

# THE WORLD COMES HERE.

# TMS 2023

## 152<sup>nd</sup> Annual Meeting & Exhibition

MARCH 19–23, 2023  
SAN DIEGO CONVENTION CENTER &  
HILTON SAN DIEGO BAYFRONT  
SAN DIEGO, CALIFORNIA, USA  
#TMSANNUALMEETING



## SUBMIT AN ABSTRACT BY JULY 1 AND JOIN US AT TMS2023 FOR THIS SPECIAL SYMPOSIUM!

### HONORARY SYMPOSIUM

## Frontiers in Solidification: An MPMD Symposium Honoring Jonathan A. Dantzig

#### ABOUT THE SYMPOSIUM

The ninth edition of the Frontiers in Solidification symposium series is dedicated to Jonathan A. Dantzig, a recognized world leader in the field of solidification, casting, and computational modelling of materials processing and microstructure development. Starting his career in process modelling, he later tackled more fundamental aspects of solidification modeling at the microstructure level. Therefore, this edition is particularly focused on process and microstructure modeling, even though contributions across the entire field of solidification are welcome.

These include:

- Fundamental aspects of solidification which advance our understanding of how microstructures develop and evolve during solidification experiments or processes
- Contributions which put forward original interpretations, observations of novel phenomena, and outstanding challenges from both fundamental and applied perspectives, as well as transfer of fundamental knowledge to practical applications
- Investigation methods including theory, experiments, characterization, modeling across all relevant length and time scales, as well as data-driven approaches
- Contributions that combine novel characterization techniques, challenging property measurements, and computational simulations across scales are especially encouraged



#### ABOUT THE HONOREE

**Jonathan "Jon" Dantzig** received his undergraduate and graduate degrees at The Johns Hopkins University, culminating in a Ph.D. in 1977. His thesis co-advisors, Stephen Davis and Robert Pond, Sr., taught him the importance of modeling and experimental verification that served as the cornerstones of his career. His first post-graduate job was at Olin Metals

Research Laboratories, where he applied both of these skills to the study of degassing of Al alloys and DC casting with rotating magnetic fields. He is co-inventor on 20 U.S. patents derived from that work.

In 1982, he moved to the University of Illinois, where he studied solidification processing of aluminum, cast iron, steel, and other alloys, at scales ranging from nanometers to meters. Most of his Masters and Ph.D. students have gone on to work in the ground vehicle industry, including Ford, GM, Cummins, and Caterpillar, among others. In 2008, he retired as W. Grafton and Lillian B. Wilkins Professor of Mechanical Engineering, after which he continued his career as both research professor at University of Illinois Urbana-Champaign and invited professor at EPFL in Switzerland.

Dantzig has received numerous awards for excellence in teaching and research, including the Bruce Chalmers Award and Distinguished Educator Award from TMS and the Brimacombe Prize. He has co-authored about 100 journal articles and two textbooks. He continues to teach in an annual short course on solidification for industrial and academic researchers, and to engage in research with colleagues in academia and industry.

#### SYMPOSIUM SPONSORS

TMS Materials Processing and Manufacturing Division  
TMS Functional Materials Division  
TMS Light Metals Division  
TMS Structural Materials Division  
TMS Aluminum Committee  
TMS Chemistry and Physics of Materials Committee  
TMS Process Technology and Modeling Committee  
TMS Solidification Committee

#### SYMPOSIUM ORGANIZERS

**Andre B. Phillion**, McMaster University  
**Michel Rappaz**, EPFL  
**Melis Şerefoğlu**, Marmara University  
**Damien Touret**, IMDEA Materials Institute

[www.tms.org/TMS2023](http://www.tms.org/TMS2023)

**QUESTIONS?**  
Contact [programming@tms.org](mailto:programming@tms.org)