

Industrial Workshop “Advanced Materials Modeling for Industrial Practice”, the fourth in a series of industrially oriented workshops organized by KMM-VIN, was held in Graz on 30th January 2015. This time, the workshop was organized in collaboration with Graz University of Technology and Federation of European Materials Societies (FEMS). The organization of the workshop was coordinated by Prof. Cecilia Poletti from Graz University of Technology and Prof. Jerzy Rojek from Institute of Fundamental Technological Research of Polish Academy of Sciences representing KMM-VIN.

The objective of the workshop was to present the latest developments in materials and process modeling ready-to-use in industrial practice. The scope of the workshop covered:

Material processing technologies

- casting processes
- sheet metal forming
- additive manufacturing
- welding

Conventional and new materials

- metals and alloys
- polymers
- nanocomposites

Modelling approaches

- finite element method
- micromechanical modelling
- atomistic modelling
- multiscale modelling

Eleven lectures were given by recognized scientists and experts: Andreas Ludwig (Montan University Leoben, Austria), Fernando Rastellini (Quantech ATZ S.A., Barcelona Spain), Norbert Enzinger (TU Graz, Austria), Werner Ecker (Materials Center Leoben, Austria), Jean-Marie Drezet (EPFL, Lausanne, Switzerland), Piotr Warczok (TU Vienna, Austria), Michele Chiumenti (Universitat Politècnica de Catalunya Barcelona, Spain), Manfred Ulz (TU Graz, Austria), Doros Theodorou (National TU of Athens, Greece), Nikolaos Michailidis (Aristotle University of Thessaloniki, Greece) and Gianaurelio Cuniberti (TU Dresden, Germany). Seven lecturers were proposed by KMM-VIN and TU Graz, and four speakers were invited by FEMS.

The workshop was well attended. There were 49 participants, of whom 26 from KMM-VIN and 6 from FEMS member institutions. The participants represented 12 countries: Austria – 25, Poland – 6, Germany – 5, Spain – 4, Greece – 2, USA – 1, Switzerland – 1, Belgium – 1, Lithuania – 1, Holland – 1, Slovakia – 1, Czech Republic -1. All participants were invited to present own posters and 12 participants used the opportunity to show their work on material modelling and process simulation.

The workshop was a good opportunity for a dialogue between scientists and engineers as there were 14 participants representing industrial companies. Informal meetings (get together party, lunch, coffee breaks and farewell aperitif) created a friendly atmosphere for exchange of opinions and establishing new collaboration links.