8th International Conference on Physical and Numerical Simulation of Materials Processing (ICPNS)

14–17 October 2016

Seattle, Washington | Hosted by Purdue University

SESSION 1: MODELS AND METHODS, SALON A

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SATURDAY, OCTOBER 15, 2016

Integration of advanced simulation and visualization for material processing

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ABSTRACT

The integration of simulation and visualization can provide a cost-effective tool for process optimization, design, scale-up, and troubleshooting. The Center for Innovation through Visualization and Simulation (CIVS) at Purdue University Calumet has developed methodologies for such an integration with applications in various manufacturing processes. The methodologies have proven to be useful for virtual design and virtual training to solve problems addressing issues on energy, environment, productivity, safety, and quality in steel and other industries. In collaboration with its industrial partnerships, CIVS has provided solutions to companies, saving over $38 million. CIVS is currently working with Steel industry to establish an industry-led *Steel Manufacturing Simulation and Visualization Consortium t*hrough the support of National Institute of Standards and Technology AMTech Planning Grant. The consortium focuses on supporting development and implementation of simulation and visualization technologies to advance steel manufacturing across the value chain.

KEYWORDS: simulation, visualization, material processing, steel industry