

FEMS EUROMAT23

03 - 07 Sep 2023 (Frankfurt am Main)

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FEMS EUROMAT is the most important international congress in materials science and technology in Europe. It continues a successful congress series promoting the transfer of knowledge and the exchange of experience between academia and industry. **Extended submission deadline: 15 March 2023**

C: Processing

Microstructure and performance of the materials are determined by their composition, manufacturing process, and further post-processing. The scope of the Area C "Processing" is to gather world-lead experts in the field of materials processing to present and discuss recent advances in processing of different materials (metals, ceramics, polymers, and composites, etc.) and their impact on material properties and performance of the final components. All materials scientific issues pertaining to the state-of-the-art processing of metals, alloys, ceramics, polymers and composites fall under the scope of this topic area. This includes experimental and theoretical research on different aspects of advanced materials processing and its impact on material properties and microstructure. Symposia in Area C provide updates on the cutting-edge research covering different aspects of material processing, including (but not limited to) manufacturing of the material feedstock (e.g. powder, wires, filaments, etc.) and their further consolidation to the final component geometry using state-of-the-art development in additive manufacturing and powder metallurgy, recent development in coating and surface modification technologies, variety of joining technologies, laser based and thermomechanical processing, severe plastic deformation, nanostructuring, and liquid metal processing as well as advances in subtractive manufacturing, etc. Symposia also cover the recent development in modeling and simulation of materials processing, covering a variety of material processing technologies included in the topic area. A special focus on the effect of manufacturing processes on microstructure and properties of the final materials is placed in all symposia. Such important aspects of modern material and process development as material and process sustainability, circularity, recyclability, and robustness of manufacturing processes are inherently integrated into all symposia in this topic area.

Area Coordinator



Prof. Dr. Eduard Hryha
Chalmers University of Technology



Prof. Dr. Ioanna Zergioti
National TU of Athens

C01: Metal Additive Manufacturing

Prof. Dr. Eduard Hryha (Chalmers University of Technology), Dr. Eric Jäggle (Universität der Bundeswehr München), Prof. Dr. Nikolaos Michailidis (Aristotle University of Thessaloniki)

C02: Additive Manufacturing of Non-Metallic Materials

Prof. Dr. Oana Ghita (University of Exeter), Dr. Ugo Lafont (European Space Agency), Prof. Dr. Katrin Wudy (Technische Universität München)

C03: Advanced Subtractive Manufacturing

Prof. Dr. Peter Krajnik (Chalmers University of Technology), Dr. Rachid M'saoubi (Seco Tools AB)

C04: Advances in Metal Powder Technologies

Prof. Dr.-Ing. Thomas Weißgärber (Fraunhofer Institute IFAM), Prof. Dr.-Ing. Raquel de Oro Calderon (TU Wien)

C05: Joining

Dr. Ivan Kaban (Leibniz Inst. for Solid State & Materials Research Dresden), Prof. Dr. Christof Sommitsch (Graz University of Technology), Prof. Dr. Anna Zervaki (National Technical University of Athens)

C06: Laser Based Processing and Manufacturing

Prof. Dr.-Ing. Andrés Fabián Lasagni (Fraunhofer Institute IWS Dresden), Prof. Dr. Ioanna Zergioti (National Technical University of Athens)

C07: Coatings and Surface Modification Technologies

Prof. Dr. Albano Carvalho (University of Coimbra), Prof. Dr. Sandra Carvalho (University of Coimbra), Prof. Dr. Ramon Escobar-Galindo (University of Seville), Prof. Dr. Tomas Polcar (University of Southampton), Prof. Dr. Juan Carlos Sánchez López (Spanish National Research Council)

C08: Advanced Ceramic Materials Processing

Dr. María Amparo Borrell Tomás (Polytechnic University of Valencia), Prof. Dr. Michael Scheffler (Otto von Guericke University Magdeburg)

DGM



C09: Thermomechanical Processing, Severe Plastic Deformation & Nanostructuring

Dr. Andrea Bachmaier (Austrian Academy of Sciences), Dr. Julia Ivanisenko (Karlsruhe Institute of Technology (KIT))

C10: Modeling and Simulation of Materials Processing

Amir Malakizadi (Chalmers University of Technology), Damien Tournet (IMDEA Materials Institute), Prof. Dr. Bai-Xiang Xu (Technische Universität Darmstadt)

C11: Multi-Material Additive Manufacturing

Prof. Dr. Piter Gargarella (Federal University of Sao Carlos), Prof. Dr.-Ing. Ilya Okulov (Leibniz Institute IWT), Prof. Dr.-Ing. Konda Gokuldoss Prashanth (Tallinn University of Technology)