



European Council of Applied Sciences, Technologies, and Engineering
US National Academy of Engineering

2022 EU-US Frontiers of Engineering Symposium

Hotel Park, Bled, Slovenia

October 19-22, 2022

<https://www.naefrontiers.org/202304/2022-EUUS-Frontiers-of-Engineering-Symposium#tabs>

<https://www.ias.si/home>

PROGRAM

Symposium co-chairs: Marko Topič, University of Ljubljana, and Vahid Tarokh, Duke University

Wednesday, October 19

7:30-9:00 pm Registration/Welcome Reception *Hotel Restaurant*

Thursday, October 20

From 7:00 am Breakfast *Hotel Restaurant*

8:30 Welcome *PREŠEREN HALL*

Patrick Maestro, Secretary-General, Euro-CASE
John Anderson, President, National Academy of Engineering
Mark Pleško, President, Slovenian Academy of Engineering
Janez Fajfar, Mayor of Bled

Opening Remarks

Marko Topič, Symposium co-chair (EU)
Vahid Tarokh, Symposium co-chair (US)

9:00 **PROSTHETICS AND AI** *PREŠEREN HALL*

Session co-chairs: and Amy Orsborn, University of Washington, and
Stanisa Raspopovic, ETH Zurich

Ultra-flexible Electrodes for Long-lasting, Large-scale, Bi-directional Neural Interface
Lan Luan, Rice University

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Machine Learning Algorithms for Neural Decoding
Chethan Pandarinath, Georgia Institute of Technology

10:30	Break	
11:15	<i>Soft Bionic Limbs: From Research to Real World</i> Cristina Piazza, Technical University Munich	
12:00 noon	Lunch	<i>Hotel Restaurant</i>
1:00	Flash Poster Presentations	<i>PREŠEREN HALL</i>
2:00	Poster Session I (odd numbers)	<i>KOSOVEL HALL</i>
2:45	Poster Session II (even numbers)	
3:30	Break	
4:00	SUPPLY CHAIN/LOGISTICS Session co-chairs: Cristiana Lara, Amazon, and Lisa Melander, Chalmers University of Technology <i>Resilient Supply Chains: Lessons from the Covid-19 Pandemic</i> Tina Comes, Delft University of Technology <i>Managing Sustainable Supply Networks</i> Veronica Villena, Arizona State University	<i>PREŠEREN HALL</i>
5:30	Break	
7:00	Dinner	<i>Hotel Restaurant</i>
<u>Friday, October 21</u>		
From 7:00 am	Breakfast	<i>Hotel Restaurant</i>
8:30	SUPPLY CHAIN/LOGISTICS (cont.) <i>A Systematic Approach to Electrification of the Transport System in Gothenburg Municipality: The Case of Heavy-duty Vehicles</i> Spyros Ntemiris, Business Region Göteborg <i>AI Robotics for Real World Logistics</i> Carlos Florensa, Covariant.AI	<i>PREŠEREN HALL</i>
10:00	Break	

10:30	<p>POST LITHIUM-ION BATTERIES Session co-chairs: Neil Dasgupta, University of Michigan, and Robert Dominko, National Institute of Chemistry, Ljubljana</p> <p><i>Solid-state Batteries for Electromobility</i> Matthew McDowell, Georgia Institute of Technology</p> <p><i>Multivalent Metal (Mg, Ca, Al) Anode Batteries as a Future High-energy Alternative to Li-ion</i> Jan Bitenc, National Institute of Chemistry, Slovenia</p>	PREŠEREN HALL
12:00 noon	Lunch	Hotel Restaurant
1:00	<p><i>Unlocking the Potential of Aqueous and Aprotic Metal-air Batteries</i> Nagore Ortiz-Vitoriano, CIC Energigune, Spain</p> <p><i>“There’s Plenty of Room in the Middle”: A Mechanistic Perspective for Beyond Lithium-ion Batteries</i> Partha Mukherjee, Purdue University</p>	
2:30	Break	
3:00	Tour to Ljubljana, visiting the National Institute of Chemistry Short and guided visit of old part of City of Ljubljana Reception at Rectors Building of University of Ljubljana	
8:00	Dinner	Hotel Restaurant
<u>Saturday, October 22</u>		
From 7:00 am	Breakfast	Hotel Restaurant
8:30	<p>ZERO-CARBON BUILDINGS Session co-chairs: Francesco Goia, Norwegian University of Science and Technology, and Nora Wang Eram, American Council for an Energy-Efficient Economy</p> <p><i>Equitable Building Decarbonization through Electrification</i> Karma Sawyer, Pacific Northwest National Laboratory</p> <p><i>Smart Buildings and Neighborhoods Enabling a Sustainable Energy Future</i> Roderick Jackson, National Renewable Energy Laboratory</p> <p><i>Integrated Simulation Workflows for Sustainable Building Design</i> Jakob Strømmand-Andersen, Henning Larsen</p>	PREŠEREN HALL
10:15	Break	
10:45	<p><i>Digital Innovation for a Circular Built Environment</i> Catherine De Wolf, ETH Zurich</p>	

12:00 noon Panel
Closing remarks
Lunch

Hotel Restaurant