MHMT
CONGRESS

PROCEEDINGS OF THE 10TH WORLD CONGRESS ON MOMENTUM, HEAT AND MASS TRANSFER (MHMT 2025)

08 - 10 April, 2025 | Barcelona, Spain

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WELCOME MESSAGE FROM THE CONFERENCE CHAIR

On behalf of the International Academy of Science, Engineering and Technology (International ASET Inc.), the organizing committee would like to welcome you to the 10th World Congress on Momentum, Heat and Mass Transfer (MHMT 2025).

MHMT is aimed to become one of the leading international annual congresses in the fields of momentum, heat and mass transfer. This congress will provide excellent opportunities to scientists, researchers, industrial experts, and university students to present their research achievements and to develop new collaborations and partnerships with experts in the field.

In the **tenth meeting** of this Congress, six plenary and three keynote speakers will share their expertise in a wide spectrum of fields and applications. In addition, approximately **70** papers will be presented by professors, students, and researchers from across the world.

We thank you for your participation and contribution to the 10th World Congress on Momentum, Heat and Mass Transfer (MHMT 2025). We wish you a very successful and enjoyable experience.

Dr. Lixin Cheng
Sheffield Hallam University, UK
Congress Chair and Proceedings Editor
MHMT 2025

Dr. Tassos G. Karayiannis
Brunel University London, UK
Congress Chair and Proceedings Editor
MHMT 2025

Dr. Sohel Murshed
University of Lisbon, Portugal
Congress Co-Chair
MHMT 2025

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ABOUT MHMT 2025

MHMT is aimed to become one of the leading international annual congresses in the fields of momentum, heat and mass transfer. This congress will provide excellent opportunities to the scientists, researchers, industrial engineers, and university students to present their research achievements and to develop new collaborations and partnerships with experts in the field.

There are 3 conferences included in the CSEE Congress:

ENFHT'25 - 10th International Conference on Experimental and Numerical Flow and Heat Transfer
ICMFHT'25 - 10th International Conference on Multiphase Flow and Heat Transfer
CSP'25 - 10th International Conference on Combustion Science and Process
While each conference consists of an individual and separate theme, the 3 conferences share considerable overlap, which prompted the organization of this congress. The goal of this undertaking is to bring together experts in each of the specialized fields, and at the same time allow for cross pollinations and sharing of ideas from the other closely related research areas.

MHMT is an acronym for **M**omentum, **H**eat, and **M**ass **T**ransfer

- The proceedings is published in Ottawa, Canada.
- All papers were peer-reviewed
- The congress proceedings is published under an ISSN and ISBN number
- Each paper is assigned a unique DOI number by Crossref
- The conference proceedings is indexed by Google Scholar
- The proceedings is permanently archived in Portico (one of the largest community-supported digital archives in the world)

Google Scholar Crossref PORTICO

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SCIENTIFIC COMMITTEE

We would like to thank the following for accepting to act as a member of the Scientific Committee for the MHMT 2025 Congress:

Scientific Committee Members for ENFHT 2025

- **Dr. Chamil Abeykoon, The University of Manchester, UK**
- **Dr. Rayhaneh Akhavan, University of Michigan, USA**
- **Dr. Jalel Azaiez, University of Calgary, Canada**
- **Dr. Longfei Chen, Beihang University, China**
- **Dr. Yanping Du, Shanghai Jiao Tong University, China**
- **Dr. Zhixiong Guo, Rutgers University, USA**
- **Dr. Gamze Gediz Ilis, Gebze Technical University, Turkey**
- **Dr. Konstantinos Kontis, University of Glasgow, UK**
- **Dr. Sébastien Poncet, Sherbrooke University, Canada**
- **Dr. Ziad Saghir, Ryerson University, Canada**

Scientific Committee Members for CSP 2025

- **Dr. Rob Bastiaans,** Eindhoven University of Technology, Netherlands
- **Dr. Pedro Jorge Martins Coelho,** University of Lisbon,Portugal
- **Dr. Young Choi,** Korea Institute of Machinery and Materials, Korea
- **Dr. Byungchul Choi,** Chonnam National University, Korea
- **Dr. Javad A. Esfahani,** Mashhad Ferdowsi University, Iran
- **Dr. Amir H. Mohammadi,** University of KwaZulu-Natal, South Africa
- **Dr. Dimitrios C. Rakopoulos,** Center for Research and Technology Hellas, Greece
- **Dr. Constantine D. Rakopoulos,** National Technical University of Athens, Greece
- **Dr. Tassos Stamatelos,** University of Thessaly, Greece

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SCIENTIFIC COMMITTEE

Scientific Committee Members for ICMFHT 2025

- **Dr. Sadegh Dabiri,** Purdue University, USA
- **Dr. Gioia Falcone,** University of Glassgow, UK
- **Dr. Kamiel Gabriel,** University of Ontario Institute of Technology, Canada
- **Dr. Afshin J. Ghajar,** Oklahoma State University, USA
- **Dr. Liejin Guo,** Xi'an Jiaotong University, China
- **Dr. Faik Hamad,** Teesside University, UK
- **Dr. Marcello Iasiello,** Università degli Studi di Napoli Federico II, Italy
- **Dr. Ali Kosar,** Sabanci University, Turkey
- **Dr. Ali Ozel,** Heriot-Watt University, UK
- **Dr. Huihe Qiu,** Hong Kong University of Science & Technology, Hong Kong
- **Dr. Qinlong Ren,** Xi'an Jiaotong University, China
- **Dr. Sergei Sazhin,** University of Brighton, UK
- **Dr. Mostafa Safdari Shadloo,** National Institute of Applied Science (INSA), France
- **Dr. Günter H. Schnerr,** Technical University of Munich, Germany
- **Dr. Pengfei Wang,** Xi'an Jiaotong University, China
- **Dr. Berend van Wachem,** University of Magdeburg, Germany
- **Dr. Somchai Wongwises,** King Mongkut's University of Technology Thonburi, Thailand
- **Dr. Jiyun Zhao,** City University of Hong Kong, Hong Kong

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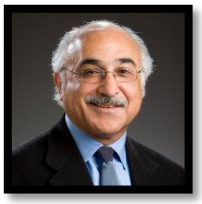
PLENARY/KEYNOTE SPEAKERS

The Plenary and keynote speakers information for the 10th World Congress on Recent Advances in Nanotechnology (MHMT 2025) is as follows:

Plenary Speakers

Dr. Srinivas Garimella
Georgia Institute of Technology, USA
ENFHT'25 Plenary Speaker



Dr. Afshin J. Ghajar
Oklahoma State University, USA
ICMFH'25 Plenary Speaker

Dr. Yannis Hardalupas
Imperial College London, UK
CSP'25 Plenary Speaker

Dr. Savvas Tassou
Brunel University London, UK
ENFHT'25 Plenary Speaker

Dr. Jules Thibault
University of Ottawa, Canada
ENFHT'25 Plenary Speaker

Dr. Gretar Tryggvason
Johns Hopkins University, USA
ICMFHT'25 Plenary Speaker

Keynote Speakers

Dr. Bofeng Bai
Xi'an Jiaotong University, China
ICMFHT'25 Keynote Speake

Dr. Francesco Coletti
Hexxcell Ltd., Uk
ICMFHT'25 Keynote Speaker

Dr. Yunting Ge
London South Bank University, UK
ENFHt'25 Keynote Speaker

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ENFHT 2025 PLENARY SPEAKER

Topic of Plenary: Condensation at Small Scales: Measuring, Modeling, and Applications

Dr. Srinivas Garimella, Georgia Institute of Technology, USA

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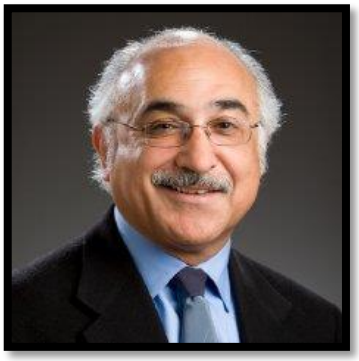
Dr. Srinivas Garimella is the Hightower Chair in Engineering and Director of the Sustainable Thermal Systems Laboratory at Georgia Institute of Technology. He has held prior positions as Research Scientist at Battelle Memorial Institute, Senior Engineer at General Motors Corp., and Associate Professor at Western Michigan University and Iowa State University. He conducts research in the areas of microscale phase change heat and mass transfer, vapor compression and sorption heat pumps, and heat recovery, upgrade and storage. He is a Fellow of the ASME and of ASHRAE. He is Editor of the Int. J. Air-conditioning and Refrigeration, and past Associate Editor of the ASME J. Heat Transfer and ASME J Energy Resources Technology, and of the ASHRAE SBTE Journal. He is Past Chair of the Advanced Energy Systems Division of ASME and was on the ASHRAE Research Administration Committee. He held the William and Virginia Binger Associate Professorship of Mechanical Engineering at ISU. He has mentored over 75 postdoctoral researchers, research engineers and students pursuing their M.S. and Ph.D. degrees, with his research resulting in over 375 archival journal and conference publications, a textbook on Heat Transfer and Fluid Flow in Minichannels and Microchannels (2nd Ed., Elsevier 2014), and books on Condensation Heat Transfer (World Scientific Publishing, 2015) and Adsorption Heat Pumps (Springer Nature, 2021.) He has been awarded seventeen patents.

ICMFHT 2025 PLENARY SPEAKER



Topic of Plenary: Two-Phase Flow Void Fraction, Pressure Drop, and Heat Transfer in Pipes with Different Orientations

Dr. Afshin J. Ghajar, Oklahoma State University, USA

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Afshin J. Ghajar is Emeritus Regents Professor and John Brammer Endowed Professor in the School of Mechanical and Aerospace Engineering at Oklahoma State University, Stillwater, Oklahoma, USA and an Honorary Professor of Xi'an Jiaotong University, Xi'an, China. He received his B.S., M.S., and Ph.D. degrees all in mechanical engineering from Oklahoma State University. His expertise is in experimental heat transfer/fluid mechanics and development of practical engineering correlations. He is a Fellow of the American Society of Mechanical Engineers (ASME) and the American Society of Thermal and Fluids Engineers (ASTFE). He is a Registered Professional Engineer in the State of Oklahoma. Professor Ghajar has received countless teaching/service awards, such as the 75th Anniversary Medal of the ASME Heat Transfer Division, the ASME ICNMM Outstanding Leadership Award, and the Donald Q. Kern Award, among others. His research work has resulted in over 250 publications including professional journals, reports, books, peer-reviewed conference papers or symposium proceedings. His research achievements have also been documented by a large number of presentations as well as keynote and invited lectures all over the world. A 2020 study conducted by Ionnidis et al. of Stanford University [Updated science-wide author databases of standardized citation indicators (plos.org)], ranked nearly 160,000 scientists of all disciplines based on citations to their work over their career and for the year 2019, Professor Ghajar ranked in the top 1.3% of researchers in Mechanical Engineering and Transports category.

CSP 2025 KEYNOTE SPEAKER

Topic of Keynote: Research Challenges in Combustion and Production of Sustainable Fuels for 'Green' Energy Futures

Dr. Yannis Hardalupas, Imperial College London, UK

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He is Professor of Multiphase Flows at the Mechanical Engineering Department at Imperial College London. His research covers combustion, heat and mass transfer, liquid atomisation and sprays and the development and application of novel optical and laser diagnostics. The latter led to patents for instruments on powder sizing, planar droplet sizing, nanoparticle sizing and novel imaging devices. His research contributed to gas- and liquid- fuelled land-based gas turbines, coal burners, aeroengines, gasoline and Diesel engines and liquid propellant rocket engines. Recent emphasis on combustion research is related to sustainable and zero carbon fuels. He also researched dispersion of droplets and particles in spray drying, manufacturing and Cleaning-In-Place processes for the chemical and food industry, and dispersion of aerosols for infection control. Finally, he has studied flow and heat transfer processes in natural convection, forced convection and boiling, including 'nanofluids' as improved coolants for fusion and fission reactors. He is a Fellow of the Institute of Physics and Associate Fellow and member of the technical committee of Propellants and Combustion of the American Institute of Aeronautics and Astronautics. He chaired the Combustion Physics Group of the Institute of Physics and is an Editor of Experimental Thermal and Fluid Science and serves at the advisory and editorial boards of Experiments in Fluids and Int. J. of Spray and Combustion Dynamics.

ENFHT 2025 KEYNOTE SPEAKER

Topic of Keynote: Supercritical CO2 Power Cycles and Technologies for High Temperature Waste Heat to Power Conversion

Dr. Savvas Tassou, Brunel University London, UK

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Savvas Tassou is Professor of Energy Engineering at Brunel University London and Director of The Centre for Sustainable Energy Use in Food Chains. Over the years he held several senior positions at Brunel University London including Head of Department of Mechanical Engineering, Head of School of Engineering and Design and Director of The Institute of Energy Futures. Research expertise covers the areas of heat pumps, refrigeration and air conditioning, energy demand reduction in the built environment, food systems and industry, heat and mass transfer and heat exchangers and heat to power conversion technologies.

ENFHT 2025 KEYNOTE SPEAKER

Topic of Keynote: Estimation and Analysis of Transport Properties in Mixed-Matrix Membranes for Enhanced Gas Separation: An Integrated Experimental and Computational Study

Dr. Jules Thibault, University of Ottawa, Canada

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Jules Thibault obtained his bachelor of chemical engineering at the Royal Military College in 1973. He later obtained a PhD in Chemical Engineering from McMaster University in 1978 where he worked on the topic of heat transfer in nuclear reactors. Following his PhD Professor Thibault spent four years in the Canadian Armed Forces, including two six-month postings to Egypt and Cyprus with the United Nations. From 1981 to 1984, he taught in the Department of Chemistry and Chemical Engineering at the Royal military College, after which time he joined the Department of Chemical Engineering of Laval University. In 2000, he moved to the Department of Chemical and Biological Engineering at the University of Ottawa. His research interests are in biochemical engineering, and process simulation, control and optimization.

ICMFHT 2025 KEYNOTE SPEAKER

Topic of Keynote: Simulations and Modeling of Multiphase Flows

Dr. Gretar Tryggvason, Johns Hopkins University, USA

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Gretar Tryggvason is the Charles A. Miller, Jr. Distinguished Professor at the Johns Hopkins University and the head of the Department of Mechanical Engineering. He received his PhD from Brown University in 1985 and was on the faculty of the University of Michigan in Ann Arbor until 2000, when he moved to Worcester Polytechnic Institute as the head of the Department of Mechanical Engineering. Between 2010 and 2017 he was the Viola D. Hank professor at the University of Notre Dame and the chair of the Department of Aerospace and Mechanical Engineering. Professor Tryggvason is well known for his contributions to computational fluid dynamics; particularly the development of methods for computations of multiphase flows and for pioneering direct numerical simulations of such flows. He served as the editor-in-chief of the Journal of Computational Physics 2002-2015, is a fellow of APS, ASME and AAAS, and the recipient of several awards, including the 2012 ASME Fluids Engineering Award and the 2019 ASTFE Award.

ICMFHT 2025 KEYNOTE SPEAKER

Topic of Keynote: Multiphase Reaction Flow and Heat Transfer Of Coal Gasification in Supercritical Water For Hydrogen Production: From Pore To Agglomeration Perspective

Dr. Bofeng Bai, Xi'an Jiaotong University, China

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Bofeng Bai received the B.Eng. degree in fluid machinery from Xi'an Jiaotong University (XJTU), China, in 1993, the M.Sc. and Ph.D. degrees in Power Engineering & Engineering Thermophysics from XJTU in 1995 and 1999, respectively. He started his academic career as a Lecturer at XJTU in 1999, as Professor since 2007, and as Leading Professor since 2015. He serves as the Deputy Director of the State Key Laboratory of Multiphase Flow in Power Engineering and leads research group of Advanced Energy Power Multiphase Flow (AEPMF). He has won China National Funds for Distinguished Young Scientists. He is currently the secretary general of the multiphase flow branch of the Chinese Society of Engineering Thermophysics, the deputy chairman of the heat exchanger safety and energy efficiency committee, and the deputy secretary general of the hydrogen energy equipment committee of the China Special Technology Promotion Association. Prof. Bai has been serving as the Associate Editor of Journal of Mechanical Engineering Science (Proc. IMech E Part C) since 2019, Journal of Measurement since 2020, Advisory Board member of Physics of Fluids from 2023-2025.

His primary research interests focus on multiphase flow fundamentals and applications in energy engineering, power engineering, thermal engineering and petroleum engineering. He has authored and co-authored more than 270 papers published in international journals and more than 200 papers in conference proceedings. He chaired and co-chaired 8 international academic conferences or symposiums and delivered 30 keynote speeches. His research results have won 1 second prize of national technological invention awards and 4 first prizes of provincial and ministerial science and technology awards.

ICMFHT 2025 KEYNOTE SPEAKER

Topic of Keynote: Exploring Applications of Machine Learning For Data Regression in Heat Transfer

Dr. Francesco Coletti, Hexxcell Ltd., Uk

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Francesco is the CEO of Hexxcell Ltd., a London-based software and consulting company focussed on the development of Hybrid-AI Digital Twins for heat transfer systems. Francesco has a track-record of developing industrial digital solutions from ideation, R&D all the way to deployment in the field, with particular focus on combining physics-based models with Artificial Intelligence for monitoring, optimization and predictive maintenance of process and energy systems. Prior to Hexxcell, Francesco worked as a Development Specialist at the Linde Technology Center in Buffalo, NY. He is also a part-time Associate Professor at Brunel University London where he contributed to the launch of a new Chemical Engineering Department and was a visiting academic at Imperial College London (2016-2017). Francesco has been elected Fellow of the Energy Institute in 2023. He is one of two elected representatives for the UK serving on the Scientific Committee of the International Heat Transfer Conference. He was elected to the UK National Heat Transfer Committee in 2014 and subsequently appointed as its Secretary in 2015. Since 2019 he is a Director of AIChE Fuels&Petrochemical Division and is currently serving as the Chair of the Division. He is involved with The organization of several international conferences, including the Topical Series on Heat Exchangers held every two years at the AIChE Spring Meeting which he initiated and chairs. He is the Executive Editor of Heat Exchanger Design Handbook and the co-editor of the first monograph dedicated to Crude Oil Fouling. He has published over 80 scientific contributions including journal articles and peer-reviewed conference proceeding and holds two patents. Francesco holds a Laurea degree in Chemical Engineering from Padova University, Italy; an MSc in Process Systems Engineering and a PhD in Chemical Engineering from Imperial College London, UK.

ICMFHT 2025 KEYNOTE SPEAKER

Topic of Keynote: High-Temperature Chemical Heat Pump Systems with Alloy Selections, Characterisations, Simulation and Experiment Development

Dr. Yunting Ge, London South Bank University UK

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Prof. Yunting Ge is currently a Professor of Building Services Engineering at the School of The Built Environment and Architecture and London South Bank University (LSBU) in the UK. He is also the Director of the Centre for Civil and Building Services Engineering (CCiBSE) in the school. He gained his BSc, MSc, and PhD degrees from Xi'an Jiaotong University (BSc, MSc) and Tsinghua University (PhD) in the field of Thermofluids, Energy, Hydrogen, and Built Environment. Prof. Ge has accumulated over 25 years of research and development experience in Built Environments, Energy Conversation Technology, Hydrogen, and Thermofluids. He has unique skills in modelling development for buildings, different energy systems, and components. He has also developed a CO2 transcritical compressor model which has been used by a famous commercial software 'Energy Plus'.

Many of his heat exchanger design software has been utilised by companies across the UK. In addition, He has developed a supermarket energy control system model which has been widely recognised. He is currently leading some research projects funded by EPSRC & Innovate UK. As a principal investigator (PI), he has obtained more than £5.16m of research funding to support his various projects. So far, He has supervised more than 12 Ph.D. students and several post-doctoral research fellows. Furthermore, he has published over 150 peer-reviewed scientific journals and conference papers. Externally, he is the President of IIR Commission E1 (International Institute of Refrigeration). In addition, he is currently the associated editor of the Journal of Energy Report. Furthermore, he has been also a committee member of several international conferences

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Two-Phase Flow Void Fraction, Pressure Drop, and Heat Transfer in Pipes with Different Orientations
Authors: Afshin J. Ghajar

Research Challenges in Combustion and Production of Sustainable Fuels for 'Green' Energy Futures
Authors: Yannis Hardalupas

Estimation and Analysis of Transport Properties in Mixed-Matrix Membranes for Enhanced Gas Separation: An Integrated Experimental and Computational Study
Authors: Jules Thibault

Simulations and Modeling of Multiphase Flows
Authors: Gretar Tryggvason

Multiphase Reaction Flow and Heat Transfer Of Coal Gasification in Supercritical Water For Hydrogen Production: From Pore To Agglomeration Perspective
Authors: Bofeng Bai

Exploring Applications of Machine Learning For Data Regression in Heat Transfer
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Integrating Solar Chimney, Trombe Wall, and PCM for Enhanced Energy Efficiency: A Climate-Based Comparative Study
Authors: Nima Ghorbani, Amirhossein Khayyaminejad, Amir Fartaj

Thermal Analysis of 150 Ah Lithium-Ion Battery Module and Its Liquid Cooling Plate
Authors: Yigitalp Gokmen, Gamze GEDIZ ILIS

Optimizing Film Cooling Efficiency: A Thorough Investigation of Mist Concentration Effects Using Shaped Holes
Authors: Abhishek Verma, Deepak Kumar, Debi Prasad Mishra

Numerical investigation on the combustion and flow characteristics of ammonia in nozzle
Authors: Nianduo Song, Fei Wang, Xinlin Xia

The Drag Force on An Oscillating Sphere Travelling in Power-law Shear-thinning Fluid
Authors: Xianping ZHANG, Afang Jin

Pressure Effect on Nucleate Boiling and Critical Heat Flux of R1233zd(E) on a Smooth Copper Surface
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Numerical Evaluation of Heat Transfer Enhancement through Film Cooling in Cratered Shaped Inclined Holes
Authors: Abhishek Verma, Deepak Kumar, Debi Prasad Mishra

Combustion Science and Process

Effect of Pilot Fuel-staging Ratio on Swirling Combustor Performance
Authors: Liyao Pang, Xu Cheng, Honghao Xu, Zongfu Li. Xiaotao Yang, Ningbo Zhao

Unsteady Reynolds-Averaged Navier-Stokes Simulation of Axial and Radial Instability in A High Mixing Ratio H_2/O_2 Rocket Engine with A Shear Coaxial Injector
Author: Jiwen Zhang, Sihan Di, Yu Nanjia

Simplified Reaction Mechanism for CFD Simulation of Rocket Re-Entry
Authors: Weiran Li, Sihan Di, Nanjia Yu

Linear Stability Analysis of Laminar Flames with Lewis Number Greater Than Unity and Wide Range of Premixedness
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Advancing Industrial Smokeless Flaring: Experimental Study into a Swirl Air-Assist Burner
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CFD Simulation of Loop Thermosiphon Using the Wall Boiling and Condensation Models
Authors: Quoc-Tuan Le, Byoung Jae Kim

Modelling Single Droplet Growth in Natural Dropwise Condensation on Inclined Flat Surfaces
Authors: Shahriyar Abedinnezhad, Mahyar Ashouri, Callum Chhokar, Majid Bahrami

New Observations on Dropwise Condensation of Moist Air on a Horizontal Superhydrophobic Surface
Authors: Waquar Raza, K Muralidhar

Coupled Bubble Dynamics and Heat Conduction Model for Pool Boiling Heat Transfer Predictions
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Capillary rise in micro-structured porous media
Authors: Milad Ebadi, Majid Bahrami

Liquid-Cooled Microchannel Heat Sink Thermal Analysis Using a Porous-Medium Model
Authors: Carlo Nonino, Stefano Savino

Numerical Analysis of Flow Channel Expansion and Contraction Effects on Polymer Electrolyte Membrane Fuel Cell Performance
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Authors: Linyi Xiang, Xuan Yang, Yuntao Zha, Bisheng Zhang, Xiaobing Luo

Numerical Study of Particle Deposition in Magnetron Sputtering with Electromagnetic Coil
Authors: Qiaoru An, Feng Shi, Haisheng Fang

Simultaneous Derivation of Temperature and Velocity Fields Using Background-Oriented Schlieren
Authors: Zhenggang Ren, Liang Hu, Jing Wang, Rui Su, Yingnan Shen, Xiaodong Ruan

Theoretical Analysis of Transient Conjugate Convective Heat Transfer Induced by Interfacial Heat Sources in Channels
Authors: Jianqiang Liu, Xiaodong Ruan, Jing Wang, Rui Su, Yingnan Shen, Liang Hu

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Numerical modelling of falling film evaporation on a horizontal tube
Authors: Yasaman Tohidi, Scott Ormiston

Experimental and Numerical Analysis of Bubbly Flow in a 4x4 Rod Bundle under Oscillating Conditions
Authors: Tan Hung Hoang, Myungho Kim, Byoung Jea Kim

Single-Field Numerical Modeling of Gas-Liquid Mass Transfer
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The Study on the Temperature Growth in Compartment for Development of Fire Model
Authors: Oh Sang Kweon, Hyun Kang

Exploring Sustainable Fuel Alternatives: Enhancing HCCI Engine Performance
Authors: Kabbir Ali, Mohamed Ibrahim Hassan Ali

A Computational Approach to Optimizing Internal Ballistics of Star Grain Geometries in Neutral Burning Solid Rocket Motor
Authors: Fatima AlShehhi, Ahmed AlHantoobi

Simultaneous Research and Development of Carbon-neutral Heavy-duty Vehicles and Construction Machinery powered by Hydrogen ICEs
Authors: Shojun Rachi, Takuya Yamaura, Akemi Ito, Kaname Naganuma

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Performance evaluation of induction heating coils at various design variables for preheating in the hot stamping process
Authors: Sujin Lee, Sewon Lee, Yongchan Kim

Investigation on the Effect of Inverted Flags on Heat and Mass Transfer Enhancement of Heat Exchangers
Authors: Sahand Najafpour, Majid Bahrami

Experimental Study on Heat Transfer Enhancement in Accelerated Fluid Flow through High Permeability Porous Media
Authors: Sandeep Kumar, Arunn Narasimhan

Experimental Determination of Thermophysical Properties in Supercritical Heat Exchangers
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Authors: Sohom Goswami, Pranav Joshi, K. Muralidhar

Natural Heat Convection in an L-Shaped Cavity with Flexible Wall: Effect of the Position of the Flexible Wall
Authors: Bader Alshuraiaan

Two-Phase Flow Patterns Of R1233zd(E) At High Saturation Temperatures Flowing Inside Horizontal Channel
Authors: Stanisław Głuch, Dariusz Mikielewicz

Application of the CALPHAD method to the analysis of the influence of chemical composition and operating conditions on the stability of modern materials used in the power industry
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