

FINAL CONFERENCE PROGRAM

Schedule at a glance

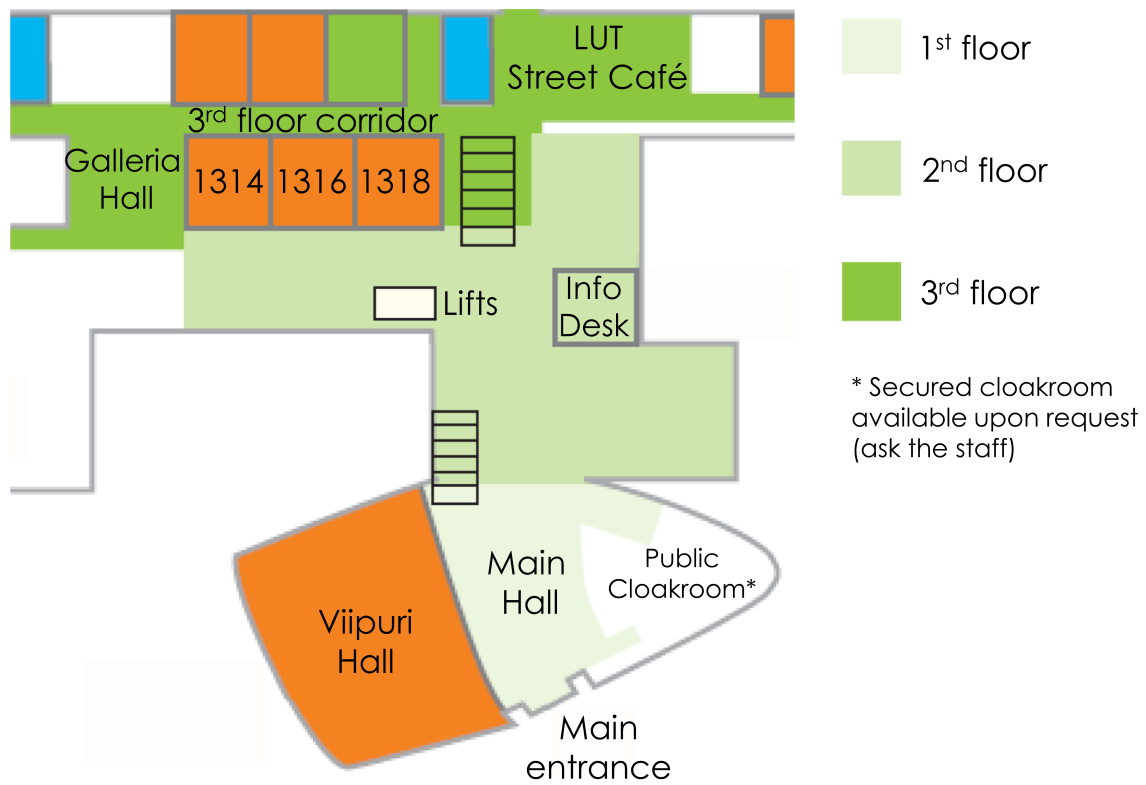
TUESDAY, 9th SEPTEMBER 2025			
8:30 - 9:15	Registration, Main Hall		
9:15 - 9:30	Welcome to ORC2025, Viipuri Hall		
9:30 - 9:45	Welcome to LUT, Viipuri Hall		
9:45 - 10:30	Keynote I: Supercritical CO ₂ , Viipuri Hall		
10:30 - 11:00	Coffee break, Main Hall		
11:00 - 12:00	Session 1A, 1318	Session 1B, 1316	Session 1C, 1314
12:00 - 13:00	Lunch, Main Hall		
13:00 - 14:40	Session 2A, 1318	Session 2B, 1316	Session 2C, 1314
14:40 - 15:30	Coffee break, 3 rd Floor corridor		TEHAG & OEMs
15:30 - 16:30	Poster session, Galleria Hall		Meeting, 1316
16:30 - 18:30	Welcome reception, LUT Street Café		

WEDNESDAY, 10th SEPTEMBER 2025			
8:45 - 9:45	Session 3A, 1318	Session 3B, 1316	Session 3C, 1314
9:45 - 10:15	Coffee break, Main Hall		
10:15 - 11:00	Keynote II: Heat pump technology, Viipuri Hall		
11:00 - 12:00	Session 4A, 1318	Session 4B, 1316	Session 4C, 1314
12:00 - 13:00	Lunch, Main Hall		
13:00 - 14:40	Session 5A, 1318	Session 5B, 1316	Session 5C, 1314
14:40 - 15:30	Coffee break, 3 rd Floor corridor		
15:30 - 16:30	Session 6A, 1318	Session 6B, 1316	
16:30 - 17:45	KCORC General Assembly, 1316		
19:00 - 22:00	Gala Dinner, Lappeenranta Harbour		

THURSDAY, 11th SEPTEMBER 2025			
8:45 - 9:45	Session 7A, 1318	Session 7B, 1316	Session 7C, 1314
9:45 - 10:15	Coffee break, Main Hall		
10:15 - 11:00	Plenary session: Sponsor Pitch, Viipuri Hall		
11:00 - 12:00	Session 8A, 1318	Session 8B, 1316	Session 8C, 1314
12:00 - 13:00	Lunch, Main Hall		
13:00 - 14:40	Session 9A, 1318	Session 9B, 1316	Session 9C, 1314
14:40 - 15:30	Coffee break, 3 rd Floor corridor		
15:30 - 18:00	Lab tour & Company visit (SpinDrive)		
18:00 - 21:00	Sauna Experience		

FRIDAY, 12th SEPTEMBER 2025	
08:00-14:00	Technical tour to ORC site in Espoo

Venue map



Tuesday 9 September 2025

- 08:30–09:15** Registration (Main Hall)
- 09:15–09:30** Welcome to ORC2025 (Viipuri Hall)
Prof. Teemu Turunen-Saaresti, Conference Chair
- 09:30–09:45** Welcome to LUT University (Viipuri Hall)
Prof. Mari Kallioinen-Mänttari, LUT University Provost
- 09:45–10:30** Keynote I (Viipuri Hall)

Keynote I, Viipuri Hall – State of the Art in Supercritical CO₂ Power Systems
Dr. Tim Allison, Machinery Department Director at Southwest Research Institute®



Dr. Tim Allison is the Machinery Department Director at Southwest Research Institute® where he leads an organization that focuses on R&D for the energy industry. His research experience includes analysis, fabrication, and testing of turbomachinery and systems for advanced power or oil & gas applications including high-pressure turbomachinery, centrifugal compressors, expanders, gas turbines, reciprocating compressors, and test rigs for bearings, seals, blade dynamics, and aerodynamic performance. Dr. Allison holds two patents, has authored three book chapters and co-edited one book, and has published over 70 articles on various turbomachinery topics. He received the best tutorial/paper awards from the ASME Oil & Gas and Supercritical CO₂ Power Cycle Committees in 2010, 2014, 2015, and 2018. He is a past chairman of the ASME Oil & Gas Applications Committee, past and current co-chair for the Thermal-Chemical-Mechanical Energy Storage Workshop, a member of the Supercritical CO₂ Symposium Planning Committee, and an Associate Editor for the ASME Journal of Engineering for Gas Turbines & Power.

- 10:30–11:00** Coffee break (Main Hall)
- 11:00–12:00** Parallel sessions 1A (room 1318), 1B (room 1316), 1C (room 1314)

Session 1A, room 1318 – Components I *Chair: Mirko Morini*

- 25 min **Marco Oliveti**, Giacomo Persico
Development and validation of a mean-line code for design optimization and off-design analysis of Organic Rankine Cycle axial turbines
-
- 25 min **Joshua Adam Kelly**, Alessandro Cappiello, Matteo Pini, Piero Colonna
CAD-Based Optimisation of a Supersonic Stator Vane for an ORC Expander

Session 1B, room 1316 – Cycle concepts I *Chair: Konstantinos Braimakis*

- 25 min **Benoît Payebien**, Nicolas Tauveron, Nadia Caney
Theoretical and thermodynamic study of innovative Carnot battery types
-
- 25 min **Dario Alfani**, Marco Astolfi
Off-Design Analysis of ORC-based Carnot Batteries: Performance Assessment and Insights into Components Design

Session 1C, room 1314 – Market deployment I

Chair: Florian Heberle

- 25 min **Aitor Cendoya**, Frederic Ransy, Olivier Dumont, Bentao Guo, Vincent Lemort
Design, component selection and critical considerations for the development of a 50 kWe Carnot Battery coupled to waste heat
- 25 min **Piotr Klonowicz**, Łukasz Jędrzejewski, Łukasz Antczak, Dawid Zaniewski, Piotr Klimaszewski
Performance evaluation of a high-temperature ORC unit with a nominal power of 30 kWe

12:00–13:00 Lunch (Main Hall)

13:00–14:40 Parallel sessions 2A (room 1318), 2B (room 1316), 2C (room 1314)

Session 2A, room 1318 – Components II

Chair: Michele Pinelli

- 25 min **Piotr Kolasiński**, Sindu Daniarta, Dawid Sowa, Szymon Lech, Przemysław Błasiak
Modelling the influence of the volumetric expander working chamber geometry on the two-phase expansion processes
- 25 min **Saverio Ottaviano**, Chiara Poletto, Lisa Branchini, Andrea De Pascale
Modelling analysis of partial evaporation Organic Rankine Cycle with volumetric expander
- 25 min **Dawid Sowa**, Szymon Lech, Piotr Kolasiński, Sindu Daniarta
Modelling of fin-and-tube based Thermal Energy Storage for use with Organic Rankine Cycle

Session 2B, room 1316 – Experiments I

Chair: Alberto Guardone

- 25 min **Joshua Bäumer**, Leander Hake, Hilmar Apmann, Stefan aus der Wiesche
Development of a new test section with an annular ring cascade for testing ORC turbines manufactured using powder bed fusion
- 25 min **Stefan aus der Wiesche**, Leander Hake
Experimental evidence for supersonic loss reduction through turbine blades with suction side profile bending
- 25 min **Matteo Majer**, Adam Head, Carlo De Servi, Piero Colonna, Matteo Pini
The ORCHID turbine: a test rig for experimental research on high-temperature supersonic Organic Rankine Cycle turbines

Session 2C, room 1314 – Supercritical CO₂ I

Chair: Marco Astolfi

- 25 min **Bentao Guo**, Vincent Lemort, Aitor Cendoya
A Fixed-Charge Control Strategy of Trans-critical CO₂ Rankine Cycle
- 25 min **Zhi Ling**, Xuan Wang, Rui Wang, Yurong Wang, Hua Tian
A zero-leakage all-in-one supercritical CO₂ expansion generator solution
- 25 min **Giovanny López-Muñoz**, Leonard Muke, Francesco Crespi, David Sánchez
Exploring the Potential of Directly Fired Supercritical Carbon Dioxide Power Cycles: A Comparative Thermodynamic Approach

14:40–15:30 Coffee break (3rd Floor Corridor)

15:00–16:30 TEHAG invites ORC Manufacturers to exchange on future targets (room 1316)

15:30–16:30 Poster session (Galleria Hall)

Poster session, Galleria Hall

- 1 **Florian Heberle**, Jaromir Jeßberger, Cordin Arpagaus, Leon Brendel, Stefan Bertsch, Dieter Brüggemann
Collaborative online tool for high-temperature heat pumps:
www.high-temperature-heat-pumps.com

- 2 **Takeshi Yasunaga**, Tetsuya Tashiro, Makoto Tsubota
Practical Application of 3D Metal Printing for Manufacturing Test Plates in Low-Temperature-Driven ORC Plate Heat Exchangers

- 3 **Elie Ghanatos**, Nicolas Tauveron, Corélie Guenard, Stéphane Colasson, Vincent Lemort, Titouan Janod, Basile Chaudoir
EU project SEHRENE

- 4 **Swann Thuillet**, Sylvanus Gbenou, Mathias Fonlupt
Dynamic modeling of a thermo-gravity compression system in a PULSE engine for low-grade waste heat recovery

- 5 **Dawid Zaniewski**, Łukasz Antczak, Łukasz Jędrzejewski, Piotr Klonowicz, Piotr Klimaszewski
ORC system operation outside the permissible control range: operational challenges and adaptive modifications on the example of the 300 kWel power plant dedicated to recovering waste heat from process exhaust gases

- 6 **Johan Manuel Gonzalez**, José Matias Garrido, Héctor Quinteros-Lama
Selection of thermal oils for heat transfer from a low/medium-temperature thermal source to a working fluid used in an organic Rankine cycle

- 7 **Marie Peeters**, Elise Neven, Olivier Dumont, Vincent Lemort
Preliminary Experimental Investigation of a 10-kWe Thermally Integrated Pumped Thermal Energy Storage System Using a Reversible Organic Rankine Cycle/Heat Pump

- 8 **Basile Chaudoir**, Samuel Gendebien, Vincent Lemort
Design optimization of shell-and-tube heat exchangers: an open-source discretized approach for any phase configuration

- 9 **Tryfon Roumpedakis**, Florian Kaufmann, Christopher Schifflechner, Ludwig Irrgang, Sotirios Karellas
Optimizing the design of a reversible ORC system: development of a ANN model for air-cooled condenser

- 10 **Aaron Wesemann**, Jannik von Zabienski, Moritz Westermeier, Hartmut Spliethoff, Christopher Schifflechner
First design concept of a digital twin mirroring a reversible 20 kWel Organic Rankine Cycle test rig

- 11 **Marco Astolfi**
A critical review of the performance indexes for Thermally Integrated Carnot Batteries

- 12 **James Bull**, Jed Pound, James M. Buick, Jovana Radulovic
Variation of Pinch Point and Approach Temperature in Geothermal ORC: Balancing Cycle Efficiency and Heat Exchanger Sizing

- 13 Karthik Bhairapurada, **Charlotte Piquet**, Arthur Leroux, Nordine Belaisaoui
Design and Manufacturing of sCO₂ Turbomachinery for the SCO2OP-TES Carnot Battery

16:30–18:30 Welcome reception (LUT Street Café)

Wednesday 10 September 2025

08:45–09:45 Parallel sessions 3A (room 1318), 3B (room 1316), 3C (room 1314)

Session 3A, room 1318 – Thermodynamics & Fluids I

Chair: Piero Colonna

25 min **Réka Kustán**, Attila R. Imre

Visualization of the simple thermodynamic processes related to heat-to-power and power-to-heat cycles

25 min **Marta Zocca**, Marta Pederzoli, Teemu Turunen-Saaresti, Alberto Guardone

Investigation of similarity parameters in isentropic supersonic expansions of organic vapors

Session 3B, room 1316 – Cycle concepts II

Chair: Sotirios Karellas

25 min **Sindu Daniarta**, Piotr Kolasiński, Attila R. Imre

Design and analysis of Organic Rankine Cycle from subcritical to transcritical operations

25 min **Amalia Stainchaouer**, Christopher Schiffelechner, Hartmut Spliethoff

Off-design and voyage-based optimization of low- and medium- grade ORC systems for enhanced ocean-going vessels performance

Session 3C, room 1314 – Heat pump technology I

Chair: Nicolas Tauveron

25 min **Albert Vogel**, Vaclav Novotny, Jan Spale, Vaclav Vodicka, Karel Sosna, Michal Kolovratnik

Electrothermal Energy Storage Carnot Battery Demonstrator with discharging via ORC

25 min **Antonios Charalampidis**, Nikolaos Sarantopoulos, Aris Leontaritis, Tryfon Roumpedakis, Sotirios Karellas

Experimental Investigation of a Reversible Heat Pump/ORC for Combined Heating, Cooling, and Electricity Production

09:45–10:15 Coffee break (Main Hall)

10:15–11:00 Keynote II (Viipuri Hall)

Keynote II, Viipuri Hall – Charge reduction – experiences from the heat pump industry

Prof. Björn Palm, Senior Professor at Division of Applied thermodynamics and refrigeration, Department of Energy Technology, KTH Royal Institute of Technology



Prof. Björn Palm is senior professor in energy technology at KTH, Royal Institute of Technology, Stockholm, Sweden, where he for more than 20 years was heading the Division of Applied Thermodynamics and Refrigeration. His research covers components and systems for heat pumps and refrigeration systems, from microstructures of boiling surfaces, to combinations of heat pumps and thermal energy storage for load shifting in the energy system. Publications include two-phase flow in plate heat exchangers and microchannels, nanofluids and enhancement of heat transfer, thermal energy storage, geothermal heat pumps and heat transfer in the ground. A special interest has been the application of natural refrigerants like hydrocarbons and carbon dioxide, but also the use of ammonia in small systems. This has led to investigations of how to design systems with minimum charge of refrigerant. Safety with flammable refrigerants and charge reduction are topics of ongoing research.

11:00–12:00 Parallel sessions 4A (room 1318), 4B (room 1316), 4C (room 1314)

Session 4A, room 1318 – Components III

Chair: Antti Uusitalo

- 25 min **Robin Gautier**, Nicolas Tauveron, Pierre Dumoulin
Study of an Axial Micro-Turbine with 1D Model Including Various Fluids or Zeotropic Mixtures and Validated against Experimental Results
-
- 25 min **Alessandro Cappiello**, Joshua A. Kelly, Piero Colonna, Matteo Pini
On the verification of design guidelines for supersonic ORC vanes by means of adjoint-based shape optimization

Session 4B, room 1316 – Experiments II

Chair: Carlo De Servi

- 25 min **Xander van Heule**, Michel De Paepe, Steven Lecompte
Experimental investigation of the non-equilibrium expansion phenomena within a reciprocating expander
-
- 25 min Rodrigo Branco, **João S. Pereira**, José Baranda
Development of an experimental setup to study the influence of heating methods on flow boiling heat transfer correlations in ORC applications

Session 4C, room 1314 – Market deployment II

Chair: Aki Grönman

- 25 min **Vaclav Novotny**, Jan Spale, Jan Syblik, Jan Stepanek
Potential of ORC applications for nuclear microreactors
-
- 25 min Veronica Schwarz, Andreas Schuster, **Richard Aumann**, Sven Schlotz, Marcel Flipse, Jonah van Sluijs, Andreas Grill, Jens-Patrick Springer
Market Experience: ORC Applications in the Marine Sector

12:00–13:00 Lunch (Main Hall)

13:00–14:40 Parallel sessions 5A (room 1318), 5B (room 1316), 5C (room 1314)

Session 5A, room 1318 – A session by the FlexGeo project

Chair: Sotirios Karellas

- 25 min **Jannik von Zabienski**, Florian Kaufmann, Piero Gei, Hartmut Spliethoff, Christopher Schifflechner
Working fluid/oil separation in a reversible ORC test rig with a twin-screw machine: Lessons learned and remaining challenges
-
- 25 min **Christopher Schifflechner**, Marco Astolfi, Sotirios Karellas, Tryfonas Roumpedakis, Marcus Budt, Maximilian Weitzer, George Kosmadakis, Vincent Lemort
Bringing reversible ORC-heat pump systems into the market: A perspective on the current obstacles and future application potential
-
- 25 min Panel discussion. *Reversible ORCs: Stuck between research and commercialisation or on the verge of breaking through?*
Moderator: **Christopher Schifflechner**
Panelists: **Richard Aumann**, **Sotirios Karellas**, **Henrik Öhman**, **Piero Colonna**, **Marco Astolfi**

Session 5B, room 1316 – Cycle concepts III

Chair: Vaclav Novotny

- 25 min **Julian Gundelwein**, Marco Griesbach, Florian Heberle, Dieter Brüggemann
Dynamic Behavior of an Organic Rankine Cycles for Waste Heat Recovery with focus on Heat Exchanger modeling
-
- 25 min **Matteo Carlo D’Incalci**, Dario Alfani, Paola Bombarda
Preliminary Analysis of an Electro-Thermal Energy Storage System for Geothermal Applications
-
- 25 min **Shih-Yen Hu**, Jie-Mou Jhang, Jui-Ching Hsieh, Chen-Hao Liao, Omid Ali Zargar
Thermodynamic, Environmental, and Economic Analysis of a Biomass Polygeneration System with Carbon Capture

Session 5C, room 1314 – Heat pump technology II

Chair: Piotr Kolasinski

- 25 min **Jaromir Jeßberger**, Florian Heberle, Dieter Brüggemann
Experimental optimization of the part load behaviour of a high-temperature heat pump
-
- 25 min **Echezona Nnaemeka Obika**, Florian Heberle, Jaromir Jeßberger, Dieter Brüggemann
Thermodynamic analysis of potential working fluids for high-temperature heat pumps in cascade configuration
-
- 25 min **Tryfon Roumpedakis**, Matthaios Papatheocharis, Antonios Charalampidis, Konstantinos Braimakis, Sotirios Karellas
Artificial neural network of a reversible small scale hybrid heat pump-adsorption chiller

14:40–15:30 Coffee break (3rd Floor Corridor)

15:30–16:30 Parallel sessions 6A (room 1318), 6B (room 1316)

Session 6A, room 1318 – Thermodynamics & Fluids II

Chair: Takeshi Yasunaga

- 25 min **Lorenzo Galiati**, Dario Alfani, Paolo Silva, Paola Bombarda, Piero Colonna, Carlo De Servi
Integrated thermo-economic optimization and working fluid selection for ORC plants operating with zeotropic mixtures
-
- 25 min **Hannah Cortnum**, Maximilian Weitzer, Nora Elhaus, Jürgen Karl
CO₂-based zeotropic mixtures for reversible HP-ORC systems – Exploiting temperature glide for enhanced performance

Session 6B, room 1316 – Experiments II

Chair: Stefan aus der Wiesche

- 25 min **Omnia Elbaz**, Tala El Samad, Martin T. White, Abdalnaser Sayma
Numerical and experimental study of supersonic nozzle for organic Rankine cycle turbine
-
- 25 min **Riccardo Gioia**, Alessandro Romei, Andrea Spinelli
Facility commissioning for experiments on liquid-to-vapor expansion of organic fluids

16:30–17:45 KCORC General Assembly (room 1316)

The Assembly begins with the following updates presented by KCORC representatives:
S&R Committee, First Edition of ORC Technical Guidelines,
and ORC World Atlas: 2025 Update

19:00–22:00 Gala dinner aboard M/S Camilla, departing from Lappeenranta Harbor – Satama, (view map). Travel to the harbor is individual.

Thursday 11 September 2025

08:45–09:45 Parallel sessions 7A (room 1318), 7B (room 1316), 7C (room 1314)

Session 7A, room 1318 – Components IV

Chair: Henrik Öhman

- 25 min **Philipp Streit**, Jan Spale, Vaclav Vodicka, Vaclav Novotny, Lukas Völfl, Andreas P. Weiß, Michal Kolovratnik
Design, optimization and experimental investigation of various small-scale ORC expanders in a biomass cogeneration plant
- 25 min **Takeshi Yasunaga**, Tetsuya Tashiro, Ristiyanto Adiptra, Dwiyo Nugroho, Kevin Fontaine, Yasuhiro Ohtsu
Theoretical Optimization of Plate-Type Condenser Geometry for Low-Temperature ORC: Case of Ocean Thermal Energy

Session 7B, room 1316 – Experiments IV

Chair: Fabio Fatigati

- 25 min **Hsien-Ta Tsai**, Jui-Ching Hsieh, Yi-Chi Hsieh
Experimental Performance Analysis of a Rotary Vane Expander in Micro-ORC Systems for Low-Grade Heat Utilization
- 25 min **Vaclav Vodicka**, Jan Spale, Zbynek Zeleny, Vaclav Novotny, Jakub Mascuch
Experimental Experience from Long-term Operation of a Rotary Vane Expander

Session 7C, room 1314 – Supercritical CO₂ II

Chair: Giacomo Persico

- 25 min **Seyedehsan Rafiee**, Aki Grönman, Antti Uusitalo, Teemu Turunen-Saaresti
Off-design analysis on effect of temperature ratio on Supercritical Carbon Dioxide (sCO₂) Radial Outflow Turbine (ROT) efficiency
- 25 min **Arooj Arooj**, Giuseppe Petrucci, Antti Uusitalo, Teemu Turunen-Saaresti
Computational Fluid Dynamics Analysis of Two-Phase Flow Heat Transfer in Condenser with Hydrocarbons

09:45–10:15 Coffee break (Main Hall)

10:15–11:00 Plenary session (Viipuri Hall)

Plenary session, Viipuri Hall – Sponsor pitch

Chair: Teemu Turunen-Saaresti

- 15 min **ENOGIA**
- 15 min **Marani Sp. z o. o.**
- 15 min **SpinDrive Oy**

11:00–12:00 Parallel sessions 8A (room 1318), 8B (room 1316), 8C (room 1314)

Session 8A, room 1318 – Thermodynamics & Fluids II

Chair: Attila R. Imre

- 25 min Sherryn Sherryn, Rizqi Dian Anggara, Bintang Putra Megantara, **Sindu Daniarta**, Nazrul Effendy, Piotr Kolasiński
A selection of working fluids for ocean thermal energy conversion using partial evaporator and two-phase expander
- 25 min **Afra Bakhit**, Antti Uusitalo, Teemu Turunen-Saaresti
Comparative Analysis of Working Fluids and Thermodynamic Parameters on ORC System and Turbine Design

Session 8B, room 1316 – Experiments V

Chair: Páll Valdimarsson

- 25 min **Konstantinos Braimakis**, Aris-Dimitrios Leontaritis, Tryfon Roumpedakis, Efstratios Varvagiannis, Ioanna Kermida, Antonis Charalampidis, Nikolaos Karkalos, Nikolaos Sarantopoulos, Sotirios Karellas
Experimental demonstration of an Organic Rankine Cycle-ejector cooling cycle prototype for vessel engine waste heat recovery
- 25 min **Pengcheng Liu**, Xuan Wang, Hua Tian, Qiyao Zuo, Weijia Meng
Experimental study on on-board performance of ORC waste heat recovery system for internal combustion engine

Session 8C, room 1314 – Market deployment III

Chair: Paola Bombarda

- 25 min **Giorgia Ruffato**, Luca Vanini, Diego Milesi
The Gemini turbine: A breakthrough in radial outflow turbine design for large-scale geothermal application
- 25 min Veronica Schwarz, Andreas Schuster, **Richard Aumann**, Sven Schlotz, Markus Lintl, Yvonne Reissner, Jonas Freischmann
Market Experience: ORC Applications in the Cement Sector

12:00–13:00 Lunch (Main Hall)

13:00–14:40 Parallel sessions 9A (room 1318), 9B (room 1316), 9C (room 1314)

Session 9A, room 1318 – Components V

Chair: Matteo Pini

- 25 min Nicola Aldi, Michele Pinelli, Mattia Piovan, Alessio Suman, Nicola Zanini, Agostino Gambarotta, **Mirko Morini**, Costanza Saletti
Simulating ORC expanders: CFD investigation and lumped parameter model identification
- 25 min **Pangbo Ren**, Graham Cox, Maria Vera-Morales, Stewart Watson, Albert Demargne
Investigation of a novel low-speed radial re-entry turbine for small-scale waste heat recovery
- 25 min **Nikolaos Karkalos**, Konstantinos Braimakis, Aris-Dimitrios Leontaritis, Tryfon Roumpedakis, Efstratios Varvagiannis, Ioanna Keramida, Antonios Charalampidis, Nikolaos Sarantopoulos, Sotirios Karellas
A comparison of 2-D and 3-D Computational Fluid Dynamics approaches for the prediction of ejector devices performance

Session 9B, room 1316 – Cycle concepts IV

Chair: Andrea De Pascale

- 25 min **Attila R. Imre**, Réka Kustán
How can self-consumption for heat engines be reduced to make them a viable alternative to utilize small heat sources for power production?
- 25 min **José Vasco Mota**, Márcio Santos, José Ribeiro, Jorge André
Techno-economic assessment of ORC-based Configurations for Low to Medium Temperature waste heat recovery

Session 9C, room 1314 – Plant Dynamics & control

Chair: Steven Lecompte

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|--------|--|
| 25 min | Andres Hernandez , Fredy Ruiz, Vincent Lemort
<i>Data-driven nonlinear modeling for superheating degree in organic Rankine cycle systems</i> |
| 25 min | Fabio Fatigati , Giammarco Di Giovine, Marco Di Bartolomeo, Davide Di Battista, Roberto Cipollone
<i>Development of a novel control to boost the cogenerating performances of an ORC-based unit fed by a very low-temperature hot source</i> |
| 25 min | Moritz Westermeier, Aaron Wesemann , Arnaud Bruch, Lea Yvernault, Konstantinos Braimakis, Sotirios Karellas, Michel Beaughon, Aldo Serafino, Christopher Schifflechner, Hartmut Spliethoff
<i>Dynamic Simulation of a 2 MW ORC for Industrial Waste Heat Recovery with a Large-Scale Thermal Energy Storage System</i> |

14:40–15:30 Coffee break (3rd Floor Corridor)

15:30–18:00 Guided tour of the Laboratory of Fluid Dynamics (inside LUT Campus) and visit to company SpinDrive (walking distance from LUT Campus, [view map](#)).
The guided tours start from the meeting point in the 3rd Floor Corridor.

18:00–21:00 Sauna Experience at LUT Rantasauna ([view map](#)) and at Vierula sauna ([view map](#)), both walking distance from LUT Campus.
We walk to the saunas from the meeting point in the 3rd Floor Corridor.

Friday 12 September 2025

08:00–14:00 Technical tour to the Blominmäki Wastewater Treatment Plant in Espoo ([view map](#))

A bus departs from Lappeenranta city center at 08:00 and takes participants to the site. After the visit, the bus continues to Helsinki Airport, arriving before 14:00. The detailed timetable and meeting point are shared via email with registered participants.