HEAT TREAT 21
31st Heat Treating Society Conference & Exposition

SEPTEMBER 14-16, 2021
St. Louis, Missouri, USA  |  America’s Center Convention Complex

CALL FOR PAPERS
SUBMIT YOUR ABSTRACT TODAY!
SUBMISSION DEADLINE: JANUARY 14, 2021
heattreatevent.org

ORGANIZED BY:
Heat Treating Society
ASM International

CO-LOCATED WITH:
IMAT
ASM’s Annual Meeting
Motion + Power Technology Expo
THE EVENT THAT BRIDGES RESEARCH WITH INDUSTRY!

Heat Treat is the premier conference and expo for heat treating professionals, attracting global innovators, researchers, influencers and decision makers from around the globe.

THIS YEAR’S CONFERENCE AND EXPO WILL FEATURE:

- Latest research and industry insights offered during more than 125 technical presentations. New topics added!

- 3 days of face-to-face networking opportunities with approximately 200 heat treat exhibitors/companies. All of the top companies and big names in the heat treating industry will be represented!

- **NEW!** Co-location with ASM’s Annual Meeting, “International Materials, Applications and Technologies (IMAT)” Conference & Expo, providing Heat Treat attendees with access to 150 materials-related exhibitors and more than 600 additional technical presentations and workshops. Special crossover keynotes and technical sessions are planned!

- Continued co-location with Motion + Power Technology Expo 2021 with access to an additional 300 exhibitors.


- VIP guided industry tour.

- Student/emerging professionals initiatives, including Fluxtrol Student Research Competition and the new ASM Heat Treating Society Strong Bar Student Competition.
2021 TECHNICAL PROGRAM TOPICS

We encourage submissions relevant to thermal processing, including the following topic areas.

- Additive Manufacturing / 3D Processing
- Applied Technology / Processes and Applications
- Atmosphere Technology and Surface Engineering
- Automation and Control
- Automotive Lightweighting
- Distortion and Control
- Environmental Standards and their Impact on Heat Treating Industry
- Failure Analysis of Heat Treated Components (joint session with IMAT/ Failure Analysis Society)
- Induction Heat Treating
- Industry Internet of Things / Industry 4.0
- Materials Durability / Mechanical Testing
- Microstructural Development / Characterization
- Multi-scale Modeling of Materials Behavior / ICME (joined with IMAT), cross promotion
- Powder Metallurgy
- Process Simulation
- Quenching Technologies
- Residual Stress
- Thermal Mechanical Processing
- Thermal Processing of Non-Metals (ceramics, composites, polymers)
- Vacuum Processes and Technology
- Welding / Joining

When submitting your 100-150 word, previously unpublished abstract, please select the topic area that best matches your research. Accepted submissions will be grouped into sessions of similar or complementary topics.

CONFERENCE PAPER POLICIES

NO PAPER, NO PODIUM

If an abstract is accepted into the Heat Treat 2021 technical program, the author will be required to submit either a full manuscript (6-10 pages) or an extended abstract (3-4 pages) by the deadline date. If a manuscript or extended abstract is not submitted, the author’s presentation will be withdrawn from the program and the author will not be allowed to present at Heat Treat. Poster presenters are excluded from this policy.

Complimentary full conference registration will be offered to authors (Presenting author only) who submit a full manuscript (6-10 pages) for the proceedings.

JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE (JMEP)

Authors of high-quality completed manuscripts may be invited to submit to a special heat treat focus issue of the Journal of Materials Engineering & Performance. Please indicate your interest in that option when submitting your abstract. All of the papers that appear in JMEP are published on SpringerLink and indexed by GoogleScholar. In 2019, forty (40) Heat Treat authors were invited to submit to the journal.
STUDENT COMPETITIONS

FLUXTROL STUDENT RESEARCH COMPETITION

Heat Treat 2021 will offer a young innovative scientists/professionals competition-based award and recognition program, seeking to encourage participation of young scientists in the ASM Heat Treating Society, and to provide attractive offers and opportunities in the worldwide Thermal Processing community. We are soliciting abstract submissions based on thermal processing of metal/metal containing components for this competition. This is a 2-step competition encompassing a poster competition, as well as an oral presentation competition for semi-finalists.

STRONG BAR COMPETITION

Student teams will heat treat steel bar to achieve the highest combination of bending strength and bend deflection. Three pre-machined cylindrical pieces of 4140 steel will be provided by the ASM Heat Treating Society to each team (only one complete sample must be submitted for testing at Heat Treat 2021; two samples are for experiment and analysis). Teams will heat treat the specimen according to their best choice and bring the heat-treated cylinders to Heat Treat 2021. Teams will provide a poster that describes their heat treatment method, the hardness profile, and microstructure. The bars will be tested in bending on the exhibit floor to determine the winners.

Visit heattreatevent.org for additional information regarding the student competitions featured at Heat Treat 2021.