

THE 10<sup>TH</sup> ASIAN INTERNATIONAL CONFERENCE ON FLUID MACHINERY (10<sup>TH</sup> AICFM)  
21 - 23 OCTOBER 2009 BERJAYA | TIMES SQUARE HOTEL & CONVENTION CENTRE, KUALA LUMPUR

**Day-1 : 21 October 2009 (Wednesday)**

**Venue: Manhattan III**

8.00am-9.00am	Registration		
9.00am-9.15am	Welcoming Address by 10 <sup>TH</sup> AICFM Organizing Chairman		
9.15am-10.00 am	<b>KEYNOTE ADDRESS 1</b> <b>“Advanced Technologies for Turbomachinery to Utilize Effectively Renewable Energies at Offshore”</b> Professor Toshiaki Kanemoto <i>Kyushu Institute of Technology, Japan</i>		
10.00am-10.30am	Tea break		
10.30am-11.15am	<b>KEYNOTE ADDRESS 2</b> Professor Mohd Salman Leong Director, <i>Institute of Noise &amp; Vibration (IKG), Universiti Teknologi Malaysia</i>		
11.15am-12.00pm	<b>KEYNOTE ADDRESS 3</b> <b>“Selection Operation &amp; Maintenance on Palm in Water Supply”</b> Ir. Hj. Zainuddin Md Ghazali <i>General Manager Operations, SAJ Holdings Sdn Bhd, Malaysia</i>		
12.00pm-1.15pm	<b>Parallel Session 1</b>		
	<b>SESSION 1A (Venue:Manhattan III)</b> <b>Theme: Fluid Dynamics of Fluid Machinery</b> <b>Chairman: Dr. T. Nagahara (Hitachi)</b> <b>Prof. Salman Leong (UTM)</b>	<b>SESSION 1B (Venue: Bronx III)</b> <b>Theme: Monitoring and Diagnosis</b> <b>Chairman: Mr. S. Takita (Ebara)</b> <b>Ir Hj. Zainuddin (SAJ)</b>	<b>SESSION 1C (Venue: Bronx V)</b> <b>Theme: Pump</b> <b>Chairman: Prof. T. Kanemoto (Kyutech)</b> <b>Dr. Syahrullail (UTM)</b>
	<b>Paper ID 65:</b> Counter-top thermoacoustic refrigerator- An experimental investigation	<b>Paper ID 74:</b> A Study on evacuation Performance of Siphon-Type Water Closets	<b>Paper ID 72:</b> Effect of J-Groove on the Axial Thrust in Centrifugal Pump
	<b>Paper ID 69:</b> Preliminary response analysis of UTHM 'S ROVs	<b>Paper ID 83:</b> Auto Detection for high level water content for oil well	<b>Paper ID 79:</b> Study on Operation Optimization of Pumping Station's 24 Hours Operation under Influences of Tides and Peak-Valley Electricity Prices
	<b>Paper ID 119:</b> Effect of guide vane in ring groove arrangement for a small turbocharger	<b>Paper ID 86:</b> Experimental study on leakage flow in labyrinth seals with asymmetric geometries	<b>Paper ID 82:</b> Development and optimized design of propeller pump system & structure with VFD in low-head pumping station
	<b>Paper ID 134:</b> Basic Characteristics of Autorotating Flat Plate in Flow	<b>Paper ID 110:</b> Flow characteristics in scroll casing of sirocco fan	<b>Paper ID 88:</b> Numerical simulation of tubular pumping systems with different regulation methods
	<b>Paper ID 136:</b> Numerical and Experimental Study on Aerodynamic Characteristics of Basic Airfoils at Low Reynolds Numbers	<b>Paper ID 128:</b> Cleaning and heat transfer in heat exchanger with circulating fluidized bed	<b>Paper ID 89:</b> Optimal operation of variable speed pumping system in the eastern route of S-to-N water diversion project

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1.15pm-2.00pm	Lunch		
2.00pm-2.40pm	<b>Official Ceremony</b> Officiated by: YB Datuk Peter Chin Fah Kui <i>Minister of Energy, Green Technology and Water Malaysia</i>		
2.40pm-3.00pm	Tea Break		
3.00pm-4.15pm	<b>Parallel Session 2</b>		
	<b>SESSION 2A(Venue: Manhattan III)</b> <b>Theme: Fluid Dynamics of Fluid Machinery</b> <b>Chairman: Prof. H. Zhu (Yangzhou Univ.)</b> <b>Prof. Amer Nordin (UTM)</b>	<b>SESSION 2B(Venue:Bronx III)</b> <b>Theme: Monitoring and Diagnosis</b> <b>Chairman: Dr.T.Shigemitsu (Tokushima Univ.)</b> <b>Prof. Mazlan Wahid (UTM)</b>	<b>SESSION 2C(Venue: Bronx V)</b> <b>Theme: Pump</b> <b>Chairman: Prof. Y.H.Lee (Korea Maritime Univ.) / Prof. Afifi (UTM)</b>
	<b>Paper ID 217:</b> Numerical simulation of fluid flow and filtration efficiency in centrifugal oil purifier	<b>Paper ID 190:</b> Experiments on combustion kernel growth in gaseous explosions	<b>Paper ID 102:</b> Study of impeller design for pipe flow generator with CFD and RP
	<b>Paper ID 155:</b> A DNS investigation of Non-Newtonian turbulent open channel flow	<b>Paper ID 197:</b> Time domain analysis of acoustic emission signal for internal surface roughness classification	<b>Paper ID 112:</b> Study on performance and internal flow condition of mini turbo pump
	<b>Paper ID 164:</b> Numerical calculation for whirling motion of a centrifugal blood pump with cinical spiral groove bearings	<b>Paper ID 204:</b> Performance of diesel engine using blended crude Jatropha oil	<b>Paper ID 122:</b> Design optimization of mixed flow pump impellers and diffusers in a fixed meridional shape
	<b>Paper ID 166:</b> Thermoacoustic refrigerator's stack optimization	<b>Paper ID124:</b> Duct water current turbine and extremely low head turbine helical type with boundary layer control	<b>Paper ID 150:</b> Research on optimal operation by adjusting blade angle in Jiangdu no. 4 pumping station
	<b>Paper ID 168:</b> The effect of lubricant viscosity in high pressure forming	<b>Paper ID 209:</b> An investigation of the water flow past the butterfly valve	<b>Paper ID 157:</b> Proposal of unique process pump with floating type centrifugal impeller (preliminary report: Axial thrust impeller with driving shaft)
4.15pm-4.30pm	BREAK		
4.30pm-5.30pm	<b>Parallel Session 3</b>		
	<b>SESSION 3A(Venue:Manhattan III)</b> <b>Theme: Fluid Dynamics of Fluid Machinery</b> <b>Chairman: Dr.D.Sakaguchi (Nagasaki Univ)</b> <b>Prof. Hayati (UTM)</b>	<b>SESSION 3B(Venue:Bronx III)</b> <b>Theme: Monitoring and Diagnosis</b> <b>Chairman: Prof. R. Zhang (Yangzhou Univ.)</b> <b>Dr.Syahrullail (UTM)</b>	<b>SESSION 3C(Venue:Bronx V)</b> <b>Theme: Pump</b> <b>Chairman: Prof. A. Furukawa (Kyushu Polytechnic College) / Dr.Jamaluddin (UTM)</b>
	<b>Paper ID 178:</b> Numerical analysis for structural safety evaluation of butterfly valves	<b>Paper ID 213:</b> A two phase flow analyses in rotory dryer with agitator	<b>Paper ID 159:</b> Counter-rotating type pump unit (rotational behaviors)
<b>Paper ID 222:</b> Optimization of a circular microchannel with entropy generation minimization method	<b>Paper ID 216:</b> Evaluation of aircraft wing-tip vortex using PIV	<b>Paper ID 192:</b> Inducer design to avoid cavitation instabilities	

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	<b>Paper ID 187:</b> Numerical investigation of plain fin and round tube heat exchanger under frost condition	<b>Paper ID 220:</b> Numerical solution of hydrodynamics lubrications with non-Newtonian fluid flow	<b>Paper ID 198:</b> Analysis of variable speed optimization operation effect of different type pumps in Jiangdu pumping station
	<b>Paper ID 196:</b> Investigation of flow field in bent duct	<b>Paper ID 221:</b> Pressure analysis in point contact for elastohydrodynamic lubrication	<b>Paper ID 202:</b> Numerical simulation of centrifugal pump with double suction impeller
5.30pm	End of Day-1		

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**Day-2 : 22 October 2009 (Thursday)**

9.00am-9.45am	<b>KEYNOTE ADDRESS 4</b> <b>“On the Development of Concave Surface Boundary Layer Flows”</b> Associate Professor Dr. Winoto S H <i>National University of Singapore</i>		
9.45am-10.00am	Tea break		
10.00am-11.30am	<b>Parallel Session 4</b>		
	<b>SESSION 4A(Venue:Manhattan III)</b> <b>Theme: Renewable Energy I</b> <b>Chairman: Prof.H.Tsukamoto (Kyushu I. T)</b> <b>Prof.Afifi (UTM)</b>	<b>SESSION 4B(Venue:Bronx III)</b> <b>Theme: Flow Meters and Valves</b> <b>Chairman: Prof.Wu Yulin (Tsinghua Univ.)</b> <b>Prof. Wan Ali (UPNM)</b>	<b>SESSION 4C(Venue:Bronx V)</b> <b>Theme: Compressors</b> <b>Chairman: Prof. Winoto (NUS)</b> <b>Dr.Kahar (UTM)</b>
	<b>Paper ID 63:</b> Sustainable rural energy: traditional water wheel in Padang Indonesia	<b>Paper ID 71:</b> Diagnostic flow metering using ultrasound tomography	
	<b>Paper ID 76:</b> Towers for offshore wind turbines	<b>Paper ID 92:</b> Effect of flow characteristics in the downstream of Butterfly valve on the flow rate measurement using Venturi tube	<b>Paper ID 165:</b> The effect of rotor blade speed to the best efficiency point of single stage axial flow compressor
	<b>Paper ID 113:</b> Wood combustion behavior in a fixed bed combustor	<b>Paper ID 106:</b> Comparison test and its evaluation of flow meters for heat meter	<b>Paper ID 188:</b> flow structure of a centrifugal compressor due to a curved duct by using PIV
	<b>Paper ID 115:</b> Limitations of commercializing fuel cell technologies	<b>Paper ID 107:</b> A study on the test method of the thermal mass flow meter	<b>Paper ID 199:</b> Design of a CO <sub>2</sub> twin rotary compressor for a heat pump water heater
	<b>Paper ID 120:</b> Innovative power - augmentation guide vane design of wind solar hybrid renewable energy harvester for urban high rise application	<b>Paper ID 111:</b> Effects of upstream turbulence on measurement uncertainty of flow rate by Venturi	<b>Paper ID 205:</b> Flow and performance calculations of axial compressor near stall margin
	<b>Paper ID 233:</b> Stability of using the accelerometer for impulse measurement of a pulse combustion tube	<b>Paper ID 108:</b> Numerical simulation of slinger combustor using 2-D axisymmetric computational model	
11.30am-11.45am	BREAK		
	<b>Parallel Session 5</b>		
11.45am - 1.30pm	<b>SESSION 5A(Venue:Manhattan III)</b> <b>Theme: Renewable Energy II</b> <b>Chairman: Prof.J.Matsui (Yokohama Univ.)</b> <b>Prof. Amer (UTM)</b>	<b>SESSION 5B(Venue:Bronx III)</b> <b>Theme: High Efficiency and Low Noise Fans</b> <b>Chairman: Prof. K.Y.Kim(Inha Univ.)</b> <b>Dr.Jamal (UTM)</b>	<b>SESSION 5C(Venue:Bronx V)</b> <b>Theme :CFD</b> <b>Chairman: Prof. Y.D.Choi (Mokkpo National Univ.) / Dr. Kahar (UTM)</b>
	<b>Paper ID 131:</b> Flow characteristics in an augmentation channel of a direct drive turbine for wave power generation	<b>Paper ID 95:</b> A Preliminary axial fan design method with the consideration of performance and noise characteristics	<b>Paper ID 75:</b> Radiation effects on free convection flow past an impulsively Started infinite vertical plate with ramped wall temperature and constant mass diffusion
	<b>Paper ID 172:</b> Numerical hydraulic study on cooling water circuit of independent water and power plant	<b>Paper ID 96:</b> Performance characteristic on 4-turbo blowers connected in serial and controlled by inverter	<b>Paper ID 93:</b> Preliminary theoretical study of the formation and growth of droplets in nucleating flows

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	<b>Paper ID 183:</b> Combustion performance and exhaust emission of diesel engine using various sources of waste cooking oil	<b>Paper ID 97:</b> Design optimization of an axial fan blade through multi- objective evolutionary algorithm	<b>Paper ID 105:</b> Modelling of air bubble rising in water and polymeric solution
	<b>Paper ID 193:</b> Study on the performance of helical savonius rotor for wave energy conversion	<b>Paper ID 98:</b> Design of side channel type regenerative blower	<b>Paper ID 118:</b> Large eddy simulation of the dynamic response of an inducer to flow rate fluctuations
	<b>Paper ID 212:</b> Conceptual design of 100kW energy integrated type bi-directional tidal current turbine	<b>Paper ID 99:</b> Performance improvement of high speed jet fan	<b>Paper ID 140:</b> Study of plume behavior from a two heated cylinders at high Rayleigh number using lattice Boltzmann method
	<b>Paper ID 219:</b> Numerical analysis of flow and heat in variable angle slider bearing	<b>Paper ID 100:</b> Aerodynamic design of slim and high-efficient turbo-fan	<b>Paper ID 144:</b> Cubic interpolated pseudo particle lattice Boltzmann method for simulation of natural convection heat transfer in an enclosure
	<b>Paper ID 211:</b> A new current power generating system	<b>Paper ID 101:</b> Flow characteristics with variations of cut-off angle of multi-blade fan for ventilation	<b>Paper ID 148:</b> Analyzing the effect of free stream turbulence on gaseous non premixed flames
1.30pm – 2.30pm	Lunch		
2.30pm – 5.30pm	Tour		
5.30pm	End of Day-2		
8.00pm - 9.30pm	Dinner/Banquet		

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**Day-3 : 23 October 2009 (Friday)**

<b>Day-3 : 23 October 2009 (Friday)</b>			
9.00am-10.15am	<b>Parallel Session 6</b>		
	<b>SESSION 6A (Venue:Manhattan III)</b> <b>Theme: Hydro Turbine</b> <b>Chairman: Prof. J. Cheng (Yangzhou Univ.)</b> <b>Prof.Amer (UTM)</b>	<b>SESSION 6B (Venue:Bronx III)</b> <b>Theme: Gas and Steam Turbines &amp; Jet Technology</b> <b>Chairman: Prof. Chan Lee (Inha Univ.)</b> <b>Prof.Mazlan (UTM)</b>	
	<b>Paper ID 60:</b> Trash diverter orientation angle optimization at run-off river type hydro-power plant using CFD	<b>Paper ID 146:</b> Nonlinear aeroelastic analysis of 3D a MW-class wind turbine blade using CFD and CMBD coupling method	
	<b>Paper ID 84:</b> Simulation of the Francis turbine and CAD used to optimize the runner design based on empirical correlation	<b>Paper ID 225:</b> Development of air supply system for gas turbine combustor test rig	
	<b>Paper ID 109:</b> Simulations of blade angle effects on egat - micro hydro turbine	<b>Paper ID 226:</b> Development of a small gas turbine combustor	
	<b>Paper ID 181:</b> Design and performance analysis of turbine for 100k wotec plant	<b>Paper ID 121:</b> Numerical investigation on the separated flow of axial flow stator in diagonal flow fan	
	<b>Paper ID 208:</b> Development of new remaining life estimation method for main parts of hydro-turbine in hydro-electric power station	<b>Paper ID 171:</b> Effect of stand -off distance on impact pressure of high speed liquid jets	
10.15am-10.30am	BREAK		
	<b>Parallel Session 7</b>		
10.30am – 12.00pm	<b>SESSION 7A (Venue:Manhattan III)</b> <b>Theme: CFD</b> <b>Chairman: Prof. Masoud Khan (Queensland Univ.) / Prof.Hayati (UTM)</b>	<b>SESSION 7B (Venue:Bronx III)</b> <b>Theme: Miscellaneous</b> <b>Chairman: Prof. H. Hayashi (Nagasaki Univ.)</b> <b>Prof.Normah (UTM)</b>	
	<b>Paper ID 201:</b> Numerical dynamic simulation of optimized cross-flow heat exchanger with various refrigerant	<b>Paper ID 167:</b> Three dimensional numerical analysis of laminar heat exchanger considering fin shape and fan performance characteristics	
	<b>Paper ID 223:</b> A CFD study on aerodynamic characteristics of a middle wing for WIG Catamaran during ground effect	<b>Paper ID 127:</b> Heat/mass transfer measurement on the tip surface of rotor blade with square rim	
	<b>Paper ID 228:</b> The development of duct for a horizontal axis turbine using CFD	<b>Paper ID 214:</b> Performance characteristics on a partially admitted small radial-typed turbine	
	<b>Paper ID 229:</b> CFD approach to investigate the flow characteristics in bi-directional ventilated brake disc	<b>Paper ID 224:</b> Spray pattern analysis for a pressure-swirl atomizer with four different nozzle configurations using Eulerian-DPM multiphase approach	

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	<b>Paper ID 230:</b> Simulation of natural convection heat transfer in an inclined square cavity with perfectly conducting side walls using finite different approach	<b>Paper ID 227:</b> Integrated portable air-conditioning system	
	<b>Paper ID 232:</b> Secondary flows in curved rectangular ducts with diminishing cross section	<b>Paper ID 235:</b> Numerical investigation of shallow lid-driven cavity flow by the constrained interpolated profile lattice Boltzmann method	
12.00pm - 12.30pm	Closing Ceremony		
5.30pm	End of Day-3		