

		PLENARY SESSION: Prof. Ali Beskok (MAIN HALL)					
	09:30-09:45	From Atoms to Flow: Exploring Evaporation and Condensation in Nano-Channels					
	09:45-10:00	Chair: Prof. Barbaros Çetlin					
DAY-1 (MAY 20)		COFFEE BREAK					
		S1-A: Thermal Management/Electronics Cooling Chair: Prof. Damena Agnolfer MAIN HALL	S1-B: Numerical Heat Transfer - I Chair: Prof. Andrey Kuznetsov Room-B	S1-C: Energy Systems Chair: Prof. Prof. Tassos G. Karayiannis Room-C	S1-D: Multi-phase Modeling - I Chair: Prof. Ali Cernel Benim Room-D	S1-E: Multiphysics Modeling Chair: Prof. Kerem Pekkan Room-E	
	10:00-12:00	[874] Performance Analysis of Wavy Microchannels: A Comparative Study of Traditional and Modified Microchannels for Electronic Cooling [875] Microsystems Direct Cooling Using a Bi-phase Microfluidic Design [877] Experimental Investigation of Open Circuit Voltage of a Li-ion Battery at Different Operating Temperatures [886] Numerical Investigation of Copper Metal Foam Integration in Hybrid Battery Thermal Management System for Enhanced Energy Density and Optimized Temperature Control [845] Development of a Novel Thermal Management System for Li-ion Battery using Microchannels [879] Enhancement of Phase-Change Efficiency by the Synchronized Reciprocating Rotation and Heaving Motion of the Thermal Storage Unit	[871] Numerical Simulation on Liquid Metals Flowing through Rough Parallel Plates with Uniform Heat Flux Heating [880] A Numerical Framework for Conjugate Heat Transfer Using the Immersed Boundary Method with a Compressible Solver [887] Comparison of Nanoscale and Laminarization Elements with Boundary Element Method for Orthotropic Heat Conduction Problem [882] Development of Grid Model Requirements for Direct Numerical Simulation of Natural Convection in an Infirig Gap Control [883] Exploring the Synergistic Impact of V-Ribs with Cylindrical Vortex Generators on Solar Air Heater Performance: A CFD Approach [884] Shape/Radius Analysis for the Convective Radiative Flow of Trihydnated Nanofluid with Three Different Nanoparticles over a Rotating Cone	[822] Integrating Waste Heat Recovery Systems in Biomass Boiler: Experimental Insights and 1D Modeling [883] Fluid-structure Interaction Analysis of a Small-scale Piezoelectric Wind Energy Harvester [811] Computational Model of a Sliding Heat Pump with Linear Actuators and a Regenerative Heat Exchanger [885] Eulerian-Eulerian Modeling of Discharge Processes in Spouted Bed Solid Discharge [886] Fluid-Particle Interaction in a Slotted Tube Equipped with Innovative Impeller	[858] Pore-scale Study on Mixing Characteristics of Phase Change Materials in Rectangular Porous Media Based on Thermal Resistance Analysis Methods [848] Numerical Analysis of the First Resonance After Protruded Flat Surface [887] CFD Coupled With a Lognormal Model for Modeling an Evaporation-Condensation Type Aerosol Generator [819] Drag Force and Mass Transfer in Gravely-driven Bubbly Flows on Inclined Channels using the UCL5 Method [882] Numerical Investigation of the Effect of Microscale Cavities on Nucleate Boiling [847] Mixing Analysis in a Slotted Tube Equipped with Innovative Impeller	[812] Multiphysics Synergy Analysis of Light, CO2 Mass Transfer and Fluid Dynamics in Monolayer Photoemission [824] Modeling of Electromagnetic Field Distribution in the Digital Train of a Laboratory-scale Microwave Chair for Clay Roof Tiles [842] Multiphysics Analysis and Design of Lightweight Composite Enclosures for Enhanced Thermal Management in Electric Vehicle Battery Module [842] Hybrid Numerical Simulation of MHD Mixed Convection in Nanofluid-Filled Cavities with Application to Electronics Cooling [844] Hybrid FDM-DEM Method for Thermal Management of Electronic Components via MHD Natural Convection Using MWONT-Fe3O4/HD Hybrid Nanofluid	
	12:00-12:30	LUNCH					
	13:30-14:15	KEYNOTE SESSION: Prof. Andrey Kuznetsov (MAIN HALL) Macroscale Turbulent Vortex Impingement on Porous/Fluid Interfaces Chair: Prof. Barbaros Çetlin			KEYNOTE SESSION: Prof. Aygü Güllü Güngör (Room-B) Vortex Dynamics and Flame Interaction in Sluff Flow Premixed Combustion Chair: Prof. Zafer Duranunay		
	DAY-2 (MAY 20)		S2-A: Heat Pipes Chair: Prof. Damena Agnolfer MAIN HALL	S2-B: Reacting Systems - I Chair: Prof. Aygü Güllü Güngör Room-B	S2-C: Numerical Heat Transfer - II Chair: Prof. Ali Beskok Room-C	S2-D: Multi-phase Modeling - II Chair: Prof. Abdumajid Mohamed Room-D	S2-E: Turbulent Flow Chair: Prof. Marcelo de Lemos Room-E
		14:20-16:50	[818] Innovative Groove Designs for Enhanced Flat-Grooved Heat Pipe Efficiency [846] Pseudo-3D Modeling of Grooved Heat Pipes [822] Thermal Management of a Distributed Heat Load Using Best Aluminum Alloy Grooved Heat Pipes [842] Effect of Groove-Fin Width Ratio on the Thermal Performance of Grooved Heat Pipes [876] Assessment of Sintered Wick Heat Pipe Performance	[812] Numerical Investigation of Hydrogen Addition on Flame and NOx Emissions in Methane Combustion for Internal Kerosene Using a New Reduced Mechanism [841] Numerical Study of Combustion Instabilities in a Single Injection Combustor [842] 3D CFD Modeling of MHD and Free Convection in an Aircraft Engine Bay [848] Large Eddy Simulation of Turbulent Non-reacting Flow Inside a Semi-stabilized Combustor via Lattice-Boltzmann Approach [818] A Novel Approach to CFD Vorticity Analysis in Heavy-Duty Engines: Multi-Cylinder Combustion Modeling with Detailed Chemistry	[844] Numerical Study of an Industrial Scale Continuous Container Glass Annealing Furnace [812] Natural Convection Within an Enclosure Filled With Blocks [841] Numerical Simulation of Magnetohydrodynamic Convection in a Planar Periodic Domain [828] Identification of Transient Fluid Temperature Using Thermometer Readings [812] Discrete Green's Function Method for Laplace Equation with Nonlinear Boundary Conditions [812] Discrete Green's Function Method for Laplace Equation with Nonlinear Boundary Conditions	[814] Comparison of the UCL5 and Coupled VOF-LES Methods for Hydrodynamics and Mass Transfer in Bubbles [849] Optimization of Closure Model Coefficients with Bubble-Induced Turbulence for Enhanced Two-Phase Flow Predictions [822] Experimental and Numerical Investigation of Heat Transfer Performance in a Condensing Heat Exchanger [844] Particle Dispersion and Deposition in Evaporating Sessile Droplets [848] Growth Mechanism of Boiling Bubble in Microscale Within the Interplay of Ultrasonic and Thermal Field	[818] Implementation and Validation of an Improved $k-\epsilon$ Turbulence Model Based on Reynolds Number [812] Direct Numerical Simulation of Turbulent Flow Regime in a Dense Translating Rod Bundle Cell at $Re = 14,200$ [818] DNS Simulations of Gas Flow Within an Industrial Kiln for Sanitary Ware Manufacture [817] Numerical Study on the Effect of Loading Density on the Efficiency of Reverse-Flow Cyclone Separators
		16:50-18:20	COFFEE BREAK				
		18:20-17:50	KEYNOTE SESSION: Prof. Damena Agnolfer (MAIN HALL) Thermal Management of Electronics From Device Level to Data Centers Chair: Prof. Barbaros Çetlin			KEYNOTE SESSION: Prof. Marcelo J.S. de Lemos (Room-B) Advances in Modeling and Simulation of Turbulent Flow, Heat & Mass Transfer in Heterogeneous Media Chair: Prof. Zafer Duranunay	
		DAY-2 (MAY 20)		S3-A: Heat Exchangers Chair: Prof. Tassos G. Karayiannis MAIN HALL	S3-B: Aerodynamic/Aerothermal External Flow - I Chair: Prof. Matteo Bernardini Room-B	S3-C: Numerical Heat Transfer - III Chair: Prof. Marcelo de Lemos Room-C	S3-D: Diverse Topics in Heat Transfer - I Chair: Prof. Qiuwang Wang Room-D
17:00-18:40			[826] Transient Modeling of Heat Exchangers Using a Steady-State Approach [826] Performance Analysis of Fixed-Bed and Spray-Based Regenerative Heat Exchangers [816] Performance Analysis of Plate Heat Exchangers under Dynamic Environmental and Freezing Conditions [836] CFD and Energy Analysis of Photovoltaic-Supported Electrically Driven Heat Exchangers	[816] Experimental Investigation of the Effect of Small Offset Surface Vortex Generator on the Aerodynamic Performance of NACA0012 at Low Reynolds Number [842] Investigating the Impact of Roughness Element Distribution on Steep Flow Dynamics in a Backward-Facing Step Channel [842] Vortex Gait Encountered by a Flat Plate at 45° Wing Sweep [812] Numerical Investigation of Heating Effect in 3D Shock-Wave/Boundary Layer Interactions Near Protrusions in Hypersonic Flow	[816] LES Modeling of Free Convection Heat Transfer from Horizontal Cylinder [842] Heat transfer coefficient between spherical particles in co-currenting fluid [816] Forced Convection of a Viscoplastic Fluid in a Pipe: Pressure Drop [888] Numerical Investigation of Heat Transfer Characteristics in Liquid-Cooled Heat Sinks for SiC MOSFET Power Inverters [848] Experimental-numerical Method for Determining Heat Transfer Correlations in the pin-and-plate Heat Exchanger	[814] CFD Modeling of Laser Cutting Process of LHD Steels: Experimental Validation and Optimum Cutting Parameters Selection [814] Investigation of thermoinduced distortions in LHPF process by utilizing finite element simulations [816] Computational Analysis of Heat and Material Flow During Chemical Recycling of Composites for Wind Turbine Blades [84] Assessment of Thermophysical Nature and Processability of Liquid-Phase Nanofluids through Non-Dimensional Parameters [812] Assessment of Micro-Porous Scaffolds via Instantaneous Response of Thermomechanical Desorption versus Post-Processed Syngas Chromatography	[841] Derivation of a Roughness Model for Urban areas by means of detailed CFD simulation [816] Open Space Indoor Air Quality and Comfort: Ventilation Versus Buoyancy Strategies [816] Numerical simulation of wind fence effect on coastal desert environment [848] Numerical Investigation of Thermal Comfort for Passengers in a Helicopter Cabin
18:40-19:10			[826] Direct Numerical Simulation of a Hypersonic Transitional Boundary Layer in Chemical Non-equilibrium: Effect of Wall Stress [826] Implementation of Numerical Schemes for the Computation of Incompressible Flows in OpenFOAM [842] Investigation of Aerodynamic and Structural Features Wind Escape Flows in Super-Tall Super-Slender Buildings [842] Numerical Investigation of Novel Derivatives of Oil-Infused Airfoils for Low Reynolds Number Applications [846] 2D Simulations on a Flat Plate to Study the Effect of Porosity on Skin Friction Drag Reduction [812] An Analysis of the Airflow Patterns of an Electrohydrodynamic Fan	[816] Responsive Virtual Wall Liquid Crystal Microfluidics [816] Programmable 3D Microfluidic Bio-Reactors: Real-time Monitoring of a Portable Pressure Pump for Microfluidization of Biomass: Point-of-Care Detection of <i>Salmonella</i> via LAMP-PCR [842] Enhanced Design and Performance Optimization of Microfluidic Micro Flow Battery for Self-Powered Lab-on-a-Chip System [816] Microstructure-Level Investigation of Nanoparticle Transport in Collagen Hydrogels for Advancing Nanomedicine Design and Delivery Strategies [846] Mathematical Modeling of Momentum and Mass Transport in Liver-on-a-Chip Systems [846] Experimental Analysis for Detection of Microfluidic Systems with an Integrated Object Tracking Algorithm	[816] Investigation of the Effectiveness of Using Micro-lattice Structured Meta-material for Enhancing Heat Transfer [848] Experimental Investigation and Evaluation of Heat Transfer Enhancement Effectiveness of Aluminum Foams for the Liquid-Cooled Avionic Electronic Units [812] Numerical Investigation of Thermal Conductivity Enhancement in Phase Change Materials using additively Manufactured Lattice Structures [848] Investigation of Convective Heat Transfer Enhancement on a Cold Plate using Serpentine Channel with Friction Stir Welding [846] Thermal and Hydrodynamic Evaluation of Microchannel Heat Sinks with In-line and Staggered Pin-Fin: Enhancing Electronic Cooling [846] Experimental Analysis for Detection of Microfluidic Systems with an Integrated Object Tracking Algorithm	[816] Precursor Detection for Feedback Control in Hydrogen Combustor via Integrated Machine Learning and Nonlinear Analysis [848] Prediction of Thermal Parameters of Individual at Tube Rows in Forced Heat Exchangers Using Artificial Neural Networks [848] Physics-Informed Neural Networks for Heat Transfer and Fluid Flow problems [816] Application of Artificial Intelligence Model for Stagnant Jet Impingement Cooling on Wavy Target Surface [816] Machine-learning-enabled Optimal Airfoil Design at High Mach Numbers [816] Dimensionless Approach to Modeling and Predicting Coating Thickness in Continuous Coextrusion Lines Using CFD and Neural Networks	[812] Preliminary numerical non-equilibrium model for heat, air, and moisture transfer in low-speed building materials [816] Discrete element modeling of heat transfer in active zone of nuclear reactor HTR-Pf with advanced radiative model and nonuniform burnout of TRISO particles [812] Study of the Thermophysical Properties of a Material-Engineered Impacted Core-based Material by Infrared Thermography [846] Computational Thermography for Injury Detection and Monitoring in Rugby Players