The ESTEP "Smart Factory" Focus Group
is pleased to announce

ESTEP
European Steel Technology Platform

AI-4-Steel

ESTEP Workshop

Overview, recent developments and future trends

15-16
APRIL 2026

2 days workshop

Live Congress,
Hauptplatz 1
Leoben (Austria)
https://www.livecongress-leoben.at/

DEADLINES:
Abstract submission: 26 February 2026
Abstract selection: 9 March 2026

SPONSORSHIP OPPORTUNITIES

Sponsorship is always welcome. Members of ESTEP interested in sponsoring the event (cost 1,200 €) are invited to contact ESTEP via e-mail: D.Snaet@estep.eu. As soon as sponsorship availability is provided, the logo of the sponsor will be included in the updated version of the flyer.

TOPICS

A. Strategy, policy and enablers
- Barriers, enablers and policy actions for AI deployment in the steel industry
- Data infrastructure, standardization and cyber-security for AI implementation in the steel sector.

B. AI for ironmaking, steelmaking and downstream processing
- AI-based solutions for modelling, monitoring, optimization and control of iron- and steelmaking processes.
- AI for downstream processing and product quality
- Hybrid modelling and digital twins across the steel value chain

C. Human-centered, safe and skilled workplaces
- AI for health, safety and human-centered work in steel plants
- AI-supported training, upskilling and knowledge management

D. Generative, agentic and advanced AI: new frontiers
- Generative and agentic AI in the value chain
- Advanced AI, foundation models and agentic control in the steel industry

E. Cross-cutting topics
- AI for decarbonization, resource efficiency and circularity
- Industrial case studies, demonstrators and scale-up of AI in steel plants

The workshop is open to other AI applications/solutions from the metal sector to share experiences and good practices.

BACKGROUND

Artificial Intelligence (AI) is one of the megatrends of this century and the largest disruption today for its pervasiveness in any industrial field for applications and needed services even though, conventional digital technologies continue to occupy a key role being further reinforced by AI and Machine Learning (ML). The peculiarities of the steel sector offer to AI opportunities in terms of e.g. flexibility, interoperability and adaptability of AI-based applications and modelling tasks, automatic and autonomous operations, increase of human operators' capabilities, self-organization for complex tasks. On the other hand, the steel sector also faces big challenges connected, for example to the present difficult economic contingency, which affects long-term investments, and a generational turnover for the incoming decade.

THE AIMS

The workshop aims at highlighting trends, opportunities and challenges connected to AI-based solutions in the steel sector by:

- Investigating the demands of the sector while broadening the view from single topic to the whole picture.
- Analyzing costs and added value of AI use in the steel field, by identifying barriers and enablers to exploit their full potential.
- Supporting a realistic approach to AI and ML in terms of expectations, complexity, training, skills, investments.

The Focus Group Smart Factory invites any stakeholder to the submission of scientific contributions to:

- provide examples of best practices or market/prototypal solutions
- evaluate new frontiers and potential applications of AI in steel sector.

ABSTRACT SUBMISSION

Authors wishing to present a contribution are asked to prepare maximum 2 pages abstract including figures and references. The abstract needs to be submitted to ESTEP by e-mail: D.Snaet@estep.eu.
During the workshop, the submitted extended abstracts will be presented with a duration according to the number of papers that will be submitted (about 10 minutes). More details will be provided at a later stage.

SCIENTIFIC COMMITTEE

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Costanzo Pietrosanti (Danieli Automation)
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