

8th International Congress on the Science and Technology of Steelmaking Recap

The 8th International Congress on the Science and Technology of Steelmaking (ICS), organized by AIST's Metallurgy — Steelmaking & Casting Technology Committee, is an internationally supported conference providing a forum for academic and industrial researchers to present their work on topics in process metallurgy, particularly those related to steel production, refining and casting. The conference was aimed at creating an opportunity for a technical exchange at an international level among the numerous experts involved in steelmaking.

Over 100 metallurgists, engineers, and operators from producers and suppliers, professors, students, and researchers convened in Montreal, Que., Canada, on 2–4 August 2022 to attend the program, which contained more than 100 presentations. These presentations were organized into sessions on metallurgy, slag engineering, fluid flow dynamics and solidification, electric arc furnace and basic oxygen furnace processes, as well as secondary refining and continuous casting.





The event kicked off with welcome greetings from Sridhar Seetharaman, Arizona State University, who led the event's International Advisory Board. Seetharaman noted the importance of the conference to the industry, recognizing that steel is a critical component of society and the environment. Pallava Kaushik, ArcelorMittal Global R&D – East Chicago and head of the organizing committee, provided additional details regarding event logistics and the recognition of the organizers involved in program development. Both Seetharaman and Kaushik asked for a moment of remembrance for Dr. Richard Fruehan, an industry icon

for the research and study of liquid steel metallurgy who had passed away prior to the event.

The six keynote presentations were delivered as the first session of the event with P. Chris Pistorius, Carnegie Mellon University, leading off with his presentation titled “Decarbonization Priorities for Electric Furnace Steelmaking,” followed by “Different Approaches to Trace the Source of Non-Metallic Inclusions in Steel,” by Susanne Michelic, Montanuniversität Leoben; “A Possible Reason Why Ti-SULC Grades Are More Prone to CC Clogging Issues Than Other Al-Killed Grades,” by John Lehmann, ArcelorMittal



International Advisory Board

Chair

- Sridhar Seetharaman, Arizona State University

Co-Chairs

- P. Chris Pistorius, Carnegie Mellon University
- Antoine Allanore, Massachusetts Institute of Technology
- Ken Coley, Western University

Organizing Committee

- Pallava Kaushik, ArcelorMittal Global R&D – East Chicago
- Bryan Webler, Carnegie Mellon University
- Judy Li, Cleveland-Cliffs Indiana Harbor
- Ron O'Malley, Missouri University of Science and Technology
- Bill Jones, U. S. Steel – Granite City Works
- Thinium Natarajan, U. S. Steel Research and Technology Center

Global R&D; “Key Issues for Near-Net-Shape Casting Technology,” by Wanlin Wang, Central South University; “Revisiting Oxide Metallurgy by Controlling the REDOX Behavior During Metal Additive Manufacturing,” Jung-Wook Cho, POSTECH; and “Physical Chemistry of Dissolution of Nutrients From Steelmaking Slag Into Aqueous Solution Containing Organic Acids,” by Hiroyuki Matsuura, University of Tokyo.

The event included a number of networking opportunities for researchers to continue discussions as well as a virtual component for some attendees who could not attend

the event in person. A conference dinner concluded the event.

AIST would like to extend a special note of appreciation to the members listed above who dedicated their time on the International Advisory Board chaired by Sridhar Seetharaman, Arizona State University, and the Conference Organizing Committee led by Pallava Kaushik, ArcelorMittal Global R&D – East Chicago. ♦

The next International Conference on the Science & Technology of Steelmaking (ICS 2024) is to be held in Jeju, South Korea, in 2024.

