4th K1-MET Simulation Conference

11 April 2023, Graz University of Technology
Campus "Alte Technik", Rechbauerstrasse 12, 8010 Graz, Location: HS I

Main goal of the K1-MET Simulation Conference is to present a cross-section of the simulation and modelling activities in a wide variety of K1-MET projects with plenty time for discussions.

Arrival

09.30 – 10.00 Get-together with coffee & tea

Morning Session

Welcome & Keynote 1

10.00 – 11.00 **Christine Gruber (K1-MET):** Welcome and introduction
Michael Harasek (TUW-ICEBE): "About the Relevance of Experimental Fluid Dynamics (EFD) in Simulations"

Particulate and reactive flows

11.00 – 11.40 **Markus Boesenhofer (TUW-ICEBE / K1-MET):** "Thermochemical modelling of the blast furnace raceway zone"
Simon Schneiderbauer (JKU-PFM): "Numerical modelling of iron ore reduction in fluidized beds using hydrogen"

Coffee break
11.40 – 12.00

Multiphase flows

12.00 – 13.00 **Mahdi Saeedipour (JKU-PFM):** "Investigation of submerged massive gas injection with simulation and experiments"
Mirko Javurek (JKU-ISW): "Validation of continuous casting mold flow simulations by water model experiments"
Sandra Vollmann (MUL-COC): "CFD Simulation of refractory finger test including surface tension"

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Lunch

13.00 – 14.00

Afternoon Session

Keynote 2

14.00 – 14.50 **Christoph Spijker (MUL-TPT):** "NO_x postprocessing for the steady laminar flamelet model"

Sim4Green

14.50 – 15.30 **Senthilathiban Swaminathan (K1-MET):** "Numerical investigation of carbon and nitrogen emissions by enriching natural gas with hydrogen on a low-NO_x burner"
Damir Kahrimanovic (K1-MET): "Numerical modelling of plasma flows"

Coffee break

15.30 – 15.50

Metallurgical modelling

15.50 – 16.50 **Dali You (PTAT):** "Thermodynamic modelling of ladle treatment in steelmaking: status and first steps of parametrization by process data"
Saham Sharifi (TUG-IMAT): "Recrystallization and recovery of micro-alloyed steel during thermomechanical processing"
Elizaveta Cheremisina (K1-MET): "FactSage™ application for process metallurgy: comprehensive thermodynamic modelling of slag systems"

Discussion

16.50 – 17.30

Dinner

18.30 Das Weitzer, Grieskai 12/14, 8020 Graz

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