

*Thursday May 15 – 14:00 → 15:30*  
**Process – Microstructure Interactions**  
*Chairmen : L. Nazé & C. O'Brien*

**14:00 - About the Annealing Twin Density Evolution during Grain Growth in the Inconel 718 Superalloy**

Yuan Jin<sup>1</sup>, Marc Bernacki<sup>1</sup>, Andrea Agnoli<sup>1</sup>, Brian Lin<sup>2</sup>, Gregory S. Rohrer<sup>2</sup>, Anthony D. Rollett<sup>2</sup>, Nathalie Bozzolo<sup>1</sup>

<sup>1</sup>CEMEF Mines-ParisTech, Sophia Antipolis, FR, <sup>2</sup>Carnegie Mellon University, Pittsburgh, USA

**14:20 - High temperature Behaviour of Liquid Ni-Based Alloys with Oxide Ceramics**

Natalia Sobczak<sup>1</sup>, Robert Purgert<sup>2</sup>, Jerzy J. Sobczak<sup>1</sup>, Rafal Nowak<sup>1</sup>, Marta Homa<sup>1</sup>, Grzegorz Bruzda<sup>1</sup>, Bartłomiej Korpala<sup>1</sup>

<sup>1</sup>Foundry Research Institute, Krakow, PL, <sup>2</sup>Energy Industries of Ohio, Independence, USA

**14:40 - Tailoring the Grain Structure of IN718 during Selective Electron Beam Melting**

Carolyn Körner, Harald Helmer, Andreas Bauereiß, Robert F. Singer  
University of Erlangen-Nuremberg, Erlangen, DE

**15:00 - Effect of Heat Treatment on the Subsurface Microstructure and Microhardness of Broached Ni-based Superalloy Inconel 718**

Zhe Chen<sup>1</sup>, Ru Lin Peng<sup>1</sup>, Pajazit Avdovic<sup>2</sup>, Jinming Zhou<sup>3</sup>, Johan Moverare<sup>1</sup>, Fredrik Karlsson<sup>2</sup>, Sten Johansson<sup>1</sup>

<sup>1</sup>Linköping University, Linköping, SE, <sup>2</sup>Siemens Industrial Turbomachinery AB, Finspång, SE, <sup>3</sup>Lund University, Lund, SE

**15:20 - Hot isostatic Pressing of Single-Crystal Ni-Base Superalloys: Mechanism of Pore Closure and Effect on Mechanical Properties**

Alexander Epishin<sup>1</sup>, Thomas Link<sup>1</sup>, Bernard Fedelich<sup>2</sup>, Igor Svetlov<sup>3</sup>

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