

Modeling Thermal Manufacturing Processes

Modeling has matured from being a research tool to a production tool for processing of metal components. The presentations in this symposium will discuss applications of analytical modeling of a variety of thermally driven processes that demonstrate current uses of modeling for process design, understanding and improvement. In addition, the modeling methods for spanning metallurgical length scale and future directions of modeling will be addressed.

Date: April 29, 2020

Venue: Crowne Plaza Hotel
7230 Engle Road
Middleburg Heights, OH 44130

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| 8:00 – 8:30 | Registration, Coffee, Juice, etc. |
| 8:30 – 8:45 | Opening remarks |
| 8:45 – 9:30 | Dr. Liu, PSU, CALPHAD |
| 9:30 – 10:15 | Dr. Steve Arnold, NASA-GRC, ICME & Future Directions for Process Modeling |
| 10:15- 10:25 | break |
| 10:25 – 11:05 | Adam Hope, Thermo-Calc Software |
| 11:05 – 11:40 | Dr. Charlie Li, DANTE Solutions, “Design and Modeling of Carburization Processes” |
| 11:40 – 12:10 | Justin Sims, DANTE Solutions, “Modeling Residual Stress and Distortion of Quench Hardened Steel Parts” |
| 12:10 – 1:00 | lunch |
| 1:00 – 1:45 | Rob Goldstein, Fluxtrol Inc., “Induction – Electromagnetics” |
| 1:45 – 2:30 | Andy Banka, Airflow Sciences Corporation, “The Role of CFD in Thermal Process Modeling” |
| 2:30 – 2:45 | break |
| 2:45 – 3:30 | Dan Londrico, DANTE Solutions, “Distortion of Permanent Casting Molds” |
| 3:30 – 4:00 | ASMI Staff, “Data Needs for Process Modeling” |
| 4:00 | wrap-up |