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SUBMIT AN ABSTRACT TO:

PHYSICAL METALLURGY

CONTINUOUS PHASE TRANSFORMATIONS

Continuous phase transformations in the solid state are not limited by nucleation barriers, can give rise to complex microstructural configurations and provide opportunities to achieve a sweeping range materials properties if properly controlled. The potential impact of such transformations now encompasses a much broader range of applications and is no longer limited to fundamental studies or very limited alloy classes. For example, short range ordering phenomenon in so called high entropy alloys are providing new insight on localized mechanical deformation behavior, while second order transformations are also central to the development of next generation steels, magnets, energy storage materials, etc. In addition to fundamental understanding of the mechanism underlying continuous phase transformations, attention will also be given to utilization of these unique transformation pathways to develop novel microstructures for advanced structural and functional materials.

This symposium aims to provide a forum for discussion of current research efforts aspiring to understand, control and predict the pathways and consequences of continuous phase transformations, which may arise through conventional or emerging processing routes, through state-of-the-art characterization tools (such as in-situ transmission electron microscopy, aberration-corrected scanning/transmission electron microscopy and atom probe tomography) and computational tools (including DFT, MD, CALPHAD, Phase-Field and Machine Learning).

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Abstract Deadline is July 1, 2020. Submit online at www.programmaster.org/TMS2021.

Questions?
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