



AIST Young Professionals



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What first interested you about learning more about the steel industry?

My first contact with metallurgy was in the first semester of my bachelor's studies. I originally planned to study process engineering, but because the first year at our university is similar across all programs, I also explored other options, and metallurgy caught my attention. We watched videos on steel production, cast a small melt and took a field

trip to the steel plant next to the university. At that time, I realized that a small pyromaniac lives in me.

Describe the coursework and degrees that you have obtained. Did you participate in any of AIST's programs or attend AIST events as a student?

After completing my B.S. and M.S. studies, with a focus on the iron and steel industry as well as nonferrous metallurgy, I started my Ph.D. in ferrous metallurgy, primarily inclusion metallurgy. I do not regret my decision to stay at the university. During my nearly four years as a Ph.D. candidate, I had the opportunity to attend several conferences worldwide, build a network with leading researchers and managers, and become an expert in my field. One of the most formative events for me was AISTech 2023 in Detroit. It was the first time I attended a conference on my own, without my supervisor or any colleagues. I participated in the student plant tour at Cleveland-Cliffs, met many people and even became close friends with some of them.

Have any AIST programs assisted with your career advancement?

AIST definitely helped advance my career. Together with my colleagues, I won the Richard J. Fruehan Award in 2024 for the research "Different Approaches to Trace the Source of Non-Metallic Inclusions in Steel." A year later, I placed third in the Hunt-Kelly Outstanding Paper Award. These two prizes brought greater recognition to my research worldwide.

Have you had any mentors that have assisted with your career development so far? If so, how did you identify them as a mentor, and what impact have they made thus far?

My Ph.D. supervisor, Prof. Michelic, has been a supportive mentor. I identified her as a mentor early on because she combines rigorous technical expertise in steelmaking with genuine openness. She listens carefully, encourages curiosity and consistently provides actionable feedback. She accompanied me to my first international conference, ICS 2022 in Toronto, which was a turning point: she introduced me to key collaborators, helped me present my work clearly and showed me how to find my way in the professional community in our field. Since then, she has continued to support my ideas, challenge me to raise the bar and advocate for opportunities that stretch



my capabilities. Her mentorship has shaped my research direction, strengthened my confidence and accelerated my transition from student to independent researcher.

What advice would you give to students considering a career in the steel industry?

Go for it. The steel industry is in the middle of a historic transformation. The shift to CO₂-free steel production offers an opportunity to contribute your ideas and be directly involved in developing new technologies. Hence, I advise interested students, already in the early stages of their studies, to get close to operations (internships and plant visits), be interdisciplinary, and build their own network by participating in student events and conferences.

What do you find unique and interesting about the steel industry? What do you enjoy the most about it?

The steel industry is interdisciplinary and diverse. That's what keeps me engaged. For example, experts around the world are developing new strategies and technologies for iron reduction, optimizing secondary metallurgy, designing alloys to enhance performance, and deepening understanding of steel-slag-refractory interactions to further improve cleanliness and quality. In my research, I connect chemistry, physical metallurgy and process engineering. One week, I spent hours next to furnaces. Next, I work in a cleanroom to analyze my samples with highly sensitive techniques. Recently, I have also been collaborating with my colleagues to implement AI. ♦

Are you a steel professional age 35 or younger?

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