8th WORLD CONGRESS ON MECHANICAL, CHEMICAL, AND MATERIAL ENGINEERING (MCM'22)

July 31, 2022 - August 02, 2022 | Prague, Czech Republic

Dr. Huihe Qiu
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

PHYSICAL CONFERENCE

Sunday, July 31

3:00 PM to 5:00 PM	Registrations

Monday, August 01

7:30 AM	Registration
8:30 AM	Official Opening of the Congress
	KEYNOTE SESSION
8:45 AM	Innovation Design and Applications of Robotic Manipulators in Intelligent Manufacturing System - PAGE 1
	MORNING PARALLEL SESSIONS I
9:30 AM	Mining, Material and Metallurgical Engineering - PAGE 2 - (ROOM 1)
9:30 AM	Heat Pipes - PAGE 2-3 - (ROOM 2)
10:15 AM	Coffee Break
	MORNING PARALLEL SESSIONS II
10:45 AM	Experimental Fluid Flow and Heat Transfer I - PAGE 3-4 - (ROOM 1)
10:45 AM	Applied Mechanics I - PAGE 4-5 (ROOM 2)
	MORNING PARALLEL SESSIONS III
12:15 PM	Heat Transfer Enhancement - PAGE 5-6 (ROOM 1)
12:30 PM	Chemical Engineering I - PAGE 6 (ROOM 2)
01:15 PM	Group Photo
01:20 PM	Lunch Break

Tuesday, August 02

	KEYNOTE SESSIONS
8:30 AM	Conjugated Phonon and Hot Carrier Transport in 2D Materials - PAGE 7
9:15 AM	Efficient Energy Architectures - PAGE 08
	MORNING PARALLEL SESSIONS I
10:40 AM	Porous Media- Fluid Flow and Heat Transfer - PAGE 09 (ROOM 1)
10:40 AM	Multiphase Flow and Heat Transfer I - PAGE 10 (ROOM 2)
11:00 AM	Coffee Break
	MORNING PARALLEL SESSIONS II
11:20 AM	CFD I - PAGE 11 -12 (ROOM 1)
11:20 AM	Multiphase Flow and Heat Transfer II - PAGE 13 (ROOM2)
12:35 PM	Experimental Fluid Flow and Heat Transfer II - PAGE 14 (ROOM 2)
01:05 PM	Lunch Break
7:00 PM	Cruise Tour

VIRTUAL CONFERENCE

Sunday, July 31

3:00 PM to 5:00 PM	Registrations

Monday, August 01

	AFTERNOON PARALLEL SESSIONS I
2:00 PM	Mineral and Metal Processing - PAGE 15
2:00 PM	Numerical Fluid Flow and Heat Transfer - PAGE 16
03:00 PM	Mining and Safety - PAGE 16 - 17
03:15 PM	Coffee Break
	AFTERNOON PARALLEL SESSIONS II
03:45 PM	Applied Mechanics II- PAGE 17 - 18
03:30 PM	Heat, Mass and Momentum Transport - PAGE 19
04:45 PM	Chemical Engineering II - PAGE 20

Tuesday, August 02

	KEYNOTE SESSION
02:10 PM	The Critical Role of Metallurgy in the Transition from Linear To Circular Economy - PAGE 21
	AFTERNOON PARALLEL SESSIONS I
03:00 PM	Experimental Fluid Flow and Heat Transfer III- PAGE 22-23
03:00 PM	Chemical Engineering III - PAGE 23
03:45 PM	CFD II - PAGE 24
7:00 PM	Cruise Tour

8th WORLD CONGRESS ON MECHANICAL, CHEMICAL, AND MATERIAL ENGINEERING (MCM'22)

July 31, 2022 - August 02, 2022 | Prague, Czech Republic

The Organizing and Scientific Committees would like to welcome you to the 8th World Congress on Mechanical, Chemical, and Material Engineering (MCM'22).

MCM'22 consists of four conferences:

- 9th International Conference on Heat Transfer and Fluid Flow (HTFF'22)
- 9th International Conference on Mining, Material and Metallurgical Engineering (MMME'22)
- 11th International Conference on Mechanics and Industrial Engineering (ICMIE'22)
- 8th International Conference on Chemical and Polymer Engineering (ICCPE'22)

The Congress aims to become one of the leading international annual events in the fields of mechanical, chemical, and material engineering. This Congress will provide excellent opportunities for scientists, researchers, and industrial specialists to present their research achievements and to develop new collaborations and partnerships with experts in the field.

We are pleased to welcome conference attendees to the beautiful city of Prague, Czech Republic. Prague, Czech Praha, city, capital of the Czech Republic. Lying at the heart of Europe, it is one of the continent's finest cities and the major Czech economic and cultural centre. The city has a rich architectural heritage that reflects both the uncertain currents of history in Bohemia and an urban life extending back more than 1,000 years. During your time here, we hope that you have an opportunity to explore Prague's many museums, beaches, and the warm ambience and hospitality of the city.

We thank you for your participation and contribution to the 8th World Congress on Mechanical, Chemical, and Material Engineering (MCM'22).

We wish you a very successful and enjoyable experience.

Dr. Huihe Qiu
Hong Kong University of Science & Technology, China
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

9th International Conference on Heat Transfer and Fluid Flow

(HTFF'22)

The Organizing Committee of the 9th International Conference on Heat Transfer and Fluid Flow (HTFF'22) would like to thank the following members for accepting to contribute to the conference.

Scientific Committee Members:

Dr. Jalel Azaiez, The University of Calgary, Canada

Dr. Fotini Labropulu, University of Regina, Canada

Dr. Ahmet Selamet, The Ohio State University, USA

Dr. Yulia Plaksina, Moscow State University, Russia

Dr. Chamil Abeykoon, The University of Manchester, UK

Dr. Yang Liu, The Hong Kong Polytechnic University, Hong Kong

Dr. Hui Hu, Iowa State University, USA

Dr. Dongsheng Wen, University of Leeds, UK

Dr. Krishnaswamy Nandakumar, Louisiana State University, USA

Dr. Yulong Ding, University of Birmingham, UK

Dr. Sylvie Lorente, Villanova University, USA

Dr. Jan Havlík, Czech Technical University in Prague, Czech Republic

Dr. Christos Markides, Imperial College, UK

Dr. Ziad Saghir, Ryerson University, Canada

Dr. Tassos G. Karayiannis, Brunel University London, UK

Dr. Frank Gerner, University of Cincinnati, USA

Dr. Mohamed Hamed, McMaster University, Canada

Dr. Yuwen Zhang, University of Missouri, USA

Dr. Marc Miscevic, Université Paul Sabatier, France

Dr. Perumal Nithiarasu, University of Wales, UK

Dr. Karthik Remella, Ansys, USA

Dr. Gerardo Maria Mauro, Università degli studi del Sannio, Italy

Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy

9th International Conference on Mining, Material, and Metallurgical Engineering

(MMME'22)

The Organizing Committee of the 9th International Conference on Mining, Material, and Metallurgical Engineering (MMME'22) would like to thank the following members for accepting to contribute to the conference.

Scientific Committee Members:

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. Frank Cheng, University of Calgary, Canada

Dr. Tung-Han Chuang, National Taiwan University, Taiwan

Dr. Ioanna Giannopoulou, National and Kapodistrian University of Athens, Greece

Dr. Fernanda Margarido, Instituto Superior Técnico, Portugal

Dr. Paul H. Mayrhofer, Technische Universitaet Wien, Austria

Dr. Katarzyna Nowińska, Silesian University of Technology, Poland

Dr. Willie Nheta, University of Johannesburg, South Africa

Dr. Andre Carlos Silva, Universidade Federal de Goiás, Brazil

Dr. Flávio de Andrade Silva, Pontifícia Universidade Católica, Brazil

Dr. Zi-Kui Liu, The Pennsylvania State University, USA

11th International Conference on Mechanics and Industrial Engineering

(ICMIE'22)

The Organizing Committee of the 11th International Conference on Mechanics and Industrial Engineering (ICMIE'22) would like to thank the following members for accepting to contribute to the conference.

Scientific Committee Members:

Dr. Alvaro Aguinaga, Escuela Politécnica Nacional, Ecuador

Dr. Carlos Avila, California Institute of Technology (Caltech), USA

Dr. Luca Greco, CNR-INM INstitute of Marine Engineering, Italy

Dr. Surendra M. Gupta, Northeastern University, USA

Dr. Satyandra Gupta, University of Southern California, USA

Dr. Angel Huminic, Transilvania University of Brasov, Romania

Dr. Aslan Deniz Karaoğlan, Balikesir University, Turkey

Dr. Ying Liu, Cardiff University, UK

Dr. Marton Takacs, Budapest University of Technology and Economics, Hungary

Dr. Duc Truong Pham, University of Birmingham, UK

Dr. Mohammad Mehdi Rashidi, University of Electronic Science and Technology of China, China

Dr. Biswajit Sarkar, Yonsei University, South Korea

Dr. Monica Sharma, Malaviya National Institute of Technology, India

Dr. Min Xie, City University of Hong Kong, China

Dr. Dan Zhang, York University, Canada

8th International Conference on Chemical and Polymer Engineering

(ICCPE'22)

The Organizing Committee of the 8th International Conference on Chemical and Polymer Engineering (ICCPE'22) would like to thank the following members for accepting to contribute to the conference.

Scientific Committee Members:

Dr. Farhang Abbasi, Sahand University of Technology, Iran

Dr. Eric S. Fraga, University College London, UK

Dr. Jaharah Ghani, Universiti Kebangsaan Malaysia, Malaysia

Dr. Masami Okamoto, Toyota Technological Institute, Japan

Dr. Dimitrios Sidiras, University of Piraeus, Greece

Dr. Jingbo Wang, Borealis Polyolefine GmbH, Austria

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Monday, August 01, 2022

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TUESDAY, AUGUST 02, 2022

PHYSICAL CONFERENCE

7:30 AM - 8:30 AM **Registration**

8:30 AM - 8:45 AM

Official Opening of the Congress

Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy

8:40 AM - 9:25 AM

ICMIE'22 KEYNOTE LECTURE

SESSION CHAIR: Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy

Innovation Design and Applications of Robotic Manipulators in Intelligent Manufacturing System

Dr. Dan Zhang,
York University, Canada

Dr. Dan Zhang is a Kaneff Professor and Tier 1 York Research Chair in Advanced Robotics and Mechatronics in the Department of Mechanical Engineering at York University. Dr. Zhang was a Canada Research Chair in Advanced Robotics and Automation, was a founding Chair of the Department of Automotive, Mechanical, and Manufacturing Engineering with the Faculty of Engineering & Applied Science at Ontario Tech University. He received his Ph.D. in Mechanical Engineering from Laval University, Canada, in June 2000.
Dr. Zhang's research interests include synthesis and optimization of parallel and hybrid mechanisms; generalized parallel mechanisms research; reconfigurable robots; innovation design of parallel robots: parallelization of serial robots; micro/nano manipulation and mems devices (e.g., sensors); rescue robots; smart biomedical instruments (e.g., exoskeleton robots and rehabilitation robotics); AI/robotics/autonomous systems; Aerial and Underwater Robotics; Artificial Intelligence for Robotics; intelligent reconfigurable adaptive landing gear and manipulator (manipulander).

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MORNING PARALLEL SESSIONS I

09:30 AM - 10:20 AM

Mining, Material and Metallurgical Engineering - (ROOM 1) - Physical

SESSION CHAIRS: Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy

MMME 130
09:30 - 09:45

Study Of The Copper Flotation From Copper Smelter Slag, Using Seawater As Operation Water

Erik Kohnenkamp, Universidad Técnica Federico Santa María, Chile
Authors: Erik Kohnenkamp, Felix Pizarro

MMME 106
09:45 - 10:00

Optimum Design Configuration of Dapped-End Beam Under Dynamic Loading Using TOPSIS Method

Hilal El-Hassan, United Arab Emirates University, UAE
Authors: Esraa Hijah, Omar Najm, Hilal El-Hassan, Zubair I. Syed

MMME 111
10:00 - 10:15

Optimization of CWP-Slag Blended Geopolymer Concrete using Taguchi Method

Hilal El-Hassan, United Arab Emirates University, UAE
Authors: Ponalagappan Chokkalingam, Abdulkader Elmir, Hilal El-Hassan, Amr El-Dieb

MMME 112
10:15 - 10:20

Preparation of Metallographic Specimen of Copper and Bronze

Tanja Antić, Slovenian National Building and Civil Engineering Institute, Slovenia
Authors: Tanja Antić, Mirjam Bajt Leban, Tadeja Kosec

09:30 AM - 09:45 PM

Heat Pipes - (ROOM 2) - Physical

SESSION CHAIR: Dr. Xinwei Wang, Iowa State State University, USA

HTFF 132
09:30 - 09:45

Pulsating Heat Pipe: Operation in Nonlinear Regime

Alok Kumar, Indian Institute of Technology Bombay, India
Authors: Alok Kumar, Nadeem Ahmed, Suneet Singh

HTFF 151
09:45 - 10:00

Surrogate Model for the Prediction of the Performance of a Tubular Pulsated Heat Pipe

Gaëlle MOURET, Capgemini Engineering, France
Authors: Gaëlle MOURET

HTFF 161
10:00 - 10:15

Analysis of a Battery Thermal Management System for Electric Vehicles using Heat Pipe Technology

Eoin Guinan, University of Limerick, Limerick
Authors: Eoin Guinan, Joseph Mooney, Johnathan Ottman, Jeff Punch, Vanessa Egan

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HTFF 169
10:00 - 10:30

Geometrical Shape of Pulsating Heat Pipe under Hyper Gravity Condition

Cezary Czajkowski, Wrocław University of Science and Technology, Poland
Authors: Cezary Czajkowski, Andrzej Nowak, Sławomir Pietrowicz, Henrik Kassai

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10:20 AM - 10:45 AM **Coffee Break**

MORNING PARALLEL SESSIONS II

10:45 AM - 12:15 PM

Experimental Fluid Flow and Heat Transfer I - (ROOM 1) - Physical

SESSION CHAIR: Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy & Dr. Cezary Czajkowski, Wrocław Universsity of Science ans Technology, Poland

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HTFF 110
10:45 - 11:00

Heat Transfer Coefficients of Layers of Greenhouse Thermal Screens

Helena Vitoshkin, Agricultural Research Organization, The Volcani Center, Israel
Authors: Vitaly Haslavsky, Helena Vitoshkin, Mordehai Barak, Avraham Arbel.

HTFF 139
11:00 - 11:15

Experimental Investigation of Thermal Discharge Performance of a Metallic Latent Thermal Energy Storage System

Frank Nees, Institute of Vehicle Concepts, German Aerospace Center (DLR), Germany
Authors: Frank Nees, Anastasios Katourtzidis, Werner Kraft, Veronika Stahl, Peter Vetter

HTFF 149
11:15 - 11:30

ORR Enhancement Using Core-Shell Copt Magnetic Nanoparticles In Cathode Electrode Of Pemfcs

Kim Jihyun, Korea University, Republic of Korea
Authors: Jihyun Kim, Wonseok Yang, Yongchan Kim

HTFF 125
11:30 - 11:45

The Influence of Sensor Position on the Measurement of Recovery Temperature in Compressible Flow

Anthony (Tony) Straatman, Western University, Canada
Authors: Anthony G. Straatman, Mark J. Parker, Benjamin T. Jentz

HTFF 153
11:45 - 12:00

Influence of Contact Angle on the Internal Flow in a Freezing Water Droplet

Erik Fagerström, Luleå University of Technology, Sweden
Authors: Erik Fagerström, Anna-Lena Ljung

HTFF 186
12:00 - 12:15

A Coupled PIV/PTV Technique for the Dispersed Oil-Water Two-Phase Flows Within a Centrifugal Pump Impeller

Rafael F L de Cerqueira, University of Campinas, Brazil
Authors: R. F. L. Cerqueira, R. M. Perissinotto, W. D. P. Fonseca, W. M. Verde1, Biazussi J. L., Franklin E. M.2, M.S. de Castro, A.C. Bannwart

Applied Mechanics I - (ROOM 2) - Physical

10:45 AM - 12:30 PM

SESSION CHAIR: Dr. Kyung Chun Kim, Pusan National University, South Korea & Dr. Muhanad Hajjawi, Higher Colleges of Technology,University city, UAE

ICMIE 104
10:45 - 11:00

An Auxetic Construction Kit for Turbomachinery Application

Stefan Schröter, Technical University of Munich, Germany
Authors: Stefan Schröter, Lukas Reisinger, Volker Gümmer

ICMIE 143
11:00 - 11:15

Recovery of Particle Reinforced Composite 3D Printing Filament from Recycled Industrial Polypropylene and Glass Fibre Waste

Omid Sam-Daliri, National University of Ireland, Galway & Ryan Institute for Environmental, Ireland
Authors: Omid Sam-Daliri, Pouyan Ghabezi, Tomas Flanagan, William Finnegan, Sinéad Mitchell, Noel Harrison

ICMIE 142

11:15 - 11:30

Manufacture of Composite Filament for 3D Printing from Short Glass Fibres and Recycled High-Density Polypropylene

Pouyan Ghabezi, National University of Ireland, Galway & Ryan Institute for Environmental, Ireland
Authors: Pouyan Ghabezi, Noel M. Harrison, Tomas Flanagan

ICMIE 145

11:30 - 11:45

Floating Photovoltaic Installation at Off River Storage Facilities to Optimize Infrastructure Utilization

Tajul Ariffin Norizan, Mechanical and Electrical Services Division, Malaysia
Authors: Tajul Ariffin Norizan, Hapida Ghazali, Rosazlan Abu Seman

ICMIE 126

11:45 - 12:00

Numerical Analysis of Gas Diffusion Characteristics during Thermal Runaway in ESS Battery Module

Dong Woo KIM, Fire Prevention System Institution/Alllitelife Co,. Ltd, Republic of Korea
Authors: Dong Woo Kim, Young Man Lee, Hong Sun Ryou

ICMIE 102

12:00 - 12:15

Design Optimization of 10 kW High Speed Generator by using Salp Swarm Algorithm

Deniz Perin, ISBIR Electric Co, Turkey
Authors: Deniz Perin, Kemal Yilmaz, Alper Akca, Aslan Deniz Karaoglan

ICMIE 133

12:15 - 12:30

A Methodology to Predict a Fatigue Life of AISI H13 Steel Die for a High-Pressure Die Casting based on Thermal Stress Analysis

Joeun Choi, Sogang University, South Korea
Authors: Joeun Choi, Jongrak Choi, Dosuck Han, Kwang-Pyo Lee, Naksoo Kim

AFTERNOON PARALLEL SESSIONS I

12:15 PM - 01:15 PM

Heat Transfer Enhancement - (ROOM 1) - Physical

SESSION CHAIR: Dr. Anthony (Tony) Straatman, Western University, Canada

HTFF 126

12:15 - 12:30

Annual Energy Consumption of Indirect Air Conditioning Systems for Electric Vehicles Using Alternative Refrigerants

SoonBum Kwon, Korea University, Republic of Korea
Authors: SoonBum Kwon, Yongchan Kim

HTFF 147
12:30 - 12:45

Experimental Study on Air-Side Heat Transfer Enhancement of Fin-Tube Heat Exchanger under Vibrational Conditions

Minjoong Kim, Korea University, Republic of Korea
Authors: Minjoong Kim, Yongchan Kim

HTFF 148
12:45 - 01:00

Experimental Study on the Heating and Cooling Performance of a Vapor Injection Heat Pump Using Low-GWP Refrigerants

Heegyu Maeng, Korea University, Republic of Korea
Authors: Heegyu Maeng, Jinyoung Kim, Yongchan Kim

HTFF 163
01:00 - 01:15

Heat Transfer and Velocity Measurement of Laminar Pipe Flow Induced by Ultrasound Released along Mainstream Direction

Teerapat Thungthong, Kasetsart University, Thailand
Authors: Teerapat Thungthong, Kanet Katchasuwanmanee, Jirachai Mingbunjerdsuk, Weerachai Chaiworapuek, Kunthakorn Khaothong

12:30 PM - 12:45 PM

Chemical Engineering I - (ROOM 2) - PHYSICAL

SESSION CHAIR: Dr. Kyung Chun Kim, Pusan National University, South Korea & Dr. Muhanad Hajjawi, Higher Colleges of Technology, University city, UAE

ICCPE 118
12:30 - 12:45

Imaging of Three-dimensional Orientation of Molecules in Polymers Using FT-IR, Raman, and O-PTIR Microspectroscopies

Karolina Kosowska, Jagiellonian University, Poland
Authors: Karolina Kosowska, Paulina Koziol, Danuta Liberda, Tomasz P. Wrobel

ICCPE 121
12:45 - 01:00

Identification of a New Experimental Method to Measure the Induction Time for Gas Hydrates.

Alberto Maria Gambelli, University of Perugia, Engineering Department, Italy
Authors: Alberto Maria Gambelli, Federico Rossi

01:15 PM - 01:20 PM **Group Photo**

01:20 PM - 02:00 PM **Lunch Break**

HTFF'22 KEYNOTE LECTURE - PHYSICAL

8:30 AM - 9:15 AM

SESSION CHAIR: Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy

Conjugated Phonon and Hot Carrier Transport in 2D Materials

Dr. Xinwei Wang,
Iowa State State University, USA

Dr. Xinwei Wang is a full professor at Iowa State University (http://web.me.iastate.edu/wang). He obtained his Ph.D. from the School of Mechanical Engineering, Purdue University in 2001, M.S. (1996) and B.S. (1994) from the University of Science and Technology of China. Over the past 20 years, he has led his laboratory to develop new techniques for characterizing thermal transport at the micro/nanoscale, including the TET, ET-Raman, TD-Raman, and FR-Raman techniques. His lab reported the first work on distinguishing the optical and acoustic phonon temperatures under intense photon excitation, and determining their energy coupling factor. His work on conjugated phonon and hot carrier transport represents the first accomplishment in distinguishing these two physical processes and quantifying their transport diffusivities. The thermal reffusivity theory developed in his lab provides a novel way to characterizing material's structure domain size, similar to that measured by x-ray diffraction, but has unique applications for nanomaterials. He received the inaugural Viskanta Fellow Award of Purdue University in recognition of his pioneering and independent work in thermal sciences. He is the recipient of the 2014 Mid-career Award for Research of Iowa State University (ISU) and 2018 ISU Award for Outstanding Achievement in Research. He is the Fellow of ASME and Associate Fellow of AIAA. He serves as the Senior Editor of International Journal of Thermophysics and Journal of Laser Applications, and associate editor of Heat Transfer Research.

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HTFF'22 KEYNOTE LECTURE - PHYSICAL

9:15 AM - 10:00 AM

SESSION CHAIR: Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy

Efficient Energy Architectures

Dr. Sylvie Lorente,
Villanova University, USA

Sylvie Lorente is the Associate Dean for Research & Innovation in the College of Engineering at Villanova University, PA, USA. She is the College of Engineering Chair Professor in Mechanical Engineering at Villanova, and Professor (Exceptional Class) at the National.

She is also Hung Hing-Ying Distinguished Visiting Professorship in Science and Technology at Hong Kong University (Hong Kong), Extraordinary Professor at the University of Pretoria (South Africa), and Adjunct Professor at Duke University (USA). She is a member of the Academy of Europe.

Sylvie has a passion for flow architectures, and works on thermal design, energy storage, vascularized structures, porous media, biological flow networks, urban design and organizations, among other things. She is the author of 7 books, 10 book chapters and 200+ peer-reviewed international journal papers.

MORNING PARALLEL SESSIONS I

Porous Media- Fluid Flow and Heat Transfer - (ROOM 1) - PHYSICAL

10:00 AM - 11:00 AM

SESSION CHAIR: Dr. Xinwei Wang, Iowa State State University, USA

HTFF 124
10:00 - 10:15

The Impact Of Conduction Shape Factor In Volume-Averaged Calculations Of Heat Transfer In Permeable Porous Materials

Anthony Anthony, Western University, Canada
Authors: Anthony Anthony, Cole Fleet

HTFF 141
10:15 - 10:30

A Heat Transfer Analysis of Axial and Radial Functionally-Graded Ceramic Foams Solar Air Receivers

Marcello Iasiello, Università degli Studi di Napoli Federico II , Italy
Authors: Assunta Andreozzi, Marcello Iasiello

HTFF 146
10:30 - 10:45

Dehumidification Performance Evaluation of a Desiccant Rotor Coated With MIL-100 (Fe) Under Process Air Conditions

Jun Yeob Chung, Korea University, Republic of Korea
Authors: Jun Yeob Chung, Myeong Hyeon Park, Sewon Lee, Yongchan Kim

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HTFF 152
10:45 - 11:00

Simulation of the Spectral Conducto-Radiative Exchanges within Semi-Transparent Heterogeneous Media

Cyril Daoût, CEA, France
Authors: Cyril Daoût, Denis Rochais, Olivier Rozenbaumk

10:00 PM - 10:45 PM

Multiphase Flow and Heat Transfer I - (ROOM 2) - PHYSICAL

SESSION CHAIR: Dr. Van Tu Nguyen, Pusan National University, South Korea & Dr. Helena Votoshkin, Agricultural Research Organization, The Volcani Center, Israel

HTFF 127
10:00 - 10:15

Modelling Droplet Evaporation with an Improved Coupled Level Set and Volume of Fluid (I-Clsvof) Framework

Huihuang Xia, Karlsruhe Institute of Technology (KIT), Germany
Authors:Huihuang Xia, Marc Kamlah

HTFF 154
10:15 - 10:30

Experimental Investigation of the Shear Effect on Oil-Water Emulsion Flow in a Pipeline

Natan Augusto Vieira Bulgarelli, University of Campinas, Brazil
Authors: Natan Augusto Vieira Bulgarelli, Jorge Luiz Biazussi, William Monte Verde, Antonio Carlos Bannwart, Marcelo Souza de Castro

HTFF 190
10:30 - 10:45

Heat Transfer Study for Oil-in-Water Emulsion Jets Impinging onto hot Metal Surface

K. Nabbout, Otto-von-Guericke-University Magdeburg, Germany
Authors: K. Nabbout, L. Pasternak, M. Sommerfeld, B. Bock-Marbach, J. Kuhnert2, E. Barth and E. Uhlmann

11:00 AM - 11:20 AM **COFFEE BREAK**

MORNING PARALLEL SESSIONS II

CFD I - (ROOM 1) - PHYSICAL

11:20 AM - 01:10 PM

SESSION CHAIR: Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy & Dr. Anthony (Tony) Straatman, Western University, Canada

HTFF 123
11:20 - 11:35

Underground Car Park Smoke Management System Design Validation Using CFD Simulation: Car Fire Products Yields Rates

Muhanad Hajjawi, Higher Colleges of Technology, University city, UAE

Authors: Muhanad Hajjawi

HTFF 159
11:35 - 11:50

Numerical and Experimental Evaluation of High-Efficiency Savonius Type Wind Turbine at Low Reynolds Number

Ivo Marinić-Kragić, University of Split, Croatia

Authors: Ivo Marinić-Kragić, Damir Vučina1, Igor Pehnec, Petar Latinac

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HTFF 171
11:50 - 12:05

CFD Study Of Flow And Heat Transfer During Compression Process In A Liquid Piston For Isothermal Compressed Air Energy Storage

Mustapha Benaouicha, Segula Technologies, Naval and Energy Engineering Research and Innovation Unit, France

Authors: GOUDA El Mehdi, BENAOUICHA Mustapha, NEU Thibault, FAN Yilin1, LUO Lingai

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HTFF 150
12:05 - 12:20

Simultaneous Heat and Moisture Transport in 3D Printed Walls

Andrea Fragnito, University of Naples, Italy

Authors: Andrea Fragnito, Marcello Iasiello, Gerardo Maria Mauro, Costantino Menna

HTFF 158
12:20 - 12:35

Comparison of Air-Cooling on Metal Heat Sinks Using Numerical Modelling

Wannarat Rakpakdee, Kasetsart University, Thailand
Authors: Wannarat Rakpakdee, Teerapat Thungthong, Weerachai Chaiworapuek, Kanet Katchasuwanmanee, Sangkla Kreuawan, Vu Tran Tuan

HTFF 179
12:35 - 12:50

Pseudospectral Modelling For Flow past a Long Flexible Cylinder

Ming-Jyh Chern, National Taiwan University of Science and Technology, Taiwan
Authors: Ming-Jyh Chern, Jhe-Ming Lin

HTFF 173
12:50 - 01:05

A Modified Preconditioning Approach For Nodal Integral Method

Nadeem Ahmed, Indian Institute of Technology Bombay, India
Authors: Nadeem Ahmed, Alok, Kumar, Niteen Kumar, Suneet Singh

HTFF 165
01:05 - 01:10

Development of a Thermal Mass Airflow Sensor for Low-Velocity Ducted Flow Applications

Eoin Guinan, University of Limerick, Ireland
Authors: Eoin Guinan, Conor Macken, Vanessa Egan

Multiphase Flow and Heat Transfer II - (ROOM 2) - PHYSICAL

11:20 AM - 12:20 PM

SESSION CHAIRS: Dr. Rafael F L de Cerqueira, UNICAMP, Brazil

HTFF 117
11:20 - 11:35

Mechanical Helminth Eggs Separation for Wastewater Purification: Analysis of the Fluid Dynamics

M. Diederich, Düsseldorf University of Applied Sciences, Düsseldorf
Authors: M. Diederich, F. Gül, C. Özman, A. C. Benim, L. Ihringer, D. Möller

HTFF 131
11:35 - 11:50

Analytical Modelling on Simultaneous Phase Transitions in Low Temperature Evaporator for Organic Rankine Cycle Applications

Kwangkook Jeong, Arkansas State University, USA
Authors: Sandeep Aryal, Mohammad Abutayehb, Young Min Kim, Kwangkook Jeong

HTFF 133
11:50 - 12:05

Numerical Study of Cavitation Bubble Collapse under Various Conditions

Van-Tu Nguyen, Pusan National University, Korea
Authors: Van-Tu Nguyen, Thanh-Hoang Phan, Dong-Hyun Kim, and Warn-Gyu Park

HTFF 137
12:05 - 12:20

Numerical Simulation through Fluent Of a Cold, Swirling Particle Flow in a Combustion Chamber

Wronski Tomek, Université de Haute-Alsace, France
Authors: Wronski Tomek, Zouaoui-Mahzoul Nabila1, Schönnenbeck Cornelius, Brillard Alain

Experimental Fluid Flow and Heat Transfer II - (ROOM 2) - PHYSICAL

12:35 PM - 01:20 PM

SESSION CHAIR: Dr. Rafael F L de Cerqueira, University of Campinas, Brazil

HTFF 184
12:35 - 12:50

Adaptive Window Technique for Temperature and Velocity Simultaneous Measurement using Thermographic Particle Tracking Velocimetry

Kyung Chun Kim, Pusan National University, South Korea

Authors: Kyung Chun Kim, Tao Cai

HTFF 155
12:50 - 01:05

Pump using Time-Resolved Particle Image Velocimetry

Rodolfo Marcilli Perissinoto, University of Campinas, Brazil
Authors: Rodolfo M. Perissinotto, William D.P. Fonseca, Rafael F.L. Cerqueira, William Monte Verde, Jorge L. Biazussi, Erick M. Franklin1, Antonio C. Bannwart, Marcelo S. Castrot

HTFF 166
01:05 - 01:20

Analysis of Carbopol And Triethanolamine Concentration in The Viscoplastic Properties of Aqueous Solution

Charlie Van Der Geest, University of Campinas, Brazil
Authors: Daiane Mieko Iceri, Jorge Luiz Biazussi, Charlie van der Geest, Roney Leon Thompson, Marcelo Souza de Castro

01:05 PM - 02:10 PM **LUNCH BREAK**

07:00 PM - 10:00 PM **CRUISE TOUR**

VIRTUAL CONFERENCE

AFTERNOON PARALLEL SESSIONS I

Mineral and Metal Processing - VIRTUAL

02:00 PM - 03:45 PM

SESSION CHAIRS: Dr. Omid Sam-Daliri, National University of Ireland, Ireland

MMME 116
02:00 - 02:15

Characterization of Hydrocarbons Contaminated Platinum Group Metals Mine Sludge from the Bushveld Complex

Willie Nheta, University of Johannesburg, South Africa
Authors: Elelwanir M. S Mavhungu, Willie Nheta, Derek Rose

MMME 117
02:15 - 02:30

Investigating The Mineralogy Of An Oxidised South African PGM Ore From The Western Limb

Willie Nheta, University of Johannesburg, South Africa
Authors: Moselyn Mailula, Willie Nheta, Clayton Bhondayi

MMME 118
02:30 - 02:45

Regeneration Of Degraded Extractant By Sodium Hydroxide Activated Clay And Evaluation Of Its Per-formances In Copper Solvent Extraction

Ruffine Kishiko, University of Johannesburg, South Africa
Authors: Ruffine Kishiko , Willie Nheta

MMME 119
02:45 - 03:00

Effects of Surface Roughness on the Diffusion Bonding of 2024 Aluminum Alloy

Pei-Ing Lee, , National Taiwan University, Taiwan
Authors: Pei-Ing Lee, Shih-Ying Chang, Yu-Kai Sun, and Tung-Han Chuang

MMME 138
03:00 - 03:15

Investigation of the Effects of Process Parameters for Friction Stir Spot Welding of Thin Al 6061 Sheet

Serkan Gundogdu, Izmir Katip Celebi University, Turkey
Authors: Serkan Gündoğdu, Onur Ertuğrul, Ege Anıl Diler

MMME 120
03:15 - 03:30

Sputtering and Evaporating of High Density (111)-textured Ag Nanotwinned Films on Sapphire Wafers

Yin-Hsuan Chen, National Taiwan University, Taiwan
Authors: Yin-Hsuan Chen, Pei-Ing Lee, and Tung-Han Chuang

MMME 134
03:30 - 03:45

Iron Ore Coarse Particle Characterisation: Towards Prediction of Particle Distribution in Gravity Separation Processing

Mapadi Olifant, Mintek, South Africa
Authors: Mapadi Olifant, Deshenthree Chetty, Bertus Smith

02:00 PM - 03:00 PM

Numerical Fluid Flow and Heat Transfer - VIRTUAL

SESSION CHAIRS: Dr. Willie Nheta, University of Johannesburg, South Africa

HTFF 115
02:00 - 02:15

Thermal Performances of Multi-Layered Liquid Cold Plates

Andoniaina M. Randriambololona, University of the District of Columbia, USA
Authors: Andoniaina M. Randriambololona, Mohammad Reza Shaeri

HTFF 134
02:15 - 02:30

Traditional or Reversed Funnel Shape in a Tornado-Like Vortex

Damián Castaño, Universidad de Castilla-La Mancha, Spain
Author: Damián Castaño, María Cruz Navarro, Henar Herrero

HTFF 142
02:30 - 02:45

Impact of Active Cooling On High Power Density Fixtures

Pranit Satish Joshi, Signify Innovations India Ltd, India
Author: Pranit Satish Joshi, Khurram Moghal

HTFF 143
02:45 - 03:00

The Effect of Outlet Manifold Location of Liquid-Cooled Battery Thermal Management Systems on Pumping Power

Kuuku-Dadzie Botchway, University of the District of Columbia, USA
Author: Kuuku-Dadzie Botchway, Mohammad Reza Shaeri

03:00 PM - 03:15 PM

Mining and Safety - VIRTUAL

SESSION CHAIRS: Dr. Willie Nheta, University of Johannesburg, South Africa

MMME 110
03:00 - 03:05

FEM analysis of saline creep behavior over time

Nor Sidki-Rius, Polytechnic University of Catalonia, Spain
Authors: Nor Sidki-Rius, Marc Bascompta, Lluis Sanmiquel, David Parcerisa, Pura Alfonso, Gabriel R. González-Jiménez

MMME 123
03:05 - 03:10

Analysis Of An Accident In The Mining Sector Using The Feyer & Williamson Method

Lluis Sanmiquel, Polytechnic University of Catalonia, Spain
Authors: Lluís Sanmiquel, Marc Bascompta, Nor Sidki, Jordi Vives, Joan López

MMME 131
03:10 - 03:15

Development Of A Low-Cost Microelectromechanical System For The Digitisation Of Bore-holes

Marc Basompta, Polytechnic University of Catalonia, Spain
Author: Jordi Bonet, Marc Bascompta, Pere Palà, Eduard Cámara, Arnau Arumi

3:15 PM - 3:45 PM **COFFEE BREAK**

AFTERNOON PARALLEL SESSIONS II

03:45 PM - 05:15 PM

Applied Mechanics II - VIRTUAL

SESSION CHAIRS: Dr. Omid Sam-Daliri, National University of Ireland, Galway & Ryan Institute for Environmental, Ireland

ICMIE 137
03:45 - 04:00

Optimization of Suspension System Parameters for a SUV

Murat Otkur, American University of the Middle East, Kuwait
Authors: Murat Otkur, Narjes Alshammari, Noura Abdullah, Danah Alkandari, Hanan Thyab, Latifah Alduwaisan

ICMIE 113
04:00 - 04:15

A Study on Traveling-Wave Motor for Miniature Particles Delivery

Yung Ting, Chung Yuan Christian University, Taiwan
Authors: Yung Ting, Chih-Hsuan Yu, Suhail Abbas

ICMIE 123

04:15 - 04:30

Acoustic Emissions Monitoring In Soil Compressibility Laboratory Tests

Danny Xavier Villalva León, Universidad Politécnica de Cartagena, Spain

Authors: Danny Xavier Villalva-León, Gonzalo García-Ros, Juan Francisco Sánchez-Pérez, Enrique Castro-Rodríguez, María Rosa Mena-Requena, Manue Conesa

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ICMIE 107

04:30 - 04:45

Experimental Investigation of Fatigue Strength in Adhesive Bonds

Yunus Emre NEHRI, Balikesir University, Turkey
Authors: Yaprak Nisa OGUZ, Mustafa Burak GEDIKLI, Yunus Emre NEHRI, Gulcan TOKTAS, Ali ORAL

ICMIE 124

04:45 - 05:00

Path Planning with Modified RRT* Algorithm for Lung Biopsy

Yuexi Dong, Sichuan University-Pittsburgh Institute, China
Authors: Yuexi Dong, Kunpeng Wang, Zheng Yang, Sai Cheong Fok, Han Wang

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ICMIE 122

05:00 - 05:15

An Overview of the Study of Acoustic Emissions In Soil Mechanics

Danny Xavier Villalva León, Universidad Politécnica de Cartagena, Spain
Authors: Danny Xavier Villalva León, Gonzalo García-Ros, Juan Francisco Sánchez-Pérez, Enrique Castro-Rodríguez, María Rosa Mena-Requena, Manuel Conesa

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Heat, Mass and Momentum Transport - VIRTUAL

03:30 PM - 04:45 PM

SESSION CHAIRS: Dr. Muhammad Zafar Iqbal, Arab Emirates University, UAE

HTFF 138
03:30 - 03:45

Application of Machine Learning to Predict Thermal Performances of Heat Sinks

Betelhiem N. Mengesha, University of the District of Columbia, USA
Authors: Betelhiem N. Mengesha, Mohammad Reza Shaeri, Soroush Sarabi

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HTFF 162
03:45 - 04:00

3D Printing Of Lunar Soil Simulant towards Compact Structures

Yiwei Liu, Nanjing University Science and Technology & China Academy of Space Technology, China
Authors: Yiwei Liu, Xian Zhang, Qinggong Wang2, Chao Wang, Jian Song, Xiong Chen, Wei Yao

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HTFF 167
04:00 - 04:15

Artificial Neural Network Models to Predict Heat Transfer Coefficients and Pressure Drops in Cold Plates with Surface Roughness

Andoniaina M. Randriambololona, University of the District of Columbia, USA
Authors: Andoniaina M. Randriambololona, Mohammad Reza Shaeri, Soroush Sarabi

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HTFF 175
04:15 - 04:30

Prediction Accuracy of Artificial Neural Networks in Thermal Management Applications Subject to Neural Network Architectures

Andoniaina M. Randriambololona, University of the District of Columbia, USA
Authors: Mohammad Reza Shaeri, Andoniaina M. Randriambololona, Soroush Sarabi

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HTFF 185
04:30 - 04:45

Thermal Resistance Of A Liquid-Solid Interface on Curved Smooth and Rough Walls

Ali Dinler, Istanbul Medeniyet University, Turkey
Authors: Semran Ipek, Kiril St. Shterev, Stefan K. Stefanov, Ali Dinler

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04:45 PM - 06:30 PM

Chemical Engineering II - VIRTUAL

SESSION CHAIRS: Dr. Yuwen Zhang, University of Missouri, USA

ICCPE 116
04:45 - 05:00

Determination of Different Forms of Phosphorus in Waters of the Wastewater Treatment Plant in Durres, Before and After Treatment

Valbona HOXHA, Polytechnic University of Tirana, Albania
Authors: Valbona HOXHA, Albana JANO, Kozeta VASO2, Enkela PORO

ICCPE 117
05:00 - 05:15

Determination of Physico-Chemical Parameters in the Seman Basin Waters, In the Fieri City

Valbona HOXHA, Polytechnic University of Tirana, Albania
Authors: Valbona HOXHA, Albana JANO, Kozeta VASO, Enkela PORO

ICCPE 128
05:15 - 05:30

Design of polymers using Deep learning for Enhanced oil recovery

Kavya Mrudula Tadepalli, IIT Madras , India
Authors: Kavya Mrudula Tadepalli, Rajnish Kumar

ICCPE 126
05:30 - 05:45

Prediction of Critical pH for Fines Migration Pre- and Post-Nanofluid Treatment in Sandstone Reservoirs using the DLVO Modelling

Rizwan Muneer, Nazarbayev University, Kazakhstan
Authors: Rizwan Muneer, Muhammad Rehan Hashmet, Peyman Pourafshary

ICCPE 125
05:45 - 06:00

Effect of Initial Wettability on Capillary Desaturation by Hybrid Engineered Water/Polymer Flooding in Carbonate Reservoirs

Mariam Shakeel, Nazarbayev University, Kazakhstan
Authors: Mariam Shakeel, Peyman Pourafshary, Muhammad Rehan Hashmet

ICCPE 115
06:00 - 06:15

Challenges and Insights into Graphene/Polypropylene Nanocomposites

Muhammad Zafar Iqbal, United Arab Emirates University, UAE
Authors: Muhammad Zafar Iqbal

ICCPE 123
06:15 - 06:30

Laboratory Investigation of Hybrid Nanoparticles Injection for Enhanced Oil Recovery Process

Muhammad Rehan Hashmet, United Arab Emirates University, UAEAuthors: Muhammad Rehan Hashmet, Peyman Peyman, Yernur Satay

MMME'22 PLENARY LECTURE - VIRTUAL

02:10 PM - 03:00 PM

SESSION CHAIR: Dr. Marcello Iasiello, Università degli Studi di Napoli Federico II, Italy

The Critical Role of Metallurgy in the Transition from Linear To Circular Economy

Dr. Zhongyun Fan,
Brunel University London, UK

Fan is a professor of metallurgy, the founder and current Director of BCAST at Brunel University London. He is the principal investigator/ director of the EPSRC funded LiME Research Hub, a national centre of excellence in liquid metal engineering. He is also the principal investigator for the UKRI Interdisciplinary Circular Economy Centre for Circular Metals. He has published over 400 scientific papers with an H-Index of 57 and a total citation of 12554 (Google Scholar). He has led a wide range of research projects as principal investigator with grants totalling over £70M. He has been chairman of 4 major international conferences and members international scientific committee of 6 international conferences. He was the co-chairmen of the Casting and Solidification Society (IOM3, 2012-2018), is a Board Member of the Light Metals Division (IOM3), a Fellow of the Institute of IOM3 and the Institute of Cast Metal Engineers (ICME). He was the recipient of the Elegant Work Prize (1995), the Cook/Ablett Award (2003) and Dowding Medal and Prize (2012) of the Institute of Materials, Minerals and Mining (IOM3). Fan's research has been focused on (1) understanding of early stages of solidification covering prenucleation, heterogeneous nucleation, Grain initiation and Grain refinement; (2) developing metallic materials for closed-loop recycling; and (3) developing innovative techniques for processing light metals.

AFTERNOON PARALLEL SESSIONS I

03:00 PM - 04:50 PM

Experimental Fluid Flow and Heat Transfer III - VIRTUAL

SESSION CHAIRS: Dr. Yuwen Zhang, University of Missouri, USA

HTFF 114

03:00 - 03:15

Experimental Investigation On Heat Transfer Enhancement And New Correlation Of Supercritical R1234ze(E) In Horizontal Helically Coiled Tube

Yi-Ran Jiang, 1 University of Science and Technology of China , China

Authors: Yi-Ran Jiang, Peng Hu, Qi Chen, Cheng-Qi Jia, Pan-Pan Zhao, Lei Jia

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HTFF 160

03:15 - 03:30

Heat Flux Prediction Accuracy Assessment of Separated Mode and Doenecke Equations for MLI Blankets

Toygan ER, Turkish Aerospace Industries, Inc , Turkey

Authors: Toygan Er, Özgür Ekici

HTFF 174

03:30 - 03:45

Additive Manufacturing of Capillary-Driven Two-Phase Cold Plates

Jana Catuche, University of the District of Columbia, USA

Authors: Jana Catuche, Mohammad Reza Shaeri, Michael C. Ellis

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HTFF 181

03:45 - 04:00

Acquisition and Physico-Chemical Data Analysis of Oxygenated Compounds From Biomass Using Microfluidics

MORENO JIMENEZ Rosa America, IFP Energies nouvelles, France

Authors: Rosa Moreno Jimenez, Claire Marliere, Benoit Creton, Olivier Nguyen, Lionel Teule-Gay, Samuel Marre

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HTFF 140

04:00 - 04:15

Correlation Between Wall Heat Transfer And Characteristics Of Pulsating Flow In A Rectangular Tube Toward An Automobile Exhaust System

Yuki Kato, Hiroshima University, Japan

Authors: Yuki Kato, Guanming Guo, Masaya Kamigaki, Kenmei Fujimoto, Mikimasa Kawaguchi, Keiya Nishida, Hitoshi Hongou, Masanobu Koutoku, Hideaki Yokohata, Shinji Sumi, Ryo Yamamoto, Yoichi Ogata

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HTFF 144
04:15 - 04:30

High Frequency Flow Measurement Technique for Slug Flow Regimes

Seyyed Saeed Shojaee Zadeh,Bernal Institute, University of Limerick, Ireland
Authors: Seyyed Saeed Shojaee Zadeh, Vanessa Egan, Pat Walsh

HTFF 156
04:30 - 04:45

Experimental Investigation on Pressure Drop In Liquid-Liquid Taylor Flow Regimes

Seyyed Saeed Shojaee Zadeh,Bernal Institute, University of Limerick, Ireland
Authors: Seyyed Saeed Shojaee Zadeh, Vanessa Egan, Pat Walsh

HTFF 195
04:45 - 04:50

Fouling of whey protein concentrate on polymeric heat exchangers

Philipp Pelz, Technical University Kaiserslautern, Germany
Authors: Philipp Pelz

03:00 PM - 03:45 PM

Chemical Engineering III - VIRTUAL

SESSION CHAIRS: Dr. Xuebo Zhang

ICCPE 105
03:00 - 03:15

Kinetic Analysis and Multi Objective Optimization of L-Lactide Polymerization

Geetu P Paul, National Institute of Technology, India
Authors: Geetu P Paul, Virivinti Nagajyothi

ICCPE 114
03:15 - 03:30

Pineapple Crown Extract As Green Inhibitor for Steel 39 in Acidic Media

Albana Jano, Polytechnic University of Tirana, Albania
Authors: Albana Jano, Alketa Lame, Efrosini Kokalari

ICCPE 113
03:30 - 03:45

The Inhibition Efficiency of Pineapple Crown Extract for Iron B500 in H2SO4and Hcl Media

Albana Jano, Polytechnic University of Tirana, Albania
Authors: Albana Jano, Alketa Lame, Efrosini Kokalari

03:45 PM - 04:35 PM

CFD II - VIRTUAL

SESSION CHAIRS: Dr. Willie Nheta, University of Johannesburg, South Africa

HTFF 157
03:45 - 04:00

Modeling a Large Thermal Energy Storage System Using RANS Turbulence Models and High-Resolution Measurement Data

Benno Krüger, Technical University of Darmstadt, Germany
Authors: Benno Krüger, Frank Dammel, Peter Stephan

HTFF 178
03:50 - 04:05

Ansys Mechanical Automation using Python for the Steady State Thermal Analysis of Fins

Mohamed Shaimi, Hassan II University of Casablanca, Morocco
Authors: Mohamed Shaimi, Rabha Khatyr, Jaafar Khalid Naciri

HTFF 191
04:05 - 04:20

Experimental investigation and Numerical Analysis of Horizontally Placed Flat Pulsating Heat Pipe for Electronic Cooling

Roshan Devidas Bhagat, Institute of Technology and Research, India
Authors: Roshan Devidas Bhagat, Samir Deshmukh

HTFF 192
04:20 - 04:35

Temperature Gradient Impact on Heat Exchanger Leaks Using CFD Analysis

Carlos Lopez, Stress Engineering Services , USA
Authors: Carlos Lopez, Stress Engineering Services , USA
Authors: Abdulrahman A. Khateeb, Abdullah M. Alqahtani, Papa Cisse, Mohammed Alhajri, Dilip Maniar, Carlos Lopez, Vishal Nayyar

NOTES

9th WORLD CONGRESS ON MECHANICAL, CHEMICAL, AND MATERIAL ENGINEERING

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