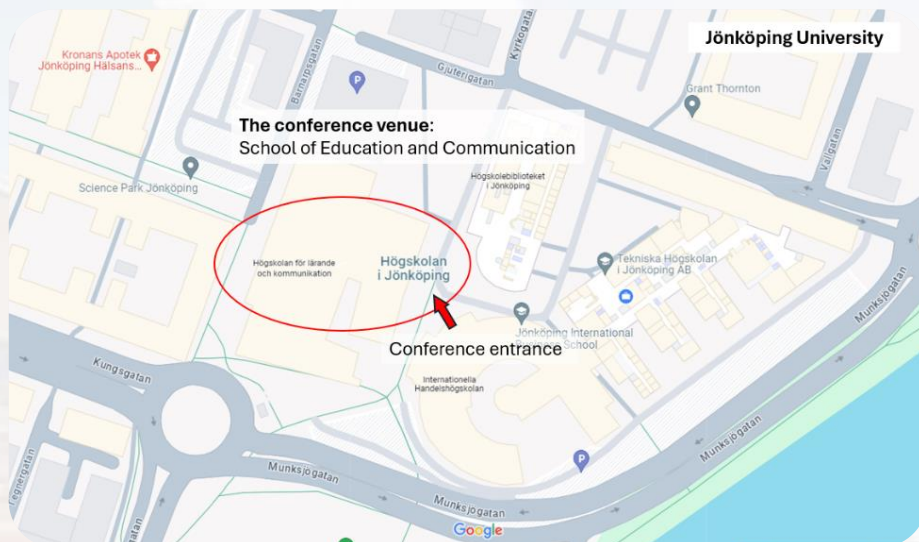


18th Society and Materials (SAM) International Conference

Jönköping University, Sweden
May 14 - 15, 2024

Venue

School of Education and Communication ([Google maps](#)), Jönköping University



Access

- **Jönköping Airport** is located 9 km from the city center. To get to and from the airport there is a regular bus service (route 27) to Jönköping city centre.
- From **Copenhagen (Kastrup Airport)**, Denmark you can easily travel to Jönköping by train. The train station in Copenhagen airport is inside the airport and no transfer is required.

Hotel Recommendation

- [Quality Hotel Match](#)
- [ProfilHotels | Savoy](#)
- [Clarion Collection Hotel Victoria](#)

Please note that we don't have any partnership with the hotels, and we recommend the nearest hotels to the university.

SAM Organizing Committee

Jönköping University

Anders Jarfors

KTH

Rutger Gyllenram

ArcelorMittal

Anne-Laure Hettinger, Ayoung Jo, Julio L. Rivera

IF Steelman

Jean-Pierre Birat

IRT-M2P

Gaël Fick, Angela Sanchez

ITAS – KIT

Marcel Weil

Knowledge & Innovation

Andrea Declich

NTNU

Leiv Kolbeinsen

Contact

SAM Organizing Committee

Email: sam.conference@arcelormittal.com

Ayoung Jo

Email: ayoung.jo@arcelormittal.com

Day 1	
08:40	Registrations & Coffee
09:00	Opening
09:05	Welcoming by host – Jönköping University
09:10	Keynote - The value of information - What LCA, MFA and direct measurements do for decarbonisation of the steel industry <i>Rutger Gyllenram, KTH, Sweden</i>

Session 1 Case studies in Sustainability	
09:55	AI-based modelling techniques for input materials optimization in the EAF route <i>Laura Laid, Antonella Zaccara, S. Dettori, Scuola Superiore Sant’Anna, TeCIP, ICT-COISP, Pisa, Italy</i>
10:20	Reducing the dependence from non-fossil carbon materials and the related impacts: effect of the use of alternative C-bearing materials on material and energy flows of electric steelworks <i>Antonella Zaccara, Valentina Colla, Scuola Superiore Sant’Anna, TeCIP, Pisa, Italy</i>
10:45	Efficient Scrap management to improve efficiency and circularity in steel industry <i>Alice Petrucciani, Jonas Peterson, Scuola Superiore Sant’Anna, TeCIP, Pisa, Italy</i>
11:10	Development of Decision Support System for slag management and valorization in the steel industry <i>A. Petrucciani, Scuola Superiore Sant’Anna, TeCIP, Pisa, Italy</i>
11:35	Functionally integrated castings for Body in White applications; Consequences for materials use and mix in automotive manufacturing <i>Anders E. W. Jarfors, Jönköping University, Sweden</i>
12:00	The LISA project: low impact of sustainable aluminum <i>Lucia Lattanzi, Jönköping University, Sweden</i>
12:25	GROUP PHOTO & LUNCH (1h)

13:30	Keynote - Metals demand 2050 – steel, copper, nickel <i>Magnus Ericsson, Anton Löf, Olof Löf, RMG Consulting, Stockholm, Sweden</i>
Session 2 New developments in Foresight (based in particular on LCA and MFA)	
14:15(v)	Carbon capture, bioenergy and electrification as options to decarbonize the global cement sector (Video) <i>Kimon Keramidas, Université de Grenoble-Alpes, Grenoble, France</i>
14:40(v)	Sustainable management of metals: the journey from resource-depletion methods to the contribution-to-resource-inaccessibility method (Video) <i>Jo Dewulf, BRGM, Orléans, France, & Ghent University, Ghent, Belgium</i>
15:05	Feedback loops in the Material-Energy-Transport nexus and the case for low-demand transition scenarios <i>Romain Guillaume Billy, Norwegian University of Science and Technology, Norway</i>
15:30	Prioritization of strategies by integrating SWOT method with Hesitant fuzzy linguistic MCDM method for developing a sustainable energy storage system: a case study of India <i>Sayan Das, Marcel Weil, ITAS, Karlsruhe, Germany</i>
15:55	COFFEE BREAK (40m)

Session 3 LCA to optimize Sustainable Technologies	
16:40	Quantifying the Environmental Impacts of Foam Injection Molding for Lightweight Components - A Life Cycle Assessment Study <i>Lars Bippus, University of Stuttgart, Stuttgart, Germany</i>
17:05	Evaluating the Global Warming Potential and Cumulative Energy Demand of Graphene as an Electrode Material for Supercapacitors <i>Fatemeh Bahmei, KIT, Karlsruhe, Germany</i>
17:30	Environmental sustainability of ceramic matrix composites (CMC) production technologies <i>Nicoletta Narres, Acoustics and Building Physics, University of Stuttgart, Life Cycle Engineering GaBi, Stuttgart, Germany</i>
	Closing
18:00	END OF DAY 1

Networking Dinner (barbecue) at 19h

Day 2	
08:40	Registrations & Coffee

09:00	Keynote - Energy <i>Leiv Kolbeinsen, NTNU, Trondheim, Norway</i>
Session 4 Sustainability and SSH	
09:45	Keynote - Inviting ANT to help redefining LCA, as a way to prepare it for a Net-Zero world <i>Jean-Pierre Birat, IF Steelman, France</i>
10:30	Material Sorting. New methodology to improve the interdisciplinary experience of material libraries <i>Chiara Del Gesso, Carmen Rotondi, Sapienza University of Rome, Rome, Italy</i>
10:55	Renewable Energy Acceptance and responsible agents: Unravelling the Influence of Government and Corporate Trust <i>Patrick Stuhm, KIT, Karlsruhe, Germany</i>
11:20	Science and art materials to improve knowledge of climate change impacts <i>Arnaud Delebarre, Mines Paris, PSL University, Paris, France</i>
11:45 ^(v)	Kinetic materials experience in morphing artifacts for environmental sustainability (Video) <i>Yi Sui, Politecnico di Milano, Milan, Italy</i>
12:10 ^(v)	Industry 5.0 as a Multidimensional Innovation Ecosystem (Video) <i>Ralf Kopp, Technical University Dortmund, Dortmund, Germany</i>
12:35	Lunch (1h)
13:40	Competence supply for the future sustainable metallic components: CIRCUMET, a case study <i>Ehsan Ghassemali, Madelene Zetterlind, Jönköping University, Jönköping, Sweden</i>
14:05	LCA, Distributive Justice and SDGs – an exploration <i>Korbinian Czirwitzky, University of Stuttgart, Stuttgart, Germany</i>
14:30	Prospective environmental systems analysis tools for decision support in emergent socio-technical solutions for circularity – A review <i>Danna Persson, Linköping University, Linköping, Sweden</i>
14:55	Social Life Cycle Assessment of Sodium Ion Battery Raw Materials <i>Bismark Razak Haruna, KIT, Karlsruhe, Germany</i>
15:20	(Steel and Aluminum) <i>(ArcelorMittal)</i>
15:45	Break (15m)

Closing	
16:00	Jean-Sebastien Thomas (JST) Award Ceremony
16:10	Conclusion
	END OF DAY 2