

Paper index for the 1st International Seminar on ORC Power Systems

Keynote lectures

- "30 Years of ORC development" by Prof. Mario Gaia
- "Supercritical CO₂ Power Cycle Development Summary At Sandia National Laboratories" by Dr. Steven Wright
- "Low temperature / small capacity ORC system development" by Dr. Joost Brasz

Conference presentations

1. 3-D rans simulation of a high-speed ORC turbine
2. A new configurations for ORC power systems
3. A small scale turbine for the ORC
4. Benefit of using high temperature ORC-modules for electricity-only applications
5. Comparison of scroll and piston expanders for small scale ORC applications
6. Design, Development & Operations of the Tri-o-gen power unit
7. Dynamic modelling and optimized model predictive control strategies for the ORC
8. Energetical, Technical and Economical consideration by choosing between a steam and ORC for small scale power eneration
9. Exergoeconomic analysis of a geothermal ORC with zeotropic fluid mixtures
10. High-potential working fluids for next-generation binary ORC
11. Shape Optimization of an ORC Radial Turbine Nozzle
12. To recuperate or not to recuperate ORC Cycles compare to Ideal Cycles
13. A novel microjet heat exchanger for domestic ORC unit
14. Evaluation of an ORC-based micro-CHP system involving a hermetic scroll expander
15. Experiment of pumpless ORC-type cycle for low-temperature waste heat recovery
16. Low temperature / small capacity ORC system development
17. Simultaneous optimization of cycle and heat exchanger parameters for waste heat to power conversion at aluminium plants
18. Background and summary of commercial ORC development and exploitation
19. Design, simulation and construction of a test rig for organic vapours
20. Efficiency improvement in pre-combustion CO₂ removal units
21. ORC micro-power plant for combined heat and electric power generation
22. Optimum conditions of a carbon dioxide transcritical power cycle from low temperature heat source for power generation
23. Suitability of siloxanes for a mini ORC turbogenerator based on high-speed technology
24. Supercritical ORC for waste heat recovery at high temperature
25. Preliminary design of a centrifugal turbine for ORC applications
26. Two-step optimization approach for increaseof engine-ORC efficiency
27. High efficiency ORC for power only generation mode in range -3 MW
28. Low temperature and small capacity ORC system development
29. ORC power plants with hermetic turbogenerators; first practical experiences
30. Thermodynamic ORC cycle design optimization for medium-low temperature energy sources

31. The Verdicorp ORC turbine
32. Development of a waste heat recovery ORC prototype using an oil-free scroll expander
33. Investigating the double-stage expansion in a solar ORC
34. Potential of water-sprayed condensers in ORC plants
35. Influence of molecular complexity on nozzle design for an organic vapor wind tunnel
36. Multi-objective optimization of an ORC-based biomass cogenerator for residential applications
37. Global analysis of ORC cycles integrating local CFD simulations and uncertainty
38. Enhancement of the electrical efficiency of commercial fuel cell units by means of ORC: A case study

Conference posters

1. Design of a 150W OTEC prototype based on the Kalina cycle and comparison with ORC based OTEC
2. Economic comparative study of Kalina Cycle, sub-and trans-critical ORC for low-temperature geothermal
3. Effects of Turbine Efficiency of Small-Scale ORC Process Electricity Production and Profitability
4. Experimental studies on low power ORC's with vane expanders
5. Flow measurements in transonic flows of organic fluids with a Ludwieg tube type setup
6. Integration of ORC's for the simultaneous recovery of waste heat at two temperature levels in a cement industry
7. Isolated-grid biomass ORC
8. Ocean Thermal Energy Conversion
9. Simulation model of an experimental small scale ORC cogenerator
10. The selection of ORC working fluid based on fuzzy logic
11. Thermodynamic Investigation of Different ORC Configurations
12. Turn Waste Heat into Electricity
13. Application of an ORC for recovery of low-grade waste heat in a (wet) biomass supercritical water gasification system
14. Combined power and refrigeration cycle for geothermal heat sources
15. Computer-aided design and selection of optimum working fluids and ORC systems for power generation from low enthalpy sources
16. Experiences from operation of different expansion devices in domestic micro ORC
17. On the optimization of ORC systems
18. Optimization of a combined power and ejector refrigeration cycle using low temperature waste heat
19. Recovery of waste heat from the coal-fired power unit using ORC
20. Development and construction of binary geothermal power plant in Russia
21. Evaluation of suitable working fluids for single ORC by the concept of power maximization
22. Power cycles using ORC technology - A comparative analysis with conventional wrc
23. Fluidized bed biomass combustion combined with ORC for small -scale CHP
24. Modelling fluid flow & heat transfer in the ORC power plant co-fueled by heat sources of different temperature

25. Optimum design of the axial ORC turbines with support of the ansys CFX flow simulations
26. Process modelling of ORC's
27. Review of the Polish research work on applicability of the ORC power plants
28. Synergy effect in the hybrid ORC power plant driven by two low enthalpy heat sources
29. Design of a scroll expander for an ORC applicable to a passenger car for fuel consumption improvement