrated phase-field modeling</i>	16:45-17:00	Final discussion
11:50-12:20	Ernst Kozeschnik, Technische Universität Wien, Austria <i>Deformation, defect generation and microstructure evolution: Present activities at TU Wien</i>		
12:20-13:45	Lunch break		