

Session Program

13-17 Sept 2021

**EUROPEAN CONGRESS AND EXHIBITION ON
ADVANCED MATERIALS AND PROCESSES -
EUROMAT 2021**

***D7_Integrated computational materials
engineering - interoperability, simulation
platforms and applications***

Virtual

Thursday 16 September

09:50

D7_Integrated computational materials engineering - interoperability, simulation platforms and applications: D7_1_Ontologies, Data Structures & Models

Session | Location: Room 10

09:50-10:10

Pizza Production - an instructive instance of an emerging & comprehensive Ontology of Production

Speaker

Dr Georg J. Schmitz

10:10-10:30

Information Data Management System to Enable ICME workflows

Speaker

Dr Davide Di Stefano

10:30-10:50

Fast prediction of structure-property linkages: Data-driven surrogate models in ICME frameworks

Speaker

Dr Marc Ackermann

10:50-11:10

Modelling of grain boundary cementite growth kinetics in hypereutectoid steels by conventional and autocatalytic ledge growth approaches

Speaker

Mr Marko Vogric

11:10-11:30

Development of Mathematical Models to describe more precisely the Scattering Light Distribution onto different material surfaces as an application for a Solar Thermal System

Speaker

Barbara Hippauf

11:30

11:50

D7_Integrated computational materials engineering - interoperability, simulation platforms and applications: D7_2_Coupled Simulations & Workflows

Session | Location: Room 10

11:50-12:10

Coupling of first-principles calculation and Boltzmann transport for accurate and computationally effective thermoelectric transport

Speaker

Dr Zhen Li

12:10-12:30

Multi-physics simulations in DAMASK

Speaker

Mr Sharan Roongta

12:30–12:50

Creep cavities: theoretical formulation of cavity nucleation in the presence of dislocation defects**Speaker**

Dr Antonio Fernandez-Caballero

12:50–13:10

A workflow for modeling mechanical properties of Ni-based superalloys based on microstructure data**Speaker**

Mr Moritz Müller

13:30

14:40

D7_Integrated computational materials engineering - interoperability, simulation platforms and applications: D7_3_ICME applications & Workflows**Session** | **Location:** Room 10

14:40–15:00

A Pragmatic ICME Approach To Microstructure Simulation**Speaker**

Dr Georg J. Schmitz

15:00–15:20

An Integrated Computational Materials Engineering approach to the design of high-performance materials for AM**Speaker**

Dr Martin Walbrühl

15:20–15:40

Coupling Cellular Automata & Crystal Plasticity frameworks for full-field simulation of Dynamic Recrystallization**Speaker**

Vitesh Shah

15:40–16:00

Execution and sharing of complex, integrated scientific workflows with AiiDAlab**Speaker**

Dr Carl Simon Adorf

16:00–16:20

Towards automated uncertainty quantification - an integrative numerical framework to assess error in multi-phase-field simulations of anisotropic grain growth**Speaker**

Dr Janin Eiken

16:20