



SAPIENZA  
UNIVERSITÀ DI ROMA



## 19th ISEC september 22 - 23 2021

### 22 september

DAY	HOURL*	TITLE	SESSION ORGANIZER	TOPIC	AUTHOR
22-set	09:10	<i>Open Cerimony</i>			
22-set	09:40	<i>Estimation of convective heat losses from conical cavity receiver of solar parabolic dish collector under wind conditions and receiver orientations</i>	D. MAKHAMOV	THERMAL RECEIVERS, COMBUSTORS AND HEAT EXCHANGERS	<i>Abhinav Rajan</i>
22-set	10:00	<i>A Comprehensive Perspective of Waste Heat Recovery Potential from Solar Stirling Engines</i>		RENEWABLE APPLICATIONS OF STIRLING ENGINES	<i>Siddharth Ramachandran</i>
22-set	10:20	<i>Performance Improvement and Parametric Analysis of a Permanent Magnet Linear Alternator</i>			<i>Surender Dhanasekaran</i>
22-set	10:40	<i>Stirling powered Solar Dish Collector with Compressed Air Energy storage system</i>			<i>Giovanni Ricco</i>
22-set	11:00	<i>Analysis of CO2 reduction with micro CHP facility: Renewable energies and Stirling engine</i>			<i>Juan A. Auñon-Hidalgo</i>
22-set	11:30	<i>Hysteresis Loss in Stirling Refrigerators</i>			<i>Danielle Yang</i>
22-set	11:50	<i>Energy analysis of a thermochemical exhaust gas recuperation system of Stirling engines</i>	B. BAUWENS		THERMODYNAMIC MODELLING AND CFD SIMULATION
22-set	12:10	<i>MSPM: A Tool for Modular Design of Low Temperature Ratio Stirling Engines</i>		<i>Steven Middleton</i>	
22-set	12:30	<i>Numerical Analysis of the Hybrid Parabolic-Solar-Concentrator Combustor Stirling-Engine System</i>		<i>Duc-Thuan Phung</i>	
22-set	12:50	<i>Modeling dynamics of the spacecraft power plant consisting of Stirling engine and external thermal circuit</i>		<i>Aigiz Valiullin</i>	
22-set	13:10	<i>Lunch</i>			

22-set	14:00	<i>ISE Council</i>			
22-set	15:00	<i>Development of a 100 kWe thermoacoustic-Stirling electrical generator</i>	C. CHING-HSIANG CHENG	NOVEL DESIGN OF DRIVE MECHANISMS AND CONFIGURATIONS	<i>Jianying Hu</i>
22-set	15:20	<i>STIRLING engines and oil-free compressors</i>			<i>Thierry Raballand</i>
22-set	15:40	<i>Generation of compressed air by cascaded thermocompressors – project status</i>			<i>Fabian Fischer</i>
22-set	16:00	<i>STIRLING engines and absolute sealing</i>			<i>Thierry Raballand</i>
22-set	16:20	<i>Experimental Evaluation of Piston Motion Modification to Improve the Thermodynamic Power Output of a Low Temperature Gamma Stirling Engine</i>			<i>Michael Nicol-Seto</i>
22-set	16:40	<i>A variant of the Fluidyne: the liquid piston ERICSSON engine</i>			<i>Ryma Chouder</i>
22-set	17:00	<i>Development of a 100-Watt-Scale Beta-Type Low Temperature Difference Stirling Engine Prototype</i>	L.CIOCCOLANTI	STIRLING ENGINE PROTOTYPES DEVELOPMENT AND TESTING	<i>Matthias Lottmann</i>
22-set	17:20	<i>Investigation of Effect of Heat Exchanger Size on Power Output in Low-Temperature Difference Stirling Engines</i>			HEAT TRANSFER

### 23 september

DAY	HOURL*	TITLE	SESSION ORGANIZER	TOPIC	AUTHOR
<b>Session A</b>					
23-set	09:00	<i>Demonstration of flywheel-based traveling-wave thermoacoustic engine</i>	A. SONJA KOLIN	STIRLING ENGINE PROTOTYPES DEVELOPMENT AND TESTING	<i>Takumaru Watanabe</i>
23-set	09:20	<i>Design and construction of multi-cylinder type liquid piston Stirling engine</i>			<i>Prastowo Murti</i>
23-set	09:40	<i>Dynamic model for a free-piston Stirling engine</i>		<i>Yi Han Tan</i>	
23-set	10:00	<i>Parametric Evaluation of Wobble-Yoke Stirling Engine State Space Model</i>		DYNAMICS AND KINEMATICS	<i>Ermira Abdullah</i>

23-set	10:20	<i>Performance analysis of free piston Stirling engine based on the phasor notation method</i>			<i>Pengfan Chen</i>
23-set	10:40	<i>Coffee break</i>			
23-set	11:10	<i>Stirling-Engine in a novel alphagamma configuration – a key for maintance free operation</i>	F.S. MARRA	STIRLING ENGINE PROTOTYPES DEVELOPMENT AND TESTING	<i>Michael Gschwendtner - Franz Diermaier</i>
23-set	11:30	<i>Performance Investigation of a kilowatt-class Free-Piston Stirling Generator</i>			<i>zilong Jia</i>
23-set	11:50	<i>Introduction to thermoacoustic Stirling engines - First steps and praxis</i>			<i>Carmen Iniesta</i>
23-set	12:10	<i>The Development of a Novel Free-Piston Stirling Engine Design Algorithm by Applying Variable-step Simplified Conjugate Gradient Method</i>			<i>Yu-Ting Lin</i>
23-set	12:30	<i>Analysis of Thermodynamic Modelling for Gamma Type Double Piston Cylinder Engine</i>			<i>Abdul Rab Asary</i>
23-set	12:50	<i>Lunch</i>			
23-set	13:40	<i>A Study of Mesh Sheets of 3-kW Stirling Engine</i>	D. BERCHOWITZ	REGENERATOR AND POROUS MEDIA	<i>Takeshi Enomoto</i>
23-set	14:00	<i>Data reduction of friction factor, permeability and inertial coefficient for a compressible gas flow through a milli-regenerator</i>			<i>Francois Lanzetta</i>
23-set	14:20	<i>Experimental Testing of <math>\beta</math>-type Stirling Cryocooler for Low-Temperature Applications</i>		STIRLING REFRIGERATORS AND CRYOCOOLERS	<i>Stefan Popesku</i>
23-set	14:40	<i>An air charged Stirling-cycle refrigerator with novel isothermalisers</i>			<i>Jafar Daoud</i>
23-set	15:00	<i>A novel model and design of a MEMS Stirling cooler for local refrigeration</i>			<i>Sylvie Begot</i>
23-set	15:20	<i>Analysis of the operating parameters in the Stirling cryocooler</i>	<i>Juan A. Auñon-Hidalgo</i>		
23-set	15:40	<i>Low to very high temperature thermal energy recycling – 3 case studies</i>	J. ARANCETA	STIRLING HEAT PUMPS	<i>Arne Høeg</i>
23-set	16:00	<i>Numerical evaluation of finite length tubes effects in Stirling engines heaters</i>		HEAT TRANSFER	<i>Francesco Saverio Marra</i>

23-set	16:20	<i>Appendix gap losses in Stirling engines – review of recent findings</i>			<i>Hans-Detlev Kuehl</i>
<b>23-set</b>	<b>16:40</b>	<b>Round Table: Introductory speech by J. ARANCETA, C.M. BARTOLINI, A. CORSINI. Coordinator: V. NASO</b>			
<b>Session B</b>					
23-set	15:00	<i>Analysis of a Stirling Engine in a Waste Heat Recovery System with Internal Combustion Engine</i>	C.M.BARTOLINI	WASTE HEAT RECOVERY SYSTEMS	<i>Francesco Catapano</i>
23-set	15:20	<i>Resonance stirling engine producing heat and power</i>		COGENERATION SYSTEMS:MICRO CHP	<i>Jean-Pierre Budliger</i>
23-set	15:40	<i>Possibilities of the power optimization in the stirling cogeneration fuelled by the natural gas</i>			<i>Sonja Koščak Kolin</i>
23-set	16:00	<i>Lifetime testing of a flexure based natural gas fired 1 kW thermoacoustic genset</i>			<i>Thomas Steiner</i>
23-set	16:20	<i>Stirling Thermodynamics using Phasor Notation</i>		DYNAMICS AND KINEMATICS	<i>Dave Berchowitz</i>

\*GMT +02:00 Italian time