YALOVA UNIVERSITY

Toronto Metropolitan University

May 25-27, 2023

14th International Conference on

THERMAL ENGINEERING

Theory and Applications

T.C. YALOVA VALİLİĞİ

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YALOVA TİCARET VE SANAYİ ODASI

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GMT	Turkiye local time	Thursday May 25	
5:00-6:00	8:00-9:00	**Registration**	
6:00-7:00	9:00-10:00	**Opening Ceremony** **Master of Ceremony: Dr G. Kilic, Room: Kahramanmaraş**	
7:00-7:30	10:00-10:30	**Coffee Break**	
7:30-8:00	10:30-11:00	**Prof. H. Bougherara** **Canada**	**Recent Advances in Horticultural applications: solving real world challenges using Modeling and Numerical Simulations**
8:00-8:30	11:00-11:30	**Prof. M.A. Sheremet** **Russia**	**Numerical Simulation of Effective Cooling Systems for Heat-Generating Elements using Finned Heat Sink Filled with Phase Change Materials**
8:30-9:00	11:30-12:00	**Prof. Y. Haik** **UAE**	**Harnessing Sustainable Energy: Algae, Seawater and Ambient**
9:00-10:30	12:00-13:30	**Lunch Break**	
10:30-11:00	13:30-14:00	**Prof. L. Chen** **China**	**Supercritical CO_2 Heat Transfer Flow and Phase Behaviors in Porous Structures**
11:00-12:30	14:00-15:30	**Sessions A**	
12:30-12:45	15:30-15:45	**Coffee Break**	
12:45-14:15	15:45-17:15	**Sessions B**	
16:00-19:00	19:00-22:00	**Gala Dinner**	

GMT	Turkiye local time	Friday May 26	
		Room: Kahramanmaraş	
6:30-7:00	9:30-10:00	Prof. O. Colpan Turkiye	Mathematical Modeling of Hydrogen and Fuel Cell Technologies
7:00-7:30	10:00-10:30	Prof. S. Kachhwaha India	Cavitation Techniques in Biodiesel Industry: Challenges and Future Prospects
7:30-8:00	10:30-11:00	Coffee Break	
8:00-8:30	11:00-11:30	Prof. B. Cetin Turkiye	Grooved Heat Pipes: Modeling, Experimentation and Applications
8:30-9:00	11:30-12:00	Prof. K. Siddiqui Canada	Multiscale Modelling to Improve Predictions of Building Energy Exchange in Urban Environments
9:00-11:00	12:00-14:00	Lunch Break	
11:00-12:30	14:00-15:30	Sessions C	
12:30-12:45	15:30-15:45	Coffee Break	
12:45-13:15	15:45-16:15	Prof. W. Habashi Online Presentation Canada	Machine learning and the inexorable path toward the “Desktop CFD Simulator"
13:15-14:45	16:15-17:45	Sessions D	
16:00-19:00	19:00-22:00	Dinner	

GMT	Turkiye local time	Saturday May 27	
6:00-7:30	9:00-10:30	Sessions E	
7:30-7:45	10:30-10:45	Coffee Break	
7:45-10:00	10:45-13:00	Session F1-online	
10:00-11:00	13:00-14:00	Lunch Break	
11:00-11:30	14:00-14:30	Prof. H.M. Ali Online Presentation KSA	Advanced Condensation Heat Transfer on Horizontal Tubes
11:30-14:00	14:30-17:00	Session F1-online	
14:00	17:00	Closing Ceremony Prof Ziad Saghir, Room: Kahramanmaraş	

Section A1
Numerical Methods in Fluid Flow and Heat Transfer I
Chair: Prof. Seshasai Srinivasan, Room: Hatay

Paper ID	Title	Authors
104	Oscillating Sweeping Jet in Cooling Gas Turbine Leading Edge: Numerical Analysis	Emad Elnajjar, Mohammed Sami Uddin Khan, Salahaddin Al Omari , Mohammad Hamdan
135	Numerical Investigation of Flow and Heat Transfer of Impinging Jet Using Converging-Diverging Air-Augmented Duct	Tamer Calisir, Eda Ergur, Senol Baskaya
105	Heat Transfer Comparison Between the One-Directional and the Bi-Directional Flows Across Heated Tube Banks with Staggered Configuration	Fatimah Al Zahrah Mohd Saat, Nurjannah Hasbullah, Fadhilah Shikh Anuar, Dahlia Johari
112	Effects of Twisting Ratio, Diagonal Length, And Pitch Ratio of Hexagonal Pin Fins on Thermo-Hydraulic Performance of Heat Sink	Mehmet Gurdal, Mutlu Tekir, Hayati Kadir Pazarlioglu, Kamil Arslan, Noora Imad Algbourie

Section A2
Numerical Methods in Fluid Flow and Heat Transfer II
Chair: Prof Mohamed Hamed, Room: Adıyaman

Paper ID	Title	Authors
125	Effect of the Geometry and Nanoparticles Size on the Enhancement of Nanofluid with Variable Proprieties on Natural Convection	Bilal El Hadoui, Mourad Kaddiri
153	On Estimating Thermophysical Properties of Liquid Metals	Remon Basily, Sumanth Shankar, Mohamed Hamed
159	Multi-Mode Heat Transfer Using Total Energy Based Entropic Lattice Boltzmann Method	Emre Gumussu, Hakan Tarman
160	Enhancing Natural Convection Through Mechanical Vibration: Eccentric Rotation of Square Cavity	Murat Can Onen, Muslum Arici

Section A3
Numerical Methods in Fluid Flow and Heat Transfer III
Chair: Prof Naci Genç, Room: Şanlıurfa

Paper ID	Title	Authors
197	Toward Cooling lithium-ion battery with Multiple cooling Configuration	Tasin Disha , Yaffa Cohen , Adrian Rodrigo , Giorgio Potito
150	A New Method to Determine Heat Loads in Thermal Storage and Fluid Transport	O.V. Guler, E.Y. Gurbuz, A. Kecebas, M.A. Erturk
143	Coupled CFD Modelling of a Top-Fired Steam Methane Reforming Furnace	Mustafa Tutar, Cihat Emre Üstün, Jose Miguel Campillo-Robles, Raquel Fuente, Silvia Cibrian, Ignacio Arzua, Arturo Fernández, Gabriel Alejandro Lopez
184	Finned Pcm Heat Sinks with Two Finning Approaches: Attached vs Detached Fins From the Sink Base	Salah Al Omari, Farooq Farooq A. Mahmoud, Zahid Qureshi, Emad Elnajjar, Mohammad Qasem

Section A4
Numerical Methods in Fluid Flow and Heat Transfer IV
Chair: Prof Sibel Basakcilardan Kabakci, Room: Kahramanmaraş

Paper ID	Title	Authors
107	Comparison Between Ordinary Nanofluids and Hybrid Nanofluid Heat Transfer in a Heated Tube	Nihad Dukhan, AmirReza Radmanesh
115	Correction of Derived Temperature Dependent Characteristic Material Properties of Thermoelectric Modules	Ahmet Koyuncu, Abdullah Berkan Erdogmus, Orkun Dogu
122	Analytical Design and CFD Simulation of Plate-Fin Heat Exchangers	Diren Deniz Çiçek, Senol Başkaya
149	Numerical Investigation of Thermal Flow Characteristics in Compact Plate Heat Exchanger with Various Surface Patterns	Emine Yagiz Gurbuz, Onur Vahip Guler, Merve Goltas Bolukbas Baris Gurel, Ali Kecebas

Section B1
Renewable Energy I
Chair: Prof. Tawfic Jaber, Room: Hatay

Paper ID	Title	Authors
118	Numerical investigation of pressure drop in a solar tower's soiled volumetric air receiver	Kacem Zereg, Sihem Djouimaa, Mounir Aksas, Amor Gama, Ali Cheknane, Hemiche Iddou, Belkacem Samar
194	Dandelion-Optimizer based power sharing in hybrid renewable energy system optimum sizing with EV: grid-connected, wind, solar, battery, electric vehicles	Aykur Fatih Guven
108	Evaluation of Materials For Indoor Organic Photovoltaic Applications	Günes Aydin
116	Voltage Control and Harmonics Investigation on Loads Supplied By Off-Grid Solar Power Plant	Aykut Fatih Guven

Section B2
Renewable Energy II
Chair: Prof Surrendra Kachhwaha, Room: Adıyaman

Paper ID	Title	Authors
154	Dynamic Mesh Model Application of a 2D Design Using Computational Fluid Dynamics Used in Wind Farm Modeling	Cemil Koyunoglu
155	Sliding Mesh Model Application of a 2D Design Using Computational Fluid Dynamics Used in Wind Farm Modeling	Cemil Koyunoglu
129	Preparation of Activated Carbon From Lignin and Cellulose-Rich Pulp Obtained By Alkali-Glycerol Organosolv Method	Kübra Al, Sibel Basakcilardan Kabakci
123	Exploring of the Biogas Production Potential of Artvin Province	Ezgi Bayrakdar Ates, Dilek Gunduz

Section B3
Thermofluids and Energy I
Chair: Prof. Emad Elnajjar, Room: Şanlıurfa

Paper ID	Title	Authors
136	Performance Studies on a Solar Pv Powered Evaporative Cooling System with Seawater and Freshwater	Kapilan Natesan, Atilla Bıyıkoğlu, Amaresh Gunge
180	Electric Vehicles: Examination of the Current Available Infrastructure in Oman	Abdullah Al-Janabi, Emad Summad, Mahmoud Al-Knidi
140	Influences of Turbulent Lid-Driven Flow in a Cubic Cavity on the Solid Micro-Particles Behaviors	Oktay Çiçek, A. Cihat Baytaş
187	Thermal Analysis of the PFC Circuit Inductor	Ömer Aldemir and Naci Genç
124	An Overview of Energy Storage Effect on a Salty Stratification System	Ridha Abdeljabar

Section B4
Thermofluids and Energy II
Chair: Prof Rizwan Uddin, Room:Kahramanmaraş

Paper ID	Title	Authors
144	Predicting Steel Hardness and Microstructures Using Feed-Forward Neural Networks	Ankur Bassi, Soham Bodas, Syed Shuja Hasan, Gaganpreet Sidhu, Seshasai Srinivasan
183	Hierarchical Hemi-Wicking Surfaces Fabricated By Nanosecond Laser Ablation For Improvement of Boiling Performance	Anton Surtaev,Vladimir Serdyukov,Sergey Starimsky
174	Conceptual RDF Production Facility Design and Theorical Power Generation	Mehmet Kerem Sarp
202	HKUST-1/Vermiculite Hybrid Material for the Adsorption of Organic Pollutant	N. Kanmaz, P. Demircivi

Section C1
Numerical Methods in Fluid Flow and Heat Transfer III
Chair: Prof. Ridha Abdeljabar, Room:Hatay

Paper ID	Title	Authors
146	LBM Simulation of the Residence Time of Polluting Particles in a Ventilated Enclosure	Yasmine Hamrioui, Zouhira Hireche, Lyes Nasseri , Rachid Nebbali Rachid Bennacer, Djamel Eddine Ameziani,
130	Numerical Analysis of the Straight Darrieus Wind Turbine Efficiency	Hemiche Iddou, Nora Nait Bouda, Kacem Zereg
196	A New Approach to Solving the Sound Problem Caused by Cargo Hatch Gasket on Dry Cargo Ship	Gulenay A. Kilic
111	Forced Convection Heat Transfer Performance of the Turbulent Flow of Nanofluid (Al2O3-Water) and Hybrid Nanofluid (Al2O3-Sio2-Water) in a Triangular Channel	Imen Meriem, Rahima Benchabi

Section C2
Energy Management and Energy systems
Chair: Prof Muslum Arici, Room:Adıyaman

Paper ID	Title	Authors
162	Radiator Selection By Considering Building Heat Loss Calculations According to TS-825 Standard	Mustafa Turhan Coban, Serdar Elce, Soykan Gussel, Serhat Demiral
191	Driving Towards a Greener Future: Low Carbon Vehicles in Saudi Arabia's Hot Climate	Eydhah Almatrafi, Mohamed Rady, Mohamed Darwish, Maysam Abbod, Chun Sing Lai
173	Battery Thermal Management Systems Used in Electric Vehicles	Beyzanur Yavuz, M. Arici
175	Optimization of a Centrifugal Fan By Coupling Metamodel and Openfoam: A New Optimization Tool	Alla Eddine Benchik Le Hocine, Sebastien Poncet, Hachimi Fellouah, Raymond Panneton
186	Exergy and Sustainability Analysis of an Ejector-Assisted Refrigeration System Under Transient Regime Conditions	Ümit İşkan, Halil Atalay, Mehmet Direk and Cüneyt Tunçkal

Section C3
Thermofluids and Energy III
Chair: Prof Ersin Akyuz, Room:Şanlıurfa

Paper ID	Title	Authors
192	Assessing Economic Viability of Fuel Cell and Battery Hybrid Propulsion in Recreational Boats: Incorporating Degradation Rate in Batteries	S.A. Aykut Korkmaz, Olgun Konur, K. Emrah Erginer, C. Ozgur Colpan
189	Improvement of the main architectural criteria on the thermal quality of the building	Benaziza Mouad, Semmar Djaffar
195	Optimization of Hydrophobic Deep Eutectic Solvent For Boron Extraction Along with the Recyclability and Reusability of the Solvent.	A. Ghazal, H. Abu Khalifeh, I. Zuburtikudis, E. Nashef
137	Influence of the Heating Rate on the Boiling Curve	Maksim Delov, Dmitrii Kuzmenkov, Kirill Kutsenko, Alexey Lavrukhin

Section C4
Thermofluids and Energy IV
Chair: Prof Habiba Bougherara, Room:Kahramanmaraş

Paper ID	Title	Authors
152	Design Procedures for an Inclined Solar Still with Thermoelectric Generator and Phase Change Material	Mahmoud Elgendi, Maryam AlMallahi, Irfan Sheikh , Adem Ismael, Yonatan Tesfamariam, Munir Mohamedbrhan, Mohammed Alderei , Abdel-Hamid Mourad
165	Analytical and Numerical Evaluation for Wind Turbine Aerodynamic Characteristics	Ashraf Abdelkhalig, Mahmoud Elgendi, Mohamed Y.E. Selim, Maryam AlMallahi
166	Numerical Investigation of the Blood Flow in An Idealized Stenosed Left Coronary Artery: Effect of the Bifurcation Angle	Ali Muftuogullari, Melisa Albayrak, Mounir Snner, B. Sarper
133	Review of Heat Pipes and Their Applications in Advanced Nuclear Reactor Designs	Rizwan Uddin
198	A New Approach Thermal Management System in Drying Oven	Gulenay A.Kilic, Cuneyt Tunckal

Section D1
Thermofluids and Energy V
Chair:Prof. Mohammad Hameed, Room:Hatay

Paper ID	Title	Authors
145	Numerical Simulation of Methanation Reactor with Circulation (Merci)(online)	Kazuhiro Yamamoto, Kohei Sakaguchi
201	Seafarers' Perception of Noise Pollution on Ships: A Survey Study and Recommendations	O.Buyukacar
142	A Strategy to Predict Early Thermal Runaway Event in Lithium-Ion Batteries Using Molecular Dynamics and Machine Learning Modelling	Ramavtar Tyagi, Seshasai Srinivasan
138	Multi-Objective Optimization and a Power Management Strategy of the Hybrid Renewable Energy with Hydrogen Storage	Tuba Tezer, Ersin Akyüz, Metin Gül
141	A Genetic Algorithm For Designing Cost Effective Multiphase Steels	Martha Kafuko, Seshasai Srinivasan

Section D2
Thermofluids and Energy VI
Chair: Prof Abdullah Al-Janabi, Room:Adıyaman

Paper ID	Title	Authors
171	Thermal Energy Storage with Nanoparticle Embedded Phase Change Materials in Concentrated Solar Systems	Ramazan Aydin, Tuba Okutucu Ozyurt
158	Design of Green House with Hybrid Renewable Source	Ender Ates, Naz Karaarslan
182	Modeling and Simulation of Anion Exchange Membrane Water Electrolyzer For Green Hydrogen Production	Eid Gul, Tariq Shamim
156	Development of an Innovative Water Injection System For New Generation of Ice Hybrid Vehicles	Osman Sumer,Yunus Emre Ozturk, Can Yangoz,Ekincan Ozyurt

Section D3
Thermofluids and Energy VII
Chair: Prof. Tariq Shamim, Room: Şanlıurfa

Paper ID	Title	Authors
167	Experimental Investigation of the Usage Of R513A as a Substitute For R134A in a Vapor Compression Refrigeration System	Kayhan Dagidir, Kemal Bilen
169	Thermodynamic Investigation of R1234Yf and R134A Gas in Vapor Compression Refrigeration Cycle	Metin Yilmaz, Canan Cimsit, Elif Ogut
172	Jet Impingement Cooling of Electronic Modules: Effect of the Nozzle Position	Melisa Albayrak, Bugra Sarper, Mehmet Tahir Erdinc, Orhan Aydin
121	Machine Learning Applications on Membrane Distillation	Ersin Aytaç, Mohamed Khayet

Section D4
Thermofluids and Energy VIII
Chair: Sibel Basakcilardan Kabakci, Room:Kahramanmaraş

Paper ID	Title	Authors
126	Heat Transfer Enhancement of a Taylor-Couette Flow	Ahmed M. Teamah, Mohamed S. Hamed
168	Comparison of the Membrane-Based Desorber and Plate Heat Exchanger Desorber For Solar Assisted Absorption Refrigeration Systems	Y. Gunduz Ozvaris, R. Jafari, T Okutucu Ozyurt
148	Combined Surface Coating For Heat Transfer Enhancement in Falling Films Of R114/R21 Mixture	Oleg Volodin, Nikolay Pecherkin, Aleksandr Pavlenko
164	Spray Cooling Performance At Different Nozzle-To-Surface Distances	Ilya Vladyko, Nokolai Miskiv, Vladimir Serdyukov, Anton Surtaev
188	Wind Pumping in Semi-Arid Areas in Algeria	Hichem Menous , Nachida Kezbedji

Section E1
Thermofluids and Energy IX
Chair: Prof. Tawfic Jaber, Room:Hatay

Paper ID	Title	Authors
134	Comparison of the Direct and Indirect Cooling Systems on the Thermal Management of the EV Batteries	Yunus Emre Öztürk, Muhsin Kılıç
131	From Ideas to Execution: Designing and Optimizing a Self-Sustained Indoor Farming Solution Using Fluid and Thermal Simulations	Ahmed Sarwar, Habiba Bougherara
127	Power -Aware 3Dnoc Design Using Soft Computing Methods	Furat AL-Obaidy, Farah Mohammadi
128	Synthesis of Activated Carbon From Biomass and Its Hydrochar	Sibel Basakcilardan Kabakci , Kübra Al
199	UV Curable Phase-Change Materials	Ali Tasci , Gülay Bayramoglu, Recep Ozcimder

Section E2
Thermofluids and Energy X
Chair: Dr Gulenay Kilic, Room: Adıyaman

Paper ID	Title	Authors
147	Global Green Solution For Global Warming	Omar Chaalal, Musthafa Odayooth Mavuk, Hameed Muhamad, Fatima Ahmed Al-Mansoori, Hessa Mohamed Almansoori, Maria Hamad, Esraa Abdul Razak,
190	Review on Response Surface Methodology Applications in Biodiesel Production And Performance Evaluation	Sara Asaad, Abrar Inayat, Chaouki Ghenai, Abdalla Shanableh
200	Dual Evaporator Ejector Refrigeration System with Diffuser Outlet Split	G. Çetin, Ü. İşkan, M. Direk, C. Tunçkal, M.C. Kahraman
193	The Application of Porous Beds Consisted of Crushed Rubber and Wasted Sponge in Improving Solar Desalination	Ehab Bani-Hani, Mamdouh El Haj Assad, Maryam Nooman AlMallahi, Mahmoud Elgendi

Section F1-Online
Thermofluids and Energy XI
Chair: M. Z. Saghir, Room: Hatay

106	Comparing the Performance of PCM Macroencapsulated Capsules and Prisms of Different Shapes	Itamar Harris, Arthur James , Maria Ortega Del Rosario
177	Solar Still with Rotating Discs: A New Solar Desalination Technique	Fatma Ouled Saad, Souhir Mankai, Jamel Madiouli, Saber Chemkhi
178	Experimental Study of Single Slope Solar Still Using Brick-Fins As Absorbing Material	Souhir Mankai, Fatma Ouled Saad , Jamel Madiouli, Saber Chemkhi
163	Effect of Inclination Angle on Flow Boiling in Micro-Sized Channels	Burak Markal, Alperen Evcimen
179	Investigating the Effect of Soya Wax Latent Heat Storage and Internal Reflectors on the Performance of Single Slope Solar Still Under Tunisian Climatic Conditions	Jamel Madiouli, Fatma Ouled Saad, Souhir Mankai, Saber chemkhi
102	Average Transmittance of Solar Cell Models Based on Perovskite Type that Can Extend the Bandgap to the Near Infrared (Nir).	Mahassen Elblbeisi, Mohammed Shabat
119	Investigation of Air Temperature and Velocity Distribution in a Room According to Different Air Vent Types and Locations By Computational Fluid Dynamics Analysis	Hande Ufat
139	A Study on Modelling Energy Performance in Buildings	Tania Guerra, Zhihui Ye
170	Genetic Algorithm-Based Multi-Objective Optimization of Fast-Charging Parameters of a Lithium-Ion Battery By a Coupled Equivalent Electric Circuit-Heat Transfer Model	G.G. Kadiz, S.O. Unverdi
120	Techno-Economic Analysis of Large-Scale Hydrogen Production From Wind Energy	Metin Gül, Ersin Akyüz, Paul C. Okonkwo
103	Heat and Mass Transfer in a Rotary Total Energy Wheel	Koutama Amara
161	Mass Flow Rate Enhancement Inside a Solar Chimney Power Plant	Ahmed Daimalla, Mohamed Lebbi, Mohand S. Lounici
181	Numerical Study of Particle Deposition of an Evaporating Sessile Droplet	Mebrouk Ait Saada, Salah Chikh, Lounes Tadrist
157	Investigation of Pilot Injection Strategy Effect on Performance and Emissions of Dual-Fuel Engine	Sarah Ouchikh, Mohand Said Lounici, Khaled Loubar, Mohand Tazerout
185	Thermal Modeling of Scott Transformer based on Thermal Electrical Analogy	Ali Hamizadeh and Naci Genç
114	Forced Heat Convection Analysis and Entropy Production of CoFe2O4/H2O Nanofluid Flow in a Channel with Wavy Tape under Laminar Regime	Mehmet Gürdal, Celal Nazli, Yasin Özcan, Umut Kaya

Prof. H. Bougherara

Professor
Toronto Metropolitan University, Canada

“Recent Advances in Horticultural applications: solving real world challenges using Modeling and Numerical Simulations”

Dr. Bougherara has won numerous grants from NSERC DG, NSERC CRDPJ, Ministry of Research and Innovation-ERA, Ontario Centres of Excellence (Collaborative research projects Grants), Industrials, Internal Research Tools and Instruments Grants, MITAC/Accelerate Ontario, Ryerson Fund for Interdisciplinary SRC. Dr. Bougherara has authored and/ or co-authored more than 50 refereed journal publications and conference proceedings.

Prof. M.A. Sheremet

Professor
Department of Theoretical Mechanics
Tomsk State University, Russia

“Numerical Simulation of Effective Cooling Systems for Heat-Generating Elements using Finned Heat Sink Filled with Phase Change Materials”

Prof. Mikhail Sheremet is a Head of the Laboratory on Convective Heat and Mass Transfer and Head of the Department of Theoretical Mechanics at the Tomsk State University.
He received the Candidate of Science in Physics and Mathematics degree from Tomsk State University(2006), and habilitation (Russia, Doctor of Science in Physics and Mathematics) (2012) from Tomsk State University. Prof. Sheremet has published over 250 papers in peer-reviewed journals and conference proceedings, and contributed to several books. He obtained the Web of Science Award 2017 in the category of Highly Cited Researcher in Russia. He is a member of Editorial Board of International Journal of Numerical Methods for Heat & Fluid Flow, Journal of Magnetism and Magnetic Materials, Journal of Applied and Computational Mechanics, Coatings, Entropy, Energies, Nanomaterials.
He is a member of the Scientific Council of the International Centre for Heat and Mass Transfer.

Prof. Y. Haik

Professor of Mechanical Engineering
University of Sharjah, UAE

"Harnessing Sustainable Energy: Algae, Seawater and Ambient"

Prof. Haik is an internationally recognized scholar in nanotechnology. His research focus is in the synthesis and characterization of nanomaterials for a myriad of applications including biomedical sensors, diagnostics, imaging and energy. His scholarly output includes over 300 peer-reviewed scientific articles, over 80 issued patents and patent applications and a number of textbooks. His scholarly output was recognized by a number of prestigious awards including the HH Sheikh Khalifa Award for Distinguished Scientific Research, Arab Creativity Award-Thought Foundation, ISESCO University Research Development Award, Fellow of the National Academy of Inventors and Fellow of the American Society of Mechanical Engineers. He is recognized in the top 2% of scientist in his field.

Prof. L. Chen

Professor
Peking University, China

"Supercritical CO_2 Heat Transfer Flow and Phase Behaviors in Porous Structures"

He received his bachelor's degree in engineering from Peking University in 2010 and his doctorate degree in engineering from Peking University in 2015. He returned to China in September 2018 as a Full Professor, Researcher, at the Institute of Engineering Thermophysics, Chinese Academy of Sciences, Beijing. Recently, he has been engaged in basic research of supercritical fluid thermal system application. As the person in charge, he has presided over important projects, such as the National Natural Science Foundation of China, international cooperation, key topics of frontier science of the Chinese Academy of Sciences, and "stuck neck" technology research of enterprises. He proposed the natural circulation and trans-critical mechanism-system stability mechanism of supercritical fluids, and developed the experimental method of supercritical precision quantitative visualization. Also, the basic framework of mass transfer in microscale critical CO2 fluids has been constructed, and the application exploration of "carbon neutrality" has been carried out by his team members. His relevant work has been reported by China Science News, China Daily, China Science Network, Chongqing Daily and the
He has published nearly 70 SCI research papers, with a total of more than 1000 citations, an h-factor of 23, and more than 20 invited reports/keynote presentations. He is currently the associate editor of the ASME J. Nucl. Eng. Rad. Sci, and one of the four Chinese editorial boards of The J. Supercritical Fluids, an authoritative journal in the field of supercritical Elsevier. For his research achievements in the field of supercritical fluid energy-mass transfer, he won the Young Scientist Award (2018) of the Asian Federation of Thermal Science and Engineering (AUTSE). He has applied for 16 Chinese patents, 1 Japanese/international patent, and published 3 English monographs.

Prof. O. Colpan

Professor
Mechanical Engineering Department
Dokuz Eylul University, Turkiye

“Mathematical Modeling of Hydrogen and Fuel Cell Technologies”

Prof. Can Özgür Çolpan has conducted research in the field of fuel cells and hydrogen and the mathematical modeling of integrated energy systems. He has mainly carried out studies on the following topics: modeling of direct internal reforming solid oxide fuel cells, material development and mathematical modeling for direct methanol fuel cells, development of high temperature PEM fuel cells, simulation and optimization of the fuel cell vehicle powertrains, catalytic dehydrogenation of solid hydrogen storage materials, analysis of organic Rankine cycle based systems, analysis of biofuel fueled turbojet, mathematical modeling of membrane reactors, mathematical modeling of power-to-gas systems, and development of electrochemical hydrogen compressors. He has worked as conference chairman, technical chair and organizing committee member in many conferences. He serves as Board Member in the Turkish Hydrogen Technology Association. In 2019, he won the Turkish Academy of Sciences Outstanding Young Scientist Award (TUBA-GEBIP) and METU Professor Dr. Mustafa N. Parlar Education and Research Foundation’s Research Encouragement Award.

Prof. S. Kachhwaha

Dean & Professor
Mechanical, School Of Technology
Pandit_Deendayal_Petroleum_University, India

“Cavitation Techniques in Biodiesel Industry: Challenges and Future Prospects”

Dr. Surendra Singh Kachhwaha is currently engaged with the responsibility of faculty as "Chair Professor Suzlon" in the Department of Mechanical Engineering, School of Technology, PDPU.Dr. Kachhwaha received his PhD and M. Tech. Degree from IIT Delhi and ITBHU, Varanasi respectively. He has teaching experience of more than 30 years in Mechanical Engineering at UG and PG level and have around 60 Technical publications in reputed national and international journals and more than 80 publications in national/international conference proceedings. He has guided five PhDs and 30 M. Tech. Dissertations. Besides, having been conferred with research awards and fellowships, Dr. Kachhwaha has carried out various awards and fellowships, Dr. Kachhwaha has carried out various consultancy/research project (worth 3.5 crores) where the fundamental and applications of mechanical and energy engineering are the main consideration.

Assoc. Prof. Dr. B. Cetin

Associate Professor of Mechanical Engineering
METU-Bilkent Heat Pipe Technologies Research Group
I.D. Bilkent University, Turkiye

“Grooved Heat Pipes: Modeling, Experimentation and Applications”

Dr. Barbaros Çetin where he focused on electrokinetic transport and particle manipulation in lab-on-a-chip devices for biomedical applications. Following his PhD, he became a faculty member in Middle East Technical University-Northern Cyprus Campus Mechanical Engineering Program. In 2011, he became a faculty member in the Mechanical Engineering Department at I.D. Bilkent University, Ankara, Turkey. His current research interests include particle manipulation for microfluidic application, modeling of particle motion using boundary element method, and modeling, fabrication and experimentation of flat-grooved heat pipes. Dr. Çetin is the recipient of the 2015 Bilkent University Distinguished Teacher Award, 2017 Outstanding Young Scientist Award of the Turkish Academy of Sciences (TÜBA-GEBİP), 2017 METU Prof. Dr. Mustafa N. Parlar Research Incentive Award and 2018 Science Academy Distinguished Young Scientist Award (BAGEP).

Prof. K. Siddiqui

Professor & Associate Dean
Mechanical Engineering
NED University of Engineering and Technology, Candana

“Multiscale Modelling to Improve Predictions of Building Energy Exchange in Urban Environments”

2008-Present Associate and Full Professor Western University, Mechanical and Materials Engineering, London, Canada
Served as Chair and Vice Chair, ASME Fluid Mechanics Technical Committee
Served as Chair, CSME Fluid Mechanics and Thermo-fluids Technical Committes
Served as Associate Editor, CSME Transactions
Fellow, ASME
Fellow, CSME

Prof W. Habashi

Professor
Department of Engineering
McGill University, Canada

"Machine learning and the inexorable path toward the "Desktop CFD Simulator"

Professor Habashi's research group at the McGill CFD Lab have made significant and original strides in the fields of in-flight icing and computational wind engineering (CWE) in the last decade. Currently, they are addressing in a cohesive manner some long pending issues of both fields, via analytical and computational basis, instead of empirical approaches. The proposed research projects are diverse from an engineering applications perspective but the underlying mathematics and the computational methodology is very similar, and can be classified as coupled multi-physics and multi-scale problems.

Prof. H. M. Ali

Professor
Mechanical Engineering
King Fahd University of Petroleum & Minerals, KSA

"Advanced Condensation Heat Transfer on Horizontal Tubes"

Dr. Hafiz Muhammad Ali, currently working as an associate professor of Mechanical Engineering at King Fahd University of Petroleum and Minerals, Saudi Arabia, received his doctoral degree in mechanical engineering from School of Engineering and Materials Science, Queen Mary, University of London, United Kingdom, in 2011. He was a postdoc at Water and Energy Laboratory of University of California at Merced, United States, during 2015-16.

Thermal sciences, heat transfer, and solar energy are his major areas of interest. Over the span of several years, he supervised numerous undergraduate and postgraduate students and his work produced more than 150 papers featured in various reputed international journals. He also participated at several international and national conferences as an invited speaker and delivered keynote talks. His other research interests include electronics cooling, condensation, nanofluids, heat transfer devices, and thermal management.

He is the recipient of the "Best Young Research Scholar Award" for 2017 in the Engineering category, conferred by Higher Education Commission of Pakistan at the 7th HEC Outstanding Research Award Ceremony. He also had the honor of receiving HEC's Best Research Paper Award (2013/2014) and Research Productivity Award by Pakistan Council of Science and Technology (2016-17). Apart from his academic duties, he is actively involved with editorial duties at several international journals, notably Heat Transfer Engineering (Taylor & Francis), Journal of Thermal Analysis and Calorimetry (Springer), International Journal of Thermofluids (Elsevier), Journal Thermal Science, and Journal of Mechanical Engineering.