

FEMS EUROMAT 23

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**

Area B: Structural Materials

B09: Theory-Guided Development of Structural Materials

There is a pressing need to develop new structural materials for a range of industries. Automotive, aerospace, nuclear, and energy sectors are just some of the sectors demanding new materials. Such demand stems from environmental, criticality, and sustainability needs, as well as the emergence of new technologies such as electric cars and airplanes, fusion and small nuclear reactors, and additive manufacturing. This symposium aims to provide a forum to present theory-guided research by adopting one or several of the established techniques for materials design. Work including one or several tools such as computational thermodynamics, dislocation dynamics, crystal plasticity, density functional theory, molecular dynamics is welcome. We particularly encourage the presentation of work wherein structural properties are set out as objectives for material design; these may include strength, corrosion and hydrogen embrittlement resistance, fatigue, ductility, and toughness.

[This is a joint symposium with symposium D12 in area D "Characterization and Modeling"](#)

Symposium Organizer



Prof. Dr. Raymundo Arroyave
Texas A&M University



Prof. Dr. Pedro Rivera Diaz Del Castillo
University of Southampton

