TMS2016
145th Annual Meeting & Exhibition

FEBRUARY 14-18 DOWNTOWN NASHVILLE, TENNESSEE **MUSIC CITY CENTER**

Connecting the Global Minerals, Metals, and Materials Community.

Material Behavior Characterization via Multi-Directional Deformation of Sheet Metal

In recent decades, the sheet metal forming community has observed that advanced constitutive models improve the predictive accuracy on formability and springback. However, in order to successfully train the models, unconventional experimental methods are often required. The objective of this symposium is to explore numerous advances in experimental testing and computational methods used for material characterization, constitutive modeling, and analyses pertaining to sheet metal deformation in multiple directions along multiple axes or with changing strain path conditions.

Potential participants are encouraged to submit abstracts on research of material behavior related to microstructure based on multiple directional deformation including:

- Improvements and new methods of mechanical property measurement;
- Characterization of phase transformations and deformation mechanisms in multiphase microstructures during forming
- Theory and modeling related to the mechanical properties
- Deformation simulations, forming processes, friction and springback
- Multi-directional mechanical testing and advanced strain/stress measurements
- Integration of scientific knowledge with manufacturing practices
- Development of accurate constitutive relationships

Organizers include:

John Carsley, General Motors Research & Development (USA)
Daniel Coughlin, Los Alamos National Lab (USA)
Myoung-Gyu Lee, Korea University (Korea South)
Youngung Jeong, National Institute of Standards and Technology (USA)
Piyush Upadhyay, Pacific Northwest National Laboratory (USA)

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