

6th ESEIA International Conference, 4 December 2024, in Kuopio, Finland <https://eseia2024.fi/>

PROGRAMME				
Tuesday, 3 December 2024				
19 - 21	Get together (Kuopion Klubi, Kuninkaankatu 10, Kuopio)			
Wednesday, 4 December 2024				
Savonia University of Applied Sciences (Microkatu 1, Kuopio)				
08.30	Coffee and registration, (Campus Heart/Kampusssydän)			
09.00	Opening ceremony Chairperson Harri Auvinen, RD Manager, Savonia University of Applied Sciences Mikko Vuoristo, Vice President, Savonia University of Applied Sciences Markku Huhtinen, Vice President, European Sustainable Energy Innovation Alliance – ESEIA			
09.20	Keynote lectures <i>Advancing Circular Economy and Carbon Capture in Biomass and Waste-Fired Power Plants</i> , Olli Sippula, Professor, PhD, University of Eastern Finland Andritz CircleToZero in pulp mills , Guilherme Magalhães, Development Manager, ANDRITZ Oy			
10.10	Coffee Break (5 th floor, B-block)			
THEMATIC SESSIONS on the 5th floor, B-block				
10.30	2. Bio and Circular economy in net zero systems B-5014, 5 th floor Chairperson: Rupert J. Baumgartner University of Graz	3. Smart Net zero communities B-5015, 5 th floor Chairperson: Teija Honkanen, Savonia UAS	4. 4G District heating, sustainable heating and cooling B-5016, 5 th floor Chairperson: Markku Huhtinen, Savonia UAS	5. Energy communities B-5018, 5th floor Chairperson: Thomas Hoppe, Universiteit Twente
	The impact of the quality of treated wastewater on the selection of water reclamation technology , Monika Wojciechowska, RDI Specialist, Savonia UAS	Regional Climate Roadmap: mitigation and adaptation Saara Karkulahti, Project manager, and Tapio Kettunen, leading climate expert, Centre for Economic Development, Transport and the Environment	4G DHC in Finland , Katja Kurki-Suonio, M.Sc, Executive Director, Palveleva Kaukolämpö FinDHC ry	Energy Community Models in Energy Poverty Alleviation - A case study of North Karelia, Finland , Lasse Okkonen, Principal lecturer, Karelia University of Applied Sciences
	Waste Management Development – Case: North-Savo , RD Manager, PhD Harri Auvinen, Savonia University of Applied Sciences	Climate and resource wise Kuopio , Mari Turunen Environmental specialist City of Kuopio	Case Study, Savon Voima Joensuu , Janne Sisso, Development Manager, Savon Voima Oyj	Scaling community energy organisation, practice and project: a longitudinal multi-case analysis , Thomas Hoppe, Prof. Dr, Universiteit Twente
	Biogas from farms: Bio- and circular economy at its best , Anu Tiikkainen, RDI Specialists, Savonia University of Applied Sciences	Towards 2030: Climate Sustainability in North Karelia , Eetu Ahlberg, Project Manager, Regional Council of North Karelia		Stakeholder and regulatory perspectives on creating energy communities , Jussi Valta, Post Doctoral Researcher, University of Tampere

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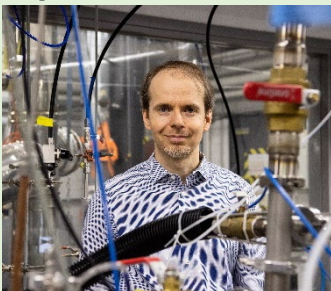
11.30	6. Net zero emission buildings B-5014, 5 th floor Chairperson: Aki Happonen, Savonia UAS	7. Decarbonization of mobility B-5018, 5 th floor Chairperson: Mario Hirz, University of Technology, Graz	8. Novel materials for energy production and storage B-5016, 5 th floor Chairperson: Anna Lähde, University of Eastern Finland
	<i>Integration AI and IoT for Energy Efficiency Management: A Study on Electricity Consumption Patterns in Varkaus, Finland</i> , Shahbaz Baig/Premtom Canamusa, RDI Specialists, Savonia University of Applied Sciences	<i>Potential contribution of automated vehicles for decarbonization of the mobility sector</i> , Mario Hirz, Graz, Associate Prof. Dr, University of Technology	<i>Effect of N-, S-doped nanostructured carbon-based composites sulphur host on electrochemical properties of lithium-sulphur batteries</i> , Kirill Murashko, DSc, University of Eastern Finland
	<i>A Novel Multi-Objective Hybrid Evolutionary-based Approach for Tuning Machine Learning Models in Short-term Power Consumption Forecasting</i> , Aleksei Vakhnin, Doctoral Researcher, University of Eastern Finland	<i>Decarbonization on Mobility through Citizen-Driven Data and Urban Co-Design</i> , Tomaž Berčič, Assistant professor, PhD, University of Ljubljana, Faculty of architecture	
	<i>High performance by software aided Net Zero building design</i> , Nikolas Salomaa, CEO, Nolla_E	<i>Using flow analysis of bike-sharing system in Kuopio city</i> , RD Manager, PhD Harri Auvinen, Savonia University of Applied Sciences	
12.30	Lunch (Antell Round, 1st floor, A-block)		
13.30	9. Social acceptance of net zero systems and technologies B-5014, 5 th floor Chairperson: Frans Coenen, University of Twente	10. Decarbonisation of energy intensive industries: best practice cases B-5018, 5 th floor Chairperson: Stanislav Boldyryev, University of Zagreb	11. Integration of renewables B-5016, 5 th floor Chairperson: Simo Paukkunen, Karelia University of Applied Sciences
	<i>Categorizing citizen acceptance in local energy systems across Europe</i> , Frans Coenen, Dr, University of Twente	<i>A new Approach to Sustainable Development of Airport and Seaport Territories Through Citizen Science – HubCities</i> , Sanela Pansinger, Dr techn arch, University of Ljubljana, Faculty of Architecture	
	<i>Social acceptance of net zero solutions</i> , Tuomo Eskelinen, PhD, Savonia University of Applied Sciences	<i>SFW Carbon Capture Solutions</i> , Teemu Nevalainen, Director, Solution Development, Sumitomo SHI FW Energia Oy	<i>CO Power: COmmunity based virtual POWER plant</i> , Fabian Sander, R&D engineer, Centria University of Applied Sciences
	<i>Conflict risk and the role of social acceptance in the green energy transition</i> , Lasse Peltonen, Prof, University of Eastern Finland	<i>Decarbonization of energy intensive industries: best practice cases</i> , Stanislav Boldyryev, PhD, University of Zagreb	<i>Exploring theoretical frameworks to analyze governance and innovation of emerging aqua thermal energy (AE) systems – the WaterWarmth project</i> , Thomas Hoppe, Prof. Dr, Universiteit Twente

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14.30	Coffee Break (Campus Heart/Kampus Sydän)
15.00	Plenary session RD Manager Jarno Ruusunen and Senior Lecturer Kari Kokkonen, Savonia University of Applied Sciences
15.45	Ending remarks Markku Huhtinen, Vice President, European Sustainable Energy Innovation Alliance – ESEIA
16.00	End of the day
16 – 17	Campus tour / laboratories <i>1. Digicenter-robots and modeling 2. Bio and Circular laboratory 3. Water laboratory 4. 3D Printing laboratory 5. Welding laboratory</i>
20 – 22	Dinner (Luoto, Makasiininkatu 5, 70100 Kuopio)

The ESEIA Conference is organized by Savonia University of Applied Sciences in collaboration with European Sustainable Energy Innovation Alliance and Energy Cluster North Savo and project Smart heating systems in a climate-friendly way by utilizing artificial intelligence ÄLLITÄ.

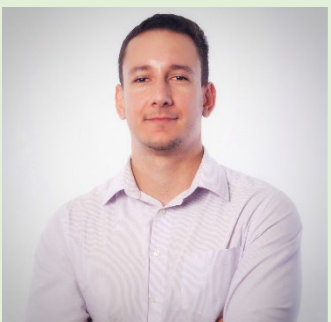
Keynote lecturers:



Professor Olli Sippula has more than 20 years of experience in studies related to combustion processes, emissions, ashes and aerosols. Currently, he leads a research group at the University of Eastern Finland that focuses to (1) characterize combustion emissions, (2) develop novel methods for emission control and (3) develop novel processes to advance circular economy in combustion plants.

He is also the director of the ILMARI research unit at the University of Eastern Finland (www.uef.fi/ilmari). He graduated with a master's degree in Environmental Engineering from the University of Oulu in 2004 and a PhD in Environmental Science from the

University of Eastern Finland in 2010.



Guilherme Magalhães is a Development Manager with **Andritz Oy** in Helsinki, Finland, where he conducts the research and development of innovative solutions for waste and emission-free pulp production. His team focuses on creating and commercializing new technologies, including the development of new mill-wide concepts, refining processes, and exploring business potential in sustainable pulp production.

Before joining Andritz, Guilherme was a Senior Process Engineer at Valmet, specializing in chemical recovery and power solutions for pulp mills. He has extensive experience in preparing technical solutions, conducting projects, including commissioning and start-up operations. His previous role at Suzano Pulp and Paper also provided valuable experience in process optimization, cost management, and improvement projects. He has a degree in Chemical Engineering from UFC in Brazil.