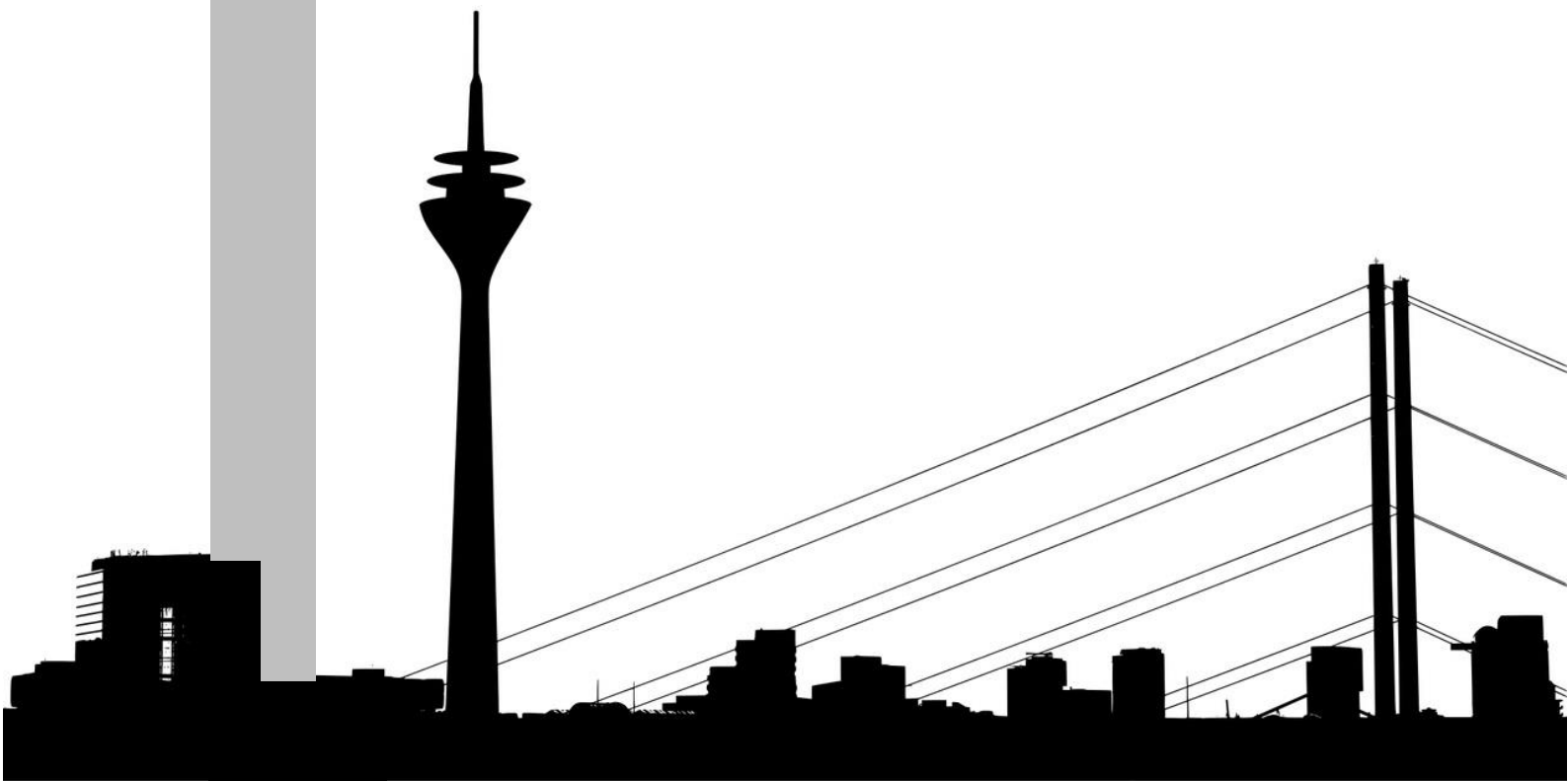


ICCHMT

2023

Düsseldorf

**14. Conference on
Computational Heat and Mass Transfer
4-8 September 2023
Düsseldorf, Germany**



CONFERENCE PROGRAM

PROGRAM OVERVIEW

	Monday, 4 September	Tuesday, 5 September	Wednesday, 6 September	Thursday, 7 September	Friday, 8 September	
07:00 07:30		REGISTRATION (07:00-08:25)				
07:30 08:00						
08:00 08:30		OPENING CEREMONY (08:25-08:55)	REGISTRATION	REGISTRATION	5 PARALLEL SESSIONS	
08:30 09:00			KEYNOTE SESSION I Prof. Kempf	KEYNOTE SESSION III Prof. Eastwick		KEYNOTE SESSIION V Prof. Lorente
09:00 09:30		<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>		<i>Coffee Break</i>
09:30 10:00						
10:00 10:30						
10:30 11:00						
11:00 11:30		5 PARALLEL SESSIONS	5 PARALLEL SESSIONS	5 PARALLEL SESSIONS	5 PARALLEL SESSIONS	
11:30 12:00						
12:00 12:30						
12:30 13:00		<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	CLOSING CEREMONY	
13:00 13:30						
13:30 14:00		REGISTRATION	KEYNOTE SESSION II Prof. Wang	KEYNOTE SESSION IV Prof. Taler	KEYNOTE SESSION VI Prof. Iaccarino	
14:00 14:30			<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	
14:30 15:00						
15:00 15:30			5 PARALLEL SESSIONS	5 PARALLEL SESSIONS	5 PARALLEL SESSIONS	
15:30 16:00						
16:00 16:30						
16:30 17:00						
19:00 23:00				GALA DINNER		

PROGRAM IN DETAIL

MONDAY, 4 September 2023 Afternoon

13:30
-
17:00

REGISTRATION

TUESDAY, 5 September 2023 Morning

07:00
-
08:25

REGISTRATION

OPENING CEREMONY

AUDIMAX

Prof. Dr. Edeltraud Vomberg
President of the Düsseldorf University of Applied Sciences -
Hochschule Düsseldorf (HSD)

08:25
-
08:55

Prof. Dr. A. A. Mohamad
Founding Chair ICCHMT

Prof. Dr. A. C. Benim
Local Chair ICCHMT2023

KEYNOTE SESSION I					
AUDIMAX					
(Chair: A. C. Benim)					
Simulation and Modelling of Nano-Particle Formation in Flames					
ANDREAS KEMPF					
University of Duisburg-Essen, Germany					
Coffee Break (Hallways)					
Parallel Session 1 BERLIN Chair: S. Tavakkol		Parallel Session 2 HAMBURG Chair: B. Cetin		Parallel Session 3 FRANKFURT Chair: Y. Demagh	
Parallel Session 4 STUTTGART Chair: U. Janoske		Parallel Session 5 AACHEN Chair: N. Arifin			
09:00 - 10:00					
10:00 - 10:30					
10:30 - 10:50	Paper 207: Low-Emission Biomass Burner - Calculations and Design <i>P. Motyl, J. Bukalska, R. Kalbarczyk</i>	Paper 243: Lagrangian Modeling of Dropwise Evaporation in a Shear Driven Flow Over Super Hydrophilic and Super Hydrophobic Surfaces <i>Giulio Croce, N. Suzzi</i>	Paper 242: Systematic Screening and Evaluation of Optimal Adsorbents for Façade-Integrated Adsorption-based Solar Cooling Systems of Buildings <i>Qiwei Li, Olaf Böckmann, Micha Schäfer</i>	Paper 004: CFD Analysis of Different Cross-Sectional Areas of Sleep Apnea Patients Under Various Conditions <i>W.M.Faizal, C.Y. Khor, Suhaimi Shahrin, M. H. M. Hazwan, M. Ahmad, M.N. Misbah, A. H. M. Haidiezul</i>	Paper 031: Effect of Axial Conduction and Viscous Dissipation in the Entrance Region of Porous Filled Duct under the Local Thermal Non-Equilibrium <i>D. Bhargavi, Nitish Gupta</i>
10:50 - 11:10	Paper 247: Assessment of Turbulence Modulation for the Simulation of a 60-kWth Swirling Flame of Pulverized Solid Fuel under Oxy-Fuel Conditions <i>H. Askarizadeh, H. Nicolai, S. Pielsticker, R. Kneer, C. Hasse, A. Maßmeyer</i>	Paper 007: Effect of Side Wall Heat Flux on Thermocapillary Droplet Migration <i>Y.Alhendal, S. Touzani, A. Turan</i>	Paper 117: A One-Dimensional Model and the Influence of the Mass Flow Rate in A Structured Thermal Energy Storage System for Concentrated Solar Power Plants <i>Oriol Sanmartí, Jordi Vera, Santiago Torras, Carlos D. Perez-Segarra</i>	Paper 039: A Study on the Injection Method of Thrombin for the Treatment of Femoral Artery Pseudoaneurysm using In-Vitro Experiment <i>Young Ho Choi, Myoung Je Song, Jong Sun Kim, Jae Don Sohn, Kyung-Wuk Kim, Chang Je Lee, Hyoung-Ho Kim</i>	Paper 033: Couple Stress Fluid Flow Behaviour between Two Parallel Plates Due to Sudden Stoppage of Pressure Gradient <i>J. V. Ramana Murthy, D. Anjali, Naresh Reddimalla</i>
11:10 - 11:30	Paper 200: Numerical Simulation of Thermal Decomposition of Polyethylene with A Single-Particle Model <i>F. Zhang, J. Cao, T. Zirwes, N. Netsch, S. Tavakkol, R.Zhang,H.Bockhorn, D.Stapf</i>	Paper 040: Effect of Vibrations on Thermocapillary Droplet Flow in a Rotating Cylinder in a Zero-Gravity Environment <i>Y. Alhendal, S. Touzani</i>	Paper 092: Experimental Analysis of Convective Heat Transfer for Solar Panels in Outdoor Conditions <i>L. Bou Nassif, S. Giroux-Julien, H. Pabiau</i>	Paper 071: Flow Analysis of Artificial Venous Valve Using In-vitro Vein Model <i>Guk Myung Choi, Changje Lee, Kyung-Wuk Kim, Hyoung-Ho Kim, Young Ho Choi</i>	Paper 034: Thermal Transport of EMHD Flow with Pressure-Dependent Viscosity through a Parallel Plate Microfluidic Channel: A Theoretical Analysis <i>Srinivas Jangili, Brijesh Kumar</i>
11:30 - 11:50	Paper 202: Development of an Immersed Boundary Framework for Iron Particle Combustion <i>D. Müller, V. Venugopal, G. Thäter, A. Stroh, B. Nguyen, A. Scholtissek, T.D. Luu, O.T. Stein, B. Frohnapfel</i>	Paper 144: Implementation of Volume Correction and Mesh Relaxation Algorithms in Isogeometric Boundary Element Formulation for Modeling Droplet Motion <i>Ö.C. Gümüş, G. Kabacaağlu, B. Çetin</i>	Paper 046: Heat Loss Analysis from a Solar Receiver with A Fresnel Linear Concentrator <i>H. Beltagy, S. Mihoub</i>	Paper 075: Study on the Mechanism of Cell Cooling Curve on Injury Based on Microfluidic Chips and Its Effect on RNA-Seq Gene Expression <i>Zhenhong Ye, Le Zhang, Yijun Ling, Jiangping Chen</i>	Paper 160: The Nonlinear Stability Analysis of Thermal Convection in A Porous Layer with Viscous Dissipation and Throughflow <i>N. Deepika</i>
11:50 - 12:10	Paper 183: Numerical Investigation of Chemically Reacting Flow Within Microreactor <i>S.-J. Baik, S. Grimm, B. Atakan, I. Wlokas, A. Kempf</i>	Paper 145: Comparison of Iterative Solvers in Isogeometric Boundary Element Formulation for Heat Transfer Problems with Non-linear Boundary Conditions <i>K. Atak, Ö.C. Gümüş, B. Çetin</i>	Paper 053: Numerical Study of the Thermal Capacity of Nanofluids Destined for Storage in Concentrated Solar Power Plants <i>F. Boufoudi, S. Zouaoui, S. Mihoub</i>	Paper 216: Numerical Study of Convection-Assisted Intra-Vitreous Drug Delivery in Human Eye <i>V. Shrinivas, Arunn Narasimhan</i>	Paper 262: Shear Thinning and Thickening Influences on the Buoyancy-Driven Flow of a Viscous Incompressible Reiner-Philippoff Fluid in a Rectangular Open-Ended Cavity with Permeable Horizontal Surfaces <i>R. Khan, J. Tiago, A. Ahmad</i>
12:10 - 12:30	Paper 062: Investigation of the Operating Flexibility of A CFB Furnace - Experimental Measurements and Dynamic Simulation <i>Falah Alobaid, Alexander Kuhn, Bernd Epple</i>	Paper 011: Morphological Evolution and Oscillatory Behaviour of Gallium-Based Liquid Metal Droplet upon Impingement on Smooth Surface using Numerical Framework <i>R. Agarwal, A. A. Mohamad</i>	Paper 191: Thermal Performances of Solar Collectors with Advanced Thermal Storage: Analysis of the Effect of Incoming Water in a Double-Pipe Heat Exchanger Incorporating Nanoparticles and Metal Foam <i>A. NematpourKeshтели, M. Iasiello, G. Langella, N. Bianco</i>	Paper 218: Numerical Modeling of the Effects of Congestion in Human Lungs <i>Aarthi Thangavelu, Arunn Narasimhan</i>	Paper 305: A Study on Solutions of Linear Heat Equation <i>Venkatramana P B, Satyanarayana Engu, Manas R Sahoo</i>

12:30 - 13:30	Lunch (Mensa)				
TUESDAY, 5 September 2023 Afternoon					
13:30 - 14:30	KEYNOTE SESSION II AUDIMAX (Chair: P. Oclon) Target-Controlling Principle of Local Thermal Resistance for Energy Saving and Storage Processes QIUWANG WANG Xi'an Jiaotong University, P. R. China				
14:30 - 15:00	Coffee Break (Hallways)				
	Parallel Session 1 BERLIN Chair: G. Marom	Parallel Session 2 HAMBURG Chair: G. Croce	Parallel Session 3 FRANKFURT Chair: H. Pabiou	Parallel Session 4 STUTT GART Chair: T. Grosan	Parallel Session 5 AACHEN Chair: Y. Alhendal
15:00 - 15:20	Paper 269: Large-Eddy Simulations of a Highly Diluted, Non-premixed Hydrogen Flame with Differential Diffusion <i>M.P. Ghofrani, P. Wollny, A. Kempf</i>	Paper 019: Experimental Investigation on Effect of Knurling on Condensation Heat Transfer Performance of Vertical Copper Tube <i>Jason Joy Poopady, Jyothish Abraham, Rajkumar M.R.</i>	Paper 036: Airborne Rotor-type Wind Turbine Performance Analysis by Three-Dimensional Rotating Mesh Unsteady RANS Simulation Method <i>Ergin Kükrer, Doğan Güneş</i>	Paper 044: Modeling of Filtration Processes with Arbitrary Shaped Particles Using an Immersed-Boundary-Method (IBM) <i>Kamil Braschke, Amin Zargaran, Florian Freese, Markus Bürger, Sebastian Burgmann, Uwe Janoske</i>	Paper 063: Applied Numerical Simulation of Thermodynamics and Fluid Flow in Metallurgical Plant Engineering <i>N. Vogl, F. Krause, A. Kemminger, H-J. Odenthal, M. Reifferscheid</i>
15:20 - 15:40	Paper 224: Comparative Analysis of Turbulence Models for Turbulent Premixed Combustion: A Hybrid Rocket Engine Case Study <i>N.Lewandowska, B. Ziegler, T. Krakowski</i>	Paper 104: Subcooled Boiling Heat Transfer Using a Semi-Mechanistic Wall Boiling Model <i>A. Khaware, V. Gupta, H. Puneekar, A. Ben Hadj Ali</i>	Paper 151: Effect of Blade Shape and Angle on the Performance Characteristics of a Wind Turbine and Additional Equipment <i>M. Jaszczur, M. Borowski, J. Halibart, K. Zwolińska-Gładys, P. Marczak</i>	Paper 080: A CFD Simulation Study on the Impact of Parametric Variations on Particle Dispersion during Sand Blasting <i>AHM Haidiezul, MS Dolah, C. Y. Khor, W. M. Faizal, M. H. M. Hazwan, M. Ahmad, M.A.M. Nawi</i>	Paper 070: A New Hybrid Approach to Predict the Solidification Process in A Continuous Casting Machine Taking Flow Effects into Account <i>T. P. Bui, M. Waldmann, F. Wietbüscher, M. Meinke</i>
15:40 - 16:00	Paper 284: Influence of Turbulence Modelling Approach on Characteristics of Premixed Jet Flames Doped with Ammonia <i>J. Jójka, N. Lewandowska, P. Czyżewski, R. Ślęfarski</i>	Paper 236: Systematic Assessment of Roughness Effect on Flow Characteristics in Minichannels <i>M. Pahlavanzadeh, S. Rulik, W. Wróblewski, K. Rusin</i>	Paper 074: CFD Simulation and Optimisation of the Efficiency of a Spiral tube Under Focused Beam by a Solar Dish <i>K. Mahdi, K. Bekrentchir, N. Bellel</i>	Paper 206: Improving the efficiency of thermal insulation of window panes - the use of transparent thin-layer insulation coverings filled with nanospheres <i>P. Motyl, D. Król, M. Patej, S. Poskrobko</i>	Paper 282: A CFD Model to Simulate Mould Filling and Solid-Liquid Phase Change during Aluminothermic Welding of Rails <i>Ravi Govindram Kewalramani, Ingo Riehl, Jan Hantusch, Tobias Fieback</i>
16:00 - 16:20	Paper 137: A Comparative Study on Flame Length using Numerical Analysis and Flame Visualization in Premixed Combustion <i>Y. B. Kim, E. J. Shin, W. Jung</i>	Paper 109: Dynamic Operation Modeling of Flat-Plate Pulsating Heat Pipes for Power Electronic Applications <i>R. Dreiling, P. Schreivogel, T. Nguyen-Xuan, T. Christ, F. di Mare</i>	Paper 172: Investigating Efficient Solar Absorber Designs <i>N. Bessanane, Y. Demagh, M. Si-ameur, M. Rebay</i>	Paper 244: High-Fidelity Simulation of Effective Heat Transfer in Stacked Spherical Particles <i>K. Redosado, A. Lyulin, B.J. Geurts</i>	Paper 020: CPU and GPU Computational Performance Comparison Applied to Autogenous Welding Simulation <i>E. J. G. Nascimento, E. S. Magalhães, A. M. Azevedo, L. E. S. Paes, A. F. M de Oliveira</i>
16:20 - 16:40	Paper 187: Proper Orthogonal Decomposition of Wall Heat Flux for Head-On Premixed Flame Wall-Interaction Across Turbulent Boundary Layers <i>Vishnu Mohan, Umair Ahmed, Nilanjan Chakraborty</i>	Paper 135: Accelerated Solution Methodology for 3D Hydrodynamic and Thermal Modeling of Grooved Heat Pipes with Complex Geometries <i>Gökay Gökçe, Barbaros Çetin, Zafer Dursunkaya</i>	Paper 087: Transition Flow Heat Transfer and Pressure Drop in a Uniformly Heated Inclined Solar Air Heater Fitted with Wavy Tapes <i>S. Bhattacharyya, D.K.Vishwakarma, M. K. Soni, S. Ghosh, A. C. Benim</i>	Paper 253: Experimental and Numerical Study of Sediment Scour under Impinging Vertical Jet <i>M. Baldi, M. Mendina, C. Chreties</i>	Paper 210: Asymptotic Fluid Flow and Energy Equations for Modeling the Drawing Process of Microstructured Optical Fibres <i>G. Luzi, B. Gatterinig, A. Delgado</i>
16:40 - 17:00	Paper 265: Incorporating the ITNFS efficiency function in Modeling of Flame-Generated Turbulence and Counter-Gradient Diffusion in Stagnating Turbulent Premixed Flames <i>A. Neche</i>	Paper 022: Relevance of Various Cavity Aspect Ratios to the Thermal Behavior of Natural Convection Heat Transfer for Water-Based Hybrid Nano fluid within A U-Shaped Enclosure <i>M. S. Asmadi, R. Md. Kasmani, Z. Siri, H. Saleh, S. Mt Aznam</i>	Paper 051: Dual Solutions for the Flow and Heat Transfer of Hybrid Nanofluid over a Rotating Disk with a Uniform Shrinking Rate in the Radial Direction <i>Rusya Iryanti Yahaya, Norihan Md Arifin, Ioan Pop, Fadzilah Md Ali, Siti Suzilliana Putri Mohamed Isa</i>	Paper 064: Duality Solutions in Boundary Layer Flow and Heat Transfer of SWCNT-MWCNT/Water Hybrid Nanofluids along Vertical Thin Needle with Effect of Suction <i>N. A. A. Samat, N. Bachok, N. M. Arifin</i>	Paper 270: Machine Learning Aided CFD Modelling of Compressible Flows with Phase Change <i>G. S. Mani Sakthi, L. Abu-farah, N. Germann</i>

08:00 -	REGISTRATION				
09:00 -	<p align="center">KEYNOTE SESSION III AUDIMAX (Chair: J. Taler) Developing and Validating Multiphase Heat Transfer Modelling CAROL EASTWICK University of Nottingham, UK</p>				
10:00 -	Coffee Break (Hallways)				
10:30 -	<p align="center">Parallel Session 1 BERLIN Chair: N. Döner</p>	<p align="center">Parallel Session 2 HAMBURG Chair: B. Kanbur</p>	<p align="center">Parallel Session 3 FRANKFURT Chair: E. Magalhaes</p>	<p align="center">Parallel Session 4 STUTT GART Chair: J. Smolka</p>	<p align="center">Parallel Session 5 AACHEN Chair: M. Iqbal</p>
10:30 -	<p>Paper 278: Numerical Analysis of the Heating Zone of a Container Glass Annealing Furnace <i>G. C. Altun, O. Aşık, H. Şişik, A. M. Başol</i></p>	<p>Paper 290: Experimental and Numerical Analysis of Nusselt Numbers for Individual Tube Rows in a Finned Heat Exchanger <i>M. Marcinkowski, D. Taler, K. Węglarz, J. Taler</i></p>	<p>Paper 266: Numerical Evaluation of Moisture Effects on the Underground Thermal Storage System <i>S. Zhang, P. Ocloń, O. Arsenyeva, P.S.Varbanov, P.Kapustenko</i></p>	<p>Paper 141: Numerical Study of Heat Transfer from a Square Pipe Nozzle Impinging Jet with Square Air-Augmented Duct <i>T. Calisir, E. Ergur, S. Baskaya</i></p>	<p>Paper 078: Analysis for Temperature Spans Generated by Electrocaloric Cooling Tubes <i>Donglin Han, Xiaoshi Qian</i></p>
10:50 -	<p>Paper 277: Numerical Investigation of the Cooling Zone of a Container Glass Annealing Furnace: Effect of the Ventilation Fan Speed on the Cooling Effectiveness of the Furnace <i>O. Asik, G. C. Altun, E. Yildiz, A. M. Basol</i></p>	<p>Paper 025: Nonlinear Mathematical Models of Cross-co-current and Cross-counter-current Superheaters in Supercritical Steam Boilers <i>J. Taler, K. Węglarz, D. Taler, M. Marcinkowski</i></p>	<p>Paper 107: Dynamic Modelling of a District Heating System with Heat Pump and Thermal Storage <i>E. Khlebnikova, M. Saini, K. Hooman</i></p>	<p>Paper 142: Numerical Study of Submerged Impinging Water Jets under High Heat Flux for Laminar Flow Conditions <i>S. Baskaya, O. F. Cakmak, T. Calisir</i></p>	<p>Paper 296: Heat, Air, and Moisture Transfer Model in Porous Building Materials with Consideration of Hygric Non-Equilibrium between Liquid Water and Vapor <i>M. Wasik, P. Łapka</i></p>
11:10 -	<p>Paper 271: Inverse Radiant Boundary Design for Ensuring Desired Heat Treatment in Vacuum Batch Furnaces <i>E. Yildiz, A. M. Başol</i></p>	<p>Paper 150: Analysis of the forced convection of the exchanger on the example of an induction unit <i>K. Zwolińska-Gładys, M. Korzec, J. Halibart, M. Borowski, P Marczak</i></p>	<p>Paper 076: 2-D Transient Numerical Analysis of Encapsulated PCM Orientation and MWCNT Nano-particles addition on Heat Transfer of Packed Bed Latent Heat Thermal Energy Storage (PBLHTES) System <i>P. Narasimha Siva Teja, G.Santhosh Kumar, P.Dinesh Sankar Reddy</i></p>	<p>Paper 130: Heat Transfer Enhancement Using Hybrid Rib-Dimple Structures in Internal Convection Cooling of Turbine Blades <i>A. Kumar, M. Pathak</i></p>	<p>Paper 153: Thermodynamic Analysis of a Novel Dew Point Evaporative Cooler through Different Air-Water Flow Configurations <i>Mohammed A. Sulaiman, Ahmed M. Adham</i></p>
11:30 -	<p>Paper 292: Effect of Fan Covers of Different Geometry inside Commercial Combi Oven on Thermal Distribution <i>R. Timur, Z. Kahrman, M. Haci, H. S. Soyhan</i></p>	<p>Paper 136: Heat Transfer Characteristics of Shell-side in Helical Baffled Heat Exchanger under Saturated Flow Boiling <i>Z. Zhou, M. Lin, Q. W. Wang</i></p>	<p>Paper 110: Enhancing the Performance of Latent Heat Thermal Energy Storage Using Different Configurations and Designs of Heat Transfer Pipes <i>Abdullah Masoud Ali, Audrius Bagdanavicius</i></p>	<p>Paper 185: Heat Transfer and Pressure Drop Analysis of Fin-Tube Heat Exchanger with Delta Winglet and Shear-Thinning Fluid <i>D. Kumar, A. Dalal</i></p>	<p>Paper 154: Numerical Investigation of Energy and Water Saving Potential of a Dew Point Evaporative Cooler with Novel Heat and Mass Exchanger Design <i>Mohammed A. Sulaiman, Ahmed M. Adham</i></p>
11:50 -	<p>Paper 193: Design and Test of Direct Contact Steam Generator with Integrated Fuel, Oxidizer and Water Mixing <i>S. W. Chung, K. J. Jung, I. G. Kwon, Y. B. Kim</i></p>	<p>Paper 081: Improving Temperature and Velocity Uniformity in Multi-Sample Apple Drying with a 3D CFD Integrated Drying Model <i>Ali Hassan, Mohammad U. H Joardder, Azharul Karim</i></p>	<p>Paper 197: A Novel Study on Energy Storage Potential of an All-day Radiative Sky Cooling System assisted by U-Shaped Ground Heat Exchanger <i>L. Jia, L. Lu</i></p>	<p>Paper 146: Effect of Dimpled Surfaces on Convective Heat Transfer and Friction Factor in a Rectangular Channel <i>E. Aslan, E. Eker Kahveci, M. Kucur, B. Korbahti</i></p>	<p>Paper 231: Numerical Modeling of an Air Gap Membrane Distillation Regenerator for Liquid Desiccant Air-Conditioning Applications <i>Yu Gao, Lin Lu</i></p>
12:10 -	<p>Paper 307: Experimental and Numerical Study of the Thermophysical Behaviour of Spruce Wood (Raw and Charred) Exposed to Fire <i>Peter Kitzmüller, Boris Sandor, Andreas Cziegler, Stefan Thumser, Sylvia Polleres, Günther Schwabegger</i></p>	<p>Paper 194: Enhancement of Heat Transfer Performance in a Cooling Channel Using the Break and Discrete Rib Turbulator: A Numerical Study <i>S. Tamang, C.H.Park, H. Park</i></p>	<p>Paper 246: Reticular Structures Embedded in Phase Change Material: Effects of their Orientation on the Thermal Performance <i>C. Nonino, A. Diani</i></p>	<p>Paper 198: Optimal Design of Impingement Nozzle and Swirler Shape for Data Center Cooling Using Computational Fluid Dynamic Analyses <i>Thi Nhan Nguyen, Van Cong Le, Tan Loc Huynh, Van Hau Duong, Chan Woo Park</i></p>	<p>Paper 295: Two-Mesh Method for Coupled Radiation-Conduction Computations in Multi-Layer Systems <i>M. Rogożyński, P. Łapka</i></p>
12:30 -	Lunch (Mensa)				
13:30					

KEYNOTE SESSION IV					
AUDIMAX					
(Chair: S.-H. Suh)					
Improving the Flexibility of Power Steam Boilers by Optimizing the Heating and Cooling of Critical Pressure Components					
JAN TALER					
Cracow University of Technology, Poland					
Coffee Break					
(Hallways)					
Parallel Session 1 BERLIN Chair: A. Basol		Parallel Session 2 HAMBURG Chair: D. Taler		Parallel Session 3 FRANKFURT Chair: C. Nonino	
Parallel Session 4 STUTT GART Chair: A. Dalal		Parallel Session 5 AACHEN Chair: P. Lapka			
13:30 - 14:30					
14:30 - 15:00					
15:00 - 15:20	<p>Paper 306: Computational Analysis of Effect of Injection Angles in Strut Based Scramjet Combustor <i>Venkateshwaran. V, Padmanathan. P, Mohamed Iqbal Shajahan</i></p>	<p>Paper 042: Transient Computational Fluid Dynamics Modelling of Air-Water Two-Phase Flow for Elbows <i>E. Kükrer, N. Eskin</i></p>	<p>Paper 106: Development of a Three-Dimensional CFD Model to Determine Convective Heat Transfer during Orthogonal Cutting <i>J. Wilker, T. Göttlich, T. Helmig, R. Kneer</i></p>	<p>Paper 121: Numerical and Experimental Study on Domestic-Scale Freeze-Dryer for Foods Equipped with Natural Refrigeration and Microwave Heating Systems <i>M. Stebel, J. Chrobak, B. Melka, E. Piechnik, M. Palacz, M. Haida, D. Wójcik, M. Surma, J. Bodys, I. Tolstorebrov, A.J. Nowak, J. Smolka</i></p>	<p>Paper 127: CFD Modelling for the Design of a Photovoltaic-Thermal (PVT) Solar Panel dedicated to Solar-Assisted Heat Pump <i>V. Delachaux, S. Daix, R. Bennacer, L. Brottier</i></p>
15:20 - 15:40	<p>Paper 049: Numerical Study of Heterogeneous Laminar and Turbulent Flames over Vertical Methanol Wicks <i>S. Nair, V. Raghavan</i></p>	<p>Paper 111: Turbulent Boiling Simulations in Vertical and Horizontal-Serpentine Ducts Based OpenFOAM-VOF Method <i>Y. Demagh, A. Achi, L. Bordja, N. Bessanane</i></p>	<p>Paper 021: A Time-Efficient Loosely Coupled Fluid-Thermal Analysis Strategy on Dynamic Flight Trajectories <i>S. Sivri, K. Özden, E. Gülay</i></p>	<p>Paper 134: Numerical analysis of the food freezing and airflow distribution in domestic-scale freeze-dryer <i>E. Piechnik, J. Smolka, M. Palacz, I. Tolstorebrov, M. Haida, M. Stebel, J. Bodys, A. J. Nowak</i></p>	<p>Paper 129: Numerical Investigation on Heat Transfer Performance of a Single-Phase Immersion Cooling System <i>S. Q. Jin, R. J. Yin, Y. T. Li, W. Q. Tao</i></p>
15:40 - 16:00	<p>Paper 226: Numerical Investigation of Minimum Ignition Energy of CH₄/Air Mixtures at Higher Pressures <i>Vasudevan, Sooraj PM, Muppala, Siva, Heidari Ali, Demebele, Siaka</i></p>	<p>Paper 241: Annular Flow Simulations of Refrigerants Flowing in a Small Diameter Channel <i>E. Zanetti, A. Berto, S. Bortolin, M. Magnini, D. Del Col</i></p>	<p>Paper 166: Investigation of Nonlinear Aerothermoelastic Characteristics of the Deployable Control Fin using Strongly Coupled Fluid - Thermal-Structural Interaction Analysis <i>A.K. Thawait, Parag Tandaiya, A.J. Chandy</i></p>	<p>Paper 093: Analysis of the Causes of the Emergency Shutdown of Natural Gas-Fired Water Peak Boilers at a Large Municipal Combined Heat and Power Plant <i>M. Trojan, P. Dzierwa, J. Taler, M. Granda, K. Kaczmarek, T. Sobota</i></p>	<p>Paper 095: A Preliminary Exploration of the Coupled Algorithm of the POD-Galerkin Method and FVM in the Temperature Simulation for an IGBT Module <i>X. Y. Feng, F. Bai, H. Ding, W. Q. Tao</i></p>
16:00 - 16:20	<p>Paper 138: Investigation of Laminar Co-flow Ethylene Flames in Air-combustion at Near-infrared Wavelength: Fundamental Case <i>Ying Zhou, Nimeti Doner, Chun Lou, Zhicong Li, Zhongnong Zhang</i></p>	<p>Paper 234: Numerical Simulation of Capillary Waves: Comparative Study of Volume of Fluid and Level Set Methods <i>V. V. Mukim, K.E.T. Giljarhus, R.W. Time, A. H. Rabenajafimanantsoa</i></p>	<p>Paper 204: The Effect of Spring Stiffness on Dynamic Characteristics of Interconnected Pilot Valves in The Steam Valve Set <i>Long-jie Yu, Huai-yu Yao, Zhi-jiang Jin, Jin-yuan Qian</i></p>	<p>Paper 308: Technological and Economical Analysis of the Flue Gas Heat Recovery System in a Thermal Waste Treatment Plant <i>P. Dzierwa, P. Peret, M. Trojan, D. Taler, J. Taler, K. Kamińska, W. Wróbel, J. Bator</i></p>	<p>Paper 132: Heat Transfer and Laminar Flow Characteristics and Correlations of Single-phase Wavy Microchannel <i>Z.Y. Tang, L. Chen, Z. Zhang, W.Q. Tao</i></p>
16:20 - 16:40	<p>Paper 102: Development of a Gas Turbine Performance Modeling Tool for Starting Phase <i>B. Günay, Ö. Ekici</i></p>	<p>Paper 072: Development of A Fast-Running Approach for The Simulation of Debris Beds in The Nuclear Severe Accident Analysis Code AC2 <i>J. Peschel, M. K. Koch</i></p>	<p>Paper 118: GPU Accelerated Simulation of Conjugate Heat Transfer Problems <i>C.A.B.S. Reis, D. Botezelli, E. S. Magalhães, A.S. Neto</i></p>	<p>Paper 069: Induction Heating Finite-Volume Simulations for Cooking Applications <i>J. Plano-Riu, E.Schillaci, J.Rigola, G. Colomer</i></p>	<p>Paper 023: Heat Transfer Characteristics and Enhancement of Microchannel Heat Sink Subjected to a Heat Source at Middle Region of Upper Surface of the Heat Sink <i>Y. L. Tsay, J. C. Cheng, C. S. Liu</i></p>
16:40 - 17:00	<p>Paper 001: Numerical Simulation of a Domestic Burner with Mixtures of Natural Gas and Hydrogen <i>Joey Castano, Andrés Colorado</i></p>	<p>Paper 035: Multiphase Mixture Simulations of a Specific Two-Phase R-744 Ejector Geometry <i>B.B. Kanbur, A. Busch, E.E. Kriezi, W.B. Markussen, M.R. Kærn, J. Kristófersson, J.H. Walther</i></p>	<p>Paper 220: Numerical Study on Flow Distribution in the Water-Cooling System of a Diesel Locomotive <i>B. Hou, S.Liu, X. Na, Y.-Q. Guo, L.-B. Wang</i></p>	<p>Paper 186: Numerical Investigation of Heat and Fluid Flow in Circular Microchannel Condensation of Environmentally Friendly R290 Refrigerant <i>Anil Başaran</i></p>	<p>Paper 279: Experimental Investigations of Phase Change Material (PCM) for Electronic Cooling Application Using Heat Sinks <i>Mohamed Iqbal Shajahan, Gandhi Mallela, Bhaskar Chandra Lenka, Aradhya Vinaykumar</i></p>

THURSDAY, 7 September 2023
Morning

08:00 - 09:00	REGISTRATION				
09:00 - 10:00	<p style="text-align: center;">KEYNOTE SESSION V AUDIMAX (Chair: A. A. Mohamad) Evolution of Heat Flow Architectures, a Constructal Approach SYLVIE LORENTE Villanova University, USA</p>				
10:00 - 10:30	Coffee Break (Hallways)				
	Parallel Session 1 BERLIN Chair: B.Schoeneberg	Parallel Session 2 HAMBURG Chair: R. Goyal	Parallel Session 3 FRANKFURT Chair: M. Pathak	Parallel Session 4 STUTTGART Chair: M. R. Rajkumar	Parallel Session 5 AACHEN Chair: E. Gepek
10:30 - 10:50	Paper 182: Interaction of an Elevated Low Velocity Ratio Turbulent Jet with Atmospheric Crossflow: A Detached Eddy Simulation Study <i>I. Yilmaz</i>	Paper 139: A Novel Method for Generating 3D Mesh at Contact Points in Packed Beds <i>D. F. Szambien, C. Ulrich, M. R. Ziegler, N. P. Maaß, R. Scharf</i>	Paper 024: Prediction of the Water Distribution in Randomly Packed Hollow Fiber Humidifiers using Artificial Neural Networks as Surrogate Models <i>M. Pollak, J. Friese, M. Pollak, J. Friese, W. Tegethoff, J. Koehler</i>	Paper 116: Molecular dynamic simulation of convective heat transfer from supercritical Argon flow in a nanochannel <i>Yunmin Ran, Volfrango Bertola</i>	Paper 173: The Relationship between the Intensity of Secondary Flow and the Thermal Capability in the Vortex Tube <i>A.-N. Guo, L. -B. Wang</i>
10:50 - 11:10	Paper 103: DNS Study of Turbulent Heat Transfer in a Wavy Walled Channel <i>T. Opperman, W.-J. Xiong, B.-C. Wang</i>	Paper 280: Computing Conductive and Radiative Heat Transfer in a Porous Media with Adaptive Mesh Refinement <i>J. Zhang, T. Li, C. Schulze-Netzer, T. Løvås</i>	Paper 179: Comparison of the Three-Generation Numerical Models for Proton Exchange Membrane Fuel Cell Multi-Physics Prediction <i>F. Bai, P. He, Y. T. Mu, W. Q. Tao</i>	Paper 176: Local Heat Flux of Resonant Layers at Solid-liquid Interface <i>W. Chen, G. Nagayama</i>	Paper 174: Heat Transfer Decay Characteristics Downstream of Delta Winglet Vortex Generator Under Turbulent Flow <i>W. Dang, L. -B. Wang, K. -W. Song</i>
11:10 - 11:30	Paper 233: A Numerical Strategy to Speed Up the Simulation of Scalar Fields at High Schmidt and Prandtl Numbers <i>A. Karimi Noughabi, A. Kempf</i>	Paper 281: Evaluation of Convective Heat Transfer inside the Pores of Pyrolyzed Wood Using a μ -CT Based Realistic Geometry <i>A. Dernbecher, S. Bhaskaran, N. Vorhauer-Huget, J. Seidenbecher, S. Gopalkrishna, Lucas Briest, A. Dieguez-Alonso</i>	Paper 221: Influence of Liquid Water Distribution on PEM Fuel Cell Performance using Cathode-Anode Model : A 3D Numerical study <i>Navdeep Malik, N. Allwyn Blessing Johnson, Sarit K. Das</i>	Paper 180: Spectral Analysis of Phonon Transport across a SiC-SiC Nanogap <i>X. Li, W. Chen, G. Nagayama</i>	Paper 212: A Small Domain Numerical Method to Study the Temperature Field of Cylinder Heated by Moving Heat Source on Cylindrical Side Surface <i>L. Wang, X. Lu, L.-M. Chang, L.-B. Wang</i>
11:30 - 11:50	Paper 148: Utilizing Physics-Informed Neural Networks for Modeling 3D Fluid Flows Incorporating Parametric Boundary Conditions <i>F. Lorenzen, A. Zargaran, U. Janoske</i>	Paper 235: Numerical and Experimental Thermal Performance Investigation of Metal Foam and Vortex Generator Fin Structures on a Liquid Cooled Heat Sink <i>S. Türk, A.C. Gözükarar, F. Susar, M. Ocak</i>	Paper 066: Effect of Cooling Flow Channels on the In-Plane Temperature Distribution in PEMFC <i>Zhuo Zhang, Zhengdao Li, Wanyu Lin, Junyu Chen, Wenquan Tao</i>	Paper 089: Optimizing the Thermal Conductivity of Silicone Resin Composite Filled with Multilayer Graphene Bridging Binary Alumina via Numerical and Experimental Study <i>Shikun Li, Bin Liu, Na Zhang, Xiulan Huai</i>	Paper 213: Thermal Performance of Microchannel Heat Sink with Transverse Microcavities Posited Different Shapes of Ribs <i>X. Lu, J.-L. Zhang, L. Wang, L.-B. WANG</i>
11:50 - 12:10	Paper 227: A flux-based formulation for Topology Optimization of Fluid Systems with one or two fluids and Conjugate Heat Transfer <i>N. Galanos, E.M. Papoutsis-Kiachagias, K.C. Giannakoglou</i>	Paper 256: Thermal Convection of Plane Couette Flow in Fluid Overlying Highly Porous Layer <i>P. Bera, N. Barman, A. Aleria</i>	Paper 240: Investigating Liquid Transport and Evaporation Phenomena in PEMFCs with Porous Gradient Gas Diffusion Layer <i>H. M. Lee, S. Y. Kim, J. S. Lee</i>	Paper 015: Numerical Estimation of Temperature-dependent Thermal Properties <i>A.F. M. de Oliveira, E. dos S. Magalhães, K. D. Zilnyk, P. Le Masson</i>	Paper 214: Mechanism of Heat Transfer Enhancement by Secondary Flow in A Helically Coiled Circular Tube <i>J. -L. Zhang, X. Lu, L. Wang, L. -B. Wang</i>
12:10 - 12:30	Paper 275: Design of the Cooling System of the European Gyrotron Cavity Using Adjoint-based Topology Optimization in OpenFOAM <i>R. Difonzo, A. Cammi, N. Galanos, K. Giannakoglou, E.M. Papoutsis-Kiachagias, L. Savoldi</i>	Paper 030: Investigation of the Energy Conservation Assessment of Electro-thermal Deicing System of UAV with Ice Accretion <i>J. C. Cheng, C. Y. Lo</i>	Paper 291: Quasi-3D Modeling of Solid Oxide Fuel Cells for Combined Degradation Study <i>K. Noguchi, M. Kishimoto, H. Iwai</i>	Paper 029: Characterizing Fluid Flows with Acceleration in a Toroidal for Particle Imaging Velocimetry Gyroscope (PIVG) Development <i>R. A. Elasad, N. El-Sheimy, A. A. Mohamad</i>	Paper 219: Numerical Analysis of Motion and Heat Transfer Characteristics of Görtler Vortices in Spiral Smooth Channel <i>S. Liu, B. Hou, X.-D. Zhu, C.-P. Liu, L.-B. Wang</i>
12:30 - 13:30	Lunch (Mensa)				

THURSDAY, 7 September 2023
Afternoon

13:30 - 14:30	KEYNOTE SESSION VI AUDIMAX (Chair: R. Bennacer) Modeling of Irradiated Particle-Laden Turbulence Subject to Uncertainty GIANLUCA IACCARINO Stanford University, USA				
14:30 - 15:00	Coffee Break				
	Parallel Session 1 BERLIN Chair: W. Chen	Parallel Session 2 HAMBURG Chair: S. Bhattacharyya	Parallel Session 3 FRANKFURT Chair: I. Hiroshi	Parallel Session 4 STUTT GART Chair: F. Zhang	Parallel Session 5 AACHEN Chair: V. Mohan
15:00 - 15:20	Paper 101: Investigation of Radial Gap Size Change under Load and the Impact on Performance for a Twin-Screw Compressor using Numerical Simulation <i>Andreas Spille, Ludwig Könnecke, Bastian Schoeneberg</i>	Paper 228: Experimental Investigation on the Performance of Novel Multistage Heat-Sink for Ultra-High Heat Flux Applications <i>Yousaf Shah, Won-Woo Choi, Sung-Min Kim</i>	Paper 014: Simulation Assisted Implementation of Radiative Cooling Materials to Grid-Emotion Flash Charging Units <i>B. Samul, C. Su, R. Bel Fdhila, R. Nowak</i>	Paper 169: Analysis of the Effect of Boundary Conditions in Ventilation Patterns and Airborne Contagion Risk in A Naturally Ventilated Classroom Via Large Eddy Simulation <i>A. Vignolo, M. Draper, M. Mendina, G. Usera</i>	Paper 273: Fluid Flow and Heat Transfer Characteristics in Minichannels - CFD Calculations in Simcenter STAR-CCM+ <i>M. Piasecka, B. Maciejewska, N. Dadas, K. Strąk</i>
15:20 - 15:40	Paper 060: Passive Air Injection through Slots for Improving the Performance of a Hollow-Bladed Axial Fan: A Numerical Study <i>A. Bouanik, A. Larabi, T. Azzam, N. Abbasnezhad, M. Mekadam, F. Bakir</i>	Paper 225: Effect of Heat Generated by an Exothermic Chemical Reaction on the Mixed Convection Flow in a Vertical Porous Channel <i>C. Berghian-Grosan, T. Grosan</i>	Paper 222: Three-Dimensional Numerical Study to Identify Temperature Non-Uniformity in Air-Cooled Lithium-Ion Battery Pack <i>S. Bhattacharjee, A. Singh, A. Dalal</i>	Paper 178: Direct Numerical Simulation of the Interaction between a Cough-Induced Aerosol-Laden Turbulent Jet and A Large-Scale Circulation <i>E. Batmaz, D. Schmeling, C. Wagner</i>	Paper 168: Time-Dependent Flow Boiling Heat Transfer in Minichannels Calculation by Trefftz Method <i>A. Maciagg, M. Piasecka, A. Pawińska, S. Hożejowska</i>
15:40 - 16:00	Paper 293: High Fidelity Simulation of Mitigation of the Vortex Breakdown Phenomenon during HL to BEP Load Rejection Procedure in a Model Francis Turbine <i>Faiz Azhar Masoodi, Rahul Goyal</i>	Paper 289: Comparative Assessment of Flow Patterns and Hydrodynamics in Cylindrical and Hourglass-Shaped Pin-Fin Configurations <i>J. Jaseliūnaitė, M. Seporaitis</i>	Paper 067: Thermal Management of Lithium Titanium Oxide Batteries A Numerical Study <i>Sharon Samuel, Antony Poulouse, K. Arul Prakash</i>	Paper 098: Mass Transfer and Lagrangian Particle Tracking in Computational Analysis of Biomimetic Active Ventilation <i>S. Grossbard, M. Bodek, E. Neuman, D. Elad, G. Marom</i>	Paper 274: Analysis of Heat Transfer in Minichannels of Heat Sink Using the Trefftz Functions <i>B. Maciejewska, M. Piasecka</i>
16:00 - 16:20	Paper 177: Comparative Assessment of Non-Newtonian Single-Phase and Two-Phase Approaches for Numerical Studies of Centrifugal Pumps Handling Emulsion <i>L. Achour, M. Specklin, M. Asuaje, S. Kouidri, I. Belaidi</i>	Paper 237: Rapid Computational Method for Predicting Aerodynamic Heating on Hemispherical Domes <i>A.C. Gözükara, U.A. Ceylan</i>	Paper 096: A Novel Immersion Cooling Technique for Thermal Management of High Energy Li-Ion Batteries <i>Mazhar Hussain, Mohd. Kaleem Khan, Manabendra Pathak</i>	Paper 170: Indoor Airflow Modelling with CHAMAN: Towards a Validated Setup <i>A. Vignolo, M. Draper, M. Mendina, G. Usera</i>	Paper 230: Evaluation of Flow Instability during Subcooled Flow Boiling of Electronic Liquid FC-72 in a Multiple Parallel Rectangular Micro-Channel Heat Sink <i>Ajith Krishnan Rohini, Santhosh Senguttuvan, Sung-Min Kim</i>
16:20 - 16:40	Paper 259: A Numerical Investigation of Cavitation Induced Downstream Instabilities and Its Mitigation Inside a Draft Tube of a Francis Turbine Using Intrusive Structure <i>Mohammad Abu Shahzer, Jin-Hyuk Kim</i>	Paper 261: Modeling and Optimizing Skylight Geometry for Passive Radiative Cooling <i>Gopalakrishna.Gangisetty, Ron. Zevenhoven</i>	Paper 068: Thermal Modeling and Optimization of an AC/DC Bidirectional Converter <i>A. Hilal, R. Nowak, A. Memelink, B. Samul, T. Nguyen, G. Demetriades</i>	Paper 201: External Ventilation Effect on Single-Sided Ventilation Room in an Urban Canyon Environment <i>L. Serir, D. Titouna, A. Benderradj, H. Boutelis, Y. Demagh</i>	Paper 088: Effects of micro-textured hot surface on interfacial thermal slip and melt-front evolution characteristics <i>J. J. He, W. X. Chu, Q. W. Wang</i>
16:40 - 17:00	Paper 164: Numerical Analysis of Multi-Zone Trench Cooling on an Adiabatic Flat Plate for Gas Turbine Application <i>Ved Prakash, Sunil Chandel, Dineshsingh G. Thakur, R. K. Mishra</i>	Paper 156: Numerical and Analytical Investigation of 2D Heat Diffusion Problem with Heat Source and Periodic Boundary Conditions <i>I. Baglan, E. Aslan</i>	Paper 223: Electroviscous Effects in the Electrolyte Liquid Flow through Asymmetrically Charged Non-Uniform Microfluidic Device <i>J. Dhakar, R. P. Bharti</i>	Paper 158: Design of connection pipeline and silencer for emergency release from an ultra-high pressure PEVA reactor through a rupture disk <i>C. W. Ong, C.-L. Chen</i>	Paper 301: Study on the Collapse Behavior of a Cavitation Bubble Near a Rigid Wall in Liquid Nitrogen with Thermodynamic Effects <i>Aibo Wei, Limin Qiu, Xiaobin Zhang</i>
19:00 - 23:00	GALA DINNER (MAXHAUS)				

FRIDAY, 8 September 2023
Morning - I

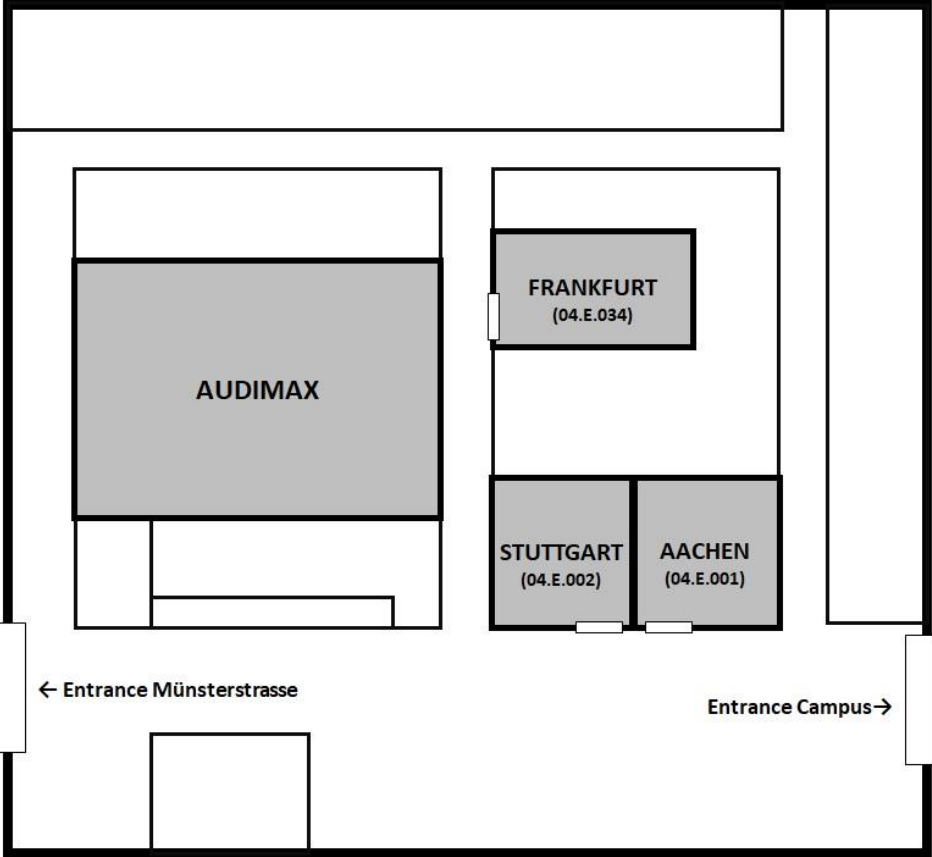
	Parallel Session 1 BERLIN Chair: S.-H. Suh	Parallel Session 2 HAMBURG Chair: A. Nahavandi	Parallel Session 3 FRANKFURT Chair: C. Deniz Canal	Parallel Session 4 STUTT GART Chair: M. Diederich	Parallel Session 5 AACHEN Chair: S. Chikh
08:00 - 08:20	Paper 085: Numerical modeling of accidental release of liquid hydrogen <i>Y. Liang, L. Liu, N. Peng, J. M. Ghidaglia, Y. Qu</i>	Paper 189: Numerical simulation of freeze-off phenomenon in an underwater pelletizer <i>Bebhash S Raj, Abhilash J. Chandy</i>	Paper 267: Instability of Sliding Annular Flow with Variable-Viscosity Dissipation <i>A. Khan, P. Chakshi</i>	Paper 008: Response Surface Methodology of MHD Axisymmetric Hybrid Nanofluid Flow Over A Radially Shrinking Surface with Heat Generation <i>N.S. Khashi'ie, K.B. Hamzah, N.A. Zainal, I. Waini, A.R.M. Kasim, I. Pop</i>	Paper 155: Modeling Frost Growth in Parallel Plate Channels: Implications for Heat Pump Performance and Optimization <i>H.G. van der Bij, A. Labuschagne, T. Zhu, W. Rohlf's</i>
08:20 - 08:40	Paper 143: Performance of Hydrogen in Gas-Focusing of Micro-jets <i>R. Zahoor, S. Bajt, B. Šarler</i>	Paper 057: Performance analysis of ejector assisted vapor compression cascade refrigeration system <i>Marte Beltran-López, Dario Colorado-Garrido, José V. Herrera-Romero, Beatris A. Escobedo-Trujillo, Francisco A. Alaffita-Hernández</i>	Paper 105: Natural Convection Heat Transfer around a Sphere in a Rotating Fluid <i>Madhumita Sahoo, Bapuji Sahoo, T.V.S. Sekhar</i>	Paper 009: Sensitivity Analysis of The Convective Nanofluid Flow Over A Stretchable Surface in A Porous Medium <i>N.S. Khashi'ie, M.F. Mukhtar, N.M. Arifin, M. Sheremet, I. Pop</i>	Paper 238: CO2 Adsorption by Core-shell Structured Hydrogel Particles Fabricated via In-air Microfluidics <i>Yiwei Long, Jieke Jiang, Wilko Rohlf's, D.W.F. Brilman, Claas Willem Visser</i>
08:40 - 09:00	Paper 255: Optimization of a Venturi Diluter/Diffuser for a Better Mixing Characteristic: A Computational Investigation <i>A Kandpal, D Dasgupta, B. Ray</i>	Paper 065: Estimating Energy Transfer to Workpiece in Wire Electrical Discharge Machining <i>Parth Sathavara, Mridul Kumar, Akshat Desai, Ajit Kumar Parwani, Paritosh Chaudhuri</i>	Paper 159: Numerical Simulation of Cavitation Characteristics on Stepped Spillway Due to Different Geometry Configuration <i>Younis Saeedrashed, Srijna Singh, Ali Cemal Benim</i>	Paper 192: Numerical study of turbulent particle-laden gas jet flows : Turbulence-particle interactions <i>A. Aouadi, G. Bellakhal, J. Chahed</i>	Paper 147: Transport of Non-Newtonian Power-Law Fluids in Porous Media: A Pore-Scale Modeling <i>S. Rath, A. Terzis</i>
09:00 - 09:20	Paper 264: Evaluation of Wall Shear Stress Distributions in Pulsatile Non-Newtonian Fluid Flows using the Multiple Relaxation Time Lattice Boltzmann Model <i>H. Vaseghnia, E. Jettestuen, K.E. Teigen Giljarhus, A. Hiorth</i>	Paper 119: Simulation of Energy Dissipation and Heat Transfer in Wet Clay Materials Using COMSOL Multiphysics <i>Prajwal Dharmananda, L. Briest, Evangelos Tsotsas, Nicole Vorhauer-Huget</i>	Paper 073: The Effect of Reynolds Number and Different Mesh Sizes on Lid Driven Cavity by Highly Stable Lattice Boltzmann Methods <i>A. Bahlouli, B. Meziani, O. Ourrad</i>	Paper 041: Analysis of heat transfer and entropy generation in MHD mixed convective flow of Williamson ternary Nano fluid past a circular cylinder via spectral domain decomposition approach <i>M. P. Mkhathswa, M. Khumalo</i>	Paper 309: Numerical Analysis of the Location of Wet Gas Outlet Effects on the Removing CO2 <i>E. Lakzian, A. Shadmehri, F. Salmani, H. Kim</i>
09:20 - 09:40	Paper 203: Charging and Discharging of Hydrogen Sorption Storage Tanks <i>G. Klepp, M. Filippi, G. Langer</i>	Paper 086: Heat transfer Augmentation in a Mini-channel using Magnetic Nanofluid and Magnetic Vortex <i>S. Bhattacharyya, N. Jain, T. Bhatt, S. Ghosh, A. C. Benim</i>	Paper 310: Comparative thermodynamic circuit selection analysis for air source heat pumps <i>W. Kuczynski, K. Chliszcz</i>	Paper 077: Numerical Heat Transfer Analysis of Lid Driven Cavity Incorporated with Rectangular and Circular Obstacles <i>Dipanshu Achary, G. Santhosh Kumar, G.Ravi Kiran Sastry</i>	Paper 038: Enhanced Geothermal Systems (EGS) Potential Estimation of the Salihli Sub-basin of the Gediz Rift Using Deep Geothermal Wells, Manisa, Western Türkiye <i>A. Çiçek</i>
09:40 - 10:00	Paper 229: A Comparative Numerical Analysis of 3D and 2D Vertical Falling Films <i>Y.X. Chen, J. Zheng, J. Castro</i>	Paper 112: Mechanism of Water Drying in Wood Derived From 3D Observations Using X-Ray Tomography <i>D.M. Nguyen, M. El Ganaoui</i>	Paper 311: Exergetic analysis of the functionalization of photovoltaic systems <i>W. Kuczynski, A. Borowska</i>	Paper 037: Review of Waste Cooking Oil (WCO) as a Feedstock for Biofuel—Indian Perspective <i>Manikandan, Gurunathan, P. Rajesh Kanna, Dawid Taler, Tomasz Sobota</i>	Paper 058: Development of a Passive Cooling System for a Gearless Wind Energy Generator <i>Frank U. Rückert, Arslan Ahmed, Dirk Hübner, Benjamin Allweyer, Friedrich Klinger, Ali Cemal Benim</i>
10:00 - 10:30	Coffee Break (Hallways)				

FRIDAY, 8 September 2023
Morning - II

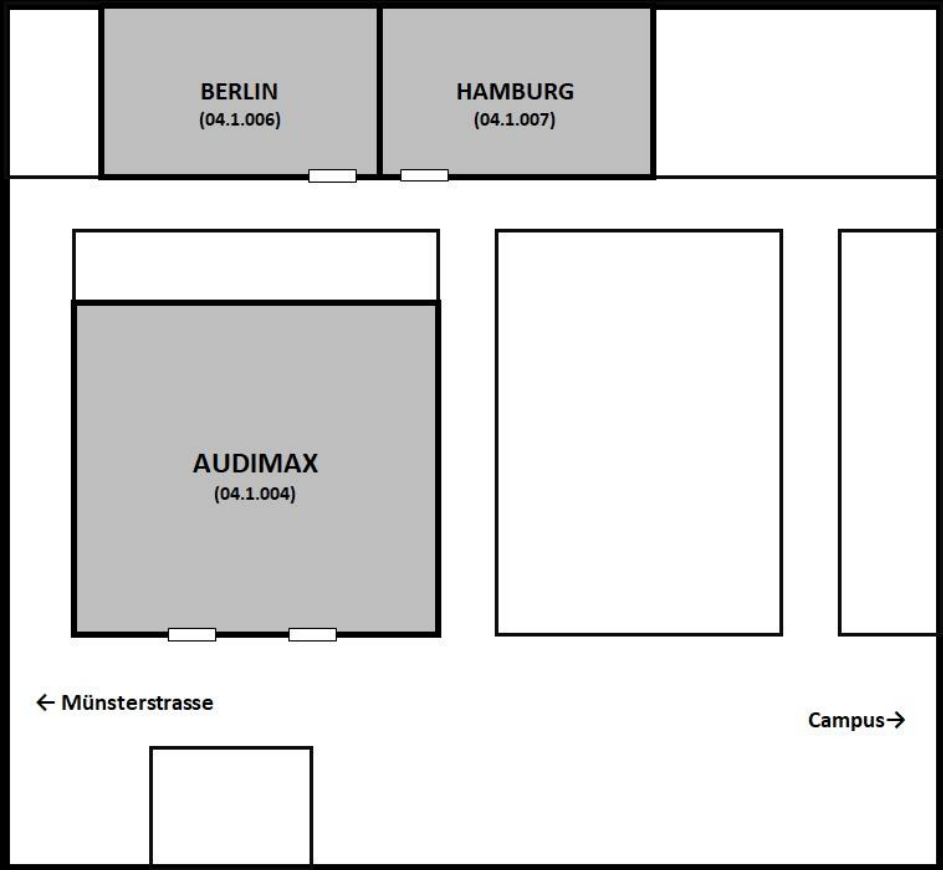
	Parallel Session 1 BERLIN Chair: R. Zahoor	Parallel Session 2 HAMBURG Chair: N. Khashi'ie	Parallel Session 3 FRANKFURT Chair: C. Deniz Canal	Parallel Session 4 STUTT GART Chair: S. Bilici	Parallel Session 5 AACHEN Chair:
10:30 - 10:50	Paper 128: Entropy Generation Due to Double-Diffusive Natural Connection Under LTNE Model and Nonuniform Heating in a Partly Porous Cavity <i>A. Omara, A. Bourouis, R. Bouchair</i>	Paper 018: Cavitation and Clogging Analyses of a Submersible Drainage Pump <i>M. Rakibuzzaman, S.-H. Suh, H.H. Kim</i>	Paper 097: Heat and Flow Characteristics of Aerofoil-Shaped Fins on a Curved Target Surface in a Confined Channel for Extended Impinging Jet Array <i>O. Yalçinkaya, U. Durmaz, A. C. Benim, A. Ü. Tepe, Ü. Uysal, M. B. Özel</i>	Paper 083: Solidification within a Rectangular Cavity Filled with Solid Phase Change Material <i>Lucas S. de Oliveira, Kamal A. R. Ismail</i>	
10:50 - 11:10	Paper 285: Analysis of Turbulence Modeling in Two-phase Particle-Laden Jet Flows <i>A. Belghith, A. Aouadi, G. Bellakhal, J. Chahed</i>	Paper 055: A Numerical Study on Performance Improvement of a Submersible Drainage Pump <i>S.-H. Suh, M. Rakibuzzaman, H.H. Kim, K.C. Song, K.H. Song</i>	Paper 131: Thermomagnetic Convection and Entropy Generation in A Hybrid Nanofluid-Filled Wavy-Walled Porous System with Protruded Bottom Heating <i>Nirmalendu Biswas, Dipak Kumar Mandal, Nirmal K. Manna, Ali Cemal Benim</i>	Paper 297: Thermodynamic Analysis of a Nuclear Desalination Cogeneration Plant <i>J. Orfi, S. Abdul, S. U.D. Khan</i>	
11:10 - 11:30	Paper 208: An Algebraic Model for Thermal Characterization of Firefighter Clothings <i>S. Kouadri Moustefai, R. Hachana, P.G.A. Piloto, A. Benarous</i>	Paper 288: Effectiveness of Oscillating Membrane for Power Enhancement in Vertical Axis Wind Turbines <i>Z. Toor, H. M. Bahaidarah, Md M. Quamar</i>	Paper 010: Investigation of Characteristics of Different ANN Concepts in Flow Prediction <i>M. Diederich, A. C. Benim</i>	Paper 298: Modelling and Simulation of Solar Desalination Based on Multiple Effect Distillation Process in Saudi Arabia <i>A.N. Alrabiah, J. Orfi</i>	
11:30 - 11:50	Paper 286: Numerical Study of the Triple Line Behavior for a Two-Phase Flow in a Rectangular Microchannel <i>L. Boubendir, S. Chikh, L. Tadrst</i>	Paper 268: A Phase-Change Model Based on the One-Energy Equation Formulation for Porous Media <i>M.J.S. de Lemos</i>	Paper 312: Numerical Investigation of the Effect of Pyrolysis Rate in Pulverized Biomass Combustion <i>C. Deniz Canal, A.C.Benim</i>	Paper 299: Numerical Analysis of the Heat and Mass Transfer in a Desalination Device by Vacuum Membrane Distillation <i>N. Loussif, J. Orfi, E. Ali</i>	
11:50 - 12:10	Paper 175: Hydrodynamic Anisotropy Analysis on 3D Elongated Porous Domain Subjected to Thermosolutal Cross Fluxes <i>N. Mimouni, O. Rahli, R. Bennacer and S. Chikh</i>	Paper 059: Triboelectric Nanogenerator-Based Air Filters to Capture Particles <i>M. Karimi Kisomi, S. Seddighi, R. Mohammadpour, A.C. Benim</i>	Paper 199: A Numerical Study of Relaxation Phenomena in Microfluidic Reactive-diffusive Systems <i>J. I. Ramos</i>	Paper 294: Energy Efficiency Strategies to Convert Buildings to nZEB: Integration of Photovoltaics and Thermal Storage <i>A. Vallati, M. Di Matteo, F. Muzi, C.V. Fiorini</i>	
12:10 - 12:30	Paper 287: Effect of Dual PCM Layer Emplacement on Multi-Layered Building Envelope Thermal Response <i>Y A. Lakhdari, S. Chikh</i>	Paper 133: Enhancing Hydrogen Generation from Seawater using Triboelectric Nanogenerators and Membrane-less Electrolysis <i>S. Elahi, S. Seddighi, Ali Cemal Benim</i>	Paper 188: Piecewise-analytical, Cell-centered, Finite-volume Methods for Multidimensional Advection-Reaction-Diffusion Equations <i>J. I. Ramos</i>		
12:30 - 13:00	CLOSING CEREMONY (AUDIMAX)				

SIMPLIFIED FLOOR PLANS OF THE CONFERENCE BUILDING (BUILDING 4)

Ground Floor



First Floor

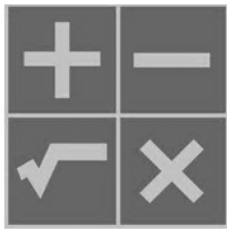


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