

MATERIALS SCIENCE AND TECHNOLOGY IN EUROPE

# FEMS EUROMAT 23

03 - 07 September 2023

Frankfurt am Main (Germany) & Online



## AREA C: PROCESSING

### 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 COORDINATORS



Prof. Dr.

**Eduard Hryha**

*Chalmers University of Technology (SE)*



Prof. Dr.

**Ioanna Zergioti**

*National TU of Athens (GR)*

### SYMPOSIA

**C01:** Metal Additive Manufacturing

**C02:** Additive Manufacturing of Non-Metallic Materials

**C03:** Advanced Subtractive Manufacturing

**C04:** Advances in Metal Powder Technologies

**C05:** Joining

**C06:** Laser Based Processing and Manufacturing

**C07:** Coatings and Surface Modification Technologies

**C08:** Advanced Ceramic Materials Processing

**C09:** Thermomechanical Processing, Severe Plastic Deformation & Nanostructuring

**C10:** Modeling and Simulation of Materials Processing

**C11:** Multi-Material Additive Manufacturing

DEADLINE FOR ABSTRACT SUBMISSION

**31 January 2023**

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## DEAR MATERIALS SCIENCE AND ENGINEERING COMMUNITY, DEAR COLLEAGUES,

We cordially invite you to join the 17<sup>th</sup> European Congress and Exhibition on Advanced Materials and Processes - FEMS EUROMAT 2023, which will be held in Frankfurt am Main, Germany, 03 - 07 September 2023. The congress venue will be the Frankfurt Goethe-University's new Westend Campus with its park-like ambiance and beautiful travertine-faced buildings, one of Germany's most attractive ones.

Our ambition is to organize a memorable and successful congress in the tradition of previous FEMS EUROMAT congress to offer delegates many opportunities to engage in discussions, build new and strengthen existing partnerships and collaborations within and outside Europe.

Germany has a long tradition in Material Science and Engineering. The German Materials Society - DGM - was founded in 1919 and is one of the founding members of FEMS.

DGM's proprietary congress platform will serve as a proven interface allowing delegates to participate on-site or connect from another location via internet. As the first hybrid FEMS EUROMAT, we will offer the best of both worlds – physical and virtual.

We hope that you'll participate in the congress to share with us your experience and views in the field of Materials Science and Engineering.

On behalf of the Scientific Committee



### Prof. Dr. Ehrenfried Zschech

deepXscan GmbH, Dresden, Germany  
*Chair of FEMS EUROMAT 2023*

## ABOUT FRANKFURT AM MAIN

Frankfurt's skyline is truly unique. From the Main Tower's rooftop observation platform, situated some 200 meters above the city streets, one has a spectacular view of the surrounding region. Nearby, in the historical old town, Römer City Hall, the Frankfurt Cathedral and St Paul's Church are all must-sees.

Old town flair in the heart of the big city: A old part of Frankfurt has been brought back to life. Completed in 2018, the New Frankfurt Old Town consists of 15 faithfully reconstructed buildings and 20 brand-new dwellings connected by a series of winding laneways. Many of the buildings feature structural ornaments dating back to the Middle Ages – thankfully saved from the destruction of World War II and now returned to their places of origin. A series of museums, restaurants, bars and shops combine to breathe new life into the old quarter, nestled between Frankfurt Cathedral and the Römerberg, turning it into a lively new urban space.

## CONGRESS VENUE

Goethe University was founded in 1914 as a unique "citizens' university," financed by wealthy citizens in Frankfurt, Germany. Named in 1932 after one of the city's most famous natives, Johann Wolfgang von Goethe, today the university has over 48,000 students. Goethe University is the third largest university in Germany.

### Goethe University

Westend Campus  
Seminar Building  
Theodor-W.-Adorno-Platz 5  
60323 Frankfurt, Germany



[EUROMAT2023.com](http://EUROMAT2023.com)

### Congress Office

Deutsche Gesellschaft für Materialkunde e.V.  
Marie-Curie-Straße 11-17  
53757 Sankt Augustin, Germany  
T +49 (0) 69 75306 750  
euromat@dgm.de



Campus Westend, Goethe University, Frankfurt, Germany

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Area C: Processing

## C01: Metal Additive Manufacturing

Additive manufacturing (AM) is widely acknowledged to be revolutionary. Metal AM techniques have attracted significant attention over the last decade, both in industry and academia. The dominant metal AM techniques are Powder Bed Fusion – Laser Beam (PBF-LB), Powder Bed Fusion -Electron Beam (PBF-EB), Directed Energy Deposition (DED), and Binder Jetting (BJT), to name some, Metal AM offers new opportunities to manufacture parts in unique shapes with outstanding mechanical properties. The industrial application of these technologies is boosting during the last decade with a demonstrated huge potential in mostly all industrial sectors (aerospace, medical/dental, automotive, etc.). Due to the high cooling rate, the high temperature gradient, the inherent process complexity, and numerous interlinked process parameters, the microstructure and hence the mechanical properties of the metal AM components differ substantially from the properties of the same component produced by conventional techniques. At the same time, exploitation of these advantages opens new dimensions in material synthesis with tailored properties. This symposium aims to tackle all aspects of metal additive manufacturing, from powder production, material development, latest advances in processing to final part qualification and characterization via process optimization. In particular, the following topics are addressed:

- Powder manufacturing process, characterization, and effect on the AM process robustness
- Development of AM processed materials with novel composition or microstructure
- Relationships between process parameters and final part properties (microstructure, physical and mechanical properties)
- Standardization and final part qualification strategies
- Development of advanced machine concepts (new printing principles, automation, multiple materials printing, large-scale printing, hybrid technologies, etc.)
- Surface integrity of AM parts
- Design rules for AM and topological/multi-physics optimization
- Modeling and simulation applied to process and design (multi-functionality)
- Post-treatment processes (surface engineering, heat treatment, machining, etc.)
- Machine learning in AM
- NDT, on-line process monitoring and control
- Life Cycle Assessment, sustainability aspects

Selected abstracts will be considered for publication at the [FEMS European Journal of Materials-EJM](#). More information will be communicated to the authors soon.

### Symposium Organizer



Prof. Dr. Eduard Hryha  
Chalmers University of Technology



Dr. Eric Jägle  
Universität der Bundeswehr München



Prof. Dr. Nikolaos Michailidis  
Aristotle University of Thessaloniki



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Area C: Processing

## C02: Additive Manufacturing of Non-Metallic Materials

The innovative nature of additive manufacturing with non-metallic materials leads to a disruptive transformation in how products are manufactured and designed. Other traditional processes are not able to provide designs with a comparable complexity of geometrical structures that a layer-by-layer build process offers. Continuous research and development of processes and materials in additive manufacturing of non-metallic materials has already established the technology as the primary production process for low volumes, advanced high-performance components. This covers a broad range of applications in the field of processing plastics, ceramics, composites, or bio-printing. However, fundamental challenges such as a limited range of non-metallic materials, insufficient process robustness and part properties, qualification aspect, low processing speeds, scaling of production, and low economic competitiveness still limit a widespread industrial adaption.

We invite authors from academia and industry to submit research papers that focus on the processing of non-metallic materials in additive manufacturing. Submissions based on experimental work or a combination of simulation and experimental validation are welcome. Topics of particular interest include, but are not limited to:

- Innovative process strategies
- Process monitoring and control
- Process and part qualification
- Ground-breaking AM systems
- Robotic-based and large-scale AM
- Processing and development of new materials in additive manufacturing
- Functionally graded structures
- Multimaterials or composite parts
- Advanced process or material simulation
- Data-driven modeling and prediction approaches
- Fundamental investigations
- Novel applications of additive manufacturing
- Other advancements in additive manufacturing processes

Authors will be invited to publish their research in a Special issue of European Journal of Materials.

### Symposium Organizer



Prof. Dr. Oana Ghita  
University of Exeter



Dr. Ugo Lafont  
European Space Agency



Prof. Dr. Katrin Wudy  
Technische Universität München



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Area C: Processing

## C03: Advanced Subtractive Manufacturing

This symposium will bring together academics and practitioners to present the latest advancements in advanced subtractive manufacturing. The symposium will also serve as an international platform to discuss and share new ideas, consolidate existing collaborations, and establish new partnerships with leading researchers in the field. The symposium covers subtractive techniques used in the manufacturing of components from metals and other materials. Topics related to the evolution of material properties when subtracted from the bulk materials, analysis of the effects workpiece materials have on manufacturing processes, and the investigation of the mechanics—experimental, theoretical, or computational are within the areas of interest of this symposium. The symposium intends to cover a broad range of subtractive manufacturing processes such as material removal (e.g., metal cutting, grinding, machining with abrasives, EDM/ECM), forming (e.g., sheet-metal forming, forging, extrusion, rolling) processes, as well as tribological aspects of materials in these manufacturing processes. Topics of interest, as they relate to advanced subtractive manufacturing, include, but are not limited to:

- Characterization of workpiece materials (structure/surfaces) by techniques such as SEM, EDS, TEM, EBSD, AES, Raman spectroscopy to reveal new phenomenological aspects that govern subtractive processes
- Advanced experimental methods for characterizing the mechanics of deformation and microstructure evolution in subtractive manufacturing processes at multiple length-scales
- Advances in multi-scale modeling of large-strain plastic deformation and ductile failure in material removal and/or metal forming
- Micromechanics of plastic deformation and microstructure evolution during subtractive material processing
- Thermal and metallurgical aspects in subtractive manufacturing processes
- Applications of novel methods for improving surface integrity in the context of subtractive manufacturing processes
- Surface engineering when it relates specifically to a subtractive manufacturing process
- Tribology and wear in subtractive manufacturing processes

### Symposium Organizer



Prof. Dr. Peter Krajnik  
Chalmers University of Technology



Dr. Rachid M'saoubi  
Seco Tools AB



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Area C: Processing

## C04: Advances in Metal Powder Technologies

Metal powder technologies allow the production of an increasing number of materials providing advantages such as: unique microstructures and efficient microstructural control, cost reduction and increased productivity, procurement of complex shapes, etc. Furthermore, the efficiency in energy and material consumption positions this technology as a sustainable manufacturing route.

This symposium will cover the latest advances in powder production and consolidation technologies, as well as the progress in processing different groups of materials and the opportunities and challenges in metal powder processing. The topics considered include (but are not limited to):

- Green and Energy Efficient Processing
- Tailored and unique microstructures developed by PM
- Advances in Powder production and conditioning
- Mechanical Alloying and High Energy Milling.
- Shaping of porous materials
- Shaping of complex micro- and nanostructures
- Sintering and Liquid Phase sintering
- Sintering-based AM techniques: advances in powder production, conditioning, consolidation, and characterization
- Non-conventional and fast sintering techniques (SPS, Flash sintering, microwaves sintering, etc.)
- Mechanical characterization
- Modeling, Simulation, and Digitalization strategies
- Secondary and Finishing Operations

Selected contributions will be invited to publish in a Special Issue of the journals "Powder Metallurgy" or "European Journal of Materials".

### Symposium Organizer



Prof. Dr.-Ing. Thomas Weißgärber  
Fraunhofer Institute IFAM



Prof. Dr.-Ing. Raquel de Oro Calderon  
TU Wien



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## Area C: Processing C05: Joining

This symposium considers all kinds of research in the field of similar and dissimilar joining and welding techniques. Conventional, advanced, and new processes, as well as hybrid processes, are of interest. Process development & simulation, microstructure, properties, and performance of the weld/joint and the thermo-mechanically affected zone shall be covered for all kinds of materials.

Considered processes and topics include, but are not limited to, the following:

- welding techniques and phenomena
- post-weld heat treatment
- mechanical joining
- brazing and soldering
- ceramic joining
- plastic joining
- nanomaterials in joining
- physical properties controlling joining (wetting, diffusion, dissolution)
- microstructure and properties
- residual stresses and distortion
- modeling of welding and joining
- ecological and economical aspects of joining

## Symposium Organizer



Dr. Ivan Kaban  
Leibniz Institute for Solid State and Materia...



Prof. Dr. Christof Sommitsch  
Graz University of Technology



Prof. Dr. Anna Zervaki  
National Technical University of Athens



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Area C: Processing

## C06: Laser Based Processing and Manufacturing

Laser-based manufacturing is a key technology, able to open significant markets for manufacturers applying laser-material processing, as well as for equipment manufacturers. Industrial sectors with high economic and social relevance, such as automotive, microelectronics, aviation, and (bio)medical sectors, rely on the quality of laser-material processing for the functionality of their products. The aim of this symposium is to bring together scientists and engineers working on laser-based manufacturing processes on macro, micro and/or nanometer scale for advanced applications, addressing the current scientific and technological advances related to laser-based technology. The papers will be oriented to technical or industrial developments as well as basic research studies describing applications in different technological fields. Furthermore, the basic interactions of laser beams with materials and the influence of such interactions in the mechanisms governing the manufacturing processes will be discussed.

Topics of this symposium will cover the following subjects (but not limited to):

- Laser beam cutting and drilling, forming
- Laser beam welding, soldering, and brazing
- Laser surface treatment, including, but not limited to, transformation hardening, annealing, alloying, cladding, cleaning, marking
- Laser micro/nano processing, including, but not limited to, micro-joining, micro-cutting & drilling, surface patterning/texturing, (ultra) short pulsed laser processing
- Laser-based Additive Manufacturing processing, including laser printing and sintering both on the macro- and micro/nano scale, including laser-transfer techniques
- Fundamental aspects of laser-material processing, including dynamics, modeling, and simulation
- Laser sources, optics, components, and systems for laser-based manufacturing
- Laser direct writing (waveguide, crystallization, photopolymerization, etc.)
- 3D Laser Bioprinting, Optical Tweezing, and trapping for biomedical applications

### Symposium Organizer



Prof. Dr.-Ing. Andrés Fabián Lasagni  
Fraunhofer Institute IWS Dresden



Prof. Dr. Ioanna Zergioti  
National Technical University of Athens



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Area C: Processing

## C07: Coatings and Surface Modification Technologies

Recent innovations and research in materials, coatings, and processes are designed to make surfaces or substrates more useful, more durable in harsh environments (high-T (temperature), high-P (stress), corrosive, etc.) and/or more cost-effective.

This symposium addresses current scientific and technological progress in traditional and cutting edge coating and thin film processes as well as surface modification treatments or techniques such as vacuum-based processes, electroless deposition, plasma and laser processing, ion beam methods, thermal and chemical diffusion, thermal spraying, hard facing and anodization. Hot topics will include

### S.1. Coatings and Thin Films for industrial applications

- Relations between synthesis conditions, microstructure, and functional properties
- Coatings with advanced properties
- New coating concepts and designs
- Design and manufacturing of protective or decorative coatings
- New frontiers in coatings for bio-based and energy applications

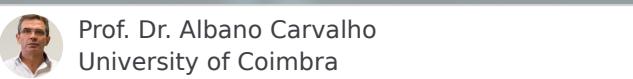
### S.2. Advanced methods of materials deposition and surface functionalization treatments

- Plasma deposition and related technologies
- Theoretical aspects of surface processing
- New coating technologies, pulsed plasmas, HiPIMS, and industrial coating units
- Fabrication of nanoparticles and 3D nanostructures
- Non-plasma deposition of coatings and thin films
- Novel fabrication and surface functionalization routes
- Chemical methods for surface modification
- Materials nano-modification and lithography

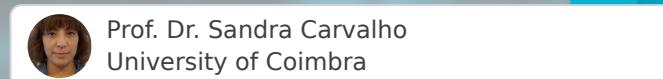
### S.3. In-situ and in-operando characterization techniques

- Emerging technologies for surfaces characterization
- Resolution enhancement of surface techniques
- In-situ characterization of coatings during deposition
- High-resolution characterization techniques of thin films
- Scaling up concepts: from lab to market

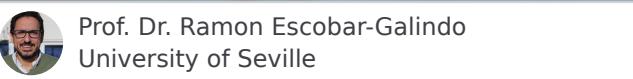
### Symposium Organizer



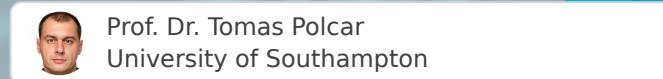
Prof. Dr. Albano Carvalho  
University of Coimbra



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



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Area C: Processing

## C08: Advanced Ceramic Materials Processing

This symposium brings together advances in the processing and consolidation of ceramic materials and composites with high-added value using conventional and non-conventional technologies. It will include advanced techniques in powder synthesis, colloidal processing, dispersion, and shaping, as well as non-conventional fast sintering technologies such as Spark Plasma Sintering, Microwave, Flash Sintering, and Cold Sintering, the most recent advances in fast sintering techniques, and any other aspect of ceramic processing leading to improved performance and microstructure, enhanced properties and reduction of environmental impact and energy consumption.

The targeted topics for this symposium are the following:

- Novel powder synthesis routes
- Beneficiation and modification of powders
- Dispersion and rheology of suspensions
- Dry processing methods
- Pastes and plastic forming
- Shaping of porous ceramics
- Processing of polymer-derived ceramics
- Manufacture of thin and thick films, coatings, and laminates
- Fast sintering technologies
- Cold sintering process

### Symposium Organizer



Dr. María Amparo Borrell Tomás  
Polytechnic University of Valencia



Prof. Dr. Michael Scheffler  
Otto von Guericke University Magdeburg



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Area C: Processing

## C09: Thermomechanical Processing, Severe Plastic Deformation & Nanostructuring

The symposium focuses on the processing of metallic materials in order to achieve nano-crystalline (NC) or ultra-fine grained (UFG) microstructures. Emphasis is laid on new developments in severe plastic deformation (SPD) and thermomechanical processing (TMP) techniques or combinations of TMP and SPD and related nanostructuring processes. The second focus of the symposium is on advances in modeling and simulation of these processes, prediction of the microstructural evolution during processing, and industrial up-scaling strategies. Furthermore, contributions dealing with the Process-Microstructure-Properties correlation are highly appreciated. Another key area is alloy design by SPD, for example, mechanically driven phase transformations, formation of metastable phases, texture formation, and grain boundary engineering. The symposium will also cover strategies to enhance the microstructural stability, new developments of tailoring/grading and functionalization of materials by these processes, as well as principal investigations on the deformation mechanisms in NC/UFG materials.

### Symposium Organizer



Dr. Andrea Bachmaier  
Austrian Academy of Sciences



Dr. Julia Ivanisenko  
Karlsruhe Institute of Technology (KIT)



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Area C: Processing

## C10: Modelling and Simulation of Materials Processing

This symposium will provide a forum to present the latest developments in the field of theoretical modeling and numerical simulation of materials processing for structural and functional applications. It will bring together academics, researchers, and industry leaders to discuss pathways to leverage multi-scale and multi-physics approaches to solve challenges in materials manufacturing and processing of a broad range of materials, including metals, ceramics, polymers, as well as composites and compositionally/functionally-graded materials.

The scope will be broad in terms of processes, including additive manufacturing, forming, casting, and joining as well as thermomechanical and subtractive post-processes like heat treatments, laser polishing, shot peening, hot isostatic pressing, and machining. Relevant methods involve new physics-based or physics-informed data-driven models linking the microstructure, defects, physico-chemical and tribological properties with the in-process material evolution and response. Typical examples include, but are not limited to, the modeling and simulation of:

- a) microstructure formation and evolution and residual stress development during solidification, solid-state phase transformations and severe plastic deformation (e.g., during machining),
- b) wear and tribology,
- c) manufacturing and synthesis of structural materials, energy materials (e.g., batteries) and magnetic materials.

Relevant scales range from atomic (e.g., molecular dynamics) to macroscopic (solid mechanics, CFD, cellular automata), going through various mesoscale and multiscale approaches (e.g., phase-field, crystal plasticity, etc.). Multiscale, multiphysics and integrated computational materials engineering (ICME) approaches, as well as computational study with direct experimental validation and/or demonstrated technological applications, are particularly encouraged.

[The symposium is cooperating with symposium D10.](#)

### Symposium Organizer



Amir Malakizadi  
Chalmers University of Technology



Damien Tourret  
IMDEA Materials Institute



Prof. Dr. Bai-Xiang Xu  
Technische Universität Darmstadt



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Area C: Processing

## C11: Multi-Material Additive Manufacturing

Multi-material additive manufacturing (AM) possesses enormous potential to extend the design space beyond complex geometries. In particular, the ability to manufacture parts from multiple materials using AM technologies enables optimization of the mechanical properties of the parts or/and provides additional functions for the final parts. Different materials combinations, including materials from different classes (e.g., metal-polymer, ceramic-metal, etc.) and various AM technologies, have already been explored to create customized multi-functional objects to suit many needs. Along with the fascinating opportunities, multi-material 3D and 4D printing technologies are facing many challenges, for example, those related to materials recycling. The objective of this symposium is to discuss the current opportunities and challenges of multi-material additive manufacturing related (but not limited) to the following topics:

- Modeling and simulation of AM multi-materials and processes
- Artificial intelligence assisted design of AM multi-materials
- Synthesis of novel AM multi-materials
- Characterization of novel AM multi-materials and their interfaces
- Design of innovative AM processes
- Energy aspects in AM multi-materials synthesis
- Post-treatment of AM multi-materials
- Application of AM multi-materials
- Recycling of AM multi-materials
- Sustainability and circular economy in multi-materials processing

### Symposium Organizer



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



# AREAS



A: Functional Materials

## A: Functional Materials

**Bernhard Bayer-Skoff**

TU Wien, Austria

**Luis Pereira**

UNINOVA, Portugal



B: Structural Materials

## B: Structural Materials

**Francisca Caballero**

Spanish National Research Council, Spain

**Pawel Zieba**

Polish Academy of Sciences, Poland



C: Processing

## C: Processing

**Eduard Hryha**

Chalmers University of Technology, Sweden

**Ioanna Zergioti**

National Technical University of Athens, Greece



D: Characterization and Modeling

## D: Characterization and Modeling

**Eva Olsson**

Chalmers University of Technology, Sweden

**Christophe Pinna**

The University of Sheffield, UK



E: Energy and Transportation

## E: Energy and Transportation

**Vito Di Noto**

University of Padova, Italy

**Dirk Lehmhus**

Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM, Germany



F: Materials for Healthcare

## F: Materials for Healthcare

**Aldo R. Boccaccini**

Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

**Sandra Van Vlierberghe**

Gent University, Belgium



G: Education, Strategy and Technology Transfer

## G: Education, Strategy and Technology Transfer

**Marco Falzetti**

APRE - Agenzia per la Promozione della Ricerca Europea, Italy

**Paloma Fernández Sánchez**

Universidad Complutense de Madrid, Spain



H: Materials for Circular Economy and Sustainability

## H: Materials for Circular Economy and Sustainability

**Gesa Beck**

SRH Berlin University of Applied Sciences, Germany

**Artur Braun**

Swiss Federal Laboratories for Materials Science and Technology (EMPA), Switzerland

# KEYDATES & DEADLINES

**31 JANUARY 2023**

DEADLINE FOR ABSTRACT SUBMISSION

**31 JANUARY 2023**

DEADLINE EARLY BIRD TICKETS

**MAY 2023**

AUTHORS CONFIRMATION

**JUNE 2023**

PRELIMINARY PROGRAM

**03 SEPTEMBER 2023**

START OF EUROMAT 2023

# EARLY BIRD TICKETS

## ON-SITE TICKETS\*

*These tickets cannot be booked separately without a catering package!*

**FEMS MEMBER - FULL CONGRESS**

**805€**

**FEMS MEMBER - HALF CONGRESS**

**515€**

**REGULAR - FULL CONGRESS**

**950€**

**REGULAR - HALF CONGRESS**

**610€**

**REGULAR - ONE DAY**

**380€**

## ON-SITE TICKETS - YOUNG SCIENTISTS\*

*Full Congress only. Bachelor, Master and PhD Students up to 30 years (proof required). These tickets cannot be booked separately without a catering package!*

**YOUNG SCIENTISTS - FEMS MEMBER**

**433€**

**YOUNG SCIENTISTS - REGULAR**

**510€**

## ONLINE TICKETS\*\*

*Full Congress only*

**FEMS MEMBER**

**325€**

**REGULAR**

**380€**

*\*On-site tickets include:*

*the possibility to watch all contributions on-demand for 14 days after the congress | catering package:*

- Coffee breaks (Monday, Tuesday, Wednesday, Thursday)
- Lunchtime snacks
- Welcome reception

*\*\*Online tickets include:*

*the online participation through a browserbased web congress plattform and the possibility to watch all contributions on-demand for 14 days after the congress*

## Congress Office

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*Deadline for abstract submission: 31 January 2023.  
Contribution submissions from Young Scientists are welcome.*