

World Congress on Momentum, Heat and Mass Transfer (MHMT'16)

The congress consists of:

International Conference on Experimental and Numerical Flow and Heat Transfer (ENFHT'16)

International Conference on Mass Transfer Operation and Devices (ICMTOD'16)

International Conference on Multiphase Flow and Heat Transfer (ICMFHT'16)

International Conference on Combustion Science and Process (CSP'16)

International Conference on Heat Transfer Devices (ICHTD'16)

*Registrants from the five conferences are permitted to attend any sessions from any of the five conferences.
All the sessions of the conference will be held in Room Aquarius.*

Monday April 4

8:00 AM	Registration	Session Chair: Dr. Pedro Coelho
9:00 AM – 9:15 AM	Official Opening of Congress	
9:15 AM – 9:55 AM	ENFHT Keynote Lecture: <i>Aeroacoustics of HVAC Systems: Simulation and Experiment</i> Stefan Becker University Erlangen-Nuremberg, Germany	
9:55 AM – 10:35 AM	ICHTD Keynote Lecture: <i>Exploiting CFD in Aero-Thermo-Mechanical Modelling of Aeroengines</i> John Chew University of Surrey, UK	
10:35 AM – 10:55 AM	Coffee Break	

10:55 AM – 12:20 PM

Session Name:
Fluid Flow, Heat & Mass Transfer

Session Chair:
Dr. Stefan Becker &
Dr. Sean Sanders

10:55 AM – 11:10 AM

ENFHT 105: *The Heat Transfer Characteristics of Cooling Fan with Electromagnetic Driven Oscillating Foils*
Han-Chieh Chiu, Ren-Horn Hsieh, Yu-Jen Chiu, **Jerhuan Jang**, Tse-Fang Lu
Taipei City University of Science and Technology, Taiwan

11:10 AM – 11:30 AM

ENFHT 101: *Effect of Nanoparticles Size and Concentration on Thermal and Rheological Properties of AL₂O₃-Water Nanofluids*
Roy Jean Issa
West Texas A&M University, U.S.A.

11:30 AM – 11:50 AM

ENFHT 113: *Effects of Turbulence on Mass Transfer of Cylindrical Disks*
Herricos Stapountzis, **Georgios Andreatos**, Ioannis Kordatos
University of Thessaly, Greece

11:50 AM – 12:10 PM

ICMFHT 105: *Analytical Determination of the Effect of Biofilm Growth on the Pressure Drop over a Biofilter*
Sonia Woudberg, Jacoline van Jaarsveld, Eric Dumont
Stellenbosch University, South Africa

12:10 PM – 12:20 PM

ICMFHT 106: *Least-Squares Method for Incompressible Two-phase Flow with Large Density and Viscosity Differences*
Keunsoo Park, Maria Fernandino, Carlos A. Dorao
Norwegian University of Science and Technology, Norway

**Group Photo of the Congress will be happening from 12:20 PM – 12:25 PM.
Please come to the registration desk to take the photo.**

12:25 PM – 1:25 PM

Lunch

1:25 PM – 2:55 PM

Session Name:
Combustion and Pollution

Session Chair:
Dr. Vahid Motevalli &
Dr. Pedro Coelho

1:25 PM – 1:35 PM

CSP 104: *Combustion Characteristics of Ammonia as a Promising Renewable Fuel*

Hadi Nozari and Arif Karabeyoglu
Koç University, Turkey

1:35 PM – 1:55 PM

CSP 105: *Numerical Investigation of the Effect of Excess Air and Thermal Power Variation in a Liquid Fuelled Boiler*

Bilal Sungur, Bahattin Topaloglu, Lutfu Namli, Hakan Ozcan
Ondokuz Mayıs University, Turkey

1:55 PM – 2:15 PM

CSP 110: *Finite Element Modeling of a Combustion Chamber with Premixed Laminar Flame using Lumped Parameter Analogy*

Sadaf Shariati, Shahin Mohammadnejad, Dirk Abel
RWTH Aachen University, Germany

2:15 AM – 2:35 PM

CSP 118: *Consistent Chemical Mechanism from Collaborative Data Processing*

Nadezda Slavinskaya, Jan-Hendrik Starcke, Mehdi Abbasi, Aisulu Tursynbay, Uwe Riedel, Wenyu Li, Jim Oreeluk, Arun Hedge, Andrew Packard, Michel Frenklach
German Aerospace Center, Germany

2:35 PM – 2:45 PM

CSP 107: *Effects of Inlet Air Preheating on NO_x Emissions from a Kerosene Fuelled Partially Premixed Injection Burner*

Shunsaku Oide, Dai Okiyama, Shintaro Goseki, Shigeru Hayashi
Hosei University, Japan

2:45 PM – 2:55 PM

CSP 116: *Compression Auto Ignition Control in a 2-Stroke Barrel-Type Opposed-Piston Engine*

Rafał Pyszczek, Paweł Mazuro, **Andrzej Teodorczyk**
Warsaw University of Technology, Poland

2:55 PM – 3:15 PM

Coffee Break

3:15 PM – 3:55 PM	
Session Name: HVAC	Session Chairs: Dr. Nadezda Slavinskaya
3:15 PM – 3:25 PM	ENFHT 107: <i>Analytical Study on the Vapour Injection Scroll Compressor</i> Dongwoo Kim , Hyunjoon Chung, Bo Gyeom Kim, Yongseok Jeon, Yongchan Kim Korea University, Republic of Korea
3:25 PM – 3:35 PM	ENFHT 108: <i>Experimental Study on the Performance Characteristics of a Vapour Compression Refrigeration Cycle using an Ejector</i> Yongseok Jeon , Sunjae Kim, Dongwoo Kim, Yongchan Kim Korea University, Republic of Korea
3:35 PM – 3:55 PM	ENFHT 111: <i>Experimental investigation of a multi effect membrane based regenerator for high concentration aqueous LiCl solution as desiccant</i> Nirmalya Datta , Anutosh Chakraborty Nanyang Technological University, Singapore
3:55 PM – 4:45 PM	
Session Name: Numerical Simulation	Session Chairs: Dr. Shigeru Hayashi
3:55 PM – 4:05 PM	CSP 122: <i>Chemical Reactor Modelling (CRN) of a Reverse Flow Combustor</i> Gurkan Sarikaya , Gokhan Varol, Onur Tuncer Istanbul Technical University (ITU), Turkey
4:05 AM – 4:25 PM	CSP 113: <i>Flame Propagation Dependency Analysis on Confinement Geometry Shape in Hydrogen-Air-Steam Combustion Simulations</i> Tadej Holler , Ed M.J. Komen, Ivo Kljenak Jožef Stefan Institute, Slovenia
4:25 PM – 4:45 PM	CSP 125: <i>Effect of Solid Fuel Particle Size on Burning Rate Using Computational Analysis</i> Thomas Marino, Vahid Motevalli Tennessee Technological University, USA

Monday

Tuesday

April 5

9:00 AM – 9:45 AM	CSP Keynote Lecture: <i>Radiative Transfer in Combustion Processes</i> Pedro Coelho Universidade de Lisboa, Portugal	Session Chairs: Dr. Stefan Becker
9:45 AM – 10:30 AM	ICMFHT Keynote Lecture I: <i>Multiphase Pipeline Flow Research: Challenges of Scale-up and Opportunities for Process Intensification</i> Sean Sanders University of Alberta, Canada	
10:30 AM – 10:50 AM	Coffee Break	
10:50 AM – 11:30 AM	ICMFHT Keynote Lecture II: <i>Coupled Heat, Moisture and Salt Transport in Civil Engineering Structures Performed on Parallel Computers</i> Jaroslav Kruis Czech Technical University in Prague, Czech Republic	
11:30 AM – 12:30 PM		
Session Name: Experimental Measurements		Session Chair: Dr. Sonia Fidler-Woudberg
11:30 AM – 11:50 AM	ICMTOD 102: Determination of U(VI) and Pu(IV) Mass Transfer Constants with N,N-dialkylamides in Liquid-Liquid Extraction Anne Lélías-Vanderperre , Romain Berlemont, Manuel Miguirditchian, Jean Pierre Simonin CEA - Nuclear Energy Division, France	
11:50 AM – 12:00 PM	CSP 111: Experimental Study On Coal Chars Oxy-Combustion In A Novel Furnace For Solid Fuels Characterization Wojciech Adamczyk, Ryszard Bialecki, Mario Ditaranto, Nils Erland L. Haugen, Anna Katelbach-Woźniak, Adam Klimanek1, Sławomir Śladek, Andrzej Szłek , Gabriel Węcł Silesian University of Technology, Poland	

12:00 PM – 12:20 PM	<p>CSP 115: <i>Measurement of the Laminar Burning Velocity of Neat Jet Fuel Components</i> Sandra Richter, Marie B. Raida, Clemens Naumann, Uwe Riedel German Aerospace Center (DLR), Germany</p>
12:20 PM – 12:30 PM	<p>CSP 120: <i>High-Speed Time-Resolved Multispectral Imaging of a Turbulent Flame</i> Marc-André Gagnon, Pierre Tremblay, Eric Guyot, Philippe Lagueux Telops Inc., Canada</p>
12:30 PM – 1:30 PM	Lunch
1:30 PM – 3:20 PM	
Session Name: Modeling and Simulation	Session Chairs: Dr. Sean Sanders & Dr. Shigeru Hayashi
1:30 PM – 1:50 PM	<p>ENFHT 114: <i>Design of A New Non-Contact Screw Seal and Determination of Performance Characteristics</i> Vildan Girişta Kaya, Vedat Temiz, Zeynep Parlar, Levent Kavurmacıoğlu Istanbul Technical University, Turkey</p>
1:50 PM – 2:10 PM	<p>ICMFHT 108: <i>Numerical Analysis of Porous Wall-Bounded Turbulent Flows Based on the Lattice Boltzmann Method</i> Zheng Tang, Shuai Tang, Yuhong Dong Istanbul Technical University, Turkey</p>
2:10 PM – 2:30 PM	<p>ICMFHT 110: <i>Pool Boiling Versus Surface Wettability Characteristics</i> Fabio Villa, Anastasios Georgoulas, Marco Marengo, Paolo Di Marco, Joël De Coninck University of Mons, Belgium</p>
2:30 PM – 2:40 PM	<p>ICMFHT 111: <i>Numerical and Experiment Study of the Correlation between Skin Blood Flow Oscillation and Radial Pulse at Wrist</i> Shuang Tian, Tianxi Chi, Yang Liu, Zhongdi Su The Hong Kong Polytechnic University, Hong Kong</p>

<p>2:40 PM – 3:00 PM</p>	<p>ICHTD 101: <i>Optical Performance and Optimization of Two Stationary Compound Parabolic Collectors (CPC)</i> Evangelos Bellos, Christos Tzivanidis, Kimon A. Antonopoulos National Technical University of Athens, Greece</p>
<p>3:00 PM – 3:20 PM</p>	<p>ICHTD 102: <i>Energetic and Financial Comparison between a 1-Stage Absorption Chiller Driven by FPC and a 2-Stage Absorption Chiller Driven by PTC</i> Evangelos Bellos, Christos Tzivanidis, Nikolaos Zervas, Georgios Mitsopoulos, Kimon A. Antonopoulos National Technical University of Athens, Greece</p>
<p>3:20 PM – 3:35 PM</p>	<p>Coffee Break</p>
<p>8:00 PM – 10:00 PM</p>	<p>Cruise Tour</p>