ExHFT-10

10th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics

PROGRAM

August, 26-30 2024

RHODES ISLAND, GREECE

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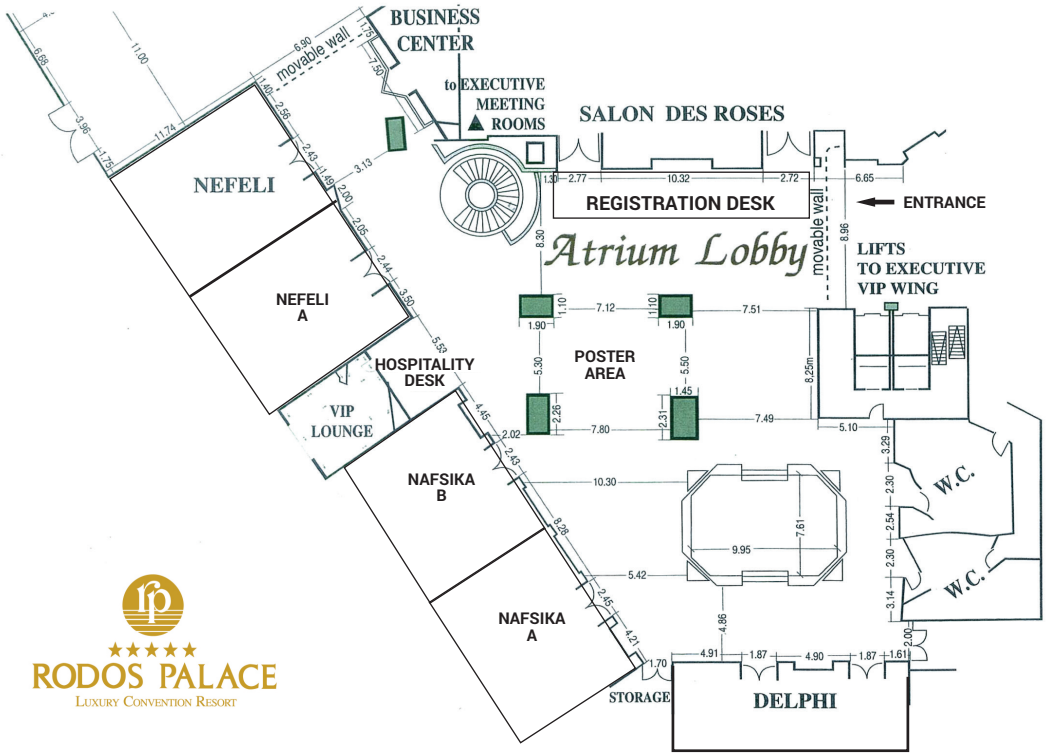
DAY 1

Monday, 26 August 2024

Conference Halls



MONDAY, 26 AUGUST 2024

Room Delfi	
17:30-19:15	**Registration**
19:15-20:00	**Plenary lecture 1 (Chair: J. Barbosa)** Tailoring surface chemistry and surface roughness to enable the long-term stable dropwise condensation (***Prof. Nenad Miljkovic***)
20:00-22:00	**Welcome Reception**

DAY 2

Tuesday, 27 August 2024

TUESDAY, 27 AUGUST 2024

Room Delfi

08:00-18:00	**Registration**
09:00-09:45	**Opening Ceremony**
09:45-10:30	**Plenary lecture 2 (Chair: T. Karapantsios)** A retrospective on experimental research in understanding microlayer and contact line evaporation (***Dr. Axel Sielaff***)
10:30-11:00	**Coffee break**
11:00-12:30	Session 1: ***Heat exchangers 1*** Chair: **N. Miljkovic & G. Baldinelli**
11:00-11:15	Determination of the supercritical heat transfer of the low GWP refrigerant R1234ze(E) (***J.V. Nieuwenhuyse***)
11:15-11:30	Thermal and hydraulic analysis of an inverted two-phase thermosyphon (***R. S. Calomeno***)
11:30-11:45	Dropwise condensation of saturated vapor on super-dewetting surfaces fabricated through novel coating technique (***B. Polat***)
11:45-12:00	Ethanol flat plate pulsating heat pipe: Effect of the filling ratio (***L.A.B. Arboleda***)
12:00-12:15	Investigating the thermal-hydraulic performance of a chaotic heat exchanger: An experimental study (***N.E. Hani***)
12:15-12:30	Experimental investigation on convective heat transfer of heat exchanger composed of paraffin/copper foam composite material (***R.S. Ferfera***)
12:30-13:00	**Keynote lecture 1 (Chair: T. Schutzius)** Overview of thermosyphon and heat pipe technologies (***Prof. Marcia Mantelli***)
13:00-14:00	**Lunch break**
14:00-15:45	Session 4: ***Heat and mass transfer 1*** Chair: **J. Barbosa & P.M. Hulse**
14:00-14:15	Suppression of boiling in a two-phase closed thermosyphon under horizontal vibration (***S. Kang***)
14:15-14:30	Experimental comparison of thermal storages with PCM and water (***M. Pieve***)
14:30-14:45	Investigation on diffuser film holes structural design of turbine twist blade (***M. Ren***)
14:45-15:00	Effects of Turbulence Intensity and Density on Film Cooling Effectiveness of Turbine Blade (***T.-L. Zhou***)
15:00-15:15	Pressure drop and heat transfer of the refrigerant mixture of R32/R1234yf inside horizontal microfin tubes (***I.W. Sugita***)
15:15-15:30	Experimental Sensitivity Analysis on Flip-Flop Synthetic Jet Parameters (***C.S. Greco***)
15:30-15:45	Dropwise-to-filmwise transition during condensation of steam on hydrophilic surfaces (***M. Tancon***)
15:45-16:15	**Coffee break**
16:15-17:45	Session 7: ***Heat exchangers 2*** **Chair: M. Mantelli & D.C. Moreira**
16:15-16:30	Experimental Investigation of Tween-40 Surfactant Effects on Boiling Phenomena (***R.C. Alvarez***)
16:30-16:45	Ice block temperature measurement using planar laser-induced fluorescence (***P. Strizhak***)
16:45-17:00	First results of a single-tube PCM-storage for optimised steam production (***L. Dietz***)
17:00-17:15	Liquid fraction evolution during the different melting regimes in a vertical tube in tube heat exchanger (***M. Goderis***)
17:15-17:30	Design and construction of a test rig for the qualification of a rotating magnetic refrigerator prototype (***J.A. Boganegra***)
17:30-17:45	New developments of a miniature loop heat pipe for compact electronics (***K.G. Domiciano***)

TUESDAY, 27 AUGUST 2024

Room Nafsika A

09:00-09:45	
09:45-10:30	
10:30-11:00	**Coffee break**
11:00-12:30	Session 2: ***Advanced energy systems 1***
	Chair: **E.M. Cardoso & M. Misale**
11:00-11:15	Experimental characterization of a solar boiler as a sensible thermal energy storage system (***A. Degelin***)
11:15-11:30	Effect of porous structure of Ni-based oxygen carrier on reaction characteristics in chemical looping combustion (***M. Kishimoto***)
11:30-11:45	Hydrodynamic innovation: Using two-phase flow and compliant surfaces for drag reduction (***R. Skvorčinskienė***)
11:45-12:00	Experimental investigations of the microstructure of a 316L porous material for a flat LHP evaporator wick (***D. Mikielewicz***)
12:00-12:15	Twisted wire flat heat pipe (***L. Krambeck***)
12:15-12:30	Thermodynamic analysis of a compressed CO_2 energy storage system with non-insulated tanks (***F. Dewevre***)
12:30-13:00	**Keynote lecture 2 (Chair: A. Sielaff)**
	In-vitro and in-vivo detection and characterization of sub-millimeter bubbles in liquid flows through highly sensitive electrical impedance measurements (***Dr. Sotiris Evgenidis***)
13:00-14:00	**Lunch break**
14:00-15:45	Session 5: ***Advanced energy systems 2***
	Chair: **P. Bardet & V. Garimella**
14:00-14:15	Nonuniform Stratification of Hydrogen-Methane Gas Mixtures Inside a Vertical Pipeline in a Gravity Field (***J. Sung***)
14:15-14:30	Evaluation of the phase change front movement in a 200KWH latent thermal energy storage unit (***K. Couvreur***)
14:30-14:45	Characteristics of phase change front movement in vertical tube and tube latent thermal energy storage heat exchangers (***J. Van Zele***)
14:45-15:00	Flow Characteristics of Amplifier in Curved Pipe Using Response Surface Method (***D.-S. Lee***)
15:00-15:15	Impact of Surface Texturing on Hydrogen Production via PEM Electrolysis (***J. Raeymaekers***)
15:15-15:30	Rapid cooling mechanism in liquid nitrogen using porous copper material (***Y. Umehara***)
15:30-15:45	Slug frequency for a gas-liquid viscous flow in vertical pipes (***K. Magit***)
15:45-16:15	**Coffee break**
16:15-17:45	Session 8: ***Aerospace and aeronautical technology***
	Chair: **D. Wen & H. Iwai**
16:15-16:30	An Approach of Hot-to-Cold(H2C) Process for Axial Compressor (***S. Kim***)
16:30-16:45	A study of the vortices merging over a nonplanar cranked lambda wing model at subsonic speed (***K. Kontis***)
16:45-17:00	Interaction of Incident shock and compressible vortex ring with a grooved cone mounted on a flat plate with a coaxial hole (***A. Yadav***)
17:00-17:15	Investigation of critical heat flux in nitrogen flow boiling and reduced gravity (***F. Chavagnat***)
17:15-17:30	Cooling Design Improvement of Trailing Edge by Adding the Impingement Plate (***S. Liu***)
17:30-17:45	An overview on atomic layer thermopile heat-flux sensor and its applications (***K. Yang***)

TUESDAY, 27 AUGUST 2024

Room Nafsika B	
09:00-09:45	
09:45-10:30	
10:30-11:00	**Coffee break**
11:00-12:30	Session 3: ***Fluid mechanics 1***
	Chair: **K. Kontis** & **D.C. Moreira**
11:00-11:15	A hybrid triple-layer liquid-liquid encapsulation technique (***S. Misra***)
11:15-11:30	Electrostatic oil-refrigerant separation (***V. Garimella***)
11:30-11:45	Assimilation of tomographic particle image velocimetry data of turbulent mixed convection in a cuboidal cell (***C. Bauer***)
11:45-12:00	Experimental investigation of asynchronous bubble growth in mini channels using machine learning image processing (***V. Scheiff***)
12:00-12:15	Mixed convection in microfluidic channels for flow manipulation (part 1): Fluid-dynamic characterization with 3D PTV (***M. Rossi***)
12:15-12:30	Mixed convection in microfluidic channels for flow manipulations (part 2): Thermofluidic analysis with data-driven CFD modelling (***F. Azzini***)
12:30-13:00	
13:00-14:00	**Lunch break**
14:00-15:45	Session 6: ***Heat and fluid flow in micro/nano scale 1***
	Chair: **H. Iwai** & **C. Tecchio**
14:00-14:15	Heat transfer and fluid flow in PDMS nanocomposite micro-pin fin heat sinks (***E.M. Cardoso***)
14:15-14:30	Current and temperature measurements of nanowire network using thermoreflectance imaging (***K. Tatsumi***)
14:30-14:45	Concentration, thermal and polydispersity effects on the phase and flow behavior of sodium lauryl ether sulfate-water systems (***R. Ferraro***)
14:45-15:00	Prediction of thermal performance and flow non-uniformity of manifold microchannel for embedded cooling (***Y.-J. Lee***)
15:00-15:15	High heat transfer chip cooling: capillary based flow boiling model and a novel experimental analysis method (***D. Mensink***)
15:15-15:30	Numerical and experimental study of parallelized two-phase heat exchangers for high-performance computing processors (***M.A. Vignon***)
15:30-15:45	Influence of inclination on a multi-parallel-connected natural circulation loop: preliminary results (***M. Misale***)
15:45-16:15	**Coffee break**
16:15-17:45	Session 9: ***Fluid mechanics 2***
	Chair: **Z. Wu** & **P.M. Hulse**
16:15-16:30	Experimental evaluation of shell and plate heat exchanger (***M. Mantelli***)
16:30-16:45	Critical conditions for secondary fragmentation of composite liquid droplets (***P. Strizhak***)
16:45-17:00	Possibility Research on Heat Transfer Enhancement by Combination of Pulsating Flow and Fin Array (***J. Hatakeyama***)
17:00-17:15	Effects of the nozzle exit section shape on the velocity field and heat transfer of impinging synthetic jets (***G. Paolillo***)
17:30-17:45	Effect of hydrogen concentration, vent area, vent shape, and burst pressure on vented hydrogen-air explosions and its consequence analysis (***Q. Chen***)

DAY 3

Wednesday, 28 August 2024

WEDNESDAY, 28 AUGUST 2024

Room Delfi

08:00-17:00	**Registration**
09:00-09:45	**Plenary lecture 3 (Chair: M. Mantelli)**
	Laminar separation bubbles: From airfoils to finite wings (***Prof. Serhiy Yarusevych***)
09:45-11:45	Session 10: ***Heat and mass transfer 2***
	Chair: **S. Bortolin & Y. Kita**
09:45-10:00	Heat transfer and pressure drop measurements of a novel baffle heat sink for power electronics cooling (***I. T'Jollyn***)
10:00-10:15	Experimental Study on Boiling Heat Transfer of Dielectric Fluid Novec 7100 at Low Pressure/Temperature Conditions (***J. Yu***)
10:15-10:30	Investigation of the effect of nonmetallic oxides on the properties of 5-Amino-1H-Tetrazole: microscopic morphology, kinetics, and thermal safety parameters (***S. Zhou***)
10:30-11:00	**Coffee break**
11:00-11:15	Optimizing concrete conductivity with copper and brass fillers under floor heating (***A. Al Takash***)
11:15-11:30	Flow boiling of R1336MZZ(Z) in a copper microgap with tapered manifold (***D.C. Moreira***)
11:30-11:45	Growth of pool boiling bubbles of ESA Multiscale Boiling Experiment on ISS (***O. Oikonomidou***)
11:45-12:45	**Nusselt-Reynolds prize (Chair: J. Barbosa)**
12:45-13:00	**Family photo**
13:00-14:00	**Lunch break**
14:00-14:30	**Keynote lecture 3 (Chair: G. Morini)**
	Droplet impact onto superhydrophobic surfaces (***Prof. Dongshegn Wen***)
14:30-15:00	**Keynote lecture 5 (Chair: G. Morini)**
	On the Quenching of Spray Cooling - When does it occur? - (***Prof. Yasuyuki Takata***)
15:00-15:30	**Coffee break**
15:30-17:00	Session 13: ***Heat exchangers 3***
	Chair: **S. Bortolin & Y. Yoshida**
15:30-15:45	Effect of fin height and geometry on evaporation heat transfer on horizontal outer-finned tube (***S. Fukuda***)
15:45-16:00	Prediction of Boiling Heat Transfer Coefficients with Uncertainty under Upward Flow Conditions using Deep Neural Networks and Gaussian Process Regression (***T. Kinjo***)
16:00-16:15	Straight cross flow printed circuit heat exchanger: Proposal of thermal models and comparison with data (***P.M. Hulse***)
16:15-16:30	Excess liquid management for high heat flux spray evaporator integrated in a vapor compression refrigeration system (***M.V. Carneiro***)
16:30-16:45	Experimental study of the vaporization of simultaneous water drops impacting a heated wall under conditions of low pressure (***A. Courouble***)
20:00-23:00	**Galla dinner**

WEDNESDAY, 28 AUGUST 2024

Room Nafsika A

09:00-09:45	
09:45-11:45	Session 11: ***Advanced environmental systems 1***
	Chair: **Y. Takata** & **V. Garimella**
09:45-10:00	Experimental study of thermal-hydraulic performance in rectangular duct with wire coil inserts and non-uniform heat flux (***F.Z. Benouis***)
10:00-10:15	Initial Investigation of the Performance of a Transcritical CO_2 Vortex Tube (***A. Mansour***)
10:30-11:00	**Coffee break**
11:00-11:15	SiO_2 nanoparticles in molten LiCl-KCl eutectic for enhanced heat storage capacity: A molecular dynamics study with machine learning potentials (***F. Liang***)
11:15-11:30	Experimental Analysis of Metal Foam Geometry on the bio-based PCM Melting Performance (***E.M. Cardoso***)
11:30-11:45	Thermal field in monti sabatini volcanic lithostratigraphic succesions (***L. Colacino***)
11:45-12:45	
12:45-13:00	**FAMILY PHOTO**
13:00-14:00	**Lunch break**
14:00-14:30	**Keynote lecture 4 (Chair: T. Schutzius)**
	Boiing heat transfer for electronics cooling at high heat fluxes (*Prof. Zan Wu*)
14:30-15:00	
15:00-15:30	**Coffee break**
15:30-17:00	Session 14: ***Advanced environmental systems 2***
	Chair: **P. Colinet** & **M. Misale**
15:30-15:45	Enhancement usage of thermoelectric generator modules for hybrid systems: Experiments and analysis (***J. Faraj***)
15:45-16:00	Experimental study of flow condensation heat transfer of R1233ZD(E) at moderate and high saturation temperatures (***S. Głuch***)
16:00-16:15	Effect of Characteristic Length on Natural-convection-driven Evaporation-based Solar Evaporators for Desalination Applications (***D. Chatterjee***)
16:15-16:30	Numerical modeling and experimental validation of an active magnetic regenerator (***H. Nikawa***)
16:30-16:45	Experimental setup for measuring the thermal non-equilibrium effects within two-phase expansion (***X. van Heule***)
16:45-17:00	Analysis of the storage and release of thermal solar energy for the production of domestic hot water using encapsulated PCM (***C. Bianqui***)
20:00-23:00	**Galla dinner**

WEDNESDAY, 28 AUGUST 2024

Room Nafsika B	
09:00-09:45	
09:45-11:45	Session 12: ***Heat and fluid flow in micro/nano scale 2***
	Chair: **N. Miljkovic** & **A.I. Garivalis**
09:45-10:00	Development of film-type surface temperature sensor based on fluorescence polarization (***R. Kuriyama***)
10:00-10:15	Effect of surface micro/nanostructure on flow boiling in microchannel based heat sinks (***A. Moita***)
10:15-10:30	Experimental Investigation of Impingement Jet Characteristics using Particle Image Velocimetry on Convective Heat Transfer in Thermal Processing Plants (***E. Trampe***)
10:30-11:00	**Coffee break**
11:00-11:15	Effect of surface temperature on splashing of droplets impacting a cold superhydrophobic surface (***Y. Shang***)
11:15-11:30	Thermal performance improvement in the ultrathin pulsating heat pipe (PHP) by introducing transverse microgrooves (***Y.J. Lee***)
11:30-11:45	Effect of ammonia composition on flame structure and blowout limits of non-premixed ammonia-hydrogen-nitrogen-air flames (***S. Rudrasetty***)
11:45-12:45	
12:45-13:00	**FAMILY PHOTO**
13:00-14:00	**Lunch break**
14:00-14:30	
14:30-15:00	
15:00-15:30	**Coffee break**
15:30-17:00	Session 15: ***Fluid mechanics 3***
	Chair: **S. Yarusevych** & **A. Moita**
15:30-15:45	Scaling of a hot test stand including a tangential fan (***J.C. Hauch***)
15:45-16:00	Experimental investigation of two-phase cross-flow interaction using wire mesh sensor (***A. Chahine***)
16:00-16:15	The effect of air injection on pressure gradient in horizontal oil-in-saline-water emulsion (O/W) flows (***A.R.A. Colmanetti***)
16:15-16:30	Study of emulsion dynamics under varying gravity conditions through electrical and optical measurements (***A. Chondrou***)
16:30-16:45	Study of stability of a dental airotor cooling jet (***B. Pathak***)
16:45-17:00	
20:00-23:00	**Galla dinner**

DAY 4

Thursday, 29 August 2024

THURSDAY, 29 AUGUST 2024

Room Delfi	
08:00-17:00	**Registration**
09:00-09:45	**Plenary lecture 4 (Chair: S. Yarusevych)** From fundamentals of crystallization fouling on nanomaterials to rational design of scalephobic surfaces (***Prof. Thomas Schutzius***)
09:45-11:45	Session 16: ***Multiphase flows 1***
	Chair: **T. Karapantsios & Y. Yoshida**
09:45-10:00	Experimental study on severe slugging flow in pipeline-riser under different start-up conditions (***T. Liu***)
10:00-10:15	Experimental study on novel anti-slug control scheme based on choke valve pressure drop (***H. Wang***)
10:15-10:30	Experimental study on instabilities of droplets subjected to an external electric field (***A.I. Garivalis***)
10:30-11:00	**Coffee break**
11:00-11:15	Liquid film thickness measurement in HFC134a-gas ethanol system simulating two-phase flow phenomena under high pressure conditions (***S. Mori***)
11:15-11:30	Two-phase flow in a centrifugal rotor using particle image velocimetry (***E.M. Ofuchi***)
11:30-12:00	**Keynote lecture 6 (Chair: M. Kostoglou)** Film characteristics and heat transfer during condensation in a small diameter channel (***Prof. Stefano Bortolin*** **)**
12:00-12:30	**Keynote lecture 7 (Chair: M. Kostoglou)** Mach-Zehnder interferometry for fluid physics experiments involving contact lines and phase change (***Prof. Pierre Colinet***)
12:30-13:30	**Lunch break**
13:30-15:00	Session 18: ***Multiphase flows 2***
	Chair: **L. Chen & A.I. Garivalis**
13:30-13:45	Near-wall heat transfer phenomena during bubble growth in nucleate boiling (***C. Tecchio***)
13:45-14:00	Experimental Investigation on the Influence of the Flow Regime on Flow Boiling Heat Transfer Under Temporally Varying Heat Loads (***J. Rogiers***)
14:00-14:15	Temperature dependence of cluster formation behavior on temperature sensitive magnetic microcapsules (***K. Ishii***)
14:15-14:30	Effects of porosity variation of pin-fin heat sinks with vapor paths on flow boiling performance (***J. Lee***)
14:30-14:45	Experimental Investigation of Dual Swirl Partially Premixed Flame Structure with Escalating Flow Rate Ratio (***H. Sibo***)
14:45-15:00	Effect of initial ambient pressure on the explosive characteristics of thermobaric explosive (***Q. Liu***)
15:00-15:30	**Coffee break**
15:30-17:00	**Poster session**

Room Nafsika A

09:45-11:45	Session 17: ***Measurement techniques and image processing 1*** Chair: **D. Wen** & **C. Tecchio**
09:45-10:00	Novel optical methodology unveils impact of polymeric pour point depressant on phase morphology of waxy crude oils (***P. Irene***)
10:00-10:15	2C-2D PIV/PTV Measurements of High Reynolds Number Turbulent Channel Flow with Sub-Viscous-Length Wall-Normal Resolution (***J. Soria***)
10:15-10:30	Advancing experimental thermal analysis of electric machines by average winding temperature measurements (***J. Nonneman***)
10:30-11:00	**Coffee break**
11:00-11:15	Study on Multiphase flow Measurement in Large-diameter Metal Pipe using Ultrasonic Velocity Profiler (***M. Teshigawara***)
11:15-11:30	Extension of the hot box method to the determination of dynamic properties of buildings components (***G. Baldinelli***)
11:30-12:00	
12:00-12:30	
12:30-13:30	**Lunch break**
13:30-15:00	Session 19: ***Measurement techniques and image processing 2*** Chair: **K. Kontis** & **Z. Wu**
13:30-13:45	Thermosensitive coatings for fast transient heat transfer characterization (***D. Fontanarosa***)
13:45-14:00	Thermal imaging of condensation using temperature sensitive paints (***Y. Kita***)
14:00-14:15	Experimental evaluation of nozzle microfabrication methods on the sizing and dynamics of water sheet jets (***A. Peteinaris***)
14:15-14:30	Exploring rheological characteristics: A comparative analysis of rheological measurements and the real data in pipeline flow (***G.K. Matoba***)
14:30-14:45	Micro-PIV measurements in a free flow and porous medium coupled system: Effects of Reynolds number and porosity (***M. Del Mastro***)
14:45-15:00	Thermographic Sensing of Benard-Cell Convection: Investigating Heat Transfer and Fluid Dynamics in Rectangular Containers with Free Surfaces (***S. Rastogi***)
15:00-15:30	**Coffee break**
15:30 - 17.00	**AWC meeting**

DAY 5

Friday, 30 August 2024

FRIDAY, 30 AUGUST 2024

Room Delfi

08:00-12:00	**Registration**
08:30-09:15	**Plenary lecture 5 (Chair: P. Bardet)** Quantifications on supercritical fluid dynamics by pixelated interferometry: Critical phenomena and phase non-equilibrium (***Prof. Lin Chen***)
09:15-11:15	Session 20: ***Turbulence*** Chair: **P. Colinet & A. Moita**
09:15-09:30	Blockage ratio effects on turbulent flows around rectangular prisms at a moderate Reynolds number (***F.B. Abdul-Salam***)
09:30--09:45	Sensitivity study on POD analysis of near wake behind circular cylinder (***K.-C. Chang***)
09:45-10:00	Turbulent mixing in a small aspect ratio rectangular free jet (***M. Azad***)
10:00-10:15	Unsteady dynamics of flow separation around trapezoidal prisms (***F.B. Abdul-Salam***)
10:15-10:45	**Coffee break**
10:45-11:00	LDV and PIV Measurements of Turbulent Boundary Layer Flow over Traveling Wavy Wall for Drag Reduction (***Y. Yoshida***)
11:00-11:15	Self-similarity of a triangular turbulent free jet (***M. Azad***)
11:15-11:45	**Keynote lecture 8 (Chair: L. Chen)** Recent developments in measuring the smallest velocity scales (***Prof. Philippe Bardet***)
11:45-12:00	**Closure ceremony**
12:30-18:30	**Trip to Lindos (*for those registered to it*)**

Room Nafsika A

09:15-11:15	Session 21: ***Thermodynamics*** **Chair: E.M. Cardoso & Y. Kita**
09:15-09:30	Investigating condensation with R1233zd€ in a minichannel during a parabolic flight campaign (***N. Mattiuzzo***)
09:30--09:45	Droplet Wall Interactions (***M. Ushakov***)
09:45-10:00	Heat transfer enhancement of impingement cooling with different shaped ribs target surface (***X. Li***)
10:00-10:15	Experimental investigation on the evaporation characteristics of a single and a binary component droplet in hot air system (***R. Omar***)
10:15-10:45	**Coffee break**
10:45-11:00	Gaining mechanistic insight into crystallization fouling through integrated in-situ thermofluidic-optical methods (***T. Armstrong***)
11:00-11:15	Experimental study of hydrogen-oxygen catalytic recombination for hydrogen mitigation in a confined pipeline using Pt/C catalyst: Development of temperature and hydrogen concentration (***X. Li***)
12:30-18:30	**Trip to Lindos (*for those registered to it*)**

POSTER

PRESENTATIONS

	POSTER PRESENTATIONS
#	Title & Authors
1	PIV experimental analysis of the gasper jet in an aircraft cabin (*João Gouveia and Jurandir Yanagihara*)
2	Effect of ZnO nanowires coating hydrophobicity on vapor film formation and friction reduction (*Lina Vorotinskienė, Raminta Skvorčinskienė, Vladas Šatas, Aine Povilaikaitė, Simas Račkauskas and Rita Kriūkienė*)
3	Experimental and numerical investigation of the multiphase flow characteristics of the in-line type separator (*Han Sang Mok, Jo Hae Jin, Woo Nam Sub, Lee Wang Do and Kim Young Ju)*
4	Contact behavior between soft wall and bubble formed near rigid wall sandwiched by soft walls (*Jun Matsui and Yasuhiro Sugimoto*)
6	Experimental Study on the Rotor Dynamic Characteristics of High-Speed Heavy-Load Cryogenic Turbo-Expanders during the Speed-up Process (*Changlei Ke, Hongbo Xu, Kongrong Li, Xiaohua Zhang, Bin Dong, Lianyou Xiong, Nan Peng, Shun Qiu, Ningyu Shi,*
7	Mathematical description of the temperature-effective heat capacity relationship obtained by differential scanning calorimetry for phase change modelling (*Martin Zálešák, Pavel Charvát, Lubomír Klimeš and Jakub Kůdela*)
8	Experimental investigation on thermal performances of the cold plates in a pump driven two-phase cooling system (*Xu Hongbo, Liu Ming and Kongrong Li*)
9	Modeling of effective heat insulation methods for vertical farming in a greenhouse (*Vitaly Haslavsky and Helena Vitoshkin*)
10	Modeling and investigation of the turbulent wake recovery in the wind farm area (*Vladislav Kovalnogov, Andrei Chukalin, Maria Kornilova and Ruslan Fedorov*)
11	Development of stator sector mock-up of a hairpin electric motor for detailed thermal testing of direct cooled end-windings (*Steven Vanhee, Jasper Nonneman, Frederik Desmet and Michel De Paepe*)
12	Velocity Measurements of Thin Falling Films Using Nuclear Magnetic Resonance (*Georges Saliba, Jan Korvink and Jürgen Brandner*)
13	Visualization Measurement of Mixing Process of Viscous Liquid Contained in a Rotating Cylindrical Vessel (*Tomoya Taguchi, Tetsuro Yanaseko, Masaki Hiratsuka and Koji Hasegawa*)
14	Effects of the rheological properties of a viscoplastic fluid on the slug flow pattern (*Daiane Mieko Iceri, Gláucio Kenji Matoba, Roney Leon Thompson, Annie Fidel-Dufour and Marcelo Souza Castro*)
15	Experimental Measurement Technique for the Determination of Flow and Heat Transfer Characteristics of Impinging Jets in Industrial Thermoprocessing Plants (*Jan Erik Menzler, Eileen Trampe, Nico Rademacher, Dominik Büschgens and Herbert Pfeifer*)
16	Evaporation-induced emulsification and phase separation dynamics of ternary droplets in acoustic levitation (*Misaki Mitsuno and Koji Hasegawa*)
17	Application of the optical flow method in PIV images: non-newtonian fluid flow in a horizontal pipe (*Helder Lima Moura, Gláucio Kenji Matoba, Daiane Mieko Iceri, Eshail Miguel Vallejos Melendres, Roney Leon Thompson, Annie Fidel-Dufour and Marcelo Souza Castro*)
18	Heat transfer characteristics of water-oil plug flow in a horizontal circular tube (*Takashi Morimoto, Toshikazu Esaki, Takato Kimura and Hiroyuki Kumano*)
19	Exploring phase separation dynamics in block copolymer solutions: innovative experimental techniques with thermodynamic analysis (*Irene Perna, Gaia Paradiso, Rosalia Ferraro, Marta Gamberoni, Salvatore Coppola and Sergio Caserta*)
20	Experimental investigation of the influence of ethanol/water mixture on nucleate pool boiling for structured surfaces (*Panagiota Xanthopoulou, Axel Sielaff and Peter Stephan*)

21	Impact and boiling of single and multiple droplets on a heated solid surface (*Tianhan Chen and Koji Hasegawa*)
22	Intermittency of flow meandering in a gap of a model of a peripheral subchannel of a fuel rod assembly (*Maxim Shestakov and Mikhail Tokarev*)
23	Machine learning of scattering signals in optical fiber to identify coolant leakage location of fusion reactor (*Shun Nukaga, Daiki Mori, Tsuyoshi Kodera, Masahiro Furuya and Takuya Katagiri*)
24	Preliminary experimental and computational investigation of a laboratory gas turbine combustor (*Gonçalo de Sousa Pina Pacheco, Afonso Santoalha, Bruno Pinto, Miguel Mendes and Pedro Coelho*)
25	Experimental study on freezing of supercooled water droplet impacting on curved cold surfaces (*Shinan Chang, Zhaoyang Sun and Shuyi Zhang*)
26	Study of droplet motion and freezing under shear of cold air streams (*Shinan Chang, Xibo Qiao and Shuoshuo Wang*)
27	Study of castor oil/diesel emulsified fuels: Behavior of a single droplet in high temperature environments using image analysis methods and combustion characteristics of emulsions in diesel engines (*Shuhn-Shyurng Hou, Chun-Ta Chen, Wei-Cheng Chiu and Ming-Da Lai*)
28	Experimental and numerical study to investigate subcooled boiling in minichannels (*Beata Maciejewska and Magdalena Piasecka*)
29	Boiling heat transfer research during flow in rectangular minichannels (*Magdalena Piasecka, Sylwia Hożejowska and Artur Piasecki*)
30	Steam explosion retardant for molten Lead-Bismuth to stabilize vapor film (*Masahiro Furuya and Takahiro Arai*)
31	Effects of refrigerant charge in heat pump on thermohydraulic performance of microchannel evaporator (*Georges El Achkar, Jalal Faraj and Mahmoud Khaled*)
32	Effect mechanism of 5-Amino-1H-Tetrazole on the pyrolysis and combustion behaviors of Nano-Al@Fe2O3 thermite reaction (*Jiu Chen*)
33	Investigation of the effect of nonmetallic oxides on the properties of 5-Amino-1H-Tetrazole: microscopic morphology, kinetics, and thermal safety parameters (*Si-yuan Zhou, Xuan Li, Dan Zhang, Bin Li, Li-Feng Xie*)
34	Vitrification of biological material by immersion in liquid nitrogen and slush:an experimental study (*Jacqueline B. Copetti, Alisson S. Silva, Matheus Chanan, Jeferson D. Oliveira, Elaine M. Cardoso, Mario H Macagnan, Andre C Monteiro, Henrique Vidaletti and Karolyn Ogliari*)
35	Flow boiling heat transfer of propane (HC-R290) in multiport minichannels (*Jeferson D. Oliveira, Jacqueline B. Copetti, Priscila F. Silva, Mario H. Macagnan and Elaine M. Cardoso*)
36	Effect of stainless-steel surfaces on biofilm formation: implications during electrical impedance spectroscopy measurements (*Dimitrios Avgoulas, Maria Petala, Margaritis Kostoglou and Thodoris Karapantsios*)
37	Simulating bubble size effect on electrical signal fluctuations (*Ourania Oikonomidou, Sotiris Evgenidis, Thodoris Karapantsios and Margaritis Kostoglou*)
38	A technique for calculating the electrical resistance of ring electrodes in a domain with many bubbles (*Margaritis Kostoglou, Sotiris Evgenidis and Thodoris Karapantsios*)
39	Study of bubble clusters morphological features through electrical impedance and optical measurements (*Sotiris Evgenidis, Petros Gkotsis, Nikoleta Chatzipapa and Thodoris Karapantsios*)
40	Exploring fluid dynamics in cardiovascular system with electrical impedance measurements (*Nikoleta Chatzipapa, Sotiris Evgenidis, Kostas Zacharias, Georgios Karagiannis, Michail Doumas, Thodoris Karapantsios*)
41	Degradation of plastics in model marine environment: optical visualization through advanced microscopy techniques (*Alessandro Marino, Sergio Caserta and Stefano Guido*)

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Research Committee

Aristotle University of Thessaloniki

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