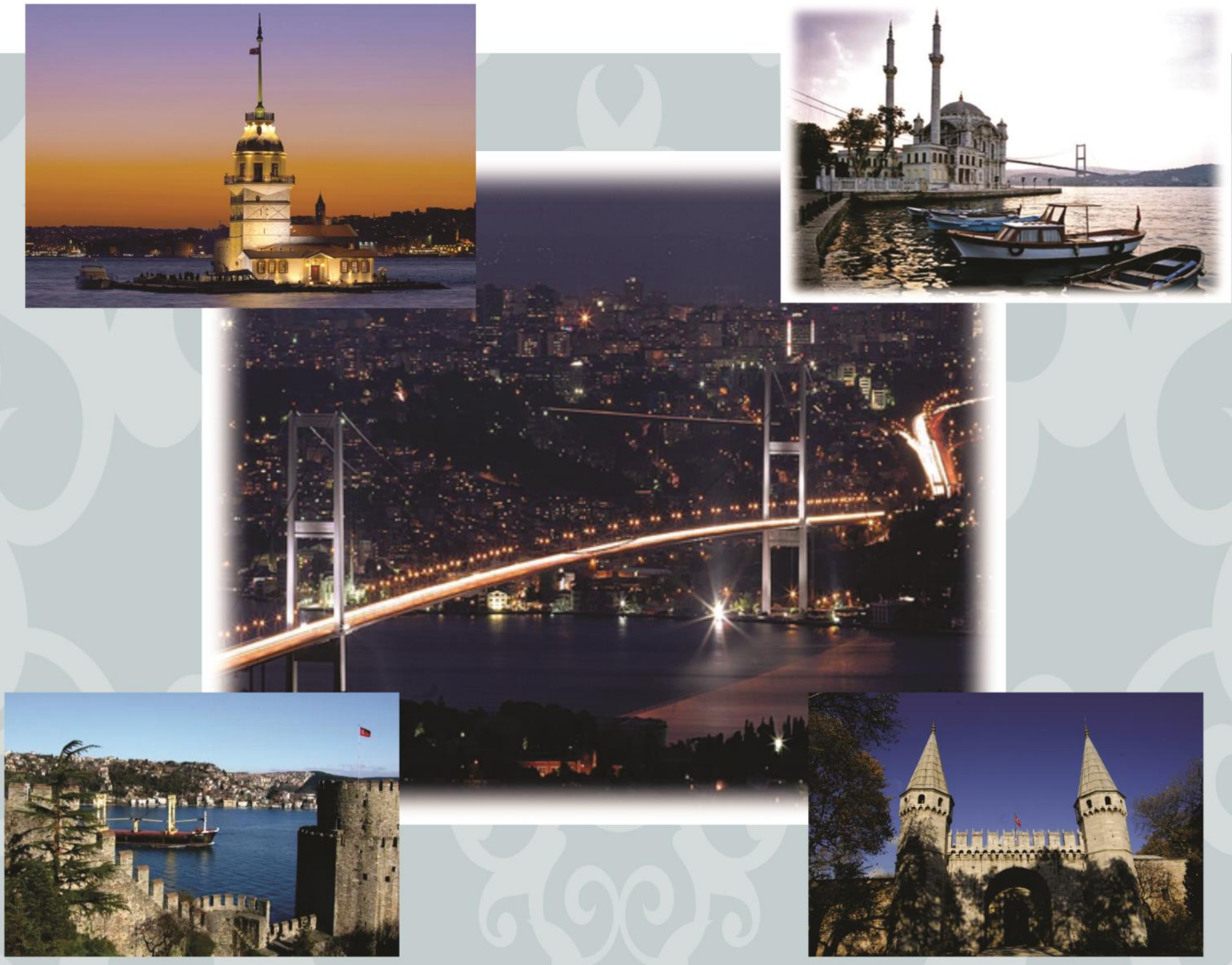
ICCFD9

The 9th International Conference on Computational Fluid Dynamics



July 11-15, 2016 • Grand Cevahir Hotel, Şişli • Istanbul Turkey

MERHABA!

Welcome to Istanbul and the 9th International Conference on Computational Fluid Dynamics (ICCFD9).

As the leading international conference devoted to both basic and applied CFD, this event brings the latest innovations to a large international community. ICCFD was founded in 2000 with the merger of the International Conference on Numerical Methods in Fluid Dynamics (ICNMFD) and the International Symposium on Computational Fluid Dynamics (ISCFD).

This year's conference introduces several new benefits for participants, including continued longer, more in-depth papers, availability of abstracts and technical papers on the conference website, and the introduction of "Young CFD Investigator Award, In memory of Prof. Kunio Kuwahara of Japan" and the Student Support Programs. In addition, we are honored to have distinguished invited speakers from the international CFD community.

We would like to thank each of you for attending this year's conference and bringing your expertise to our gathering. As CFD experts, you have the vision, the knowledge, and the experience to help pave our way into the future. We encourage you to network with your international colleagues both during and after the technical sessions and at our social events. Please also take time to interact with and encourage the ICCFD9 student members—our future colleagues and leaders.

Our personal respect and thanks to all of you for attending.

CONFERENCE CO-CHAIRS

Prof. Alim Rüstem Aslan

Dr. Ayşe Gül Güngör

Prof. İlyas Bedii Özdemir

ICCFD9 Invited Speakers

Each day of the conference, we will feature a distinguished invited speaker in the 8–9 am timeslot.

Monday

Prof. Metin Muradoglu (Koc University)

Dr. Muradoglu is a professor in Mechanical Engineering at Koc University. He received BS degree from Istanbul Technical University (ITU) in Aeronautical Engineering in 1992, and MS and PhD degrees both from Cornell University in 1997 and 2000, respectively. He also worked as a postdoc at Cornell for about 18 months before joining Koc University faculty in 2001 as an assistant professor. He has had visiting positions at Harvard, Notre Dame and Princeton Universities.

Some of his CFD contributions include:

- The first consistent hybrid finite-volume/particle method for solving the PDF equations of turbulent reacting flows.
- A front-tracking method for direct numerical simulations of soluble surfactant in multiphase flows.
- An auxiliary grid method for computations of multiphase flows in complex geometries.
- Development of a front-tracking method for computational modeling of viscoelastic two-phase systems

Prof. Muradoglu is the recipient of Turkish Academy of Sciences (TUBA) outstanding young scientist award (2009) and encouragement award by Scientific and Technical Research Council of Turkey (TUBITAK) (2010).

His web site is http://home.ku.edu.tr/~mmuradoglu/

Tuesday

Prof. Georges-Henri Cottet (University of Grenoble Alpes)

Georges-Henri Cottet received his PhD form University Paris 6 in 1982. He then joined CNRS as a Research Assistant. After two years at UCLA as Assistant Professor he was appointed Professor at the Université of Grenoble in 1990. He was elected senior member of the Institut Universitaire de France in 2009.

G.-H. Cottet was the founder in 2007 and chairman until 2011 of the Laboratoire Jean Kuntzmann, a laboratory gathering about 250 people in Applied Math and Computer Science. In 2011 he founded AMIES (Agency for Mathematics in Interaction with Enterprises and

Society), a national initiative of CNRS with INRIA and University of Grenoble, to foster interactions between mathematics and enterprises. The research of G.-H. Cottet is in numerical analysis and scientific computing. His contributions in particular deal with the following topics:

-design, numerical analysis and applications of particle methods in CFD
-nonlinear anisotropic diffusion for image processing
-sub-grid scale modeling for Large Eddy Simulations
-level set and penalization methods for fluid-structure interaction.

His website and recent papers are at the following address:
http://ljk.imag.fr/membres/Georges-Henri.Cottet/

Prof. Laiping Zhang (CARDC)

Laiping Zhang is a research professor of fluid mechanics in Computational Aerodynamics Institute (CAI) of China Aerodynamics Research and Development Center (CARDC). He graduated from the Department of Modern Mechanics, University of Science and Technology of China (USTC) in 1990. Then, he received his MSc and PhD degrees from CARDC, in 1993 and in 1997, respectively, where he studied under Prof. Hanxin Zhang. He visited Michigan State University as a visiting scholar in 2002-2003, and worked with Prof. ZJ Wang. His areas of interest include hybrid and dynamic grid generation techniques, numerical methods, parallel computing and CFD applications in aerodynamics. His code, HyperFLOW, has been applied in many fields, including aerodynamics of airplanes, cars and trains, multi-body separation and interaction, bio-fluid dynamics of fishes and birds. His current research interests are high-order schemes on unstructured grids (such as DG/FV hybrid schemes), automatic and robust super-large scale hybrid grid generation and adaptation, DES and LES of turbulence flow over complex geometries, multidisciplinary coupling simulations and numerical virtual flight, bionic flow mechanics of UAVs. He is the author of more than 150 articles covering the fields enumerated above.

Wednesday

Assoc. Prof. Mehmet Şahin (ITU)

Mehmet Şahin is an Associate Professor at the Faculty of Aeronautics and Astronautics of Istanbul Technical University. He received B.Sc. degrees in both Aeronautical Engineering and Physics Engineering from Istanbul Technical University. Then he obtained a scholarship from the Ministry of Japanese Education Culture and Sport and completed his MSc degree at the Mechanical Engineering Department of Yokohama National University in Japan. He also received another MSc degree from the Aerospace Engineering Department of Georgia Institute of Technology. He completed his PhD degree in Mechanical Engineering from the Swiss Federal Institute of Technology at Lausanne in 2004.

Prior to joining to Istanbul Technical University in 2009, he worked as a postdoc at the Mathematics Department of University College London as a part of the Microscale Polymer Processing (MuPP2) project supported by ESPRC and as a research associate at the Aerospace Engineering Sciences Department at the University of Colorado at Boulder. His current research and teaching interest include advanced numerical algorithms, ALE methods, high-performance computing, flow instabilities, non-Newtonian flows, multi-phase flows, fluid-structure interactions, dynamic mesh adaptation, low Reynolds number aerodynamics and animal locomotion. His codes and numerical methods have been applied to the simulation of three-dimensional viscoelastic instabilities, polymer processing, fluid-structure interaction in arteries, insect flight, jellyfish swimming, MAVs, etc. He is a currently working within the Fluid Mechanics Research Center - FMRC group at ITU.

His website is http://web.itu.edu.tr/~msahin/

Thursday

Prof. Shigeru Obayashi (M'96)

Shigeru Obayashi received B.S. and M.S. degree from University of Tsukuba in 1982 and 1984, respectively. He received Doctor of Engineering from University of Tokyo in 1987.

He worked as a visiting scientist at NASA Ames Research Center from 1987, and then joined the faculty of engineering at Tohoku University as an associate professor in 1994. He is a professor at Institute of Fluid Science, Tohoku University, Sendai, Japan since 2003. He also serves as Director of the Institute since 2014. His current research interests include computational fluid dynamics, multidisciplinary design optimization, evolutionary computation, data mining and their real-world applications.

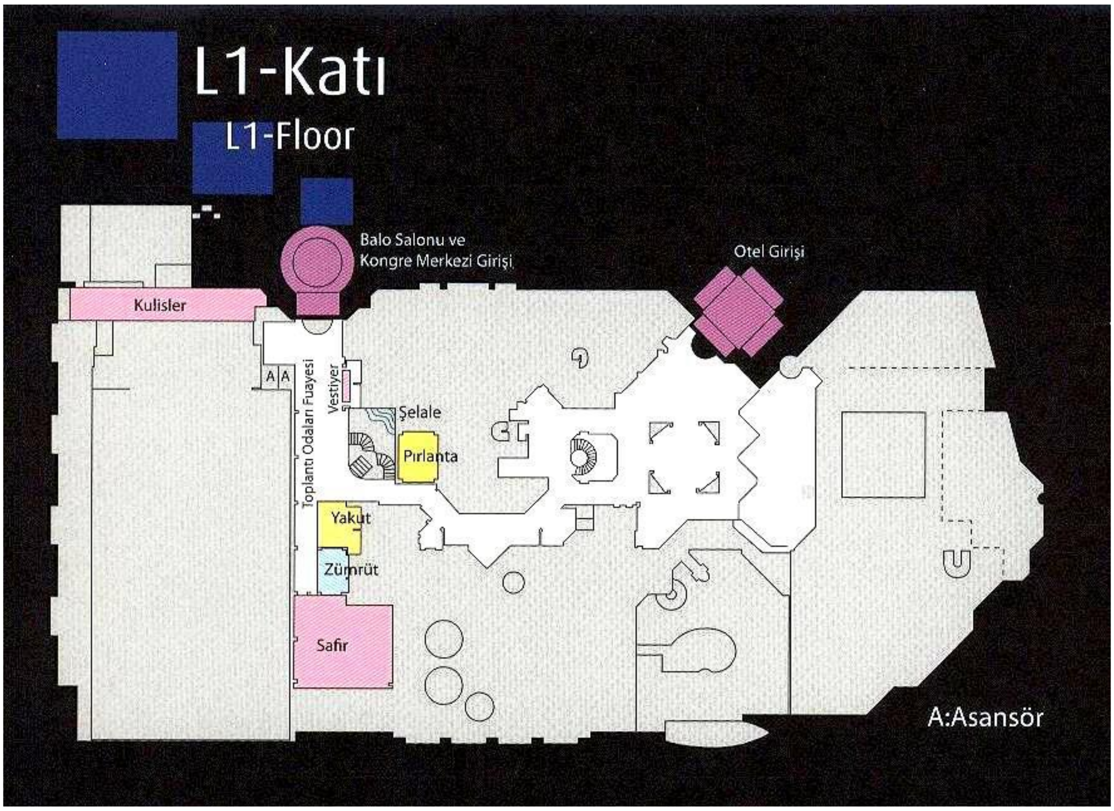
Prof. Obayashi is currently President of the Japanese Society for Evolutionary Computation (2015-2016), Associate Fellow of the American Institute of Aeronautics and Astronautics, Fellow of the Japan Society for Aeronautical and Space Sciences, Fellow of the Japan Society of Mechanical Engineer, Fellow of the Japan Society of Fluid Mechanics. His awards and honors include 1993 NASA Ames Honor Award, 2012 Computational Mechanics Award, the Japan Society of Mechanical Engineers and 2014 the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology.

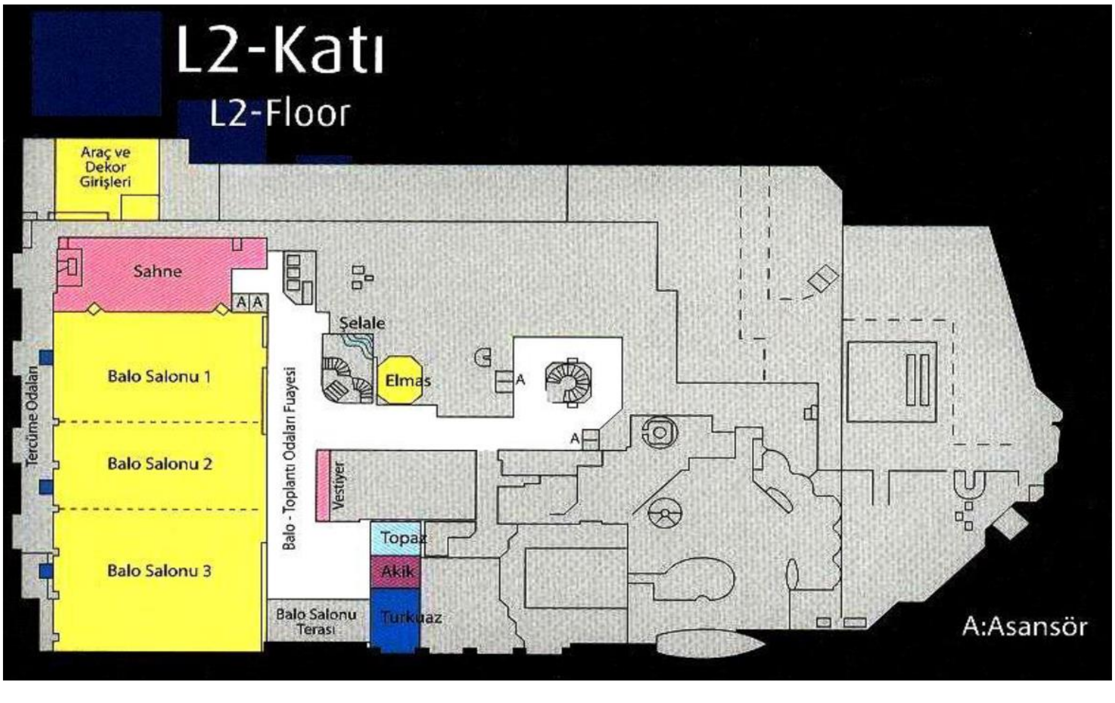
His website is http://www.ifs.tohoku.ac.jp/edge/e_index.html.

ICCFD9 Schedule Overview

Time		Monday July 11 , 2016	Tuesday July 12 , 2016	Wednesday July 13 , 2016	Thursday July 14 , 2016	Friday July 15 , 2016
7:00-7:45		Registration	Registration	Registration	Registration	Registration
7:45-8:00		Openning				
8:00-9:00	PLANERY TALKS	M MURADOGLU	GH COTTET	M SAHIN	S OBAYASHI	
9:00-9:30		TEA/COFFEE BREAK				
9:30-10:00	1	3 PARALLEL SESSION				
10:00-10:30	2					
10:30-11:00	3					
11:00-11:30	4					
11:30-12:00	5					
12:00-12:30	6					
12:30-14:00		LUNCH				
14:00-14:30	KEYNOTE TALKS	AG GUNGOR	Z LAIPING	CITY Tour	POSTER SESSION	POSTER SESSION
14:30-15:00	1	3 PARALLEL SESSIONS			3 PARALLEL SESSIONS	
15:00-15:30	2					
15:30-16:00	3					
16:00-16:30		TEA/COFFEE BREAK			TEA/COFFEE BREAK	CLOSING
16:30-17:00	4	3 PARALLEL SESSIONS			3 PARALLEL SESSIONS	
17:00-17:30	5					
17:30-18:00	6					

Grand Cevahir Hotel
CONVENTION CENTER


L1-Katı
L1-Floor
Balo Salonu ve Kongre Merkezi Girişi
Otel Girişi
Kulisler
A A
Toplantı Odaları Fuayesi
Vestiyer
Şelale
Pırlanta
Yakut
Zümrüt
Safir
A:Asansör


L2-Katı
L2-Floor
Araç ve Dekor Girişleri
Sahne
A A
Şelale
Elmas
A
A
Tercüme Odaları
Balo Salonu 1
Balo Salonu 2
Balo Salonu 3
Balo - Toplantı Odaları Fuayesi
Vestiyer
Topaz
Akik
Turkuaz
Balo Salonu Terası
A:Asansör

ICCFD9 Program: Monday, July 11, 2016

07:00 am – 07:45 am	**Registration**	Location
07:45 am – 08:00 am	**Opening Remarks by Co-Chairs**	
08:00 am – 09:00 am	**Invited Lecture**	
P1	Prof. Metin Muradoglu Dept. of Mechanical Engineering, Koc University, Istanbul, Turkey Topic: "Computational Modeling of Soluble Surfactant in Multiphase Flows"	
09:30 am – 10:00 am	**Break**	

01 Chairs: Muradoglu, M. — **Numerical Methods - I** — **Ballroom 1**

	09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	12:00pm – 12:30pm
09:30am:12:30 pm	ICCFD9-2016-150 *A Posteriori Stability Analysis of Finite-Volume Methods on Unstructured Meshes* Reza Zangeneh, Dr. Carl Ollivier-Gooch University of British Columbia, Canada	ICCFD9-2016-152 *An accurate and robust finite volume scheme based on the spline interpolation for solving the Euler and Navier–Stokes equations on non-uniform curvilinear grids* Qiuju Wang, Yu-xin Ren Institute of Applied Physics and Computational Mathematics, China	ICCFD9-2016-327 *Cell-Centered Reconstruction based Finite Volume Method for Hyperbolic Incompressible Navier-Stokes Equations on Unstructured Grids* Hyung Taek AHN, Euntaek LEE, Gwang Soo GO, Hong LUO University of Ulsan, Korea North Carolina State University, USA	ICCFD9-2016-321 *Preconditioned Characteristic Boundary Conditions based on Artificial Compressibility Method for Solution of Incompressible Viscous Flows* Kazem Hejranfar, Kaveh Parseh Sharif University of Technology, Iran	ICCFD9-2016-124 *ENATE procedure for the Navier Stokes equations* Antonio Pascau, Muslum Arıcı, Víctor Llorente University of Zaragoza and CSIC, Spain Kocaeli University, Turkey	ICCFD9-2016-140 *Application of the BDDC method to incompressible flows* Martin Hanek, Jakub Šístek, Pavel Burda Czech Technical University, Czech Republic Czech Academy of Sciences, Czech Republic

02 Chairs: Satofuka, N. — **Large Eddy Simulation - I** — **Ballroom 2**

	09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30pm – 12:00pm	
09:30am:12:30 pm	ICCFD9-2016-149 *Recent Progresses in Large Eddy Simulations with the FR/CPR Method* Z.J. Wang, Yanan Li University of Kansas,USA	ICCFD9-2016-158 *LES-IB computations of flows with large temperature and density variations* Artur Tyliszczak, Witold Elsner, Mariusz Ksiezyk Czestochowa University of Technology, Poland	ICCFD9-2016-276 *Implicit v.s. Explicit Large Eddy Simulation of Premixed Turbulent Combustion with Multi-scale Forcing* Song Zhao, Fabien Thiesset, Ivan Fedioun, Iskender Gökalp ICARE-CNRS, France University of Orléans, France	ICCFD9-2016-211 *Large Eddy Simulation of End Wall Flows in Low Pressure Turbines* Seyfullah Cay, Dogukan Tugberk Karahan, Ayse G. Gungor Istanbul Technical University, Istanbul , Turkey	ICCFD9-2016-257 *An analysis of the flow field of a radially lobed nozzle via Large Eddy Simulations* Aarthi Sekaran, Noushin Amini Engineering Mechanics Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, , India	

ICCFD9 Program: Monday, July 11, 2016

03	Chairs: Chongam, Kim		**Multiphase Flows - I**			Safir
09:30am:12:30 pm	**09:30am – 10:00am** ICCFD9-2016-303 *Simulations of Drop Impact on Hydrophobic Moving Walls* Hosein Heidarifatasmi, Özgür Ertunç Ozyegin University, Turkey	**10:00am – 10:30am** ICCFD9-2016-130 *A WELL-POSED TWO PHASE FLOW MODEL AND ITS NUMERICAL SOLUTIONS FOR REACTOR THERMAL-FLUIDS ANALYSIS* Samet Y. Kadioglu, Ray Berry, Richard Martineau Idaho National Laboratory, USA	**10:30am – 11:00am** ICCFD9-2016-129 *Linear and Nonlinear Computations of Seakeeping Abilities of a Containership* Ferdi Çakıcı, Ömer F. Sukas, Ömer K. Kınacı, Ahmet D. Alkan Yildiz Technical University, Turkey	**11:00am – 11:30am** ICCFD9-2016-322 *Effect of Bubbles Number on Cavitating Flow Through a Venturi* Mohammed ZAMOUM, Mohand KESSAL, Rachid BOUCETTA Laboratoire Génie Physique des Hydrocarbures LGPH,Algérie	**11:30am – 12:00pm** ICCFD9-2016-288 *Reducing numerical wave damping through accurate and efficient PLIC-VOF techniques* Bülent Düz, Mart J.A. Borsboom, Arthur E.P. Veldman, Peter R. Wellens, Rene H.M. Huijsmans Maritime Research Institute (MARIN), The Netherlands	**12:00pm – 12:30pm** ICCFD9-2016-277 *Simulation of Navier-Stokes Flows Including Rigid Particles* Salah ZOUAOUI, Sofiane KHELLADI, Kamal MOHAMMEDI, Hassane DJEBOURI Mouloud Mammeri University of Tizi-Ouzou, Algeria
12:30 pm – 02:00 pm			**Hosted Lunch**			
02:00 pm – 02:30 pm			**KEYNOTE TALK**			
K1			Prof. Z. Ayse Gul, GUNGOR Turkey Topic: "Direct Numerical Simulations of Adverse Pressure Gradient Turbulent Boundary Layers "			
04	Chairs: Koren, B		**Mesh Refinement/Adaptation**			Ballroom
02:30pm:04:00 pm	**02:30pm – 03:00pm** ICCFD9-2016-117 *ALE Residual Scheme for the time dependant penalized Navier Stokes equations on adapted grids* L. Nouveau, H. Beaugendre, M. Ricchiuto, C. Dobrzinsky, R. Abgrall Inria Bordeaux Sud-Ouest, Team CARDAMOM, France		**03:00pm – 03:30pm** ICCFD9-2016-146 *Semi-Lagrangian finite volume transport scheme on adaptively refined grids* Eray Uzgoren Middle East Technical University ,Northern Cyprus			

ICCFD9 Program: Monday, July 11, 2016

05 Chairs: Takakura, Yoko — **Supersonic/Hypersonic Flows - I** — **Ballroom 2**

02:30pm:04:00 pm	02:30pm – 03:00pm	03:00pm – 03:30pm	03:30pm – 04:00pm
	ICCFD9-2016-311 *Highly-accurate Computation of Supersonic Flows around a Concave Body (I. Influences of perturbations)* Daichi Inui, Yoko Takakura Tokai University, Japan	ICCFD9-2016-299 *Three Dimensional Hypersonic Flow Analysis Around a Re-entry Vehicle Using Navier-Stokes Equations* Muharrem Özgün, Sinan Eyi Middle East Technical University, Turkey	ICCFD9-2016-326 *Highly-accurate Computation of Supersonic Flows around a Concave Body (II. Motion analysis by mo ving-coordinate method)* Masayuki Nomura, Yoko Takakura Tokai University, Japan

06 Chairs: Milanovic, Sasa — **Heat Transfer - I** — **Safir**

02:30pm:04:00 pm	02:30pm – 03:00pm	03:00pm – 03:30pm	03:30pm – 04:00pm
	ICCFD9-2016-185 *Investigation of the Mechanical Integrity of Wings/Fins under Thermal Loading* Emir ÖZKÖKDEMİR, Dilek Funda KURTULUŞ Roketsan Missiles Inc.,Turkey	ICCFD9-2016-332 *Numerical Assessment of the Flow Patterns within the Rod Draw Furnace Chamber* A. Goyal, R. Behera Indian Institute of Technology, India	ICCFD9-2016-225 *Thermal analysis of Calandria Based Reactor for Different Fuel Channel Configurations* NKS Rajan, PS Kulkarni, Suneel M P, Vijesh V Joshi Indian Institute of Science, INDIA

04:00 pm – 04:30 pm — **Break**

07 Chairs: Li, Xinliang — **Boundary Layer Stability/Transition** — **Ballroom 1**

04:30pm:06:00 pm	04:30pm – 05:00pm	05:00pm – 05:30pm	05:30pm – 06:00pm
	ICCFD9-2016-310 *Numerical Simulation of Shock/Boundary-Layer Interactions in Supersonic Flows* Jayahar Sivasubramanian University of Arizona, USA	ICCFD9-2016-181 *DNS study on the Effect of Wall Temperature on the Shock Wave/Turbulent Bound ary Layer Interaction* Xingkun Zhu, Changping Yu, Xinliang Li Chinese Academy of Sciences, China	ICCFD9-2016-203 *DNS Study of the Roughness Induced Transition in the NASA SLDT Ma3.5 Tunnel* Duan Zhiwei, Xiao Zhxiang, Fu Song Tsinghua University, China

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08	Chairs: Celik, B.	**Supersonic/Hypersonic Flows - II**	**Ballroom 2**
04:30pm:06:00 pm	**04:30pm – 05:00pm** ICCFD9-2016-242 *The effect of combination of counterflow jet and spike on drag reduction for a blunt body at high Mach number flow* Ziba Eghlima, Kamyar Mansour AmirKabir University of Technology, Iran	**05:00pm – 05:30pm** ICCFD9-2016-286 *Shock interaction mechanism for 3-D laminar hypersonic flow over a double wedge* Ahmet Selim Durna, Bayram Celik Istanbul Technical Universtiy,Turkey	**05:30pm – 06:00pm** ICCFD9-2016-214 *A Fully Compressible Multiphase Scheme for Hypervelocity Impacts* Iason Zisis, Bas van der Linden, Barry Koren Eindhoven University of Technology, The Netherlands

09	Chairs: Biswas, R.	**Heat Transfer - II**	**Safir**
04:30pm:06:00 pm	**04:30pm – 05:00pm** ICCFD9-2016-218 *Numerical Investigation of Entropy Generation in a C-shaped Channel for Laminar Non-Newtonian Fluid Under a Constant Heat Flux* Naas Toufik Tayeb, Lasbet Yahia, Benzaoui Ahmed, Loubar Khaled Ziane Achour University, Algeria	**05:00pm – 05:30pm** ICCFD9-2016-200 *Numerical analysis of Fully Developed Laminar Flow and heat transfer of Non-Newtonian Fluid in Ducts of Arbitrary Cross-Sectional Shape* Naas Toufik Tayeb, Lasbet Yahia, Benzaoui Ahmed, Loubar Khaled Ziane Achour University, Algeria	**05:30pm – 06:00pm** ICCFD9-2016-294 *Simulations of a rotating disk system with air cooling* Zhe Jiao, Song Fu, Tomoki Kawakubo, Satoshi Ohuchida, Hideaki Tamaki Tsinghua University, China

ICCFD9 Program: Tuesday, July 12, 2016

07:00 am – 08:00 am **Registration**

08:00 am – 09:00 am **Invited Lecture**

P2

Prof. Georges-Henri Cottet
Grenoble University, France
Topic: "Recent advances with Semi-Lagrangian particles for complex fluid and fluid-structure dynamics"

09:30 am – 10:00 am **Break**

10 Chairs: Cottet, GH. **High Order Methods** **Ballroom 1**

	09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	12:00pm – 12:30pm
09:30am:12:30 pm	ICCFD9-2016-135 *Compact High-Order Finite Volume Method on Unstructured Grids* Qian Wang, Yu-Xin Ren, Wanai Li Tsinghua University, China	ICCFD9-2016-136 *Development and Analysis of High-Order Vorticity Confinement Schemes* Ilias Petropoulos, Michel Costes, Paola Cinnella ONERA, The French Aerospace Lab, France	ICCFD9-2016-115 *A Numerical Strategy for the Freestream Preservation of the High-order Weighted Essentially Non-oscillatory Scheme in General Curvilinear Coordinates* Yujie Zhu, Zhensheng Sun, Hu Yu, Shiying Zhang Xi'an Research Institute of High-tech, Xi'an, China	ICCFD9-2016-227 *A high accuracy finite volume scheme based on the quantic spline reconstruction on non-uniform curvilinear grids* WenFeng Huang, Yu-Xin Ren, Qiuju Wang Tsinghua University, China	ICCFD9-2016-174 *Higher Order Discretization Error Estimation by Error Transport using Unstructured Finite-Volume Methods for Unsteady Problems* Gary Yan, Carl Ollivier-Gooch Inria Bordeaux Sud-Ouest, Team CARDAMOM, France	ICCFD9-2016-137 *A POD model for boundary conditions in CFD* Michel Bergmann, Andrea Ferrero, Angelo Iollo Inria Bordeaux Sud Ouest, Team MEMPHIS,France

11 Chairs: Napolitano, M **Turbulent Flows** **Ballroom 2**

	09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	
09:30am:12:30 pm	ICCFD9-2016-312 *Turbulent Flow Structures over Separation Bubble on a NACA0012 Airfoil at Low Reynolds Number* Toshiki Hashizume, Tomohisa Ohtake, Tatsuo Motohashi, Akinori Muramatsu Nihon University,Japan	ICCFD9-2016-123 *Considerations of Stress Limiter for the SST Turbulence Model in Dual Throat Nozzle Predictions* R. Tharwat, M. El-Samanoudy, A. M. R. El-Baz Ain Shams University,Egypt	ICCFD9-2016-118 *Prediction of wall thermal conditions on a confined turbulent premixed jet flame* D. Mira, S. Gövert, M. Zavala-Aké, J.B.K. Kok, M. Vázquez, G. Houzeaux Barcelona Supercomputing Centre, Spain	ICCFD9-2016-240 *Applications of a Scale Adaptive Simulation One-Equation turbulence model* Elkhoury M Lebanese American University, Lebanon	ICCFD9-2016-278 *Improvement and Application of High-Order Accurate Gas-Kinetic Scheme in Turbulence Simulation* Qibing Li, Song Fu Tsinghua University, China	

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12 Chairs: Laiping, Z. **Fluid Structure Interaction** **Safir**

09:30am:12:30 pm	**09:00am – 09:30am** ICCFD9-2016-166 *A numerical method for the fluid-structure interaction problems based on the gas kinetic theory* Xiaodong Ren, Kun Xu, Wei Shyy Hong Kong University of Science and Technology,China	**10:00am – 10:30am** ICCFD9-2016-249 *Study of Aero-elastic Behaviour of an Aerospike in Unsteady Supersonic Flow by FSI Simulation* A Kamalesh, P Theerthamalai, G Jagadeesh RCI, Hyderabad, India	**10:30am – 11:00am** ICCFD9-2016-283 *Predicting flutter instability by means of an Immersed Boundary Fluid-Structure-Interaction method* D. De Marinis, M. D. de Tullio, M. Napolitano, G. Pascazio Politecnico di Bari, Italy	**11:00am – 11:30am** ICCFD9-2016-207 *A coupled Discrete Element Method and Finite Volume Method for the simulation of elastic fishnets in interaction with fluid* Paolo Sassi, Jorge Freiría, Gabriel Usera University of the Republic, Uruguay		

12:30 pm – 02:00 pm **Hosted Lunch**

02:00 pm – 02:30 pm **KEYNOTE TALK**

K2

Prof. Z. Laiping, CARDC
China
Topic: "Numerical study of the twist mechanism for the flapping motion of seagull wing"

13 Chairs: Ozdemir, B. **Optimization/Uncertainity - I** **Ballroom 1**

02:30pm:04:00 pm	**02:30pm – 03:00pm** ICCFD9-2016-213 *Improved Non-Intrusive Uncertainty Propagation in Complex Fluid Flow Problems* L.M.M. van den Bos, B. Koren, R.P. Dwight Eindhoven University of Technology, the Netherlands	**03:00pm – 03:30pm** ICCFD9-2016-199 *Adjoint Shape Optimization of Hypersonic Blunt Bodies Including Graphite Ablation Effects* Oguz K. Onay, Sinan Eyi Middle East Technical University, Turkey	**03:30pm – 04:00pm** ICCFD9-2016-246 *CFD Optimization of Transonic Low Pressure Turbine Blade* Firat Kiyici, Tolga Yasa Anadolu University, Turkey

ICCFD9 Program: Tuesday, July 12, 2016

14	**Chairs: Fu, Song**	**Rotor Aerodynamics - I**	**Ballroom 2**
02:30pm:04:00 pm	**02:30pm – 03:00pm** ICCFD9-2016-172 *The Effects of the Model Scale and Mach Number on the Aerodynamic Characteristics of one six-blade Propeller* Liu Zhang, Litao Liu, Hui Zhang, Hong Chen The University of Leeds, UK	**03:00pm – 03:30pm** ICCFD9-2016-282 *Aerodynamic Analysis of Flow Characteristics over Rotors Using CFD Methods* Onur Öktem, Emre Başaran, Ünver Kaynak TOBB University of Economics and Technology, Turkey	
15	**Chairs: Sivasubramanian, J.**	**Heat Transfer - III**	**Safir**
02:30pm:04:00 pm	**02:30pm – 03:00pm** ICCFD9-2016-317 *Numerical Analysis of Multiplicity and Transition Phenomena in Natural Convection* Hadi Kafil, Ali Ecder Bogazici University, Turkey	**03:00pm – 03:30pm** ICCFD9-2016-111 *Thermal and Flow Field Analysis of Electronic Components Inside a Desktop Computer Chassis* Kutay ÇETİN, Kürşad Melih GÜLEREN University of Turkish Aeronautical Association, TURKEY	**03:30pm – 04:00pm** ICCFD9-2016-302 *Flow Structures in Compact Plate Heat Exchangers: A Numerical Study with Experimental Validation* Caner Şenkal, Özgür Ertunç Ozyegin University, Turkey
04:00 pm – 04:30 pm		**Break**	
16	**Chairs: Kaynak, Ü.**	**Flow Control - I**	**Ballroom 2**
04:30pm:06:00 pm	**04:30pm – 05:00pm** ICCFD9-2016-191 *Optimal Flow Actuation for Separation Control and Noise Minimization* Beckett Y. Zhou, Tim Albring, Nicolas R. Gauger TU Kaiserslautern, Germany	**05:00pm – 05:30pm** ICCFD9-2016-220 *Channel and Cavity Flow Analysis Using Lattice Boltzmann Solvers Parallelized with Coarray Fortran* F.Yudum Comez, Nevsan Sengil Middle East Technical University, Turkey	**05:30pm – 06:00pm** ICCFD9-2016-236 *Effects of Temperature on the Acoustic Waves from A Compressible Turbulent Mixing Layer* Daiki Terakado, Taku Nonomura, Akira Oyama, Kozo Fujii The University of Tokyo,Japan

ICCFD9 Program: Tuesday, July 12, 2016

17	Chairs: Eyi, Sinan	**Rotor Aerodynamics - II**	**Ballroom 2**
04:30pm:06:00 pm	**04:30pm – 05:00pm** ICCFD9-2016-316 *Development of Explicit Algebraic Reynolds Stress Model in OpenFOAM with Application to NACA66(mod) Hydrofoil and INSEAN E779A Propeller* Kayhan Ülgen Istanbul Technical University, Turkey	**05:00pm – 05:30pm** ICCFD9-2016-281 *Computational Fluid Dynamics Simulations of Ship Airwake with a Hovering Helicopter Rotor* Ezgi Orbay, Nilay Sezer Uzol Middle East Technical University,Turkey	
18	Chairs: Güngör, A.G.	**Heat Transfer - IV**	**Safir**
04:30pm:06:00 pm	**04:30pm – 05:00pm** ICCFD9-2016-329 *Multiphase modelling of compressible diesel fuel in a solenoid valve injector* Nuray Kayakol Address	**05:00pm – 05:30pm** ICCFD9-2016-245 *Investigation of the Two-Pass Turbine Internal Cooling Channel with 90 Degree Ribs* Firat Kiyici, İsa Kavas, Tolga Yasa Istanbul Technical University, Turkey	**05:30pm – 06:00pm** ICCFD9-2016-201 *Numerical Study of the Passenger Thermal Plume Effects in the Airliner Cabin Environment* Yihuan Yan, Xiangdong Li, Jiyuan Tu RMIT University, Australia

ICCFD9 Program: Wednesday, July 13, 2016

07:00 am – 08:00 am	**Registration**
08:00 am – 09:00 am	**Invited Lecture**
P3	Assoc.Prof. Mehmet Şahin Dept. of Aerospace Eng., Istanbul Technical University, Turkey Topic: "An arbitrary Lagrangian Eulerian (ALE) approach for moving-boundary problems with large displacements and rotations"
09:30 am – 10:00 am	**Break**

19 Chairs: Sahin, M. — **Numerical Methods - III** — **Ballroom 1**

09:30am - 12:30 pm	**09:30am – 10:00am**	**10:00am – 10:30am**	**10:30am – 11:00am**	**11:00am – 11:30am**	**11:30am – 12:00pm**	**12:00pm – 12:30pm**
	ICCFD9-2016-113 *Development of A FVM-based code using Conjugate Gradient Approach* Rico Morasata, Kürşad Melih Güleren University of Turkish Aeronautical Association, Turkey	ICCFD9-2016-241 *Stable, non-dissipative, and conservative flux-reconstruction schemes in split forms* Yoshiaki Abe, Issei Morinaka, Takanori Haga, Taku Nonomura, Koji Miyaji The University of Tokyo, Japan	ICCFD9-2016-235 *An investigation on hybrid upwind fluxes for improving the numerical shock stability on unstructured grids* Fan Zhang, Jun Liu, Biaosong Chen, Zedong Chen Dalian University of Technology, China	ICCFD9-2016-198 *Comparative Study of the CTM and SDM-IDC Methods for Diffusive Fluxes Calculation in the CFD Code Based on SIMPLE Algorithm on Highly Skewed Meshes* Pannasit Borwornpiyawat, Ekachai Juntasaro, Abdul Ahad Narejo The Sirindhorn International Thai-German Graduate School of Engineering,	ICCFD9-2016-167 *All-speed Two-phase RoeM and AUSMPW+ Scheme for Unsteady Low Mach Number Flows* Hyeongjun Kim, Hyunji kim, Yohan Choe, Chongam Kim Seoul National University, Republic of Korea	ICCFD9-2016-127 *The geometric conservation law in the numerical simulations* Dan Xu, Xiaogang Deng, Yidao Dong, Yaming Chen, Guangxue Wang, Xiaoliang Yang National University of Defense Technology, China

20 Chairs: Abgrall, R. — **Computational Aeroacoustics** — **Ballroom 2**

09:30am - 12:30 pm	**09:30am – 10:00am**	**10:00am – 10:30pm**	**10:30am – 11:00am**	**11:00am – 11:30am**		
	ICCFD9-2016-182 *Multilevel ADER Scheme For Computational Aeroacoustics* S. M. Joshi, A. Chatterjee Indian Institute of Technology, India	ICCFD9-2016-169 *Numerical Validation for Aeroacoustic Transmission Loss Performance of a High Frequency Wave Bypass Filter Based On Destructive Interferometry* Barış Elbüken, Alper Ata Alarko Carrier Research and Development Center, Turkey	ICCFD9-2016-210 *Investigation of advanced turbulence modeling approaches for aeroacoustic problems* X. Huang, M. Schäfer Technische Universität Darmstadt, Germany	ICCFD9-2016-270 *Application of CFD Methods to Wind Noise Estimation of A-Pillar/Side Glass Region on Passenger Vehicles* Kerem Anbarci, H.Can Koman, Ibrahim Avsar, M. Berkay Acikgoz, A.Rustem Aslan Istanbul Technical University, Turkey		

ICCFD9 Program: Wednesday, July 13, 2016

21	**Chairs: Son, Gihun**		**Biological Flows**			**Safir**
09:30am:12:30 pm	**09:30am – 10:00am** ICCFD9-2016-189 *A Numerical Investigation of Urine Flow Rate Effects on Stag Horn Stones Formation in a Kidney Ducts* Sevda Aghaei Zad, Esmaeel Razavi, Farhad Sadegh Moghanlou Tabriz University, Iran	**10:00am – 10:30am** ICCFD9-2016-248 *Numerical Investigation of Blood Flow through a Vein with Two Consecutive Leaflet Valves* Zohreh Sheidaei, Rahim Vesal Tabriz University, Iran	**10:30am – 11:00am** ICCFD9-2016-304 *Blood Flow over Bileaflet Mechanical Heart Valves under Changes in Cardiac Cycle Length: A Direct Numerical Investigation* Viet Anh Nguyen, Roberto Verzicco, M.D. de Tullio Dipartimento di Ingegneria Civile, Università di Roma, Italy	**11:00am – 11:30am** ICCFD9-2016-108 *An IBM-FSI solver of flexible objects in fluid flow for pumps clogging applications* A. Albadawi, S. Marry, B. Breen, R. Connelly, Y. Delaure Dublin City University, Ireland	**11:30am – 12:00pm** ICCFD9-2016-260 *A Two-Dimensional Spectral Model of Blood Plasma Flow with Oxygen Transport and Blood Cell Membrane Deformation* G. Bueno, W. Harris Massachusetts Institute of Technology, US	
12:30 pm – 02:00 pm			**Hosted Lunch**			
02:00 pm – 06:00 pm			**CITY TOUR**			

ICCFD9 Program: Thursday, July 14, 2016

07:00 am – 08:00 am	**Registration**
08:00 am – 09:00 am	**Invited Lecture**
P4	Prof. Shigeru Obayashi Director, Institute of Fluid Science, Tohoku University, Japan Topic: "Multi-objective Design Exploration (MODE) with CFD"
09:30 am – 10:00 am	**Break**

22 Chairs: Obayashi, Shigeru — Discontinous Galerkin Method — Ballroom 1

09:30am:12:30 pm

09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	
ICCFD9-2016-196	ICCFD9-2016-251	ICCFD9-2016-252	ICCFD9-2016-151	ICCFD9-2016-290	
A Robust High-Order Discontinuous Galerkin Solver for Fluid Flow with Cavitation	*Discontinuous Galerkin Methods for Hyperbolic Advection-Diffusion Equation on Unstructured Grids*	*A Reconstructed Discontinuous Galerkin method for Compressible Multiphase flows in Arbitrary Lagrangian-Eulerian Formulation*	*A Reconstructed Direct Discontinuous Galerkin Methods for the Compressible Navier-Stokes Equations on Hybrid Grids*	*Supersonic Film Cooling Simulation with a Discontinuous Galerkin Method*	
Malte Hoffmann, Claus-Dieter Munz	Jialin Lou, Hong Luo, Hiroaki Nishikawa	Aditya K. Pandare, Hong Luo	Xiaoquan Yang, Jian Cheng, Hong Luo, Jiangtao Si, Peifen Weng	Shi Xiaotian, Hu Ning, Wang Tiejin, Yue Caiqian, Yuan Xiangjiang	
University of Stuttgart, Germany	North Carolina State University, USA	North Carolina State University, USA	Shanghai Aircraft Design and Research Institute, COMAC, China	China Aerospace Academy of Aerodynamics, China	

23 Chairs: Hashimoto, Tomohisa — Large Eddy Simulations - II — Ballroom 2

09:30am:12:30 pm

09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	12:00pm – 12:30pm
ICCFD9-2016-223	ICCFD9-2016-138	ICCFD9-2016-305	ICCFD9-2016-250	ICCFD9-2016-233	ICCFD9-2016-153
Improvement of weighted compact nonlinear scheme and its application in compressibl e turbulence simulations	*Large Eddy Simulations of Heavy Gas Dispersion within Building Group*	*Large Eddy Simulation of Subsonic H2/N2 transverse jet in hot air cross-flow*	*Large eddy simulation of turbulent drag reduction study based on ribs*	*A SGS Model for LES of Turbulent Buoyant Flows*	*Temperature perturbation method to generate turbulent inflow conditions for LES/DNS simulations in OpenFOAM*
Zhenguo Yan, Huayong Liu, Yankai Ma , Meiliang Mao, Huajun Zhu	Weiming Liu, Abdullah Alakalabi, Tony Lee Graham, Xiaojun Gu	Mehmet Karaca, Ivan Fedioun, Iskender Gokalp	Wenjiao Dong, Haixin Chen, Yufei Zhang	Ilyas Yilmaz	Sophia Buckingham, Lilla Koloszar, Clara Garcia-Sanchez, Grégoire Winckelmans
CARDC, China	University of Central Lancashire, UK	Institut de Combustion Aérothermique Réactivité et Environnement (CNRS),i France	Tsinghua University, China	Istanbul Aydin University, Turkey	von Karman Institute for Fluid Dynamics, Belgium

ICCFD9 Program: Thursday, July 14, 2016

24 Chairs: Balakrishnan, N. **Multiphase Flows - II** **Safir**

09:30am:12:30 pm	09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	12:00pm – 12:30pm
	ICCFD9-2016-287 *An absorbing boundary condition for free surface water waves* Bülent Düz, Mart J.A. Borsboom, Arthur E.P. Veldman, Peter R. Wellens, Rene H.M. Huijsmans Maritime Research Institute (MARIN), The Netherlands	ICCFD9-2016-291 *An efficient interface capturing method for a large collection of interacting cells immersed in a fluid* M. Jedouaa, C-H Bruneau, E. Maitre Univ. Grenoble Alpes and CNRS, France	ICCFD9-2016-273 *Experimental and numerical analysis of the bubble growing and sliding underneath of the inclined hydrophobic surface* Ceren Genç, Ali Kibar Address	ICCFD9-2016-322 *Effect of Bubbles Number on Cavitating Flow Through a Venturi* Mohammed ZAMOUM, Mohand KESSAL, Rachid BOUCETTA Université M'hamed Bougara, Algérie	ICCFD9-2016-288 *Reducing numerical wave damping through accurate and efficient PLIC-VOF techniques* Bülent Düz, Mart J.A. Borsboom, Arthur E.P. Veldman, Peter R. Wellens, Rene H.M. Huijsmans Maritime Research Institute (MARIN),The Netherlands	ICCFD9-2016-277 *Simulation of Navier-Stokes Flows Including Rigid Particles* Salah ZOUAOUI, Sofiane KHELLADI, Kamal MOHAMMEDI, Hassane DJEBOURI Mouloud Mammeri University of Tizi-Ouzou, Algeria

12:30 pm – 02:00 pm **Hosted Lunch**

02:00 pm – 02:30 pm **POSTER SESSION**

25 Chairs: Jackson, S. **Meshless Methods - I** **Ballroom 1**

02:30pm:04:00 pm	02:30pm – 03:00pm	03:00pm – 03:30pm	03:30pm – 04:00pm
	ICCFD9-2016-190 *A Development of Meshless Point Generation Technique for analysis of the unsteady flow around the multi-body* Jae Sang Rhee, Jin Young Huh, Kyu Hong Kim, Suk Young Jung Seoul National University, Republic of Korea	ICCFD9-2016-229 *Numerical Simulation of Compressible Flow using Meshless Method Satisfying the Geometric Conservation Law* Jin Young Huh, Jae Sang Rhee, Kyu Hong Kim, Suk Young Jung Seoul National University, Republic of Korea	ICCFD9-2016-274 *An Implicit Meshless RBF-based Differential Quadrature Method Applied to the Lid-Driven Cavity Problem* Y. Yeginer, M. Sahin, A. Altinkaynak Istanbul Technical University, Turkey

ICCFD9 Program: Thursday, July 14, 2016

26	Chairs: Abdulaleen, Albadawi	**Optimization/Uncerteanity - II**	Ballroom 1
02:30pm:04:00 pm	02:30pm – 03:00pm ICCFD9-2016-148 *Construction of Multi-Fidelity Surrogate Models for Aerodynamic Databases* Markus Peer Rumpfkeil, Philip Beran University of Dayton, USA	03:00pm – 03:30pm ICCFD9-2016-165 *Aerodynamic Optimisation of Active Flow Control on a Three-Element High-Lift Configuration* Anil Nemili, Emre Özkaya, Nicolas Gauger, Felix Kramer, Frank Thiele China Aerodynamics Research and Development Center, China	03:30pm – 04:00pm ICCFD9-2016-184 *A Two-Level Approach for Design Optimization of Acoustic Liners.* Emre Özkaya, Junis Abdel Hay, Nicolas R. Gauger, Norbert Schönwald, Frank Thiele TU Kaiserslautern, Germany
27	Chairs: Koren, Barry	**Multiphysics - I**	Safir
02:30pm:04:00 pm	02:30pm – 03:00pm ICCFD9-2016-145 *girdap: Open source object oriented autonomous grid management library for multi-physics simulations* Eray Uzgoren Middle East Technical University ,Northern Cyprus	03:00pm – 03:30pm ICCFD9-2016-315 *FeatFlow: A Fast, Efficient and Robust CFD solver for Multiphysics Problems* Evren Bayraktar, Otto Mierka, Stefan Turek Technische Universität Dortmund, Germany	03:30pm – 04:00pm ICCFD9-2016-175 *Numerical Modelling of Immiscible Hele-Shaw Flow with Inhomogeneous Viscosity* S.J. Jackson, H. Power, D. Giddings University of Nottingham, UK
04:00 pm – 04:30 pm		**Break**	
28	Chairs: Petropoulos, Ilias	**Meshless Methods - II**	Ballroom 1
04:30pm:06:00 pm	04:30pm – 05:00pm ICCFD9-2016-325 *Simulating 3-D Single Gas Bubble Growth in a Polymer Melt Using Multi-Phase SPH* Burak Kaan Cirpici, Benedict D. Rogers, Yong C. Wang Namik Kemal University, Turkey	05:00pm – 05:30pm ICCFD9-2016-119 *An improved contact algorithm for SPH method in simulation of fluid-structure interaction problems* CHEN Jian-qiang , SHEN Yan-ming , HE kun China Aerodynamics Research and Development Center, China	

ICCFD9 Program: Thursday, July 14, 2016

29	Chairs: Ren, Yu-Xin	**Flow Control - II**	**Ballroom 2**
04:30pm:06:00 pm	**04:30pm – 05:00pm** ICCFD9-2016-266 *Modeling water and gas coning using CFD* H.N.Akangbou, M. Burby, M. Babaie, G.G. Nasr University of Salford, United Kingdom	**05:00pm – 05:30pm** ICCFD9-2016-272 *Flow Control by Microwave-Excited Plasmas* Ning Hu, Xiao-tian Shi, Pei-pei Zhou China Academy of Aerospace Aerodynamics, China	**05:30pm – 06:00pm** ICCFD9-2016-256 *Research on Fluidic Amplifiers Dimensional Modifications via Computer Simulation (CFD)* Masoud Baghaei, Josep M Bergada, David Del Campo, Vanessa Del Campo NASA Ames Research Center, USA

29	Chairs: Çırpıcı, B.K.	**Multiphysics - II**	**Safir**
04:30pm:06:00 pm	**04:30pm – 05:00pm** ICCFD9-2016-289 *Numerical Solution of Burgers-Huxley Equation using Improved Nodal Integral Method* Niteen kumar, Suneet singh Indian Institute of Technology,India	**05:00pm – 05:30pm** ICCFD9-2016-128 *Computational Fluid Dynamic Analysis of Sand Erosion in Complex Pipe Geometry* M.G Droubi, M. Hossain, E. Mitchell Robert Gordon University, UK	**05:30pm – 06:00pm** ICCFD9-2016-309 *The numeric examination of the flow and diaphragm movements within the dripper with pressure regulator simultaneously* Ceren Genç, Hasan Karabay Sakarya University, Turkey

ICCFD9 Program: Friday, July 15, 2016

07:00 am – 08:00 am **Registration**

08:00 am – 09:00 am **Invited Lecture**

P5

09:30 am – 10:00 am **Break**

30 Chairs: Aslan, A.R. **Numerical Methods - II** **Ballroom 1**

09:30am:12:30 pm

09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	
ICCFD9-2016-255 *Time Integration Schemes for Simulations of Periodic Phenomenon* William E. Tavernetti, Mohamed M. Hafez University of California Davis, USA	ICCFD9-2016-295 *Assessment of KRLNS for Solving Unsteady Incompressible Navier-Stokes Equations* T. Hashimoto, I. Tanno, T. Yasuda, Y. Tanaka, K. Morinishi, N. Satofuka Kinki University, Japan	ICCFD9-2016-125 *Runge-Kutta Based Algorithms for More Efficient Simulation of Unsteady Incompressible Flows* Matthew V. Fischels, R. G. Rajagopalan Iowa State University,Iowa	ICCFD9-2016-331 *Assessment of the Performance of ADI Method as Multigrid Smoother for Solving Elliptic PDEs* A. Goyal, M. Damodaran Indian Institute of Technology, India	ICCFD9-2016-271 *Comparison of artificial compressibility method with and without subiteration for unsteady flow* Itaru Tanno, Tomohisa Hashimoto, Takahiro Yasuda, Yoshihiro Tanaka, Koji Morinishi, Nobuyuki Satofuka Tsukuba University of Technology, Japan	

31 Chairs: Marek, Maciej **Computational Aerodynamics - I** **Ballroom 2**

09:30am:12:30 pm

09:30am – 10:00am	10:00am – 10:30am	10:30am – 11:00am	11:00am – 11:30am	11:30am – 12:00pm	12:00pm – 12:30pm
ICCFD9-2016-194 *Drag Prediction and Decomposition of a Real Aircraft Based on Middle-Field and Far-Field Methods* Yeming Deng, Yufei Zhang, Haixin Chen Tsinghua University, China	ICCFD9-2016-139 *Numerical investigations of the flow around a ground vehicles platoon* Charles-Henri Bruneau, Khodor Khadra, Iraj Mortazavi Univ. Bordeaux IMB, INRIA Bordeaux Sud-Ouest MEMPHIS,France	ICCFD9-2016-239 *Drag Analysis of a Supersonic Fighter Aircraft* Osman Akgun, Ali Ihsan Golcuk, Dilek Funda Kurtulus, Ünver Kaynak Middle East Technical University, Turkey	ICCFD9-2016-168 *Aerodynamic Design of Buses Inspired by Sperm Whale* Seda Kırmacı Arabacı, Mehmet Pakdemirli Celal Bayar University, Turkey	ICCFD9-2016-217 *Stick Fixed Stability of a Hybrid Buoyant Aircraft* Anwar Ul Haque, Waqar Asrar, Ashraf Ali Omar, Erwin Sulaeman, Jaffar Sayed Mohamed Ali International Islamic University Malaysia (IIUM), Malaysia	ICCFD9-2016-226 *Parametric Investigation of Hull Shaped Fuselage for an Amphibious UAV* Emre Sazak, D. Funda Kurtulus Middle East Technical University, Turkey

ICCFD9 Program: Friday, July 15, 2016

32	Chairs: Gadala, M. S.		**Multiphase Flows - III**			Safir
09:30am:12:30 pm	**09:30am – 10:00am** ICCFD9-2016-329 *A Front Tracking Method for Computational Modeling of Temperature and Species Gradient Based Phase Change* Muhammad Irfan, Metin Muradoglu Koc University, Turkey	**10:00am – 10:30am** ICCFD9-2016-132 *HYDRODYNAMICS OF TWIN WATER JETS IMPINGEMENT ON A FLAT HORIZONTAL MOVING SURFACE* Sultan Al-Qash, M. M. Seraj, M. S. Gadala University of British Columbia, Canada	**10:30am – 11:00am** ICCFD9-2016-157 *Accurate and Efficient Computations of Phase-changing Compressible Flows in Thermal Vapor Compressor* Daeho Min, Hyeongjun Kim, Hoon Lee, Chongam Kim Seoul National University, Korea	**11:00am – 11:30am** ICCFD9-2016-330 *A Front-Tracking Method for Direct Numerical Simulation of Viscoelastic Interfacial Flows* Daulet Izbassarov, Metin Muradoglu Koc University, Turkey	**11:30am – 12:00pm** ICCFD9-2016-215 *Towards a CFD model of isothermal air-nanofluid bubbly flows in a vertical tube* Yang Yuan, Xiangdong Li, Jiyuan Tu RMIT University, Australia	

12:30 pm – 02:00 pm **Hosted Lunch**

02:00 pm – 02:30 pm **POSTER SESSIONS**

33	Chairs: Droubi, Mohamad Ghazi	**Numerical Methods - IV**	Ballroom 1
02:30pm:04:00 pm	**02:30pm – 03:00pm** ICCFD9-2016-126 *Numerical Simulation of Incompressible Flows using Immersed Boundary Method Considering Pressure Condition* Kyohei TAJIRI, Hidetoshi NISHIDA, Mitsuru TANAKA Kyoto Insititute of Technology, Japan	**03:00pm – 03:30pm** ICCFD9-2016-234 *Benchmark Simulations of Flow Past Moving Rigid Bodies Using a Sharp Interface Immersed Boundary Method* Utku Senturk, Daniel Brunner, Nicoleta Herzog, Hrvoje Jasak, Alexander J. Smits Ege University,Turkey	**03:30pm – 04:00pm** ICCFD9-2016-263 *Simulation of Flow Through Random Packed Beds – a Study of Ordering Effects* Maciej Marek Częstochowa University of Technology, Poland

ICCFD9 Program: Friday, July 15, 2016

34	Chairs: Tyliszczak, Artur	**Computational Aerodynamics - II**	**Ballroom 2**
02:30pm:04:00 pm	02:30pm – 03:00pm ICCFD9-2016-141 *A Numerical Study of Circulation Control on a Flapless UAV* Huaixun Ren, Lihua Gao, Jian Liu, Yong Huang Kyoto Insititute of Technology, Japan	03:00pm – 03:30pm ICCFD9-2016-154 *Viscous Flow Around Wings Moving Above Free Water Surface* Ali Dogrul, Sakir Bal Yildiz Technical University, Turkey	03:30pm – 04:00pm ICCFD9-2016-228 *Numerical Investigation of Winglets Used to Improve the Flying Performance of Unmanned Aerial Vehicle* Prof. Ünver Kaynak, Ahmet Buğra Çoban, Ali İhsan Gölcük TOBB University of Economics and Technology, Turkey
35	Chairs: Gungor, A.G.	**Gas Kinetic Scheme**	**Safir**
02:30pm:04:00 pm	02:30pm – 03:00pm ICCFD9-2016-318 *GAS-KINETIC SCHEME ON MOVING GRID AND ITS APPLICATION IN FREELY FALLING CARD* Changqiu Jin, Liang Pan, Kun Xu Institute of Applied Physics and Computational Mathematics, China	03:00pm – 03:30pm ICCFD9-2016-284 *Molecular Modeling of Force Driven Gas Flows in Nano-channels* Murat Barisik Izmir Institute of Technology, Turkey	03:30pm – 04:00pm ICCFD9-2016-121 *A third-order compact gas-kinetic scheme on unstructured meshes for inviscid and viscous flows* Liang Pan, Kun Xu Hong Kong University of Science and Technology, Hong Kong
04:00 pm – 06:00 pm		**Closing**	

ICCFD9 Program: Thursday-Friday, July 14-15, 2016

14:00 pm – 14:30 pm **Poster Presentations**

ICCFD9-2016-264
Turbulent Wall Jet Over a Forward-Backward Facing Step Pair
Kabache Malika, Mataoui Amina
University of Sciences and Technology, Algeria

ICCFD9-2016-279
Inclined slot jet impinging a moving wall
Benmouhoub Dahbia, Mataoui Amina
University of Sciences and Technology, Algeria

ICCFD9-2016-298
Flow in fractured porous media
H.Djebouri, S.Zouaoui, K.Mohammedi, A.Ait Aider Aomar
Mouloud Mammeri University, Algeria

ICCFD9-2016-170
Study of the three-dimensional flow characteristics inside the WWER-440 fuel assembly
Ts. Malakyan, H. Hovhannisyan, M. Zadoyan, A. Amirjanyan
Nuclear and Radiation Safety Center, Armenia

ICCFD9-2016-212
A New Computational Package for Using in CFD and Other Problems
Mohammad Reza Akhavan Khaleghi
The Office of Counseling and Research Fluid Engineering and Aerodynamic, Mashhad, Iran

ICCFD9 Program: Thursday-Friday, July 14-15, 2016

14:00 pm – 14:30 pm	**Poster Presentations**
	ICCFD9-2016-205 *Development of ventilation systems in a Semi-Confined Room, by using lobed diffusers* Khadidja Boualem, Azzi Abbes Senia University, Algeria
	ICCFD9-2016-296 *Numerical study of brine dilution in a marine environment* Remili Sadia, Azzi Abbes, Nemdili Fadela University of Sciences and Technology, Algeria
	ICCFD9-2016-104 *Large Prandtl number effect on the velocity distribution field of free convective flow of two different types of immiscible fluids in a vertical channel* M.N. Bouaziz, A. Tetbirt, M. Tahar Abbes Dr. Yahia Fares University, Algeria
	ICCFD9-2016-105 *Hydrodynamic dispersion in Darcy-non Darcy porous medium filled by a nanofluid* A.M. Bouaziz, S. Hanini Dr. Yahia Fares University, Algeria
	ICCFD9-2016-206 *Numerical investigation and heat transfer inside inclined and vertical finned enclosure* M. Seddik Bouchouicha, A. Azzi, F. Nemdili, A. Z. Delli Senia University, Algeria

NOTES

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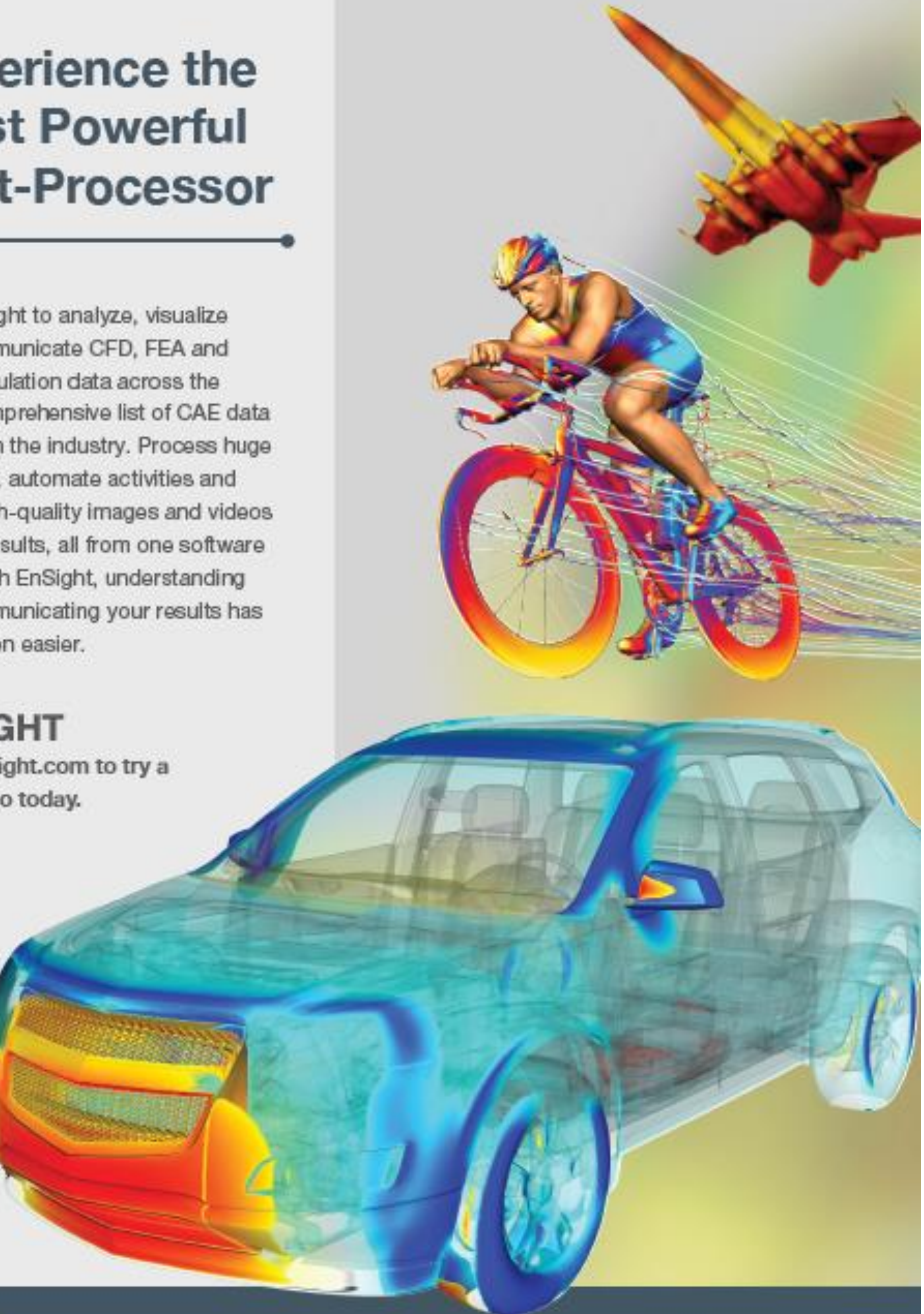

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