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**TMS 2020**

**149<sup>th</sup> Annual Meeting & Exhibition**

February 23-27, 2020 • San Diego, California, USA



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## **Mechanics and Structural Reliability**

### **Advancing Current and State-of-the-Art Application of Ni- and Co-based Superalloys**

Superalloys are critical to operation and future design of a wide variety of propulsion and power-generation components in the aerospace, marine, and energy industries. Their industrial application is often driven by excellent long-term stability and durability at elevated temperatures or in aggressive environments because they display a good balance of mechanical strength, fatigue, and creep resistance, as well as corrosion and oxidation resistance.

This symposium aims to attract papers on current and state-of-art application of Ni- and Co-based superalloys. Topics of interest may include (but are not limited to):

- Viability of fabrication with additive manufacturing methods (powder bed techniques and direct energy deposition)
- Relationships of metallurgical processing with microstructure and performance (i.e. casting, forging, and heat treatment)
- Mechanisms of ambient and elevated temperature plasticity, creep, fatigue, creep-fatigue, crack growth, and environmental damage
- Mitigation of environmental, thermal, and thermal mechanical damage, including improved coatings for service operation
- Advancement in joining, repair, and rejuvenation of superalloys

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Abstract Deadline is July 1, 2019. Submit online at  
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**Questions?**  
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