

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. **Submission deadline: 31 January 2023**

Area D: Characterization and Modeling

D09: Development of Advanced Microscopy and Spectroscopy Techniques for Materials Characterization

This symposium focuses on new and innovative developments in advanced microscopy and spectroscopy techniques for the characterization of microstructural, chemical, and functional properties of inorganic, soft, and biological materials. Contributions are particularly encouraged in areas of methodology and instrumentation development that include:

- Enhancement of contrast from weakly scattering materials.
- Time-resolved characterization of dynamic processes in materials.
- Improved tomographic methods for three-dimensional materials characterization.
- Advances in minimally-invasive characterization using low-dose techniques to reduce beam damage.
- Static and programmable phase plates and adaptive optics.
- New approaches for combining data acquisition with data management, analysis, and processing.
- Hardware, software, and electronics for the automation of experimental workflows, instrument alignment, instrument control and remote access.
- Instrumentation for enabling correlative, multiscale and multi-modal experiments.
- Instrumentation aimed at improving sample preparation and sample transfer.
- Innovative, exploratory, and curiosity-driven methodological techniques and instrumentation for materials characterization.

Presentations in this symposium should ideally either contribute to or complement more conventional advances in spatial resolution, spectroscopic sensitivity, in situ capabilities, and studies of the local electrical and magnetic properties of materials.

Symposium Organizer



Prof. Dr. Rafal Dunin-Borkowski
Research Centre Juelich



Prof. Dr. Aleksandar Matic
Chalmers University of Technology

