Purdue School of Materials Engineering and Purdue Center for Metal Casting Research

Present

Peter G. Winchell Distinguished Lecture Series Seminar

Date: Monday, Feb. 18, 2013
Time: 3:30 Refreshments
3:45 Seminar
Place: ARMS 1010

Professor Charles Monroe

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Material Science and Engineering
University of Alabama at Birmingham

Science Fiction to Reality in Metal Casting Processing

ABSTRACT

We are inspired by science fiction to answer hard questions and solve problems never attempted in the past. This presentation will review some science fiction that has become reality in the world of metal casting processing that is in use today at OEMs. This is accomplished by using computer modeling of the process to anticipate defects and process problems. Some solutions are real and some are still fiction but all the engineering helps to clarify the direction of the next big breakthrough.

SHORT BIO

Charles Monroe is an Assistant Professor at the University of Alabama at Birmingham and leads the Metals group in the Department of Materials Science & Engineering (www.uab.edu/metals). For the last 10 years, his research has focused on solidification, metal casting, design for manufacture, simulation and modeling. He has worked in the metal casting industry for companies such as Caterpillar and Ashland Chemical assisting in metal casting process improvements. He obtained all his degrees in mechanical engineering from the University of Iowa, PhD and MS, and Penn State University, BS.

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