

Registration and conference site:

Please register via email until 10 May 2019.

Veranstaltungszentrum
Ruhr-Universität Bochum
Saal 1
44801 Bochum
Conference phone: 0234 32 29332

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advanced-discussions@icams.rub.de



ADVANCED DISCUSSIONS
Data-oriented Materials Science
21 May 2019

ICAMS
INTERDISCIPLINARY CENTRE FOR
ADVANCED MATERIALS SIMULATION

Data-oriented Materials Science



09:00 Arrival / Coffee

09:30 Opening

Session 1

09:30-11:00 *A. Hartmaier, I. Roslyakova (ICAMS):*
Data-oriented materials research at ICAMS

T. Glasmachers (Theory of Machine Learning, Institut für Neuroinformatik, Ruhr-Universität Bochum):
Introduction to machine learning

H. ul Hassan (ICAMS):
Using machine learning method to homogenise damage from micro- to macroscale

N. Vajragupta (ICAMS):
Data-driven toolkit for property-based design of microstructures

11:00-11:30 Coffee break

Session 2

11:30-12:45 *E. Kozeschnik (Institute of Materials Science and Technology, TU Wien):*
Role of heterogeneous nucleation site energies in thermokinetic simulation of cooling differential scanning calorimetry curves

T. Hickel (MPI für Eisenforschung, Düsseldorf):
High-throughput optimization of finite temperature phase stabilities: Concepts and application

S. G. Fries (ICAMS):
Sapiens reloaded

12:45-13:45 Lunch break

Session 3

13:45-15:00 *S. Sandfeld (Micromechanical Materials Modelling, TU Freiberg):*
Data mining and statistical learning – what's in it for computational materials science?

L. Banko (Institut für Werkstoffe, Ruhr-Universität Bochum):
Towards materials discovery using combinatorial synthesis of materials libraries, high-throughput characterization and machine learning

I. Roslyakova (ICAMS):
Role of materials informatics in computer-based design of Ni/Co-based single crystal superalloys

15:00-15:30 Coffee break

Session 4

15:30-16:45 *U. Paul (Technology & Innovation, thyssenkrupp Steel Europe AG, Duisburg):*
Data mining and machine learning and their application at thyssenkrupp Steel Europe for production and quality problems

Y. Lysogorskiy (ICAMS):
Data-driven approach for the validation of interatomic potentials

N.N.:
t.b.a.

16:45-17:00 Concluding remarks

17:00 End

Invited talks: 30+5 minutes
Contributed talks: 15+3 minutes