



Contribution ID: 253

Type: **Invited talk**

Phase-field modeling of complex polycrystalline structures

Wednesday, 16 March 2022 13:30 (1 hour)

Orientation-field-based phase-field models developed in the past decade will be presented, which incorporate homogeneous and heterogeneous nucleation of growth centers, and several mechanisms for the formation of new grains at the perimeter of growing crystals termed “growth front nucleation”. This approach enables the modeling of complex polycrystalline structures. Microscopic aspects of growth front nucleation, quantitative simulations, and possible future directions will be discussed briefly.

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Session Classification: Plenary Talk

Track Classification: Main conference: Theory, simulation, modeling, computational crystallography