

Session Program

13-17 Sept 2021

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

***D9_Modelling of solidification, casting and
remelting***

Virtual

Tuesday 14 September

15:20

D9_Modelling of solidification, casting and remelting: D9_1_Mesosopic modelling

Session | Location: Room 11

15:20–16:00

simulation of dendritic grain growth by Cellular Automaton - Parabolic Thick Needle method (Keynote)

Speaker

Mr Yijian Wu

16:00–16:20

Mesosopic modeling of equiaxed and columnar solidification microstructures under forced flow and buoyancy-driven flow in hypergravity: Envelope versus phase-field model

Speaker

Dr Alexandre Viardin

16:20–16:40

Multiscale modeling of dendritic growth in directional solidification with buoyant flow

Speaker

Mr Thomas Isensee

16:40–17:00

Multiscale prediction of primary dendritic spacing in metal alloy casting

Speaker

D Turret

17:00

17:20

D9_Modelling of solidification, casting and remelting: D9_2_Microstructures, interfaces and properties

Session | Location: Room 11

17:20–17:40

Modeling of solutal melting in Cu-Ni system (Highlight)

Speaker

Nazim Abdedou

17:40–18:00

Prediction of intermetallic layers thicknesses at the contact interface of aluminum-brass hybrids produced by compound casting

Speaker

Mrs Vanessa Glück Nardi

18:00–18:20

Calibration of Numerical and Determination of Physical Parameters for the Organic Model System TRIS-NPG

Speaker

Johann Mogeritsch

18:20–18:40

Prediction of the risk of chunky graphite formation as a function of the solidification conditions of a GS SiMoCrNi cast iron coupling simulations and experiments

Speaker

Mr Quentin Levices

18:40–19:00

Fast modelling of dendritic growth in metal additive manufacturing at part-scale

Speaker

Mr Can Huang

19:00

Wednesday 15 September

09:50

D9_Modelling of solidification, casting and remelting: D9_3_Phase-field modelling

Session | Location: Room 11

09:50–10:30

Large-scale 2D simulations of formation process of equiaxed structure and semi-solid deformation using phase-field lattice Boltzmann method (Keynote)

Speaker

Tomohiro Takaki

10:30–10:50

Phase-field study of microstructure selection in hcp Mg alloys

Speaker

Dr Ahmed Kaci Boukellal

10:50–11:10

Phase-field modelling of the formation of the layered eutectic microstructure during laser additive manufacturing

Speaker

Tamás Pusztai

11:10–11:30

Multiple GPUs parallel computing implementation of 3D AMR phase-field simulation for columnar dendrite growth

Speaker

Dr Shinji Sakane

11:30

11:50

D9_Modelling of solidification, casting and remelting: D9_4_Process-scale modelling: structures and defects

Session | Location: Room 11

11:50–12:10

Modelling the Electromagnetic Brake Effects During the Thin Slab Casting

Speaker

Dr Alexander Vakhrushev

12:10–12:30

Phase field assisted analysis of a metal purification processes

Speaker

Dr Alexandre Viardin

12:30–12:50

Fully coupled simulation approach for predicting defects in high pressure die casting applications

Speaker

Dr Juergen Jakumeit

12:50–13:10

Thermo-mechanical modeling of AZS electrofused refractories

13:10

Speaker

Ms Tiphaine Houdard

15:30

D9_Modelling of solidification, casting and remelting: D9_5_Process-scale modelling: new models and numerical methods**Session** | **Location:** Room 11

15:30–15:50

A meshless approach for solving binary alloy solidification with moving grains**Speaker**

Dr Katarina Mramor

15:50–16:10

Modelling of Nanoparticle Tracking in the Mushy Zone of Metal Solidification Processes**Speaker**

Dr Gongyuan Zheng

16:10–16:30

Numerical and experimental analysis in AlSi13 gravity casting solidification using 3D printed molds**Speaker**

Mr Mohammad Zarbini Seydani

16:30–16:50

Numerical modeling of SEN clogging considering chemical reaction on refractory surface during continuous casting of Ti-ULC**Speaker**

Hadi Barati

16:50