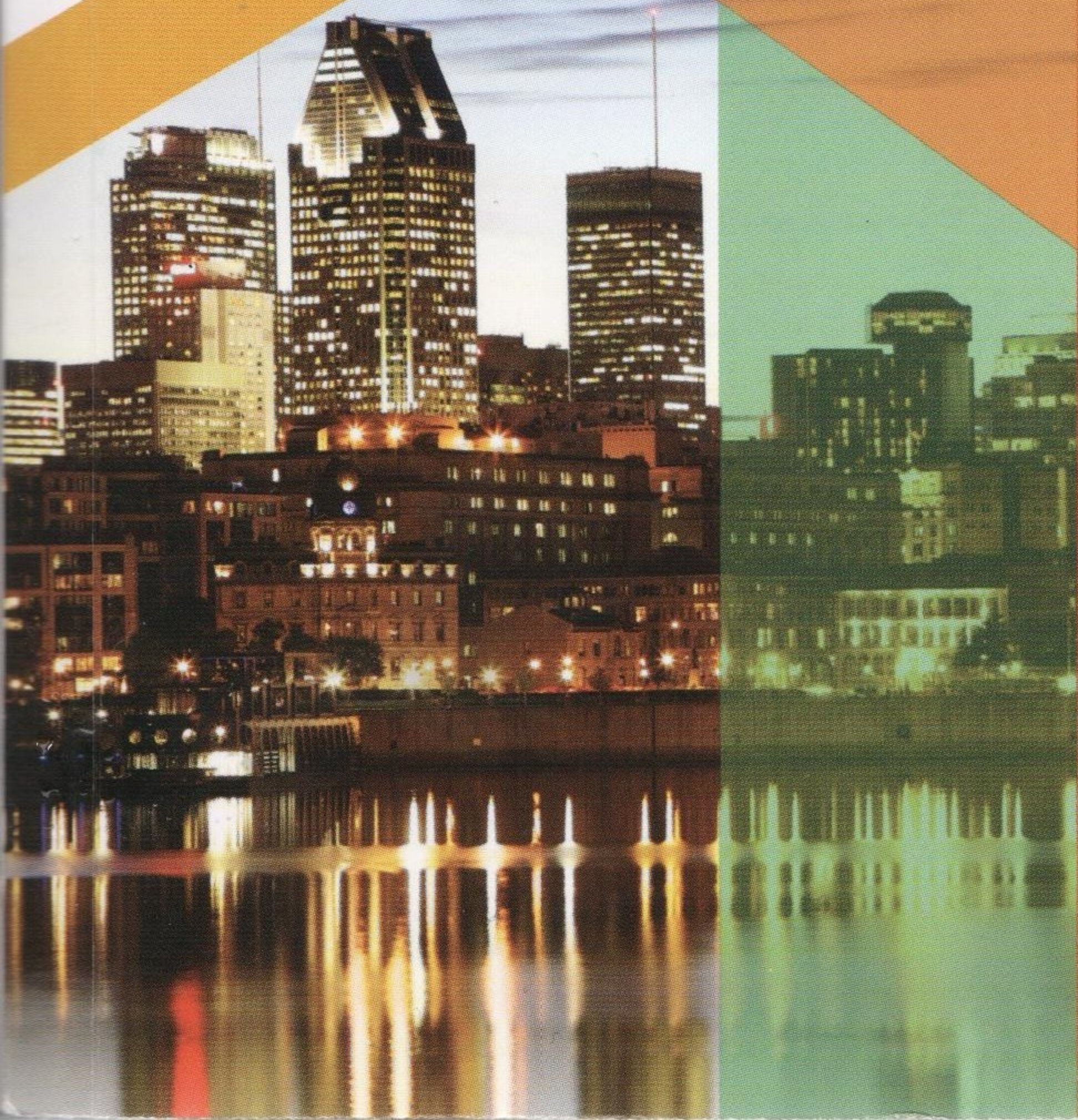


# 2014

INTERNATIONAL  
MECHANICAL  
ENGINEERING  
CONGRESS  
& EXPOSITION

November 14–20 2014  
Montreal, Canada

## Program



**1:51pm – Effect of Longitudinal Core Flow on Vortex Stability**

Technical Paper Publication. IMECE2014-38522

Amir Allaf-Akbari, A. Gordon L. Holloway, Joseph Hall,  
University of New Brunswick, Fredericton, NB, Canada

**2:08pm – Effect of Inclination on the Air-Water Flow in 4 in. Inner Diameter Pipeline**

Technical Paper Publication. IMECE2014-38468

Mehaboob Basha, Syed M. Shaahid, Muhammad Mudasar Imam, Aftab Ahmad, Luai Al-Hadhrami, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia

**2:25pm – Experimental Study of Twin Liquid Jets Interaction on Stationary and Moving Surfaces**

Technical Paper Publication. IMECE2014-36777

Mohammad Mohsen Seraj, Mohamed Gadala, University of British Columbia, Vancouver, BC, Canada

**9-1 21st Symposium on Fluid Mechanics and Rheology of Nonlinear Materials and Complex Fluids**

**9-1-2 Fluid Mechanics and Rheology of Nonlinear Materials and Complex Fluids II**

520F

3:00pm–4:45pm

**Session Organizer:** Dennis Siginer, Botswana International University of Science and Technology & Universidad de Santiago de Chile, Santiago, Chile

**Session Co-Organizer:** Mhamed Boutaous, Institut National des Sciences Appliquées de Lyon, Villeurbanne, France

**3:00pm – Analysis of the Process-Structure-Behavior Interaction in Bio-Sourced Polymers: Role of the Crystallization Kinetics**

Technical Paper Publication. IMECE2014-39729

Mhamed Boutaous, Zakariaa Refaa, Matthieu Zinet, Shihe Xin, Patrick Bourgin, Institut National des Sciences Appliquées de Lyon, Villeurbanne, France

**3:17pm – Velocity Field and Energy Dissipation in Viscoplastic Flow in Tubes of Noncircular Cross Section**

Technical Paper Publication. IMECE2014-36246

Mario Letelier, University of Santiago of Chile, Santiago, Chile, Chile, Dennis Siginer, Universidad de Santiago de Chile, Wichita, KS, United States, Felipe Godoy, University of Santiago of Chile, Santiago, Chile

**3:34pm – Viscoelastic Rotating Flow With Viscous Dissipation**

Technical Paper Publication. IMECE2014-36880

Abbas Hazbavi, Nariman Ashrafi, Mohamad Najafi, Islamic Azad University, Tehran, Iran

**3:51pm – Airflow Distribution in the Longitudinal Plan of a Boeing 767 Mockup Cabin**

Technical Paper Publication. IMECE2014-40102

Maher Shehadi, Mohammad Hosni, Byron Jones, Kansas State University, Manhattan, KS, United States

**4:08pm – Experimental and Numerical Investigation of Compressor Corner Stall**

Technical Presentation. IMECE2014-40035

Saeed Anwar, Benha University, Benha, Egypt, Hesham El-Batsh, Ali Attia, Benha University, Benha-Qalubia, Egypt

**4:25pm – N-Heptane Pool Fire Behavior in a Controlled Oxygen and Low-Pressure Environment**

Technical Paper Publication. IMECE2014-37389

Quanyi Liu, Kewei Chen, Nan Wu, Jiusheng Yin, Rui Yang, Hui Zhang, Tsinghua University, Beijing, China

**9-5 15th Symposium on Fundamental Issues and Perspectives in Fluid Mechanics**

**9-5-2 Fundamental Issues and Perspectives in Fluid Mechanics II**

521A

3:00pm–4:45pm

**Session Organizer:** Khaled J. Hammad, Central Connecticut State University, Simsbury, CT, United States

**Session Co-Organizers:** Francisco Diez, Rutgers University, Piscataway, NJ, United States, Francine Battaglia, Virginia Tech, Blacksburg, VA, United States

**3:00pm – Analysis of Turbulent Flow Past Bar-Racks**

Technical Paper Publication. IMECE2014-38653

Samuel Paul, Sunrit Engineering and Consulting Services Inc., Winnipeg, MB, Canada, Muyiwa Adaramola, Norwegian University of Life Sciences, Ås, Norway

**3:17pm – Wavelets of Finite Height Grid Turbulence Over a Flat Plate**

Technical Paper Publication. IMECE2014-36803

Fama Fouladi, Paul Henshaw, David S.-K. Ting, University of Windsor, Windsor, ON, Canada

**3:34pm – Relation Between Sound Sources and Vortical Structures in Isotropic Compressible Turbulence**  
 Technical Paper Publication. IMECE2014-37052  
 Daiki Terakado, University of Tokyo, Sagamihara, Japan, Taku Nonomura, Makoto Sato, Kozo Fujii, JAXA, Sagamihara, Japan

**3:51pm – Numerical Simulation of Using Combined Active and Passive Stall Control Techniques in Centrifugal Compressors**  
 Technical Paper Publication. IMECE2014-37983  
 Taher Halawa, Mohamed Gadala, University of British Columbia, Vancouver, BC, Canada, Mohammed Alqaradawi, Qatar University, Doha, Qatar, Osama Badr, British University in Egypt, Al-Shorouk City, Egypt

**4:08pm – Pressure Drop Testing of Corrugated Stainless Steel Pliable Gas Tubing (PLT)**  
 Technical Paper Publication. IMECE2014-36668  
 Bharadwaj Srinivasan, Stephen Idem, Tennessee Tech University, Cookeville, TN, United States

✓ **4:25pm – Method of Autonomous Statistical Modeling ASMTurb and Its Testing on the Example of Classical Turbulent Flows**  
 Technical Paper Publication. IMECE2014-36355  
 Yuriy Nuzhnov, Al-Farabi Kazakh National University, Almaty, Kazakhstan

## 9-8 23rd Symposium on Industrial Flows

### 9-8-2 Industrial Flows II

521B

3:00pm–4:45pm

**Session Organizer:** Sandip Kale, Trinity College of Engineering and Research, Pune, Pune, India

**Session Co-Organizer:** George Chamoun, Eastman Chemical Company, Kingsport, TN, United States

**3:00pm – Effects of Fouling and Erosion on the Blades of a Centrifugal Compressor in Two Different Thicknesses**

Technical Presentation. IMECE2014-36186

Vahid Kamali, Science and Research of Tehran University, Tehran, Iran, Yahya Aghayari, Teacher Training University Shahid Rajaei, Tehran, Iran

**3:17pm – Numerical Study of the Fluid Flow in a Cylindrical Hydrocyclone Separator**

Technical Paper Publication. IMECE2014-39561

Hans E.M. Ninahuanca, Henrique Stel, Rigoberto E.M. Morales, PPGEM/UTFPR, Curitiba, Paraná, Brazil

**3:34pm – Leveling of a Line of Paint Droplets on a Surface**  
 Technical Paper Publication. IMECE2014-37109

Javad Esmaeelpanah, Alireza Dalili, Javad Mostaghimi, University of Toronto, Toronto, ON, Canada, Sanjeev Chandra, University of Toronto, Mississauga, ON, Canada

**3:51pm – Universal Semi-Analytic Model for Axial Mixing in a Straight Pipe**

Technical Paper Publication. IMECE2014-37351

Heng Luo, Yun Li, Hai Wang, Xi'an Jiaotong University, Xi'an, Shaanxi, China

**4:08pm – Novel Energy Storage and Recovery Architecture for Speed-Controlled Hydraulic Actuation**

Technical Paper Publication. IMECE2014-37696

Oscar Pena, Michael Leamy, Georgia Institute of Technology, Atlanta, GA, United States

**4:25pm – Theoretical and Experimental Study of Hydrocyclone Performance and Equivalent Settling Area**

Technical Paper Publication. IMECE2014-37482

Reza Sabbagh, Michael G. Lipsett, Charles R. Koch, David S. Nobes, University of Alberta, Edmonton, AB, Canada

## 9-10 Symposium on Fluid Measurements and Instrumentation

### 9-10-2 FMITC Session 2

521C

3:00pm–4:45pm

**Session Organizer:** Judith Bamberger, Pacific Northwest National Laboratory, Richland, WA, United States

**Session Co-Organizer:**s Francisco Diez, Rutgers University, Piscataway, NJ, United States, Joel Park, Naval Surface Warfare Center Carderock Division, West Bethesda, MD, United States

**3:00pm – Efficient Airload Determination for Bluff Body Aeromechanics**

Technical Paper Publication. IMECE2014-37638

Sorin Pirau, Vrishank Raghav, Alex Forbes, Brandon Liberi, Narayanan Komerath, Georgia Institute of Technology, Atlanta, GA, United States

**3:15pm – Experimental Performance Evaluation of a Centrifugal Pump With Different Impeller Vane Geometries**

Technical Paper Publication. IMECE2014-38985

Susanta Kumar Das, Kettering University, Flint, MI, United States