CONFERENCE PROGRAMME

STEELSIM 2025

11TH INTERNATIONAL CONFERENCE
ON MODELLING AND SIMULATION OF
METALLURGICAL PROCESSES IN STEELMAKING

2-4 SEPTEMBER 2025 · TŘINEC CZECH REPUBLIC

ČESKÁ HUTNICKÁ SPOLEČNOST
CZECH METALLURGICAL SOCIETY

Last Update August 22, 2025

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ABOUT THE CONFERENCE

We are pleased to announce the organization of the 11th International Conference on Modelling and Simulation of Metallurgical Processes in Steelmaking STEELSIM 2025, which will be held in Třinec, Czech Republic, 2 - 4 September 2025, and organized by the Czech Metallurgical Society.

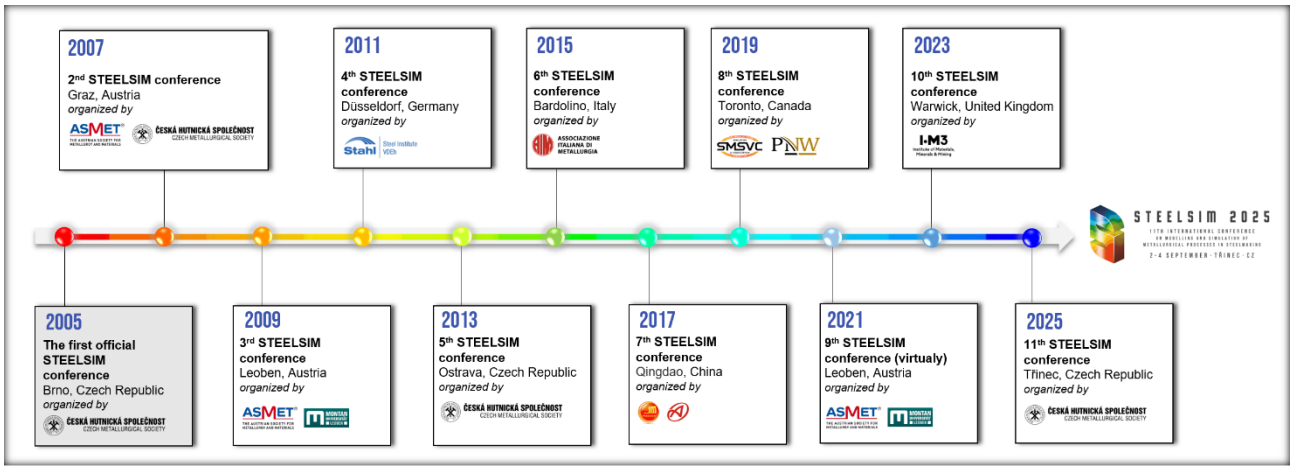
The Czech Metallurgical Society together with general partner TŘINECKÉ ŽELEZÁRNY, a.s. were behind the establishment of this conference in 2003 in Třinec when the discussion about new conference focused on modelling was done during the conference Continuous Casting of Billets and Modelling of Steelmaking Processes (October 21-23, 2003, Třinec, Czech Republic). Then, the first official STEELSIM 2005 conference was held in 2005, in Brno from 25 to 27 October.

The STEELSIM conference is a part of the Conference calendar of the International Society of Steel Institutes (www.issisteel.org).

The conference is well-defined and aims to offer a great opportunity for experts in the field of numerical modelling and simulation. Attendees come from spheres of academic research as well as from the ironmaking/steelmaking industry to share knowledge and new scientific/technical achievements, and to discuss the common challenges and potential pathways for future development. It will cover current state-of-the-art simulated and predictive modelling in steel design and manufacture.

Organizing committee

CONFERENCE HISTORY



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Czech Metallurgical Society / Průmyslová 1034 / Staré Město / 739 61 Třinec / Czech Republic / PredsedaCHS@trz.cz / +420 558 532 152

CONFERENCE COMMITTEES

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CONFERENCE COMMITTEES

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Maryla CARRARA	Czech Metallurgical Society / TŘINECKÉ ŽELEZÁRNY, a.s.
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Jiří CUPEK, jr.	Czech Metallurgical Society / TŘINECKÉ ŽELEZÁRNY, a.s.

CONFERENCE SECRETARIAT	CO-ORGANIZATION / VENUE
ČESKÁ HUTNICKÁ SPOLEČNOST, z.s. (Czech Metallurgical Society, z.s.) Průmyslová 1034 739 61 Třinec - Staré Město Czech Republic Phone: +420 558 532 152 E-mail: info@steelsim2025.com www.hutnickaspol.cz	**TRISIA, a.s.** náměstí Svobody 526 739 61 TŘINEC Czech Republic E-mail: info@steelsim2025.com www.trisia.cz TRISIA

VENUE

CONFERENCE HOST TOWN / VENUE

The STEELSIM 2025 Conference takes place in **Třinec**, Czech Republic. This city lies in the border region of Těšín Silesia, neighbouring both Poland and Slovakia. Třinec combines the steel heart of its industry with the beauty of the surrounding countryside. Within minutes of exploring the city centre with its touch of steelmaking, you can find yourself on the peaks of the nearby mountains, relaxing undisturbed in the middle of the Beskydy forests. Traditional architecture and folklore are also highlights of the region. (www.trinecko.cz).

The conference venue is the Cultural and Congress Center – **TRISIA, a.s.** (https://www.trisia.cz/).

HOW TO GET THERE: https://www.steelsim2025.com/maps-transportation/

SOCIAL EVENING VENUE – FOJTSTVÍ

The venue selected for the social evening is **Fojtství Oldřichovice** (https://fojtstvioldrichovice.cz/), located just outside the center of Třinec. This renovated historical building once served as the residence of local reeves and today stands as a unique cultural and social venue. Surrounded by the beauty of the Beskydy Mountains, this stylish location offers a warm and welcoming atmosphere – ideal for informal gatherings, relaxation, and experiencing local hospitality after a full day of conference activities.

HOW TO GET THERE: Bus will be available – see information below.
GPS: 49.64614, 18.63437

DINNER VENUE – MUSEUM

The history of the city of Třinec, the TŘINECKÉ ŽELEZÁRNY plant, and the wider region can be explored in the local **museum,** which will also host the conference dinner – see information below (www.muzeumtz.cz).

HOW TO GET THERE: Bus will be available – see information below.
GPS: 49.67695, 18.66398

PLANT VISIT – TŘINECKÉ ŽELEZÁRNY, A.S. (www.trz.cz/en)

The Largest Steel Producer in the Czech Republic. The rich tradition of industrial metallurgical production in Třinec dates back to the first half of the 19th century. The first blast furnace was lit on 1 April 1839. Since then, Třinecké železárny has built a stable position on the market for steel and other metallurgical products with exports to many countries around the world.

HOW TO GET THERE: Bus will be available – see information below.

IMPORTANT INFORMATION FOR PARTICIPANTS

1. Conference Venue

- The venue is located in TRISIA, a.s., nám. Svobody 526, 739 61 Třinec, Czech Repiblic: www.trisia.cz.
- Parking will be available in front of the venue. If you plan to arrive by car, please inform us in advance so that we can ensure sufficient parking capacity.

2. Language

- The official language of the conference is English. No translation will be provided.

3. Registration & Entrance

- Each participant will receive **Entrance Pass**, which you will present at registration. The entrance pass is not transferable and is only in the name of the participant.
- You will receive a name badge upon registration – it must be worn at all times during the conference and shown when requested.

4. Conference Materials

- Each participant will receive the conference proceedings on a **USB flash drive** during registration.

5. Presentations

- Speakers may use their own presentations platform. Please include either the conference logo or, at minimum, the conference name, date, and venue on the title slide or in the footer of your presentation. Format: PowerPoint (MS Office 2000 and newer) or Adobe Acrobat. Please, send your final version of presentation on email: info@steelsim2025.com.

6. Poster

- In the case of poster presentation, please, use the poster size: A1 - 594 mm (width) × 841 mm (height).
- The Best Poster Competition will be a part of the Poster Session.

7. Conference Programme

- The programme is available online at: https://www.steelsim2025.com/timetable-programme/
- Please check it regularly, as updates will be made continuously.

8. Social Events

Tuesday, 2 September 2025 – Evening at Fojtství (located around 7 km from Trisia, view on map)

- Comfortable shoes are recommended, as the courtyard is paved with cobblestones.
- Bus transport will be provided from Hotel Vitality starting at 17:30 and from Trisia starting at 17:45.
- Return shuttle service from Fojtství to Trisia starting at 21:00, 21:45 and 22:30 (the last bus continues to Hotel Vitality).

Wednesday, 3 September 2025 – Evening at the Museum of TŘINECKÉ ŽELEZÁRNY and the City of Třinec
(located around 2 km from Trisia, view on map)

- Includes a guided tour of the museum.
- Regular conference footwear is suitable.
- Bus transport will be provided from Hotel Vitality starting at 17:40 and from TRISIA starting at 17:50.
- Return shuttle service from Museum to Hotel Steel House and Hotel Vitality starting at 21:00 and 22:00.

9. Thursday, 4 September – Schedule Change & Excursion (Plant Tour)

- The PLANT TOUR has been moved to the afternoon time slot (13:00 - 15:00), and the Technical Session with oral presentations will now take place in the morning time slot. This adjustment was necessary due to planned maintenance works and partial operational limitations at the TŘINECKÉ ŽELEZÁRNY plant, especially in the morning.
- 8:45 – 11:30 Technical Sessions, TRISIA, a.s.
- 11:30 – 12:30 Lunch

For excursion registered participant:

- 12:15 – TRISIA, teaching rooms (no. 1 and no. 2): **Pre-excursion health & safety briefing.**
- The participant of the visit to the plant will be equipped with protective equipment – a coat, helmet, safety glasses and hearing protection, which will be provided or otherwise by the organizer. The participant is required to wear long trousers and full-length shoes.
- Personal belongings can be stored at the conference venue – we will return there after the excursion.
- During the plant visit, participants are required to follow the instructions of the persons providing guidance during the visit.
- Transport to and from the excursion will be arranged by bus:
  - 12:30 Bus to Plant (from TRISIA to TŘINECKÉ ŽELEZÁRNY)
  - **13:00 – 14:30 Plant Tour**
  - 14:30 – 15:00 Bus to TRISIA (from TŘINECKÉ ŽELEZÁRNY to TRISIA, bus will wait at the plant)

10. Additional Information

- All updates will be posted on the conference website: www.steelsim2025.com
- For any questions, do not hesitate to contact us: info@steelsim2025.com

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CONFERENCE TOPICS

The main aim of the conference STEELSIM 2025 is to present new knowledge and trends in the optimization of iron and steel production using physical or numerical modelling, simulations, mathematical models, thermodynamic calculations, statistical models and related methods.

- **Theoretical Base** – Modelling of Fluid Flow, Multiphysics and Heat Transfer, Thermodynamic Calculations, Thermodynamic Data Establishment, Thermo-physical Properties etc.
- **Ironmaking –** Blast Furnace Processes, Cokemaking Processes, Coal Injection, Finex Process, Corex Process, Midrex Process etc.
- **Steelmaking –** Processes in BOF and EAF, Heating, Melting, Intensification, Decarburization, Degassing, Construction, Lifetime of Refractory, Equipment etc.
- **Secondary Metallurgy** – Ladle Metallurgy, Vacuum Treatment, Argon Blowing, Slag Interaction, Slag Entrainment, Inclusion Removal etc.
- **Steel Casting and Solidification** – Ingot Casting, Continuous Casting, Tundish Metallurgy, Processes in Shroud, SEN, Mould, EMS Modelling, Secondary Cooling, Soft Reduction, Solidification Modelling, Defect Prediction, ESR Modelling etc.
- **Forming Process Modelling** – Cold Rolling, Hot Rolling, Forging etc.
- **Heat Treatment** – Optimization of Heat Transfer, Evolution of Microstructural Phases, Kinetic Parameters, Dilatometry Utilization, Mechanical Behaviour Calculations, Calculation of Residual Stresses, Prediction of Cracking, Modelling of Hydrogen Diffusion, Carburization etc.
- **Data Mining & Logistics** – Identification of Process Variables, Application of Logistics Systems, Machine Learning Technique etc.
- **Related Topics** – Data Verification, Data Implementation, Optimization, Environmental Processes etc.

Colour of Topics in Technical and Poster Sessions

Theoretical Base	Secondary Metallurgy	Heat Treatment
Ironmaking	Steel Casting and Solidification	Data Mining & Logistics
Steelmaking	Forming Process Modelling	Related Topics

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CONFERENCE TIMETABLE

Monday	1 September 2025
Time	**Programme**
17:00	Early Congress Registration
18:00	**Get Together (TRISIA)**
Tuesday	**2 September 2025**
Time	**Programme**
8:00	Registration
9:00	**Opening, Welcome Address**
9:30	**Plenary Session**
10:30	Coffee Break
10:50	**Technical Session 1**
12:20	Lunch
13:30	**Technical Session 2**
15:00	Coffee Break
15:20	**Technical Session 3**
16:20	Coffee Break
16:40	**Technical Session 4**
17:45	Bus to Social Evening (17:30 from Hotel Vitality, 17:45 from TRISIA)
18:00	**Social Evening (Venue Location: "Fojtství" Oldřichovice - Třinec, Czech Republic)**
Wednesday	**3 September 2025**
Time	**Programme**
8:00	Registration
8:45	**Technical Session 5**
10:15	Coffee Break
10:45	**Technical Session 6**
12:00	Lunch
13:00	**Technical Session 7**
14:15	Coffee Break
14:35	**Technical Session 8**
15:35	Coffee Break + Poster Session (The Best Poster Competition)
17:50	Bus to Dinner (17:40 from Hotel Vitality, 17:50 from TRISIA)
18:00	**Dinner (Museum of TŘINECKÉ ŽELEZÁRNY and of the City of Třinec)**
Thursday	**4 September 2025**
Time	**Programme**
8:45	**Technical Session 9**
9:45	Coffee Break
10:05	**Technical Session 10**
11:05	**Closing remarks**
11:30	Lunch
12:30	Bus to Plant (from TRISIA)
13:00	**Plant Tour (TŘINECKÉ ŽELEZÁRNY, a.s.)** Steelmaking route / Long Products Rolling route

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CONFERENCE PROGRAMME

We are pleased to publish **the official version of the programme** for the STEELSIM 2025 conference including times and list of the oral presentations

The conference organisers reserve the right to make changes to the programme if necessary.
All updates will be communicated promptly including upload a new updated version of the programme on the conference website (www.steelsim2025.com).

Monday			1 September 2025
Time			Programme
From	-	To	
17:00	-	18:00	Early Congress Registration
18:00	-	20:00	Get Together (TRISIA)

Tuesday			2 September 2025	
Time			Programme	
From	-	To		
8:00	-	20:00	Registration	
9:00	**-**	**9:30**	**Opening, Welcome Address**	
9:00	-	9:30	**Opening remarks** - Members of the Honorary Board, Scientific Committee and Organizing Committee	
9:30	**-**	**10:30**	**Plenary Session** **Chairpersons:** *Markéta TKADLEČKOVÁ, Jiří CUPEK*	
9:30	-	9:50	**[PS_01] Smart-Steel: AI-Driven Control Models for Future Steel Production** MAŠLEJOVÁ Alica, BUĽKO Branislav, DEMETER Peter, LEGEMZA Jaroslav, FOGARAŠ Lukáš, HUBATKA Slavomír, HRUBOVČÁKOVÁ Martina, DZURŇÁK Róbert, FEDORKO Patrik, MIŠKOVIČOVÁ Zuzana, VASKOVÁ Iveta, ŠMIGURA Peter *Technical University of Košice, Košice, Slovakia*	
9:50	-	10:10	**[PS_02] Integrated CFD Models for Optimizing Scrap Melting in DC EAF** WANG Shiyu, UGARTE Orlando, OKOSUN Tyamo, ABRAHAM Sunday, WANG Yufeng, PETTY Randy, ZHOU Chenn *Purdue University Northwest, Hammond, The United States of America* *SSAB Americas, The United States of America*	
10:10	-	10:30	**[PS_03] Physicochemical Modelling of ESR Ingot Composition Changes** MEDOVAR Lev, STOVPCHENKO Ganna, LISOVA Liudmila *Tianjin Heavy Industries Research and Development Co, Tianjin, China* *China First Heavy Industries, Hellonglang, China* *Iron and Steel Institute of Z.I.Nekrasov of NAS of Ukraine, Kiev, Ukraine*	
10:30	**-**	**10:50**	**Coffee Break**	

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	Tuesday			2 September 2025	
	Time			Programme	
	From	-	To		
90 min	**10:50**	**-**	**12:20**	**Technical Session 1** Steelmaking / Steel Casting and Solidification / Heat Treatment / Data Mining & Logistics **Chairpersons:** *Mariola SATERNUS, Jiří MRAVEC*	
	10:50	-	11:05	**[TS1_01] EAF Process Optimization as a Key to Reducing Costs, Improving Product Quality, Ensuring Process Stability, and Minimizing CO_2 Emissions** ROHRHOFER Andreas, MAYRHOFER Anna, REINDL Thomas *Primetals Technologies Austria GmbH, Linz, Austria*	
	11:05	-	11:20	**[TS1_02] Tundish Filling Modeling and Starter Tube Designing to Prevent Freezing at Start-up** RAVE Marcel, RICHAUD Johan, KREIERHOFFMartin *Vesuvius plc, London, United Kingdom*	
	11:20	-	11:35	**[TS1_03] Numerical Simulations for Mold Level Sensor Development** KUPCZAK Marek *VÚHŽ a.s., Dobrá, Czech Republic*	
	11:35	-	11:50	**[TS1_04] Simulation-Based Process Chain Analysis of Bloom Continuous Casting and Subsequent Forming** SHVYDKII Evgenii, KOLDORF Sebastian *MAGMA Gießereitechnologie GmbH, Aachen, Germany*	
	11:50	-	12:05	**[TS1_05] Numerical Prediction of Thermal Kinetics in Industrial Furnaces Using FEM: The Role of Radiation and Multi-Part Interactions** MORENO Marc, LASNE Patrice, BARLIER Julien, GOTTI Arianna, FORNARA Alexandre *TRANSVALOR s.a., Sophia Antipolis Cedex, France / Aubert et Duval, Le Piat, France*	
	12:05	-	12:20	**[TS1_06] Future Simulations: Modern Approaches and Their Applications** MOŠTĚK Michal, HLOUŽEK Jakub, DRÁBEK Pavel, SVOBODA Aleš *TechSoft Engineering, spol. s r.o., Praha, Czech Republic*	
70 min	**12:20**	**-**	**13:30**	**Lunch**	
90 min	**13:30**	**-**	**15:00**	**Technical Session 2** Theoretical Base / Ironmaking / Steelmaking **Chairpersons:** *Orlando UGARTE, Petr FARUZEL*	
	13:30	-	13:45	**[TS2_01] The Shrinking Core Model of $CaCO_3$ Thermal Decomposition in Melt Slag** KIHARA Kengo, NOGAMI Hiroshi *Nippon Steel Corporation RE Center, Futtsu, Chiba, Japan / Tohoku University, Sendai, Japan*	
	13:45	-	14:00	**[TS2_02] CFD-PBM Multiphase Simulation of Polydispersed Bubbly Flow in a Gas-Stirred Vessel** AVATAR Krishna, MISHRA Rishikesh, MAZUMDAR Dipak *Indian Institute of Technology Kanpur, Kanpur, India*	
	14:00	-	14:15	**[TS2_03] Time-Extrapolation of an Industrial Tundish Case Using Recurrence CFD (rCFD)** LUMETZBERGER Hannes, PIRKER Stefan, QUETESCHINER Daniel, LICHTENEGGER Thomas *Johannes Kepler University, Linz, Austria / K1-MET, Linz, Austria*	
	14:15	-	14:30	**[TS2_04] Physical Modeling as a Basic Tool in Steel Production** SATERNUS Mariola, MERDER Tomasz, PIEPRZYCA Jacek *Silesian University of Technology, Gliwice, Poland*	
	14:30	-	14:45	**[TS2_05] Numerical Analysis on Reaction and Heat Transfer in Packed Bed of Burden Materials for Ironmaking** NOGAMI Hiroshi *Tohoku University, Sendai, Japan*	
	14:45	-	15:00	**[TS2_06] Description of the Scrap Hot Metal Interaction in Steelmaking Furnace Using a CFD-DEM Approach** HASSAN Mohammed, CHARRUAULT F., ROUT B.K., SCHRAMA F.N.H., DOGAN N., KUIPERS J.A.M., YANG Y. *TU Delft, Delft, Netherlands / TATA Steel Netherlands, IJmuiden, Netherlands / Eindhoven University of Technology, Eindhoven, Netherlands*	
20 min	**15:00**	**-**	**15:20**	**Coffee Break**	

	Tuesday			2 September 2025	
	Time			Programme	
	From	-	To		
60 min	**15:20**	**-**	**16:20**	**Technical Session 3** Steelmaking / Secondary Metallurgy / Data Mining & Logistics / Steel Casting and Solidification **Chairpersons:** *Carl SLATER, Tomáš HUCZALA*	
	15:20	-	15:35	**[TS3_01] Numerical Simulation of Multiphase Flow in the Submerged Entry Nozzle of the Continuous Casting Process Using an Eulerian-Eulerian Population Balance Model** ATF Alireza, BARATI Hadi, WU Menghuai *Montanuniversitaet Leoben, Leoben, Austria* *K1-MET, Leoben, Austria*	
	15:35	-	15:50	**[TS3_02] Hydrogen Removal during RH Degassing of Molten Steel: Real-time Recurrence CFD Predictions and Validation using Plant Data** ZHANG Xiaomeng, THUMFART Maria, WACHLMAYR Johannes, GRUBER Christine, RÖSSLER Roman, QUETESCHINIER Daniel, PIRKER Stefan *K1-MET GmbH, Linz, Austria* *voestalpine Stahl GmbH, Linz, Austria* *Johannes Kepler University, Linz, Austria*	
	15:50	-	16:05	**[TS3_03] LTT Model Development for Prediction of Steel Temperature During Secondary Metallurgy** MRAVEC Jiří, KALETA Jaromír, ZALISZ Gabriel, HUCZALA Tomáš, BOCEK David, PILKA Václav, MAREK Ryszard, CIENCIALA Marek, CUPEK Jiří jr., GAURA Jan, ZARZYCKI Jan *TŘINECKÉ ŽELEZÁRNY, a.s., Třinec, Czech Republic*	
	16:05	-	16:20	**[TS3_04] Numerical and Physical Modeling on Hydrodynamics in the One Strand Slab Tundish with Novel Design of "Umbrella" Type Ladle Shroud** CWUDZIŃSKI Adam *Czestochowa University of Technology, Częstochowa, Poland*	
20 min	**16:20**	**-**	**16:40**	**Coffee Break**	
45 min	**16:40**	**-**	**17:25**	**Technical Session 4** Steel Casting and Solidification **Chairpersons:** *Adam CWUDZIŃSKI, Petr KLUS*	
	16:40	-	16:55	**[TS4_01] Effect of Steel Bath Level in the Tundish on Flow Characteristics Using CFD Modelling** CUPEK Jiří jr., TKADLEČKOVÁ Markéta, CIBULKA Jiří, HUCZALA Tomáš, KLUS Petr *TŘINECKÉ ŽELEZÁRNY, a.s., Třinec, Czech Republic*	
	16:55	-	17:10	**[TS4_02] Physical Simulation– and Visualization of Metal Flow in Tundish-SEN-mould System and Indicated Risks of Clogging** ECK Joakim, NILSSON Christer, MANU Karthik, RAMIREZ LOPEZ Pavel *SWERIM AB, Luleå, Sweden* *SSAB EMEA AB, Sweden*	
	17:10	-	17:25	**[TS4_03] Flow Under Control: Modelling of Electromagnetic Effects in Continuous Casting** AYOUB Yahea, RAMIREZ LOPEZ Pavel, KESAVAN Sailesh, GUSTAFSSON Magnus, NILSSON Christer *SWERIM AB, Luleå, Sweden* *Luleå University of Technology, Luleå, Sweden* *SSAB EMEA AB, Sweden*	
	17:45			Bus to Social Evening (17:30 from Hotel Vitality; 17:45 from TRISIA)	
	18:00	**-**	**22:30**	**Social Evening (Venue Location: "FOJTSTVÍ" Oldřichovice - Třinec, Czech Republic)**	

	Wednesday			3 September 2025	
	Time			Programme	
	From	-	To		
	8:00	-	20:00	Registration	
90 min	8:45	-	10:15	**Technical Session 5** Theoretical Base / Steelmaking / Forming Process Modelling / Heat Treatment **Chairpersons:** *Alica MAŠLEJOVÁ, Rudolf MORAVEC*	
	8:45	-	9:00	**[TS5_01] Steels Thermophysical Properties Study Using Thermal Analysis and Calorimetry** SMETANA Bedřich, KAWULOKOVÁ Monika, ZLÁ Simona, DOBROVSKÁ Jana, CIBULKA Jiří, KLUS Petr, TKADLEČKOVÁ Markéta *VSB - Technical University of Ostrava, Ostrava, Czech Republic / TŘINECKÉ ŽELEZÁRNY, a.s., Třinec, Czech Republic*	
	9:00	-	9:15	**[TS5_02] Solute Drag Effect of Sn on the Austenite Grain Growth Kinetics** DUAN Jiaqi, JU Yulin, DASTUR Pedram, SLATER Carl, DAVIS Claire *University of Warwick, Coventry, United Kingdom*	
	9:15	-	9:30	**[TS5_03] Effect of Residual Elements on the Static Recrystallisation in C-Mn Steels** DASTUR Pedram, DUAN Jiaqi, JU Yulin, SLATER Carl, DAVIS Claire *University of Warwick, Coventry, United Kingdom*	
	9:30	-	9:45	**[TS5_04] Kinetic Study of Pure Iron Oxide Reduction with Hydrogen Using a Dynamic Triple Reaction Front Shrinking Core Model** SALUCCI Emiliano, D'ANGELO Antonio, RUSSO Vincenzo, GRÉNMAN Henrik, SAXÉN Henrik *Abo Akademi, Turku, Finland / Università di Napoli "Federico II", Naples, Italy*	
	9:45	-	10:00	**[TS5_05] Insights from Droplet Heat Transfer Modelling in Basic Oxygen Furnace** MADHAVAN Nirmal, BROOKS G.A., RHAMDHANI M.A., DOGAN N., YANG Y., ROUT B.K., OVERBOSH A. *TU Delft, Delft, Netherlands / Swinburne University of Technology, Melbourne, Australia / TATA Steel Netherlands, IJmuiden, Netherlands*	
	10:00	-	10:15	**[TS5_06] Numerical and Water Modelling Study on Electromagnetic Stirring Technology in Steelmaking** ZIELIŃSKA Monika, TENG Lidong, MADEJ Lukasz, MALINOWSKI Lukasz *ABB Sp. z o. o., Warsaw, Poland / AGH University of Krakow, Poland*	
30 min	10:15	-	10:45	**Coffee Break**	
75 min	10:45	-	12:00	**Technical Session 6** Steel Casting and Solidification / Forming Process Modelling **Chairpersons:** *Jaroslav PINDOR, Branislav BUĽKO*	
	10:45	-	11:00	**[TS6_01] Multiphysics CFD Modelling for Continuous Casting: A Holistic Approach to Process Insight** KESAVAN Sailesh, RAMIREZ LOPEZ Pavel, SUNDSTRÖM Anton *SWERIM AB, Luleå, Sweden / KTH, Royal Institute of Technology, Stockholm, Sweden*	
	11:00	-	11:15	**[TS6_02] Liquid Metal Flow Understanding around Submerged Nozzle to Limit Erosion and Increase Productivity in Bloom Casters** BUSOLINI Sara, TRUANT Marco, DONOFRIO Maurizio, RICHAUD Johan, Chen Lucas *ABS - Acciaierie Bertoli Safau S.p.A., Pozzuolo del Friuli (UD), Italy / Vesuvius plc, London, United Kingdom*	
	11:15	-	11:30	**[TS6_03] Optimizing Rotating Casting Mold Processes for Improved Steel Microstructure: Modeling and Experimental Validation** GOMES-RODRIGUES C.M., WU M., ZHANG H., HOLZGRUBER H., SCHERIAU A., HOLZGRUBER T., KHARICHA A. *Montanuniversität Leoben, Leoben, Austria / INTECO melting and casting technologies GmbH, Bruck a.d. Mur, Austria / Breitenfeld Edelstahl AG, St. Barbara im Mürztal, Austria*	
	11:30	-	11:45	**[TS6_04] Prediction of Liquidus and Solidus Temperatures and Solidification Paths in Duplex Stainless Steels** MAJOUDI Noura, ALATARVAS Tuomas, VISURI Ville-Valtteri *University of Oulu, Oulu, Finland*	
	11:45	-	12:00	**[TS6_05] High Carbon Wire Cracking During Cold Forming Process** JANOŠEC Marcel, FABÍK Richard, SMETANOVÁ Markéta, POZBAI Zoltán, MACHETANZ Marek *ŽDB DRÁTOVNA a.s., Bohumín, Czech Republic / D&D Drótáru Zrt., Miskolc, Hungary*	
60 min	12:00	-	13:00	**Lunch**	

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	Wednesday			3 September 2025	
	Time			Programme	
	From	-	To		
75 min	**13:00**	**-**	**14:15**	**Technical Session 7** Theoretical Base / Forming Process Modelling / Heat Treatment / Related Topics **Chairpersons:** *Bedřich SMETANA, Janusz DĄNEMARK*	
	13:00	-	13:15	**[TS7_01] Rapid Recrystallisation Modelling Removing the Dependence on Alloy Specific Fitting Parameters** SLATER Carl, DAVIS Claire, DASTUR Pedram, DUAN Jiaqi, JU Yulin *University of Warwick, Coventry, United Kingdom*	
	13:15	-	13:30	**[TS7_02] Simulation of High-Frequency Induction Welding of Thick-Walled Line Pipe Products** ELKABBANI ALHOUH Sami, SLATER Carl, DAVIS Claire *University of Warwick, Coventry, United Kingdom*	
	13:30	-	13:45	**[TS7_03] Optimising Strength in Structural Steel Tubes via Grain Size Control: A Combined Experimental and Modelling Approach to Controlled Cooling Strategies** DIXON Nathan, SLATER Carl, DAVIS Claire *University of Warwick, Coventry, United Kingdom*	
	13:45	-	14:00	**[TS7_04] Effect of Sn on $\gamma \rightarrow \alpha$ Phase Transformation in Low Carbon Low Alloy Steels** JU Yulin, DUAN Jiaqi, DASTUR Pedram, SLATER Carl, DAVIS Claire *University of Warwick, Coventry, United Kingdom*	
	14:00	-	14:15	**[TS7_05] Using Edger for Batch Planning of Continuous Casting - Challenges and Solutions** FINKELSHTEIN Vladimir *Smart Steel Technologies GmbH, Berlin, Germany*	
20 min	**14:15**	**-**	**14:35**	**Coffee Break**	
60 min	**14:35**	**-**	**15:35**	**Technical Session 8** Data Mining & Logistics / Related Topics **Chairpersons:** *David BOCEK (Markéta TKADLEČKOVÁ), Rudolf MORAVEC*	
	14:35	-	14:50	**[TS8_01] Accelerating Steel Casting CFD with Machine Learning** MERGL Josef, VILA Alija, ABBAS Ali, HUSAKOVIC Adnan *Primetals Technologies Austria GmbH, Linz, Austria*	
	14:50	-	15:05	**[TS8_02] Kinetic and Mathematical Modeling of Iron Oxide Reduction Using Hydrogen as Green Reducing Agent** D'ANGELO Antonio, SALUCCI Emiliano, RUSSO Vincenzo, GRÉNMAN Henrik, SAXÉN Henrik *Abo Akademi, Turku, Finland / Università di Napoli "Federico II", Naples, Italy*	
	15:05	-	15:20	**[TS8_03] Comparative Assessment of YOLO Architectures for Bubble Detection in Metallurgical Processes** SHARMA Amit, TAMYIGIT Orhun, EICKHOFF Moritz, ECHTERHOF Thomas, WUPPERMANN Christian *RWTH Aachen University, Aachen, Germany*	
	15:20	-	15:35	**[TS8_04] Plasma-Assisted Refining of Pig Iron: Role of Lime Charging Modes, Fluxed DRI Reduction Levels and Method of Melting** DISHWAR Raj Kumar *Indian Institute of Technology, Dhanbad, India*	
85 min	**15:35**	**-**	**17:00**	**Coffee Break + Poster Session (The Best Poster Competition)**	
	17:50			Bus to Dinner (17:40 from Hotel Vitality; 17:50 from TRISIA)	
	18:00	**-**	**22:00**	**Dinner (Museum of Třinecké Železárny and the City of Třinec)**	

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	Thursday			4 September 2025	
	Time			Programme	
	From	-	To		
60 min	**8:45**	**-**	**9:45**	**Technical Session 9** Steel Casting and Solidification **Chairpersons:** *Johan RICHAUD, Jiří CIBULKA*	
	8:45	-	9:00	**[TS9_01] A Coupled CFD-DEM Modeling of Clogging in Submerged Entry Nozzle during Steel Continuous Casting** SEDAGHAT Ali, BARATI Hadi, WU Menghuai *K1-MET, Leoben, Austria*	
	9:00	-	9:15	**[TS9_02] CFD Simulation of Flow Dynamics in a Twin-Slab Caster** MORAVEC Rudolf, MENG Dianzhi, NANDIPATI Sai Bhuvanesh, SILAEN Armin, ZHOU Chenn *United States Steel Corporation, Fairfield Tubular Steel Operations, Fairfield, The United States of America* *Purdue University Northwest, Hammond, The United States of America*	
	9:15	-	9:30	**[TS9_03] Physical and Industrial Investigations on Liquid Steel-Slag Interaction in the Four Strand Billet** STRÓŻIK Leszek, CWUDZIŃSKI Adam *Czestochowa University of Technology, Częstochowa, Poland*	
	9:30	-	9:45	**[TS9_04] Determination of Cooling Practices for Cold Charging Crack-Sensitive Slabs at ArcelorMittal Plants** CHANG Abel (Chongzhi), YIN Hongbin *ArcelorMittal Global R&D, Hamilton, Canada*	
20 min	**9:45**	**-**	**10:05**	**Coffee Break**	
60 min	**10:05**	**-**	**11:05**	**Technical Session 10** Forming Process Modelling / Heat Treatment / Related Topics **Chairpersons:** *Mariola SATERNUS, Jiří CUPEK*	
	10:05	-	10:20	**[TS10_01] Developing an Industrial Digital Twin Framework for Steel Forming: Validation through VDA 3-Point Bending of Advanced High-Strength Steels** CHESHMEHZANGI Amir, FARRUGIA Didier, AUINGER Michael, HAZRA Sumit *University of Warwick, Coventry, United Kingdom*	
	10:20	-	10:35	**[TS10_02] From Cooling Strategy to Microstructure: Towards a Digital Twin for the Run-Out Table in Hot Strip Rolling** MORENO Carlos, SLATER Carl, DAVIS Claire *University of Warwick, Coventry, United Kingdom*	
	10:35	-	10:50	**[TS10_03] Computer Simulation of Accelerated Cooling of Rails by Air** ŠIMEČEK Pavel *ITA s. r. o., Ostrava, Czech Republic*	
	10:50	-	11:05	**[TS10_04] Process-Based Quantification Framework for Product-Level Scope 1 - 2 CO_2 Emissions in Integrated BF-BOF Steelmaking** HUBATKA Slavomír, FOGARAŠ Lukáš, BUĽKO Branislav, DEMETER Peter, FINDORÁK Róbert, LEGEMZA Jaroslav, DEMETER Jaroslav, FEDORKO Patrik, MIŠKOVIČOVÁ Zuzana, VASKOVÁ Iveta *Technical University of Košice, Košice, Slovakia*	
15 min	**11:05**	**-**	**11:20**	**Closing remarks**	
60 min	**11:30**	**-**	**12:30**	**Lunch**	
	12:30			Bus to Plant (from TRISIA)	
	13:00	**-**	**15:00**	**Plant Tour (TŘINECKÉ ŽELEZÁRNY, a.s.)** Steelmaking Route / Long Products Rolling Route	

Wednesday	3 September 2025	
Time From - To	Programme	
15:50 - 17:00	**Poster Session (The Best Poster Competition)** Chairpersons: *Jiří CUPEK, Scientific Committee*	70min
[POSTER_01]	**Sources of Nitrogen in Pig Iron and Crude Steel for Its Analytical Modelling in BOF Production** DEMETER Jaroslav, BUĽKO Branislav, DEMETER Peter, HRUBOVČÁKOVÁ Martina, FOGARÁŠ Lukáš, HUBATKA Slavomír, PYLYPENKO Andrii, MAŠLEJOVÁ Alica *Technical University of Košice, Slovak Republic*	
[POSTER_02]	**Comparison of Downstream Velocity Fields of a Supersonic Oxygen Lance Using RANS Modeling and PIV** AN Jeongwoo, KIM Youngchul, SHIN Daehoon *Hyundai Steel Company, Dangjin, Republic of Korea*	
[POSTER_03]	**Predictive Modeling of Lime Reactivity and Dissolution in Oxygen Steelmaking** BUĽKO Branislav, DEMETER Peter, FINDORÁK Róbert, LEGEMZA Jaroslav, FOGARÁŠ Lukáš, HUBATKA Slavomír, DEMETER Jaroslav, DZURŇÁK Róbert, FEDORKO Patrik, MAŠLEJOVÁ Alica, MIŠKOVIČOVÁ Zuzana, VASKOVÁ Iveta *Technical University of Košice, Slovak Republic*	
[POSTER_04]	**Thermodynamic Analysis of Potential Slag System for Nitrogen Removal in BOF Converters** VERMA Gaurav, DOGAN Neslihan, YANG Yongxiang, ROUT K Bapin *TU Delft, Delft, Netherlands / TATA Steel Netherlands, IJmuiden, Netherlands*	
[POSTER_05]	**Modelling of the Physicochemical Properties - Dynamic Viscosity and Surface Tension for Metallurgical Slags** MIGAS Piotr, ŚLĘZAK Marta, HORNIK Andrzej, TORBA Mariusz *COGNOR SA HSJ Branch in Stalowa Wola, Stalowa Wola, Poland / AGH University of Krakow, Krakow, Poland*	
[POSTER_06]	**Development and Validation of a Carbon Injector for Enhanced Reaction Efficiency in Electric Arc Furnaces** KIM Youngchul, KIM Yelim, SHIN Daehoon *Hyundai Steel Company, Dangjin, Republic of Korea*	
[POSTER_07]	**Research of Porous Plug Slot-type of a New Design - Physical Modeling** PIEPRZYCA Jacek, MERDER Tomasz, WENDE Rober, SATERNUS Mariola, WITEK Jerzy *Silesian University of Technology / Cognor SA Ferrostal Łabędy / Łukasiewicz Research Network, Gliwice, Poland*	
[POSTER_08]	**Numerical Modeling of Steel Mixing in a 65-Mg Ladle Using an Innovative Module** MERDER Tomasz, WARZECHA Marek, PIEPRZYCA Jacek, WARZECHA Piotr, WENDE Rober, SATERNUS Mariola *Silesian University of Technology / Cognor SA Ferrostal Łabędy Gliwice, Poland / Czestochowa University of Technology, Poland*	
[POSTER_09]	**Computational Modeling of Sulfur Removal Mechanisms at the Steel-Slag Interface in Secondary Metallurgy** FOGARAŠ Lukáš, HUBATKA Slavomír, BUĽKO Branislav, DEMETER Peter, DEMETER Jaroslav, HRUBOVČÁKOVÁ Martina, DZURŇÁK Róbert, FEDORKO Patrik, MIŠKOVIČOVÁ Zuzana, DUBEC Dominik *Technical University of Košice, Slovak Republic*	
[POSTER_10]	**Enhancing Continuous Casting of Steel through Advanced Numerical Modelling** TKADLEČKOVÁ Markéta, CIBULKA Jiří, HUCZALA Tomáš, LASOTA Martin, CUPEK Jiří sr., SZMARAGOWSKI Marek, BOCEK David, KOTAS Petr, JELÍNEK David *TŘINECKÉ ŽELEZÁRNY, a.s., Třinec, Czech Republic / MAGMA GießereitechnologieGmbH, Pardubice, Czech Republic*	
[POSTER_11]	**Liquid Pool Control Model Application for Quality Prediction of Continuously Cast Blooms** CIBULKA Jiří, CIENCIALA Marek, TKADLEČKOVÁ Markéta, RUCKI Adam *TŘINECKÉ ŽELEZÁRNY, a.s., Třinec, Czech Republic*	
[POSTER_12]	**Numerical Modeling of the Casting Process of Alloyed Steel 34CrMo4** RŮŽIČKA Jana, MACHÁČKOVÁ Adéla, RADKOVSKÝ Filip *VSB - Technical University of Ostrava, Ostrava, Czech Republic*	
[POSTER_13]	**Advanced Simulation Methods for Bulk Material Processing in Metallurgy and Metalworking** DOBIÁŠ Jiří, HLOSTA Jakub *VSB - Technical University of Ostrava, Ostrava, Czech Republic*	

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