



SIAM Conference on

## Mathematical Aspects of Materials Science

Sponsored by the SIAM Activity Group on  
Mathematical Aspects of Materials Science.

This meeting is being held jointly with the SIAM  
Annual Meeting (AN18), SIAM Conference on Applied  
Mathematics Education (ED18) and the SIAM  
Workshop on Network Science (NS18).

**Conference Dates: July 9-13, 2018.**

**Venue: Portland, Oregon**

**Submission Deadline: January 18, 2018**

**Travel Funding for students: January 19, 2018**

### Minisymposium

Recent advances in phase-field modeling and analysis of microstructural evolution.

### Organizers

Kumar Ankit, Arizona State University.

Yang Jiao, Arizona State University.

Rajdip Mukherjee, Indian Institute of Technology Kanpur.

Britta Nestler, Karlsruhe Institute of Technology, Germany.

Rapid advancements in phase-field modeling and ever-increasing high-performance computing resources have enabled large-scale simulations of 3D microstructural evolution in materials. However, establishing a synergy between the simulated microstructures and those observed in in-situ experiments remains challenging. One-to-one correspondence between these two kinds of datasets essentially warrants development of quantitative phase-field models as well as techniques for rigorous microstructural analysis. This minisymposium focuses on the recent developments and applications of the phase-field method and numerical post-processing techniques for microstructural quantification. Application areas of interest include but are not limited to solidification and solid-state transformations in multicomponent alloys, defects proliferation, and self-assembly of polymers and thin films.

*For details, visit: <http://www.siam.org/meetings/ms18/>*

### Open for lecture and poster contributions!

SIAM MS-18 will focus on new advancements in interdisciplinary materials research and technology in all areas of the science and engineering of materials are solicited, including all electronic structure, atomistic simulation, microstructures, continuum descriptions, thermodynamics, kinetics, analytical methods, stochastic methods and computational methods. Of particular interest are innovative mathematical and numerical approaches to materials science and engineering.