

| Start time | End time | Thursday March 24, 2016 | |
|-------------|-------------|----------------------------------|---|
| 7:30:00 AM | 9:00:00 AM | Registration | |
| 9:00:00 AM | 9:30:00 AM | Opening Ceremony | |
| 9:30:00 AM | 10:15:00 AM | Invited Speaker-Wagdi Habashi | |
| 10:15:00 AM | 10:45:00 AM | Coffee Break | |
| | | Chair | Tawfiq Jaber |
| 10:45:00 AM | 11:30:00 AM | Invited Speaker-Josua Meyer | |
| 11:30:00 AM | 12:15:00 PM | Invited Speaker-Marcelo de Lemos | |
| 12:15:00 PM | 1:15:00 PM | Lunch Break | |
| | | Manuscript number | Title & Author |
| | | Session Title | Biofuels and Internal Combustion Engines |
| | | Chair | Mohammed Al Khedher |
| 1:15:00 PM | 1:35:00 PM | 12 | Experimental investigation of a dual-fuel pilot diesel ignition engine operating on biogas fuel <i>F. Z. Aklouche, K. Loubar, S. Awad, M. Tazerout, A. Bentebbiche</i> |
| 1:35:00 PM | 1:55:00 PM | 62 | Biodiesel production from various oil sources and their performance and emission analysis in a compression ignition engine <i>M. Tariq, B. Karunanithi, I. Ahmad, A. Hussain, A. Samad, S. Suzzoha</i> |
| 1:55:00 PM | 2:15:00 PM | 38 | Initiation of Heterogeneous Detonation of Air-Diluted Mixtures of liquid fuel and Oxygen in a Heated Pulsed Combustor <i>K. Alhussan, M. Assad, O. Penyazkov</i> |
| 2:15:00 PM | 2:35:00 PM | 65 | Knock investigation in natural gas dual-fuel engines <i>M.S. Lounici, K. Loubar, M. Tazerout</i> |
| 2:35:00 PM | 2:55:00 PM | 93 | A PDF transport simulation of a turbulent lifted methane non-premixed flame <i>A. Guessab, M. T. Janan, A. Aris, A. Benamara</i> |
| 2:55:00 PM | 3:15:00 PM | 50 | Manipulating laminar non-premixed counter-flow propane flames using a DC electric field <i>A. M. AL-Naeemy, A. R. D. Farraj, A. N. Al-Khateeb, D. C. Kyritsis</i> |
| 3:15:00 PM | 3:30:00 PM | Coffee Break | |
| | | Session Title | Renewable Energy |
| | | Chair | Tariq Shamim |
| 3:30:00 PM | 3:50:00 PM | 106 | Performance of solar air collector: an experimental study in Biskra region, Algeria. <i>K. Aoues, M. Zellouf, A. Labed</i> |
| 3:50:00 PM | 4:10:00 PM | 98 | Proton exchange membrane fuel cell parametric study via mathematical modeling and numerical simulation <i>R. Jaralla, J. Cao, T. J. Jaber</i> |
| 4:10:00 PM | 4:30:00 PM | 7 | Mathematical analysis of a new design for cascade solar still <i>M. Bouzaid, M. Oubrek, O. Ansari, A. Sabri, M. T. Janan</i> |
| 4:30:00 PM | 4:50:00 PM | 111 | UK Centre for efficient and renewable energy in buildings (CEREB)- lessons learned after 5 years of running <i>I. Chaer, M. Yebiyo, S. Haddowe, Y. Zhihui, A. Dunn</i> |
| 4:50:00 PM | 5:10:00 PM | 95 | Direct immersion cooling of a real computer <i>W. Tong, F. Duan</i> |
| 5:10:00 PM | 5:30:00 PM | 64 | Utilization of electrical vehicle in oman: energy and environment enhancement <i>A. Al-Janabi, O. Abu Mohareb, P.-L. Huynh, M. Grimm, H.-C. Reuss</i> |
| 5:30:00 PM | 5:50:00 PM | 115 | Numerical investigation of imposed aerodynamic forces on vertical axis wind turbine <i>K. Mansour, H. Ahmadi</i> |

| Start time | End time | Friday March 25, 2016 | |
|-------------|-------------|---|---|
| | | Manuscript number | Title & Author |
| | | Session Title | Micro/nano Heat Transfer |
| | | Chair | Ziad Saghir |
| 8:30:00 AM | 8:50:00 AM | 6 | Stress-dependent in micro-mechanical resonators based on dual-phase-lagging heat conduction <i>H. M. Youssef, N. A. Alghamdi</i> |
| 8:50:00 AM | 9:10:00 AM | 34 | Mechanism of locally thicker thin film formation by partial heating of a polymer solution film on the substrate from the bottom during drying <i>H. Kagami</i> |
| 9:10:00 AM | 9:30:00 AM | 22 | Natural convection of a nanofluid in a conical container <i>B. Mahfoud, R. Bessaïh and A. Bendjaghlouli</i> |
| 9:30:00 AM | 9:50:00 AM | 31 | Analytical thermal resistance model for the heat sink used in high led power applications <i>F. Haraka, A. Elouatouati, M. T. Janan</i> |
| 9:50:00 AM | 10:10:00 AM | 113 | Water dynamics in PEMFC microchannel with diffusion through GDL <i>A. M.B.A Soopee, A. P. Sasmito, T. Shamim</i> |
| 10:10:00 AM | 10:40:00 AM | Coffee Break | |
| | | Chair | Mehdi Shemirani |
| 10:40:00 AM | 11:25:00 AM | Invited Speaker-Shripad P. Mahulikar | |
| 11:25:00 AM | 12:10:00 PM | Invited Speaker-Dean Vucinic | |
| 12:10:00 PM | 12:55:00 PM | Invited Speaker-Mabruk Issa Suleiman | |
| 12:55:00 PM | 1:55:00 PM | Lunch Break | |
| | | Manuscript number | Title & Author |
| | | Session Title | Thermodiffusion |
| | | Chair | Mama Chacha |
| 1:55:00 PM | 2:15:00 PM | 36 | Experimental investigation on thermal diffusion in ternary hydrocarbon mixtures <i>S. A. Mousavi, T. Yousefi, M. Z. Saghir</i> |
| 2:15:00 PM | 2:35:00 PM | 59 | Evaluation of molecular dynamics methods for thermodiffusion in binary mixtures <i>S.H. Mozaffari, S. Srinivasan, M. Z. Saghir</i> |
| 2:35:00 PM | 2:55:00 PM | 120 | A Review on Influencing Parameters when Analyzing Heat Transfer Enhancement Using Alumina-Water Nanofluids <i>M. Shemirani</i> |
| 2:55:00 PM | 3:15:00 PM | 109 | Study of thermal effects in a cavitating Venturi flow <i>E. Goncalves, D. Zeidan</i> |
| 3:15:00 PM | 3:35:00 PM | 69 | An efficient grading strategy for large classes <i>G. Sidhu, S.Srinivasan</i> |
| 3:40:00 PM | | Safari Trip | |

| Start time | End time | Saturday March 26, 2016 | |
|-------------|--|-------------------------|--|
| | | Session Title | Numerical Methods in Fluid Flow and Heat Transfer I |
| | | Chair | AbdulAziz Soufyane |
| 9:00:00 AM | 9:20:00 AM | 17 | Effects of magnetic field on the phase change cells and the formation of ice crystals in bio-materials : carrot case <i>B. Liu, J. Song, Z. Yao, R. Bennacer</i> |
| 9:20:00 AM | 9:40:00 AM | 60 | A review of VMS methods for the simulation of turbulent incompressible flows <i>N. Ahmed, T. Chacon Rebollo, V. John, S. Rubino</i> |
| 9:40:00 AM | 10:00:00 AM | 33 | Kinematic control of vortex flows in a free surface cylinder <i>M. Imoula, B. Benkoussas, R. Saci</i> |
| 10:00:00 AM | 10:30:00 AM | Coffee Break | |
| | | Manuscript number | Title & Author |
| | | Session Title | Porous Media |
| | | Chair | Filippo Genco |
| 10:30:00 AM | 10:50:00 AM | 40 | Experimental study of interfacial phenomena between the heavy oil and maximum solvent concentration as function of injection pressures <i>H. Muhamad, S. Upreti, A. Lohi, H. Doan</i> |
| 10:50:00 AM | 11:10:00 AM | 112 | Influence of wall boundary conditions and particle collisions on hydrodynamics of an annular fluidized bed reactor <i>M.N. Khan, T. Shamim</i> |
| 11:10:00 AM | 11:30:00 AM | 94 | Numerical simulation of thermosolutal convective transitions in a very narrow porous annulus under the influence of lewis number <i>A. Ja, A. Cheddadi</i> |
| 11:30:00 AM | 11:50:00 AM | 72 | Study of heat transfer enhancement through nano-particles injection within phase change materials <i>M. Bechiri, K. Mansouri</i> |
| 11:50:00 AM | 12:10:00 PM | 56 | Contributions of various driving forces to moisture migration during convective drying process of an unsaturated porous medium <i>Y. Tang, J. Min</i> |
| 12:10:00 PM | 12:30:00 PM | 102 | Thermal and mechanical performance assessment of polymer composite materials for heat exchanger applications <i>I. Darawsheh, P. Rodgers, V. Evely</i> |
| 12:30:00 PM | 12:50:00 PM | 116 | Optimization of the design of reverse osmosis unit working by photovoltaic (RO/PV) for Abu Dhabi climate <i>K. Bourouni, T. Jaber, S. El Behissy</i> |
| 12:50:00 PM | 1:50:00 PM | Lunch Break | |
| | | Session Title | Advances in Experimental Characterization |
| | | Chair | Seshasai Srinivasan |
| 1:50:00 PM | 2:10:00 PM | 44 | Performance simulation of two-bed silica gel-water adsorption chillers <i>N. Ghilen, S. Messai, S. Gabsi, M. El Ganaoui, R. Benelmir</i> |
| 2:10:00 PM | 2:30:00 PM | 49 | Electro-deposition of asphaltenes from Abu Dhabi crude oil/synthetic formation water mixtures <i>H. Abu Khalifeh, H. Belhaj</i> |
| 2:30:00 PM | 2:50:00 PM | 84 | Estimation of thermal contact parameters at a sliding interface <i>E. Guillot, S. Azzouz, B. Bourouga</i> |
| 2:50:00 PM | 3:10:00 PM | 92 | Experimental investigation of cavitation behind a circular cylinder in cross-flow <i>P. Kumar, D. Chatterjee, S. Bakshi</i> |
| 3:10:00 PM | 3:30:00 PM | 96 | Cooling issues in operational data centres: CFD analysis and experimental study <i>B. Fakhim, S. Nagarathinam, M. Behnia, S. W. Armfield</i> |
| 3:30:00 PM | 3:45:00 PM | Coffee Break | |
| | | Session Title | Thermal Management |
| | | Chair | Hamdi Shebani |
| 3:45:00 PM | 4:05:00 PM | 52 | Liquid flow enhancement using natural polymeric additives: effect of concentration in micro-channels <i>H. A. Abdul Bari, F. W.M. Ling</i> |
| 4:05:00 PM | 4:25:00 PM | 85 | Jet impingement heat transfer analysis For electronic components <i>L. Liston, L. Antony, M. Linda</i> |
| 4:25:00 PM | 4:45:00 PM | 18 | Controlled condition in dynamic cold storage using nano-partical fluid as PCM <i>B. Liu, Z. Yang, Y. Wang, R. Bennacer</i> |
| 4:45:00 PM | 5:05:00 PM | 20 | Breakup of the water sheet formed by impinging jets <i>Y. Xia, L. Khezzer, S. Bojanampati, A. Molki</i> |
| 5:05:00 PM | 5:25:00 PM | 88 | Cooling high heat flux fusion reactors components using Al ₂ O ₃ /water nanofluids <i>F. Genco, G. Genco</i> |
| 7:00:00 PM | Oriental Buffet Dinner-Centro Hotel | | |

| Start time | End time | Saturday March 26, 2016 | |
|-------------|-------------|--|--|
| | | Session Title | Numerical Methods in Fluid Flow and Heat Transfer II |
| | | Chair | Karim Bourouni |
| 9:00:00 AM | 9:20:00 AM | 43 | Numerical and experimental investigation on time dependent temperature distribution for a vertical beverage cooler <i>I. Hakki Tavman, E. Ozcan, F. Erinc Yavuz, O. Ozcan, Y. Ozan Donmez, M. Akif Ezan</i> |
| 9:20:00 AM | 9:40:00 AM | 15 | Natural ventilation feasibility in typical patients wards in a Belgian hospital during summer <i>S. Maraqa, G. Van Moeseke, A. De Herde</i> |
| 9:40:00 AM | 10:00:00 AM | 57 | Molecular dynamics simulations of ion pairing in electrochemical fluids <i>G. Sidhu, R. Pallonji, S. Srinivasan</i> |
| 10:00:00 AM | 10:30:00 AM | Coffee Break | |
| 10:20:00 AM | 10:40:00 AM | 30 | Boundary conditions effects on the natural convection in a square cavity <i>M. Adnani, B. Meziani, O. Ourrad</i> |
| 10:40:00 AM | 11:00:00 AM | 42 | Numerical simulation of frosting on fin surfaces <i>Q. Ma, X. Wu, F. Chu, S. Hu</i> |
| 11:00:00 AM | 11:30:00 AM | 13 | Comparison between steady and pulsating water flow through aluminum foam: experimental and numerical approach <i>A. M. Bayomy, M. Z. Saghir</i> |
| 11:30:00 AM | 11:50:00 AM | 89 | Modelling of natural convection and radiative heat transfer in inclined thermosiphon system Installed on a roof of a building <i>D. Ababsa, S. Bougoul</i> |
| 11:50:00 AM | 12:10:00 PM | 105 | Multiple solutions for natural convection in inclined rectangular cavities <i>M. Zellouf, I. Gat, K. Aoues, N. Moumimi, A. Labed</i> |
| 12:10:00 PM | 12:30:00 PM | 41 | Shrink angle of the melt liquid during defrosting <i>F. Chu, X. Wu, Y. Zhu</i> |
| 12:30:00 PM | 12:50:00 PM | 39 | Cooling of electronic components using nanofluids <i>M. Zitoune, O. Ourrad Meziani, B. Meziani</i> |
| 12:50:00 PM | 1:50:00 PM | Lunch Break | |
| | | Session Title | Numerical Methods in Fluid Flow and Heat Transfer III |
| | | Chair | Hameed Mohamad |
| 1:50:00 PM | 2:10:00 PM | 114 | The effect of counter flow jet on a blunt body with a spike at high free stream Mach number flow <i>Z. Eghlima, K. Mansour</i> |
| 2:10:00 PM | 2:30:00 PM | 81 | Wall-pressure fluctuations of modified turbulent boundary layer with riblets <i>H. A. Abdulbari, H. D. Mohammed, Z. B. Yaacob, W. K. Mahmood</i> |
| 2:30:00 PM | 2:50:00 PM | 119 | Thermal performance of biomass-fired steam power plant <i>C. Ghenai</i> |
| 2:50:00 PM | 3:10:00 PM | 25 | The effect of varying the radii of the inner and outer cylinders on the appearance of Taylor vortices <i>A. Daimallah, M. Lebbi, A. Bouabdallah</i> |
| 3:10:00 PM | 3:30:00 PM | 120 | Entropy generation of mixed convection flow in convergent channel <i>S. Hadjadj and S. Saouli</i> |
| 3:30:00 PM | 3:45:00 PM | Coffee Break | |
| | | Session Title | Numerical Methods in Fluid Flow and Heat Transfer IV |
| | | Chair | Hadil Abu Khalifeh |
| 3:50:00 PM | 4:10:00 PM | 24 | Biodiesel production by Citrullus colocynthis for internal combustion engines <i>R. Alloune, S. Awad, K. Loubar, M. Balistrou, M. Tazerout</i> |
| 4:10:00 PM | 4:30:00 PM | 121 | Planar premixed flames and their stability <i>E. Al-Sarairah</i> |
| 4:30:00 PM | 4:50:00 PM | 21 | Transient heat conduction in materials with linear power-law temperature dependent thermal conductivity: integral balance approach <i>A. Fabre, J. Hristov, R. Bennacer</i> |
| 4:50:00 PM | 5:10:00 PM | 1 | Performance modeling analysis of industrial process desalination sea water <i>H. Acheheb, J. Guerfi, A. Metloui, M. Khattab</i> |
| 5:10:00 PM | 5:30:00 PM | 90 | Numerical simulation of unsteady free surface flow on irregular bed <i>Kh. Korichi, A. Hazzab, M. Atallah, A. Chetti</i> |
| 5:30:00 PM | 5:50:00 PM | 58 | Alternative heat transfer fluid in heating systems-energy results from a real case study <i>I. Chaer, S. Haddowe, M. Yebiyo, P. Stanley, Y. Zhihui, K. Dilli</i> |
| 5:50:00 PM | 6:10:00 PM | 122 | Flow and Heat Characteristics of Low Pressure Flows in the Annulus Region between Two Concentric Horizontal Cylinders <i>W. Al-Kouz, S. Kiwan, A. Alshare, A. Alkhalidi</i> |
| 7:00:00 PM | | Oriental Buffet Dinner-Centro Hotel | |

| Chair | |
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| | Poster Session |
| 10 | Etude d'écoulement en mini-canaux cas d'une mini diode tesla <i>B. Dennai , M. Belboukhari, R. Khelfaoui ,T. Chekifi</i> |
| 19 | Effet de la recirculation des gaz d'échappement sur l'émission du monoxyde d'azote dans un moteur diesel <i>L. Mokhtari, Z. Nemouchi</i> |
| 16 | Turbulent ejection of stainless steel film during fusion laser cutting process <i>S. Aggoune , C. Abid, E. H. Amara</i> |
| 66 | Analytical modeling of the thermal behaviour of an air/soil heat exchanger using Green's functions <i>A. Grine, A. Radjough, S. Maamir</i> |
| 100 | Numerical investigation of turbulent forced convection in a rectangular channel with transverse ribs <i>K. Bourezg , R. Bessaih , C.O. Lahoucine, F. Berrahil</i> |
| 118 | Thermoelectric MHD with memory- dependent derivative heat transfer <i>M. A. Ezzat , A. A. El-Bary, H. Youssef</i> |
| 73 | Transient heat transfer simulation of atmospheric residue during pipeline shutdowns <i>T. Firmansyah, M. Abdur Rakib, A. George, M. Al Musharfy, M. Issa Suleiman</i> |
| 75 | Experimental investigation of the effect of inlet orifice on flow boiling instability in a single vertical microtube <i>Q. You , I. Hassan , L. Kadem , M. Sajid</i> |
| 53 | Challenges in designing a non-uniform heat flux framework for a single microchannel tube <i>A. Eltaweel, I. Hassan</i> |
| 78 | Numerical investigation of heat transfer characteristics of a wavy-tapered microchannel <i>A. Eltaweel, I. Hassan</i> |
| 101 | Effect of length on thermal performance of solar air heating for drying purposes <i>A. Boukadoum, A. Benzaoui , M. Koussa</i> |
| 103 | 3D printing for a wind turbine prototype <i>H. Daaou Nedjari, A. Toumi, M. Maizi, A. Belahouane, F. Bourakba, O. Guerri, M. Saighi, N. Nait Bouda</i> |
| 107 | Soret and Dufour Effects on Thresholds of Supercritical and Subcritical Convection in a Shallow Horizontal Binary Fluid Layer <i>A. Lagra, M. Hasnaoui , A. Amahmid , M. Er-Raki, M. Bourich</i> |
| 117 | Effect of the aspect ratio of holes of hollow clay bricks on the heat transfer through double hollow brick walls <i>M. Boukendil, A. Abdelbaki, Z. Zrikem</i> |
| 108 | On the stabilization of the oscillatory convection flow by adding nanoparticles <i>M. El Abdallaoui , M. Hasnaoui , A. Amahmid</i> |
| 35 | Brackish water desalination using solar energy <i>A. Diaf, F. K Benabdelaziz</i> |
| 77 | Experimental investigation on the effect of metal foam on the enhancement of natural convection heat transfer <i>M. Packnezhad, A.M. Rashidi, T. Yousefi, M. Z. Saghir</i> |
| 28 | Non-isothermal timefractional model for porous media <i>A.D. Obembe, M. E. Hossain, S. Abu-Khamsin</i> |
| 32 | Sensitivity analysis of rock and fluid properties on temperature distribution during thermal operation during EOR process <i>A. M. Hassan, M. E. Hossain</i> |
| 104 | The effect of salt on the stability of solar ponds: Laboratory Experiences <i>I. Mahfoudh , M. J. Safi</i> |
| 70 | Numerical simulation based exergetic analysis of transesterification in a sono-chemical reactor <i>M.N. Hussain , I. Janajreh</i> |
| 47 | CFD Analysis of a Typical Vane Plate Mist Elimination System at Different Plate Spacings <i>M. Nazififard</i> |

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| 26 | Three-dimensional simulation of transient heat transfer in scrap preheater <i>E. Hajidavalloo, E. M. Hamedani</i> |
| 46 | Numerical evaluation of the sphere packed pipe as a heat transfer promoter for the molten salt blanket system in a fusion reactor <i>M. Nazififard</i> |
| 80 | Nuclear heat transfer enhancement by mixing vane for hexagonal fuel assembly <i>M. Nazififard</i> |
| 110 | Computational study of the melting of Nano-enhanced phase change material in a rectangular latent heat storage unit <i>R. Elbahjaoui, H. El Qarnia, M. El Ganaoui</i> |
| 9 | Interaction between longitudinal acoustic waves and sidewall injection in solid rocket motor chamber <i>A. M. Hegab</i> |
| 83 | Numerical investigation of Entropy Generation in a Propane-Air Burner <i>S. Morsli, A. Sabeur, M. El Ganaoui</i> |
| 82 | Simulation of the fouling phenomenon in the heat exchangers of Algiers refinery <i>R. Harche, A. Mouheb</i> |
| 71 | Anaerobic Digestion of Waste Water Sludge <i>A. Alshehhi, I. Janajreh</i> |