



PROCEEDINGS OF THE 11th WORLD CONGRESS ON MECHANICAL, CHEMICAL, AND MATERIAL ENGINEERING (MCM 2025)

August 19, 2026 - August 21, 2026 | Paris, France

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TABLE OF CONTENTS

Welcome Message from the Conference Chair.....	3
About MCM 2025.....	4
Scientific Committee.....	5
Speakers.....	8
List of Papers	20
Sponsors	56
Journal Publication.....	57
MCM 2026.....	58
Ethics & Malpractice	59
Contact Us	64

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 11th World Congress on Mechanical, Chemical, and Material Engineering (MCM 2025).

MCM is aimed to become one of the leading international annual congresses in the fields of mechanical, chemical, and material engineering. 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.

While each conference consists of an individual and separate theme, the 4 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.

In the **eleventh meeting** of this conference, five Plenary Speakers and five Keynote Speakers will share their expertise with the aim of exposing participants to a wide spectrum of applications, fostering the cross-pollination of ideas, and developing new research interests. In addition, approximately **206 papers** will be presented by professors, students, and researchers from around the world.

We thank you for your participation and contribution to the **11th World Congress on Mechanical, Chemical, and Material Engineering (MCM 2025)**. We wish you a very successful and enjoyable experience.

Dr. Huihe Qiu

Congress Chair and Proceedings Editor
MCM 2025

Dr. Yuwen Zhang

Congress Co-Chair
MCM 2025

Dr. Marcello Iasiello

Congress Co-Chair
MCM 2025

[Return to Top](#)

ABOUT MCM 2025

MCM is aimed to become one of the leading international annual congresses in the fields of mechanical, chemical, and material engineering.

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 4 conferences included in the MCM Congress:

HTFF 2025 - 12th International Conference on Heat Transfer and Fluid Flow

ICMIE 2025 - 14th International Conference on Mechanics and Industrial Engineering

MMME 2025 - 12th International Conference on Mining, Material and Metallurgical Engineering

ICCPE 2025 - 11th International Conference on Chemical and Polymer Engineering

While each conference consists of an individual and separate theme, the 4 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.

MCM is an acronym for **M**echanical, **C**hemical and **M**aterial Engineering.

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 [Scopus](#) and [Google Scholar](#)

The proceedings is permanently archived in [Portico](#) (one of the largest community-supported digital archives in the world)

[Google Scholar](#)

[Scopus](#)

[Crossref](#)

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[Return to Top](#)

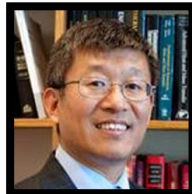
SCIENTIFIC COMMITTEE

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



Dr. Huihe Qiu

The Hong Kong University of Science
& Technology, Hong Kong
Congress Chair



Dr. Yuwen Zhang

University of Missouri, USA
Congress Co-Chair



Dr. Marcello Iasiello

Università degli Studi di Napoli
Federico II, Italy
Congress Local Chair

Scientific Committee Members for HTFF 2025

- **Dr. Chamil Abeykoon**, The University of Manchester, UK
- **Dr. Jalel Azaiez**, The University of Calgary, Canada
- **Dr. Sid Becker**, University of Canterbury, New Zealand
- **Dr. Wilson Chiu**, University of Connecticut, USA
- **Dr. Yulong Ding**, University of Birmingham, UK
- **Dr. Mohamed Hamed**, McMaster University, Canada
- **Dr. Hui Hu**, Iowa State University, USA
- **Dr. Tassos G. Karayiannis**, Brunel University London, UK
- **Dr. Fotini Labropulu**, University of Regina, Canada
- **Dr. Sylvie Lorente**, Villanova University, USA
- **Dr. Gerardo Maria Mauro**, Università degli Studi di Napoli Federico II, Italy
- **Dr. Krishnaswamy Nandakumar**, Louisiana State University, Baton Rouge, USA
- **Dr. Yulia Plaksina**, Moscow State University, Russia
- **Dr. Karthik Remella**, Ansys, USA
- **Dr. Ziad Saghir**, Toronto Metropolitan University, Canada
- **Dr. Ahmet Selamet**, Ohio State University, USA
- **Dr. Dongsheng Wen**, University of Leeds, UK

SCIENTIFIC COMMITTEE

Scientific Committee Members for ICMIE 2025

- **Dr. Alvaro Aguinaga**, Escuela Politécnica Nacional, Ecuador
- **Dr. Carlos Avila**, California Institute of Technology, USA
- **Dr. Luca Greco**, CNR-INM Institute of Marine Engineering, Italy
- **Dr. Aslan Deniz Karaoğlu**, Balikesir University, Turkey
- **Dr. Monica Sharma**, Malaviya National Institute of Technology, India
- **Dr. Biswajit Sarkar**, Yonsei University, Korea
- **Dr. Marton Takacs**, Budapest University of Technology and Economics, Hungary
- **Dr. Joao Carlos de Oliveira Matias**, University of Aveiro, Portugal

Scientific Committee Members for MMME 2025

- **Dr. Zdzislaw Adamczyk**, Silesian University of Technology, Poland
- **Dr. Pura Alfonso**, Escola Politècnica Superior d'Enginyeria de Manresa (EPSEM), Spain
- **Dr. Corby Anderson**, Colorado School of Mines, USA
- **Dr. Marc Bascompta**, Universitat Politècnica de Catalunya, Spain
- **Dr. Tung-Han Chuang**, National Taiwan University, Taiwan
- **Dr. Mohammad 'Behdad' Jamshidi**, University of Technology Sydney, Australia
- **Dr. Shaidah Jusoh**, Xiamen University Malaysia, Malaysia
- **Dr. Zi-Kui Liu**, The Pennsylvania State University, USA
- **Dr. Willie Nheta**, University of Johannesburg, South Africa
- **Dr. Katarzyna Nowińska**, Silesian University of Technology, Poland
- **Dr. Andre Carlos Silva**, Universidade Federal de Catalão, Brazil

SCIENTIFIC COMMITTEE

Scientific Committee Members for ICCPE 2025

- **Dr. Farhang Abbasi**, Sahand University of Technology, Iran
- **Dr. Madhu Bhaskaran**, RMIT University, Australia
- **Dr. Joao Bordado**, University of Lisbon, Portugal
- **Dr. Xiwen Gong**, University of Michigan, USA
- **Dr. Farhad Ein-Mozaffari**, Toronto Metropolitan University, Canada
- **Dr. Amir H Mohammadi**, University of Kwazulu-Natal, South Africa
- **Dr. Masami Okamoto**, Toyota Technological Institute, Japan
- **Dr. Marleny D. Aranda Saldana**, University of Alberta, Canada
- **Dr. Boxin Zhao**, University of Waterloo, Canada

MCM 2025 Plenary & Keynote SPEAKERS

The plenary speakers' information for the 11th World Congress on Mechanical, Chemical, and Material Engineering (MCM 2025) is as follows:

PLENARY SPEAKERS



Dr. Yang Jiao
Arizona State University, USA
MMME 2025 Plenary Speaker



Dr. Ali Kosar
Sabanci University, Turkey
HTFF 2025 Plenary Speaker



Dr. Virgílio Cruz Machado
Universidade NOVA de Lisboa, Portugal
ICMIE 2025 Plenary Speaker



Dr. Raman Singh
Monash University, Australia
ICCPE 2025 Plenary Speaker



Dr. Dongsheng Wen
Technical University of Munich, Germany
HTFF 2025 Plenary Speaker

MCM 2025 Plenary & Keynote SPEAKERS

The Keynote speakers information for the 11th World Congress on Mechanical, Chemical, and Material Engineering (MCM 2025) is as follows:

Keynote Speakers



Dr. Denis Cormier
Rochester Institute of
Technology, USA
ICMIE 2025 Keynote Speaker



Dr. Farhad Ein-Mozaffarif
Toronto Metropolitan University, Canada
ICCPE 2025 Keynote Speaker



Dr. Sasa Kenjeres
Delft University of Technology, Netherlands
HTFF 2025 Keynote Speaker



Dr. Li Li
Polytechnique Montreal, Canada
MMME 2025 Keynote Speaker



Dr. Adriano Sciacovelli
The Technical University of Denmark (DTU),
Denmark
HTFF 2025 Keynote Speaker

PLENARY SPEAKER



Titles: Disordered Hyperuniform Materials

Dr. Yang Jiao

Affiliation: Arizona State University, USA

[Return to Top](#)

Dr. Yang Jiao is a Professor and Program Chair of Materials Science and Engineering and an affiliated Professor of Physics at Arizona State University. He obtained his B.S. from Peking University and Ph.D. from Princeton University. His research focuses on understanding the fundamental physics of “disorder” in complex material systems, using analytical and computational techniques in statistical mechanics, condensed matter physics, statistical field theory, and discrete geometry. He has published over 140 papers and received numerous awards including the Martin Summerfield Fellowship, Ray Grimm Prize, DARPA Young Faculty Award, and ACS New Investigator Award.

PLENARY SPEAKER



Titles: Manipulation of Phase Change Phenomena with Mixed Wettability and External Fields

Dr. Ali Kosar

Affiliation: Sabanci University, Turkey

[Return to Top](#)

Dr. Ali Kosar is a Distinguished Research Professor at Sabanci University. He earned his master's and doctoral degrees in Mechanical Engineering from Rensselaer Polytechnic Institute. His research focuses on phase change phenomena on functional surfaces, micro heat sinks, and microfluidic devices. He has authored over 200 research articles and 100 conference papers, and co-invented more than 10 patents. He is the Co-director of the Center of Excellence for Functional Surfaces and Interfaces for Nano diagnostics (EFSUN), a Subject Editor in Applied Thermal Engineering, and a Member of the Turkish Academy of Sciences (TÜBA).

PLENARY SPEAKER



Titles: Global Challenges in Mechanical and Industrial Engineering

Dr. Virgílio Cruz Machado

Affiliation: Universidade NOVA de Lisboa, Portugal

[Return to Top](#)

Dr. Virgílio Machado holds a Ph.D. in Computer Integrated Manufacturing from Cranfield University, UK. He is a full professor in Mechanical and Industrial Engineering at Universidade NOVA de Lisboa. He teaches operations and production management and has launched programs in Industrial Engineering, Project Management, Lean & Green Sustainability, and Entrepreneurship. He is the president of the Portuguese Institute of Industrial Engineers.

PLENARY SPEAKER



Titles: Graphene Coatings: A Disruptive Approach to Mitigate Corrosion of Metals and Alloys

Dr. Raman Singh

Affiliation: Monash University, Australia

[Return to Top](#)

Professor Raman Singh's primary research interests are in the relationship of Nano/microstructure and Environment-assisted degradation and fracture of metallic and composite materials, and Nanotechnology for Advanced Mitigation of such Degradations. He has worked extensively on advanced materials (e.g., graphene) for corrosion mitigation, stress corrosion cracking, and corrosion-mitigation. He is a senior professor at Monash University, Australia. He is/was a Guest Professor at ETH Zurich, Switzerland (2020, 2023, 2024), US Naval Research Lab, Indian Institute of Science, and University of Connecticut. Prof Singh's professional distinctions and recognitions include: Guest Professor of ETH Zurich, Editor of a book on Cracking of Welds (CRC Press), Lead Editor of a book on Non-destructive Evaluation of Corrosion (Wiley), Editor-in-Chief of an Elsevier and two MDPI journals, leader/chairperson of a few international conferences and numerous plenary/keynote lectures at international conferences, over 295 peer-reviewed international journal publications and 15 book chapter, and several competitive research grants. He has supervised 60 PhD students.

PLENARY SPEAKER



Titles: Supercritical flow and heat transfer of hydrocarbon fuels

Dr. Dongsheng Wen

Affiliation: Monash University, Australia

[Return to Top](#)

Prof. Wen is the Chair professor and Head of the Institute of Thermodynamics, Technical University of Munich. Prior to his current position, he was the Chair Professor at the University of Leeds and Beihang University, and had he worked in various academic positions at the Queen Mary University of London. His research is focused on heat: namely, how heat is produced, transported, stored and utilized across different scales via nanomaterials / nano-surfaces with targeted applications in energy and aerospace engineering. He has taken a multiscale approach, both experimentally and numerically from nanoscale to bulk scale, to investigate fundamentals of flow, heat transfer and reactions across scales, and apply these fundamentals cross-disciplinarily into different sectors. Funded by UK, EU, China, German research councils and many industry partners, including two prestigious European Research Council (ERC) grants (Advanced and Consolidator), his research has produced over 20 patents, 400 referred journal publications, with total citation of >25000 and current H-index = 73. He is Member of the Academia of Europaea (MAE), and elected Fellow of the Royal Society of Chemistry (FRSC), the Energy Institute (FEI) and the Institute of Nanotechnology (FloN). He is an Editor-in-Chief of Advance in Aerodynamics, and an Associate Editors of Applied Thermal Engineering.

Keynote SPEAKER



Titles: Metal Additive Manufacturing via Molten Metal Droplet Jetting

Dr. Denis Cormier

Affiliation: Rochester Institute of Technology, USA

[Return to Top](#)

Denis Cormier is the Earl W. Brinkman Professor of Industrial and Systems Engineering at Rochester Institute of Technology. He is a Fellow of IISE, and he was the 2024 recipient of the International FAME award for career achievement in the field of additive manufacturing (AM). He has nearly 30 years of AM experience and is best known as one of the first researchers to design and fabricate engineered lattice structures. He is also well known for his pioneering contributions to the electron beam melting (EBM) and Molten Metal Jetting (MMJ) AM processes.

Keynote SPEAKER



Titles: Design and Characterization of Aerated Reactors Equipped with Coaxial Impellers

Dr. Farhad Ein-Mozaffarif

Affiliation: Toronto Metropolitan University, Canada

[Return to Top](#)

Dr. Farhad Ein-Mozaffarif received his Ph.D. in chemical engineering from the University of British Columbia. Currently, he is a professor in the Department of Chemical Engineering at Toronto Metropolitan University. Dr. Ein-Mozaffarif is a registered professional engineer in Ontario, Canada. His research interests are mixing, computational fluid dynamics (CFD), flow visualization (e.g., tomography and ultrasonic velocimetry), multiphase flow, non-Newtonian fluid flow, hydrodynamics of bioreactors, Scale-up of chemical processes, discrete element modeling (DEM), CFD-DEM coupling, and powder blending. He has published more than 380 refereed journal papers, book chapters, conference papers, and industry-university technical reports. Dr. Ein-Mozaffarif has supervised/co-supervised more than 59 PhD and MSc students, PDF, and research associates. He has been awarded various reputable research grants such as NSERC DG, NSERC RTI, NSERC CRD, NSERC Alliance, New Frontiers in Research Fund – Exploration, NSERC ENGAGE, CFI, Mitacs, Connect Canada, and OCE. Dr. Ein-Mozaffarif has collaborated with numerous companies such as Xerox Research Centre of Canada, Apotex, Sanofi Pasteur, Cosmetics Laboratories Inc., Baffinland Iron Mines, CSRplus, Hayward Gordon, Husky Injection Molding Systems Ltd., and Imasco Minerals Incorporation. He is the editor and a member of the editorial board of several journals. Dr. Ein-Mozaffarif is the recipient of several awards including Dean's Research Award, Dean's Service Award, and YSGS Outstanding Contribution to the Graduate Education Award. .

Keynote SPEAKER



Titles: Recent Advances in Multi-Modal Experimental and Computational Investigations of Cardiovascular Flows

Dr. Sasa Kenjeres

Affiliation: Delft University of Technology, Netherlands

[Return to Top](#)

Dr. Saša Kenjereš, Dipl.-Ing. is a Full Professor of Applied Physics and Chemical Engineering at the Delft University of Technology, Delft, The Netherlands. He received his Ph.D. in Applied Physics in 1999 at the Delft University of Technology, The Netherlands. From 2001 to 2005 he was a Research Fellow of the Royal Netherlands Academy of Sciences and Arts (KNAW). From 2005 to 2006 he was a Burgers Visiting Associate Professor at the University of Maryland, College Park, USA, Institute of Physical Science and Technology, Computer and Space Science/Earth Systems Science Interdisciplinary Center. He received ERCOFTAC (European Research Community on Flow, Turbulence, and Combustion) and Leonhard Euler Centre Visitor Fellowships at ETH Zurich, Switzerland (2002, 2003, 2004, 2008, and 2014). He was the Marie-Curie Visiting Professor at the AGH University of Science and Technology, Krakow, Poland (2007-2013).

He is currently (2022-present) also Visiting Professor of the double-degree Energy and Environmental Engineering (E3) MSc program between the Shibura Institute of Technology, Tokyo, Japan, and the AGH University of Science and Technology, Krakow, Poland. His research interests include: (i) multiscale transport phenomena in biomedical applications (numerical methods, computer simulations, and experiments); (ii) advanced fluid dynamics, heat and mass transfer, and turbulence (mathematical modeling, simulations, and experiments); (iii) coupling fluid mechanics and electromagnetism (magnetohydrodynamics, MHD); (iv) environmental flows, turbulent dispersion in complex urban areas, atmospheric chemistry and crowd behavior; (v) high-performance supercomputing (HPC);

Keynote SPEAKER



Titles: Some Critical Issues in Underground Mining with Backfill

Dr. Li Li

Affiliation: Polytechnique Montreal, Canada

[Return to Top](#)

Dr. Li is a registered engineer in Ordre des ingénieurs du Québec (OIQ). He obtained a bachelor degree and a Master's degree both in mining engineering in China, and a doctorate degree in France. He was a professor at École de technologie supérieure between 2010 and 2012. Since 2012, Dr. Li is a professor of mining engineering at Polytechnique Montreal. He was the Head of Mining Program at Polytechnique Montreal from June 2020 to June 2023. Starting from May 2023, he serves the Research Institute on Mines and Environment (RIME) at Polytechnique as Scientific Director (<https://irme.ca/en/rime/>).

Dr. Li has more than twenty-year experience in geotechnical engineering. His projects of research vary from underground mining with backfills to surface co-disposal of tailings and waste rocks. He is particularly active in research and development on stress and pressure estimation in backfilled stopes and on backfill barricades, sizing barricades made of waste rocks, and assessing the required strength of cemented backfill with exposed faces. Specialized in numerical modeling, he realized that a large portion of people doing numerical modeling does not believe in their own numerical results, a phenomenon particular in geotechnical engineering (<https://www.mdpi.com/books/reprint/6156-numerical-modeling-in-civil-and-mining-geotechnical-engineering>).

Keynote SPEAKER



Titles: From Thermal Phenomena to Scalable Devices: The Thermo-Mechanical Foundations of Long-Duration Energy Storage for Flexible Heat

Dr. Adriano Sciacovelli

Affiliation: The Technical University of Denmark (DTU), Denmark

[Return to Top](#)

Professor Adriano Sciacovelli is international leader in Thermal Energy Engineering, with a focus on Sustainable Thermal Energy Processes, Systems & Storage (STEPS); He is Full Professor in Thermo-mechanical energy storage systems at the DTU – The Technical University of Denmark (DK). He previously held Associate Professorial role at the University of Birmingham (UK) and Research Fellow at the Politecnico di Torino (ITA). Underpinned by expertise in Mechanical, Chemical, and Energy Engineering, his research aims to advance thermo-mechanical engineering science to develop innovative STEPS solutions, technologies and methods for decarbonizing thermal energy (heat & cold). A distinctive aspect of his work is the ability to conduct combined computational and experimental research across various scales of STEPS (materials, components, systems). Outputs of Professor Sciacovelli activities encompass fundamental understanding and advancement in STEPS solutions, such as Carnot Batteries (CB), Liquid Air Energy Storage (LAES), and Phase-Change and Thermo-Chemical Energy Storage (PCM, TCM), through fundamental thermal engineering research and technology development. With over 30 research grants for a combined investment of £25m (~€31m) from the EU, EPSRC, the Royal Society, and industrial partners, his research has involved more than 50 national and international collaborations, the pre-commercialization of three STEPS technologies, and resulted in over 140 publications, 30+ invited talks, and international awards. He holds scientific and advisory roles in 10+ institutions/associations, such ASME, ECOS and IEA.

LIST OF PAPERS

The following papers were presented at the 11th World Congress on Mechanical, Chemical, and Material Engineering (MCM 2025)

Plenary & Keynote Speakers Session

From Thermal Phenomena to Scalable Devices: The Thermo-Mechanical Foundations of Long-Duration Energy Storage for Flexible Heat

Authors : Dr. Adriano Sciacovelli

Metal Additive Manufacturing via Molten Metal Droplet Jetting

Authors : Denis Cormier

Design and Characterization of Aerated Reactors Equipped with Coaxial Impellers

Authors: Farhad Ein-Mozaffari

Graphene Coatings: A Disruptive Approach to Mitigate Corrosion of Metals and Alloys

Authors : Raman Singh

Disordered Hyperuniform Materials

Authors : Yang Jiao

Some Critical Issues in Underground Mining with Backfill

Authors : Li Li

LIST OF PAPERS

Industrial Engineering

Design and Prototyping of a Stephenson Type III Mechanism for Repetitive Tasks with Symmetrical End-Effector Motion

Authors : Amani AlKhalaf, Fatemah Khalifah, Hawraa Ibrahim, Hebah Alazemi, Rawnaq Alfadhli, Ahmed Saber and Eddie Gazo-Hanna

Design and Evaluation of a Single-Stage Planetary Gearbox for Lightweight Electric Vehicles

Authors : Ahmad Amine, Ali BeytMeshal, Ali AlSarraf, Fahed Ramadan, Mohammad Abu Ejel, Ahmed Saber, and Semaan Amine

Comparative Analysis of Technological Measurement Tools Used In the Creation of Anthropometric Tables in Honduras

Authors : Ligia Cecilia Rodríguez Hernández, Dennis Isnan Arias Hernandez, Paola Michelle Pascua Cantero, Leonel Molina Guardiola, René Antonio León Quant

Water Quality Analysis in a Micro-Watershed for the Community of Loma Alta Norte

Authors: Andrea Nicolle Amador Mendoza, Jean Emerson Castro Nuñez, Nereyda Lainez, Paola Pascua, Victor Manuel Pineda Alvarado

Logistical Optimization and Efficiency in Firefighter Response to Wildfires in Honduras

Authors : Emili Rachell Alvarez Reyes, Sergio Alejandro Ponce Saucedo, Paola Pascua3 Mendel Nelson

Measurement of Anthropometric Parameters for the Honduran Population Database Using Photogrammetry

Authors : Eliana Lineth Moncada Echeverria, Emily Suzeth Moncada Echeverria, Paola Pascua, Mendel Iván Nelson Padilla, Efraín Antonio Paz Calderon

LIST OF PAPERS

Industrial Engineering

Application of Convolutional Neural Networks (CNNs) for Work Ergonomics Analysis

Authors : Jefferson Murillo, Luis Montesinos, María Elena Perdomo

Production Management Model to Reduce the Percentage of Defectives by Applying Lean Manufacturing Tools in a Textile Sector: A case study

Authors : Camila Xiomara Meza-Cuenca, Giancarlo Rodrigo Vargas-Jimenez, Jorge Antonio Corzo-Chavez

Implementation of Lean Manufacturing to increase aircraft availability

Authors :William Orbegoso-Alaluna, Luis Cevallos-Bonifacio, dilberto Avalos-Ortecho

IMPLEMENTATION OF TPM AND RCM TO INCREASE SERVICE LEVEL IN A MAINTENANCE SECTOR COMPANY

Authors :Juan Carlos Vasquez, Joaquín Gamarra, Miguel Avalos

OSH Guardian: An Occupational Health Recommendation System Architecture Based on Worker's Health History and Individual Environmental Monitoring

Authors : Janaína Lemos, Vanessa Borba de Souza, Tânia M. Lima, Pedro D. Gaspar

Implementation Of Machine Learning and BPM To Increase Profitability in A Travel Agency

Authors : Guillermo Bernardo Huapaya Villegas, Aiko Maria Makino Aguilar, Edilberto Avalos-Ortecho

LIST OF PAPERS

Industrial Engineering

Improvement Plan for the Prevention of Musculoskeletal Disorders to Minimize the Rate of Medical Leave in the Overhaul Operations Workshop

Authors : Dick Calzada-Lloclla, Carolina Vilcas-Mitma, Marco Herrera-Portal, José Antonio Velásquez Costa

Lean Green and Smart Manufacturing: Ecosystem Strategies for Sustainable Innovation

Authors : Necolle Mozo-Narciso, Tayra Espinoza-Martinez, Baldomero Mendez-Pallares, Edgar Ramos-Palomino, Jose Velasquez-Costa

Operational Model to Improve On-Time Delivery: A Peruvian Case Study in Metalworking SMEs Integrating Lean Tools and TPM

Authors : Camila Ybonny Suejiro-Mariño, Alex Brian Tirado-Alzamora, Juan Carlos Quiroz

Optimizing OEE in a Peruvian Fishmeal Factory Through TQM, TPM, and Standard Work: A Case Study

Authors : Maricarmen Puchoc-Galarza, Valery Uribe-Manrique, Juan Carlos Quiroz-Flores

Empirical Study on Enhancing OTIF in Peruvian Footwear Retail: A Lean Model Integrating 5S, Standard Work, and Inventory Management

Authors: Diego Yvan Calderon-Saavedra, Terry Ann Morales-Davila, Juan Carlos Quiroz

LIST OF PAPERS

Industrial Engineering

Integrated Model for Order Fulfillment: Standard Work with GenAI, SLP, WMS, and Augmented Reality in Distribution Operations

Authors : Mylena Hipolito-Osorio, Allison Siles-Olivera, Baldomero Mendez-Pallares, José Velásquez-Costa

Improving Machine Availability Through Sensor-Based Virtual Modeling in SIMIO: A Case Study of Smart Manufacturing Simulation

Authors: Mishel Lozano-Cruz, Jennifer Tomaila-Ulloa, Shantall Cisneros Saldana, Heike Markus, Jose Velasquez-Costa

Coffee Quality Analysis for the Development of Small Producers in Guajiquire, La Paz, Honduras.

Authors : Andrea Gabriela Euseda Valle, Leonel Molina Guardiola, Ismael Abarca

Anthropometric Table Consolidation for the Honduran Population Database

Authors : André Fabian Carrasco Rivera, Juan Diego Fiallos Ruiz, Paola Michelle Pascua Cantarero

Effect of Electrochemical Machining Time on Burr Removal Efficiency under Constant Electrolyte and Electrical Conditions

Authors : Gülçin Deniz

Boundary Value Problems of Coupled Thermoelastodynamics on a Star Graph

Authors : Lyudmila Alexeyeva, Assiyat Dadayeva

Study on Impact and Wear Properties of ZGMn13 High manganese steel Materials under Dry, Water and Sand Conditions

Authors : Lei Ma, Xiangpeng Pu

LIST OF PAPERS

Industrial Engineering

Study On the Influence of Brake Speed on Friction and Wear Properties of High-Speed Iron Brake Materials under High Humidity Condition

Authors : Lei Ma, Meixian Zhang

Investigating the Impact of Thermal Oxidative Aging on the Frictional Properties of Ultra-High Molecular Weight Polyethylene and the Modulating Effects of Lubricating Media

Authors : Xuyang Nie, Wen Zhong, Yongqing Tang, Xuan Liu, Siqiang Chen

The Influence of Biomimetic Textures in Synergy with Nanoparticles on the Anti-Friction and Wear Resistance Properties of Titanium Alloys

Authors : Xinhao Yang, Wen Zhong, Chao Xiang

Ergonomic Strategies for an Ageing Workforce: Towards a Human-Centric Industry 5.0

Authors : Joel Alves, Tânia M. Lima, Pedro D. Gaspar

State of Health Prediction for Lithium-Ion Batteries Using Partial Charging-Transformer-Based Deep Learning Models

Authors : Abdul Azis Abdillah, Hongyu Sun, Hongming Xu, Quan Zhou

Rheological Calibration and CFD Simulation of Grease Behaviour Using the Herschel-Bulkley Model

Authors : Michele Benetti, Lorenzo Maccioni, Kay Juckelandt, Michael Plogmann, Franco Concli

LIST OF PAPERS

CFD

Effect of Micromagnetorotation on an MHD Blood Flow through an Idealised Stenosis

Authors : Kyriaki-Evangelia Aslani, Ioannis E. Sarris, Efstratios Tzirtzilakis

Thermal Modelling of Alkaline Water Electrolyzer for Green Hydrogen Production

Authors : Prasanna Jade, Sarit K. Das

Numerical Study of the Effect of Smoke Barrier Length Relative to Ceiling Height on Smoke Movement and Fire Behaviour in Battery Electric Vehicle Fires

Authors : Truong Minh Quan, Ha Thien Khieu, Dong Woo Kim, Young Man Lee, Hong Sun Ryou, Hyoungsoon Lee

Isomorphic Modelling-Based Simulation Method for Overall Performance of Water Enhanced Turbofan and Its Applications

Authors : Dong-Yi Wu, Yu-Sen Xu, Ke-Lun He, Rong-Hong Xu, Nan Meng, Meng-Di Yuan, Qun Chen

Numerical Investigation of the Cooling of a Horizontal Plate by Mixed Convection Flow

Authors : Lukáš Bábor, Endre Bozsó

Preliminary CFD Study of a Gyroid-Based Recuperator for Sco2 Power Cycles

Authors : Alexandre Guille, Sebastian Unger, Uwe Hampel

Investigation of Airflow in Human Nasal Cavity and Virtual Septoplasty Using CFD

Authors : Cem Turutoglu, Sertac Cadirci

Improving Separation Efficiency through Optimization of Weir Curvature in FWKO

Authors : Hyunsu Jeong, Hwan-Gyo Kim, Dong-Hyun Kim, Ho-jin Choi, Youn-Jea Kim

LIST OF PAPERS

CFD

OH* Chemiluminescence, Flame Structure and CFD Analysis of A Partially-Premixed Acetylene/Air Flame

Authors : Christian Herwerth, Hannah Kaiser, Herbert Pfeifer

Flow Control Using Interference of Two Pulsating Jets with Phase Difference

Authors : Ryota Kobayashi, Koichi Nishibe, Kotaro Sato

Review of DEM Models to Simulate Granular Beds in Rotary Kilns

Authors : Edgar Rimarachin, Eduardo Rojas

Thermoelectric Conversion Performance of Porous Si Thin Film — Phonon Transport Simulation

Authors : Moeka Sato, Mitsuhiro Matsumoto, Yoshiya Takahara, Nobuhiko Kajinami, Manabu Iwakawa, Misaki Hanaoka, and Yasutoshi Yashiki

Hydrodynamic Induced by the Interaction between Water Waves and Two Blocks of Wavy Surfaces: Characterization of the Reflected Energy

Authors : E. Bautista

Design and Numerical Analysis a SAR '(Y-T) α ' Micromixer

Authors : Md Readul Mahmud, Asma Begum, Farhad Alam

Taylor Dispersion in a Pulsatile Flow of a Maxwell Fluid through an Eccentric Annular Tube

Authors : Alfredo Covarrubias, Oscar Bautista, José Arcos

Review-Paper: Sugar Alcohol Based Phase Change Materials: Progress and Challenges in Medium to High Temperature Heat Storage

Authors : Lamyaa Hammou, Maximilian Harder, Felix Kugler

LIST OF PAPERS

CFD

Numerical Analysis of Hydrogen-Fueled Micro Cylindrical Combustor with Parallel Partitions for Thermophotovoltaic Applications

Authors : Faisal Almutairi

Flow Regime Characterisation of Wall Jet Controlled by Suction Flow on Coanda Surface

Authors : Kaito Yabu, Yutaro Kato, Koichi Nishibe, Kotaro Sato

Microjet Formation of a Two-Dimensional Bubble near A Slitted Rigid Wall

Authors : Kan Zeniya, Ryuichi Inoue, Daiki Iwaya, Akihito Kiyama, Donghyuk Kang and Kotaro Sato

Behavior of Two-dimensional Jets Passing Over Flat Plate Row

Authors : Kota Ishiwata, Takahiro Iwasaki, Kotaro Sato

A Study on Flow and Heat Transfer Characteristics in Printed Circuit Heat Exchangers with Zigzag Channels through PIV and CFD Analysis

Authors : Yoomyeong Lee, Seongmin Lee, Hong Beom Park, Kyoungwoo Seo, Donghwi Lee

Finite Element Simulations of Thermal Annular Stick-Slip and Die-Swell and Pressure-Tooling Problems for Non-Newtonian Fluid with Feedback Treatment

Authors : Nawalax Thongjub

Assessment of Blends of CO₂ with Hydrocarbons as a Zeotropic Refrigerant for HTHPs

Authors : Kalkidan Mekonnen Meshesha, David Newport, Gómez-Hernández, J., Alan Odonovan, Ronan Grimes

LIST OF PAPERS

CFD

Parametric Analysis of Heat Transfer in Cooled Rotating Detonation Engine Composite Walls Utilizing CFD and Lumped-Parameter Model

Authors : Adam Sienkiewicz, Piotr Fil

Thermographic Mapping and Wettability Alteration of Mini-Channel Heat Sinks: Impact on Fluid Flow and Heat Transfer

Authors : Shashi Rastogi, Chirodeep Bakli

Numerical Approach to Correct the Flow Patterns in an Electrostatic Precipitator via fitting Perfect Perforated Plate Configuration

Authors : Masoud Darbandi, Armin Mohiaddini, Pooya Javadpour, Gerry Schneider

Reaction-embedded CFD Simulation on of Autoclave High-pressure Polyethylene and EVA

Authors : Jianhua Chen, Yunpeng Jiao, Kaijie Wen

LIST OF PAPERS

Mineral and Metallurgical Processing And Safety

Advanced Strategies for Ventilation Design and Controlling Particulate Matter in Underground Polymetallic Mines

Authors : Abdullah Rasheed Qureshi, Sergei Sabanov

Risk Management for Sustainable Mining in Kazakhstan

Authors : Sergei Sabanov, Ruslana Korshunova

Oil Shale Geological Resources in Central Asia

Authors : Sergei Sabanov, Merey Jumabekova, Madina Gabdulliyeva

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Authors : Susana Torno, Javier Toraño

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Authors : Richel A. Dadzie , Massimiliano Zanin, William Skinner, George B Abaka-Wood

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Authors : Kabelo Ramalepe, Willie Nheta

Leaching of Hydrocarbon-Contaminated Mine Sludge using Concentrated Hydrochloric Acid and Ozone Gas

Authors : Tshiamo Pheko, Willie Nheta

LIST OF PAPERS

Mineral and Metallurgical Processing And Safety

Impact of Gangue Removal on the Flotation on Performance of a Polymetallic Base Metal Sulphide Ore

Authors : Masingita Clinton Mawila, Willie Nheta, Omoyemi Ololade Ola-Omole

Measuring the Dispersion of Delay Times of Non-Electric Surface Connectors and Detonators Using an Arduino-Based Low-Cost Device.

Authors : Eduardo Cámara-Zapata, Marc Bascompta, Lluís Sanmiquel, Nor Sidki-Rius

Selective Flotation of Fine Magnesite Ore: Evaluating Sodium Oleate as Collector and Sodium Silicate as Depressant

Authors : Alfredtina Akua Abrafi Appiah, Mohammadbagher Fathi, Julie Hunt, Owen P. Missen

Utilization of Pyrite-Rich Tailings in Sulfation Roasting for Efficient Recovery of Copper, Nickel, and Cobalt from Smelter Slag

Authors : Labone L. Godirilwe, Bobur Gayratov, Sanghee Jeon, Atsushi Shibayama

Correlation between Crystallographic Texture and Corrosion Behaviour of Directed Energy Deposited Inconel 718

Authors : Ayda Shahriari, Shokat Keshavarzi, Mohsen Mohammadi

LIST OF PAPERS

Numerical Fluid Flow and Heat Transfer

Optimization of Thermophysical Properties of Pyrochlore-type TBCs Based on Molecular Dynamics Simulation

Authors : Zhechuan Zhou, Yichuan He, Mu Li, Dawei Tang

Physics Informed Neural Networks for Temperature Fields of Convective Heat Transfer

Authors : Chilao Ma, QingLong Jin, Yan Su

Thermal Dynamics of Settling Inertial Particles in a Stably Stratified Turbulent Flow

Authors : Hamid Reza Zandi Pour, Michele Iovieno

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Authors : Ilyas Khurshid, Mrunal Kanti Mishra, Federico Renda, Francesco Giorgio-Serchi, Imran Afgan

CFD-Driven Hydrodynamic Optimisation of a Whale Shark-Inspired Underwater Drone for Shallow Reef Observation

Authors : Himasha Ekanayake, Athishka Thushan, Madusanka Perera, Ranjith Amarasinghe, Dumith Jayathilake

Assessment of Influence of Flow Regime on Heat Transfer Capacity of A Shell and Tube Heat Exchanger Using Computational Fluid Dynamics Analysis

Authors : S.A.P Ushettige, W.K. Wimalisiri, H.G.S. Hikkaduwa

LIST OF PAPERS

Mechanical Engineering

3D PRINTING PROPOSAL FOR VEHICLE LICENSE PLATES THROUGH PROCESS SIMULATION IN TEGUCIGALPA, HONDURAS

Authors : Paola Michelle Pascua Cantarero, Gustavo Rosales, Alejandra Sanchez

Rhinoceros-Based Tool for Versatile Lattice Structure Generation

Authors : Rahali Yosra, Gely Benoît

Optimal Baffle Design for Kuwait's Next-Gen Hydrocarbon Truck Tanks to Minimize Internal Wave Formation

Authors : Mohamed Abouelela, Saad Al-Azmi, Abdullah Jawli, Abdullateef Al-Khudhur, Yousef Dash, Ebraheem Al-Sawan

Strain Rate Effect on Dynamic Behavior of Southern Yellow Pine (SYP) Based Wood Bio-composites

Authors : Maharshi Dave, Tejas Pandya, Jason Street, Ananda Nanjundaswamy

Design of an Active Suspension System using PD Controller

Authors : Ahmad Alsultan, Ammar Mohammad, Aryana Ranjbar, Ebrahim Alsaleh, Murat Otkur, Yousef Bosakher

Design and Development of an Eight-Legged Wheeled Wall Pressed In-Pipe Inspection Robot for Complex Pipeline Networks

Authors : Murat Otkur, AbdulAziz Muqames, AbdulAziz Al Abdulghani, Esmael Johar, Saad Al Suwaileh, Mohammed Al Sebee

LIST OF PAPERS

Multiphase Flow & Heat Transfer

Physical Analysis of Thermal–Particulate Interaction in Heat-Assisted Sedimentation Processes within Inclined Cells

Authors : Fernando Apaz, Christian Ihle, Aldo Tamburrino, Yarko Niño

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LIST OF PAPERS

Chemical and Polymer Engineering

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Inhibition Efficiency of Vitamin B1 and Ascorbic Acid for Iron B500 in Acidic Media

Authors : Albana Jano, Valbona Hoxha

LIST OF PAPERS

Experimental Fluid Flow and Heat Transfer

Synthetic Jets Produced by an Asymmetric Slot in a Rectangular Water Tank

Authors : Daiki Iwaya, Shinnosuke Tanaka, Akihito Kiyama, Donghyuk Kang, Kouichi Nishibe, Kotaro Sato

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Authors : Ryuichi Inoue, Kan Zeniya, Daiki Iwaya, Akihito Kiyama, Donghyuk Kang, Kotaro Sato

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Authors : Yang Fu, Chi Yan Tso

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Authors : S. Sahamifar 1, D. Naylor, J. Friedman

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LIST OF PAPERS

Experimental Fluid Flow and Heat Transfer

Development of Lab Scale Solar Reactor for Thermochemical Processes

Authors : M. Kambayashi, A. Z. Rizal, T. Kodama and S. Bellan

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Authors : Kodai Munakata, Mayuko Katano, Koichi Nishibe, Kotaro Sato

Characteristics of oscillations induced at downstream of a circular cylinder with tangential blowing for jet vectoring

Authors : Yuya Higashi, Raichi Naito, Kouichi Nishibe, Donghyuk Kang, Kotaro Sato

Comparison of Continuous Jet and Synthetic Jet in a Rectangular tank

Authors : Shinnosuke Tanaka, Daiki Iwaya, Akihito Kiyama, Donghyuk Kang, Kouichi Nishibe3 Kotaro Sato

Experimental Characterization of Heat Transfer in a Partially Heated Rectangular Duct

Authors : Md Arman Arefin, Islam Ramadan, Hélène Bailliet

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Authors : Haifa El-Sadi and Sammy Riadi

LIST OF PAPERS

Experimental Fluid Flow and Heat Transfer

Hydrokinetic Turbine Blade Design for Enhanced Efficiency in Variable Flow Conditions

Authors : Haifa El-Sadi, Cameron Roderick, Brendan Reilly and Agyekum Edmund

Cross-Stream Measurements in a Small Aspect-Ratio Rectangular Jet

Authors : Mohammad Azad

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Authors : Mohammad Imanzadeh , Seyedreza Tebyani, Mohammadamin Maleki, Salar Heyat Davoudian, Metin Mert Ilgun, Hatice Eker, Pelin Yilmaz Cetiner, Ehsan Tuzcuoglu, Morteza Ghorbani, and Ali Koşar

Impact of Curved Riblet Tips on Turbulent Drag Reduction in Pipes

Authors : Mirvahid Mohammadpour Chehrghani, Doekle Yntema, David Matthews, Matthijn de Rooij, Jamal Seyyed Monfared Zanjani

Convection of a Dielectric Fluid in a Cylindrical Annulus under Microgravity Conditions Due To a Radial Dielectrophoretic Force Field

Authors : Antoine Meyer, Vasyi Motuz, Peter Szabo, Innocent Mutabazi, Christoph Egbers

LIST OF PAPERS

Nature-Inspired Thermal Systems: Modeling, Simulation and Optimization

Simulation of Parison Control and Weight Optimization in HDPE Bottle Production Using PolyFlow

Authors : Hukumran Selim Erturk, Mert Patkavak, Canan Cimsit

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Authors : Yogesh Jaluria

Topology-Optimized Indirect Cooling System for Thermal Management of Cylindrical Li-Ion Battery Packs

Authors : Nicola Bianco, Rosa Francesca De Masi, Andrea Fragnito, Marcello Iasiello, Gerardo Maria Mauro, Vittorio Orlanducci, Francesco Piccirillo

Insights on the Ongoing Project VISIONS: Evolutionary Design of Innovative Heat Transfer Devices

Authors : Assunta Andreozzi, Nicola Bianco, Rosa Francesca De Masi, Andrea Fragnito, Marcello Iasiello, Fabio Iozzino, Gerardo Maria Mauro, Vittorio Orlanducci

Experimental Investigation of Perfusion Effects on Heat Transfer in Tissue-Mimicking Phantoms for Cardiac Radiofrequency Ablation

Authors : Nooruldeen Essam Mustafa, Brett Wrubleski, Cristian A. Linte and Satish G. Kandlikar

LIST OF PAPERS

Heat Transfer Enhancement

CFD Study on Cross-Cut Design of Horizontal Plate-Fin Heat Sinks

Authors : Po-Hsun Chen, Chieh Yeh, Yu-Fu Ku

An Analysis and Optimization of the Cooling Channel Design Of the High-Pressure Die Casting (HPDC) Process Using Computer-Aided Engineering (CAE)

Authors : Robert Manullang, Shueiwan H. Juang, Cheng-Hsi Chuang

High-Performance Immersion Cooling of Li-ion Batteries: Addressing Thermal Challenges in EVs

Authors : Mohammad Ali Yaqteen, Jin Sub Kim

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Authors : Hongseok Choi, Hoseong Lee

Tunable Pool Boiling Performance over a Copper Tube by Controlling Electric Field and Achievement of Extremely Low Critical Heat Flux

Authors : Ho-Ching Lin, Hui-Chung Cheng, Ping-Hei Chen

Preliminary CFD Analysis on the Effects of Conjugate Problems for a Smooth Duct and a Kagome Lattice Channel: Average Results for Heat Transfer and Pressure Losses

Authors : Giacomo Tosatti, Sandra Corasaniti, Michele Potenza, Ivano Petracci

Boiling Heat Transfer Enhancement on Micropillar Surfaces through Size-Controlled Nanoparticle deposition

Authors : Hyunmuk Park, Yoomyeong Lee, Donghwi Lee

Experiments to Understand Bubble Dynamics and Associated Heat Transfer for a Single Bubble During Nucleate Flow Boiling on a Steel Surface

Authors : Mohd Moiz, Manish Kumar, Atul Srivatava

LIST OF PAPERS

Mineral Processing

Evaluating the Effect of an Organic Non-Ionic Surfactant on the Passivation and Electrochemical Behavior of Chalcopyrite in Sulfate Solution

Authors : Roozbeh Saneie, David Dixon, Edouard Asselin

Investigating The Synergistic Effect Of Non-Ionic Surfactants And Ethylene Thiourea On Chalcopyrite Bioleaching

Authors : Kiana Sabzehei, David Dixon

Meta-Model Development for Mine-to-Mill Optimisation Using AI and Simulation

Authors : Pouya Nobahar, Chaoshui Xu, Peter Dowd

Process Optimization for Scheelite Flotation from A Low-Grade Sample

Authors : Mohammadbagher Fathi1, Greg Doherty and Marcus Mollison

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Authors : Jianliang Gao, Chunxia Wang

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Authors : Ashma Singh, Nichole Maistry

Flotation Separation of Anglesite and Silica from Zinc Leaching Residue

Authors : Kenta Sugawara, Kazutoshi Haga

Selective Removal of Zinc and Lead from Dirty Cu Concentrates By High Pressure Oxidation Leaching Followed By Amine Leaching

Authors : Katsuya Sato, Sanghee Jeon, Kazutoshi Haga, Labone L. Godirilwe, Tatsuru Takahashi, Yoshiyuki Tanaka, Kenji Watanabe, Kenji Hayashi, Hiroyuki Nakado

Uniaxial Acoustic Emission and Chaotic Fractal Analysis of Granite Pre-Damaged By Triaxial Cyclic Loading

Authors : Lei Cheng, Dongjie Yang, Lili Dong

LIST OF PAPERS

Applied Mechanics

Shaking Force and Shaking Moment Balancing in Planar Serial Manipulators

Authors : Vigen Arakelian

Mathematical Modeling of Material Removal Rate in Sapphire CMP using Silica Particle

Authors : Natthaphon Bun-Athuek, Panart Khajornrungruang, Keisuke Suzuki and Noppachai Saivaew

A Comparative Thermo-Mechanical Reverse-Flow-Forming Analysis on High Strength Alloys: A DOE-Based Numerical Study

Authors : Gokul Vikraman, Ajith Ramesh, Venkataraman Balasubramanian

Development of Numerical Model Based Deep Learning for the Roll Force Prediction of the Hot Rolling Process

Authors : Yongseok Cho, Shinil Kim

A Finite Element Approach to Optimize Fiber Paths of Tow Steered Composites Using Unstructured Mesh Technique

Authors : Altan Kayran, Rameezul Haq

Compilation of Requirement System on Development of CNC Machine Tools with Modular Dimensions and Universal Technology

Authors : István Gábor Dr. Gyurika

LIST OF PAPERS

Chemistry and Chemical Engineering

Role of Alkali Earth Metals in Tailoring Ni/CeO₂ system for efficient Ammonia Decomposition

Authors : Majed A Alamoudi

Heat Transfer Experimental Characterization and Modeling of Innovative Structured Internals in Counter-Current Gas-Liquid Flow: Insight View on Distillation

Authors : Antonio da S. G. CAIAIA, Youssef SWESI, David EDOUARD Régis PHILIPPE, Pascal FONGARLAND

Comparison of UiO-66 Nanoparticles Synthesized via Micro-fluidic vs. Macro-Stationary Routes for Aqueous Phosphate Removal

Authors : Buket Ustun, Selis Onel

Optimizing Solvent Conditions for Reduced-Time Solvothermal Synthesis of Ti-MIL-125

Authors : Selis Onel, Elif Gokcen Dilci

Drug Delivery Control in Drug-Eluting Stents Using Magnetic Nanoparticles

Authors : Seyed Masoud Vahedi, Jalel Azaiez

The Impact of Temperature on the Regeneration of Used Engine Oil Using Attapulgite Clay as an Adsorbent

Authors : Sithembiso F Makhathini

Improving Separation Efficiency through Optimization of Weir Curvature in FWKO

Authors : HyunSu Jeong, Hwan-Gyo Kim, Dong-Hyun Kim, Ho-jin Choi , Youn-Jea Kim

LIST OF PAPERS

Chemistry and Chemical Engineering

[Initial Investigation of C–H Functionalization of Pentafluorobenzene with 2-Chloroquinoline Catalyzed by Palladium and Hemilabile Benzimidazolyl Phosphine Ligands](#)

Authors : Shun Man WONG, Wing Tung HO

[Photocatalytic Dye Degradation Activities Of Chitosan Film Modified By Green Synthesized TiO₂ From Aloe Vera Leaf Extract](#)

Authors : İbrahim Kaba, Rabia Nur Bozkurt, Özge Kerkez Kuyumcu, Atif Koca

[Synthesis and Characterisation of Petroleum Needle Coke to Graphene Oxide](#)

Authors : Yee Chech Tan, NorFarah Diana Aba

[Development of Hybrid Blue Ammonia Process for Co-production of Green and Blue Ammonia](#)

Authors : Amin Soleimani Mehr, Günter Scheffknecht, Reihaneh Zohourian, Jörg Maier

LIST OF PAPERS

Soil Mechanics

Design, Kinematic Analysis, and Prototyping of a Six-Bar Linkage-Based Legged Robot

Authors : Behbehani Danah, AlGhashem Noor, AlAjmi Hanoof, Fathaldin Saleemah, Hussain Fatemah, Prasad Benrose and Gazo-Hanna Eddie

Curing Response Analysis of Solid Motor Propellant Considering Heat Transfer Size Effect

Authors : Baoshi Yu, Dapeng Zhang, Wenqin Zhang, Zijian Fan

Fatigue Damage Evolution and Property Variation of Low-frequency Fatigue-loaded NEPE Solid Propellant

Authors : Wenqin Zhang, Dapeng Zhang, Zijian Fan

Analysis and Study of the Effects of Pre-Damage and Deformation on the Burning Rate of HTPB Propellants

Authors : Jiahao Peng, Zhibin Shen, Dapeng Zhang

Study on Uniaxial Tensile Yield Characteristics of NEPE Propellant Considering Aging at Low Strain Rate

Authors : Yuxuan Zhang, Kuangwei Deng, Zhibin Shen, Dapeng Zhang

Aging Failure Behavior Of NEPE Bonding Interface Under Long-term Shear Condition

Authors : Kunlin Zhou, Zijian Fan, Zhibin Shen, Dapeng Zhang

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Authors : Gulmira Zakiryanova

Structural Rationale of Hollow Tapered Cantilever Beam under a Uniformly Distributed Load

Authors : Carol Lee Chalermson, Motohiro Sato

LIST OF PAPERS

Materials Processing

Digital Twin Technology Supporting the Development of a Phosphorus Recovery Pilot Plant

Authors : Els Nagels, Sander Arnout

Predictive Modelling Of Pilot Spiral Continuous Circuit Using Rougher Batch Spiral Data and Laboratory Shaking Table Data as Input

Authors : Tebogo Mokgomola, Ashma Singh

Development of New Annealing Technology for Stainless Coils

Authors : Seongkyu See, Seokhyun Nam, Kwonwoo Jang

Applicational Research for Transition Metal Dichalcogenides & High Entropy Alloy using Self-Propagating High-Temperature Synthesis

Authors : Dogyun Byeon, Tae-min Kim, Sungmin Yoon

Comparison of Erosive Wear on Composite and Metallic Propellers in Slurry

Authors : Marc Tusenko, Sebastian Winkler, Matthias Martin, Hannah Linde1, Detlef Klatt, Kay Rostalski

LIST OF PAPERS

Posters Session

Digital Twin Technology Supporting the Development of a Phosphorus Recovery Pilot Plant

Authors : Els Nagels, Sander Arnout

Predictive Modelling Of Pilot Spiral Continuous Circuit Using Rougher Batch Spiral Data and Laboratory Shaking Table Data as Input

Authors : Tebogomola Mokgomola, Ashma Singh

Development of New Annealing Technology for Stainless Coils

Authors : Seongkyu See, Seokhyun Nam, Kwonwoo Jang

Applicational Research for Transition Metal Dichalcogenides & High Entropy Alloy using Self-Propagating High-Temperature Synthesis

Authors : Dogyun Byeon, Tae-min Kim, Sungmin Yoon

Comparison of Erosive Wear on Composite and Metallic Propellers in Slurry

Authors : Marc Tusenko, Sebastian Winkler, Matthias Martin, Hannah Linde1, Detlef Klatt, Kay Rostalski

Numerical investigation on power generation performance of enhanced geothermal system with CO₂ and water as geothermal fluid

Authors : Nan Meng, Wenyan Xu, Yonglin Xin, Kelun He, Xiang Gao

Design Modification Methodology for Diesel Injector Adaptation to DME Fuel Using 1D Simulation with AMESim

Authors : Jinwoo Lee

LIST OF PAPERS

Posters Session

Impact of Cooling Conditions on Heat Transport in a Meander-Shaped Low-Fill Heat Pipe

Authors : Eiji Yazaki, Asami Hatamoto, Koji Fumoto

Thermo-Economic Analysis of a Single-Flash Geothermal Power System

Authors : Yeh-Tung Chen, Jui-Ching Hsieh, Nadya Sefira Salsabilla

Ultrasonic bonding with Cu thick wires on die-top Cu foils sintered cladded on Ag-Cu nanotwinned films coated SiC chips for power modules

Authors : Tung-Han Chuang, Yen-Ting Chen, Yin-Hsuan Chen, Ang-Ying Lin, Chun-Hao Chen, Wei-Chung Huang, Jing-Yao Chang, Jung-Hsuan Chen

Influence of Work Hardening On the Microstructure and Thermophysical Properties of Austenitic Stainless Steel

Authors : Rita C.C. Rangel, Fábio Camargo, Guilherme Fernandes Nielsen, Selma Luiza Silva Batochio, Daniel Gerchman

Li-ion Battery Recycling: A Summary Review

Authors : Carlos A. Nogueira, Maria Joana Neiva Correia, Fernanda Margarido, Maria João Plancha, Fátima Pedrosa, A.M. Gonçalves, Clara Silva, Sara Silva

Analyses of Soil Volatile Contaminants Extraction by Hot Air Injection

Authors : Abraham Dayan

Spreading Dynamics of a Soluble Surfactant in a Deep Layer of Shear-Thinning Fluid

Authors : Ruben Baños, Federico Méndez, Oscar Bautista, José Arcos

3D Positioning of a Stewart Platform Using Soft Pneumatic Actuators: A Design Approach

Authors : Antonio Šoljić, Goran Gregov, Ervin Kamenar

LIST OF PAPERS

Posters Session

Breakthrough Curve Model Evaluation for the Sorption of Perfluorooctanoic Acid in a Fixed Bed Column

Authors : Siphesihle Mangena Khumalo, Babatunde Femi Bakare, Sudesh Rathilal

Starch-Integrated Amine-Functionalized Terpolymeric Hybrid Gels: Role of Functional Groups in Swelling, Elasticity, and Tartrazine Adsorption

Authors : Rabia BOZBAY, Nermin ORAKDOGEN

Next-Generation Hybrid Materials for Organic Pollutant Removal: Carbon Dot–ZIF-8 Systems

Authors : Nida Ük, Caner Ünlü

Analysis of Electron Dynamics in Contact Electrification

Authors : Tatsuro Kono, Mitsuhiro Matsumoro

Chemical Reaction Modelling of Carbon Fiber Production for MC/MD Hybrid Simulation

Authors : Issei Shimizu; Mizuki Sumita; Bunta Kishimoto; Mitsuhiro Matsumoto, Hiroki Hayami, Tomoyuki Kotani, Daisuke Yuhara, and Ryuichi Hiraiwa

Characterization and Adsorption Behavior of Rice Husk Ash for Cr(VI) Removal from Aqueous Solutions

Authors : Behris Kılıç, Sevgi Polat

Morpho-elasticity of Confined Proliferating Stem Cell Cysts

Authors : Joseph Ackermann, Martine Ben Amar, Jean-François Joanny

Enhanced Fluorescence Behavior and Surface Characteristics of ZIF-8 Structures Modified with Graphitic Quantum Dots

Authors : Hilal Nazan Ağar, Caner Ünlü

LIST OF PAPERS

Energy Storage

Techno-Economic Assessment of Multi-Field Solar Thermal Power Plants with Thermocline-based Storage

Authors : Kapil Kumar, Shireesh B. Kedare, Manaswita Bose

Electro-Thermal-Electromagnetic Model-Based Immersion Cooling Channel Design for Large Pouch Lithium-Ion Batteries

Authors : Sangwoo Kim, Kyoungdoug Min

A review of Heat Integration Strategies in the Cu-Cl Thermochemical Cycle for Hydrogen Production

Authors : M. W. Abdulrahman, Y. A. Fenta, Y. Fonkamo

Material Properties of Copper Oxychloride and Their Importance in the Thermolysis Step of the Cu-Cl Hydrogen Production Cycle

Authors : M. W. Abdulrahman, Y. Fonkamo, Y. A. Fenta

Copper (I) Chloride in the Cu-Cl Hydrogen Production Cycle: A Property-Based Analysis of Its Role in Thermolysis

Authors : M. W. Abdulrahman, Y. Fonkamo, Y. A. Fenta

Passive Thermal Management of Cylindrical Li-ion Batteries Using GO-Enhanced Micro-Encapsulated Phase Change Material

Authors : Satyam Singh Thakur, Karan Dhuper, Lalit Kumar

Preliminary Theoretical Research on the Development of a New Plastic Heat Exchanger Concept for Geothermal Heat Pumps

Authors : Marius-Andrei Boca, Dmitry Rychkov

LIST OF PAPERS

Energy Storage

Hydrodynamic Cavitation-Driven Energy Harvesting in Microfluidic Devices Using Thermoelectric Conversion

Authors : Seyedreza Tebyani, Shahriyar Rahbarshahlan, Mohammad Imanzadeh, Morteza Ghorbani, Ali Koşar

Prediction of Axial Wind Turbine Rotor Performances Using a Self-Corrected $k-\omega$ SST Turbulence Model

Authors : Masoud Darbandi, Alireza Nojavan, Milad Tahani, Gerry E. Schneider

Preparation and characterization of microencapsulated phase change material for the application of thermal regulation of electronic chips

Authors : Karan Dhuper, Lalit Kumar, Siddhartha Duttagupta

Graphite-Enhanced Paraffin and Beeswax Composites: Numerical and Experimental Investigations of Thermal Properties

Authors : Mohamed Moussa EL IDI, Atilla ATLI, Ahmad HAJJAR, Manel KRAIEM, Mustapha KARKRI

LIST OF PAPERS

Polymer Science and Engineering

Techno-Economic Assessment of Multi-Field Solar Thermal Power Plants with Thermocline-based Storage

Authors : Kapil Kumar, Shireesh B. Kedare, Manaswita Bose

Electro-Thermal-Electromagnetic Model-Based Immersion Cooling Channel Design for Large Pouch Lithium-Ion Batteries

Authors : Sangwoo Kim, Kyoungdoug Min

A review of Heat Integration Strategies in the Cu-Cl Thermochemical Cycle for Hydrogen Production

Authors : M. W. Abdulrahman, Y. A. Fenta, Y. Fonkamo

Material Properties of Copper Oxychloride and Their Importance in the Thermolysis Step of the Cu-Cl Hydrogen Production Cycle

Authors : M. W. Abdulrahman, Y. Fonkamo, Y. A. Fenta

Copper (I) Chloride in the Cu-Cl Hydrogen Production Cycle: A Property-Based Analysis of Its Role in Thermolysis

Authors : M. W. Abdulrahman, Y. Fonkamo, Y. A. Fenta

Passive Thermal Management of Cylindrical Li-ion Batteries Using GO-Enhanced Micro-Encapsulated Phase Change Material

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