6th K1-MET Simulation Conference

23 April 2025, Vienna University of Technology (TU Wien),
GM5, Getreidemarkt 9, 1060 Vienna

09:30 – 10:00 Get-together with coffee

10:00 – 10:10 Welcome and introduction (Christine Gruber)

Morning session

10:10 – 10:40 Kersten Marx (BFI)
Embedded real-time analysis of continuous casting for machine-supported quality optimisation

10:40 – 11:10 Thomas Lichtenegger (JKU-PFM)
Fast, data-assisted simulations of bubble transport in submerged double jets

11:10 – 11:30 Coffee break (one floor above)

11:30 – 12:00 Alexander Vakhrushev (CDL-MAMHD and MUL-SMMP)
Advanced Modeling of Multiphase and Magnetohydrodynamic Phenomena in Continuous Casting

12:10 – 12:30 Martin Barna (JKU-ISW)
Modelling of magnetohydrodynamic flow control for continuous casting of steel – a review of ISW's research activities

12:30 – 13:30 Lunch break

Afternoon session

13:30 – 14:00 Gernot Hackl (RHIM)
The Role of Modelling and Simulation in Refractory Product Development for the Steel Industry

14:00 – 14:30 Mirko Javurek (JKU-ISW)
Continuous Casting Mold Flow with Gas Injection: Comparison of Numerical Simulations and Water Model Measurements

14:30 – 15:00 Christian Bernhard (MUL-ESM)
From phenomenological models to hybrid approaches: quality prediction in continuous casting at a crossroads

15:00 – 15:20 Coffee break (one floor above)

15:20 – 15:50 Menghuai Wu (MUL-SMMP)
Modeling study of the as-cast structure and macro-segregation in steel continuous casting

15:50 – 16:20 Marc Koester (BFI)
Measurement and model-based control of solidification in continuous casting of billets

Financially supported and coordinated by

Affiliations

BFI	VDEh-Betriebsforschungsinstitut GmbH
CDL-MAMHD	Christian Doppler Laboratory for "Metallurgical Applications of Magnetohydrodynamics"
JKU-ISW	Johannes Kepler University Linz, Institute for Fluid Mechanics and Heat Transfer
JKU-PFM	Johannes Kepler University Linz, Department of Particulate Flow Modelling
MUL-ESM	Montanuniversitaet Leoben, Chair of Ferrous Metallurgy
MUL-SMMP	Montanuniversitaet Leoben, Chair of Thermal Processing Technology
RHIM	RHI Magnesita GmbH

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