TMS2016
145th Annual Meeting & Exhibition

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

Connecting the Global Minerals, Metals, and Materials Community.

Driving Discovery: Integration of Multi-Modal Imaging and Data Analysis

Imaging and microscopy offer a way to "see" a real material in all of its complexities, and explore its behavior, often in operando conditions. Combining such experiments with complementary techniques and analytical spectroscopy allows one to gain a deeper insight into the relevant physical phenomena. These new insights allow us to successfully address grand-challenge problems, such as those in the materials-for energy field. Manual integration and analysis of data are far too time consuming and cumbersome for large, complex and especially multi-modal datasets. State-of-the-art mathematics and computer science tools are needed to automate the understanding process for data integration and analysis. Only then will our scientific understanding be able to fully benefit from the oncoming deluge of data. The proposed symposium will focus on state of the art advanced computational tools and visualization methods that address integration of multi-modal imaging and spectroscopic data. The symposium also aims to explore and introduce potentially important methods for future applications. The symposium seeks to bring together an interdisciplinary community of experts and researchers with expertise in computational as well as experimental methods. By doing so, we believe this symposium will facilitate a conversation focused on computational integration of imaging and data as well as pave the way to identify current limitations and future challenges for data integration.

Organizers include:
Charudatta Phatak, Argonne National Laboratory (USA)
Doga Gursoy, Argonne National Laboratory (USA)
Emine Begum Gulsoy, Northwestern University (USA)
Yang Jiao, Arizona State University (USA)

Learn More at www.tms.org/TMS2016