



Sunday, 6th Sept 2015

18:00 **Onsite registration and Drinks reception at 19:00**

Day 1: Monday, 7th Sept 2015

07:30 **Poster presenters set up their posters**

08:00 onwards **Onsite registration**

Welcome	08:30	-	09:00	Welcome	
Keynote1	09:00	-	09:30	Keynote 1	Prof. Tassos Karayiannis (Brunel University London, UK): Flow boiling in microchannels
9:30-10:30 Poster Presentations Phase Change Session Chair: D. A. McNeil	09:30	-	09:32	PC1	CFD modelling of low pressure evaporation. By <i>Ahmad et al.</i>
	09:33	-	09:35	PC2	Novel CFD methods to predict evaporation of water under a vacuum. By <i>Panesar et al.</i>
	09:36	-	09:38	PC3	Shell-side boiling of a glycerol-water mixture at low subatmospheric pressures. By <i>McNeil et al.</i>
	09:39	-	09:41	PC4	Implementing a multi-disciplinary strategy to understand heat transfer in a reduced pressure highly active evaporator. By <i>Baker et al.</i>
	09:42	-	09:44	PC7	Ambient pressure effect on nanofluid sessile droplet evaporation. By <i>Askounis et al.</i>
	09:45	-	09:47	PC8	Leidenfrost vitrification of droplets with liquid nitrogen. By <i>Duursma et al.</i>
	09:48	-	09:50	PC9	Condensation of R134A at low mass fluxes in a smooth tube at different inclination angles. By <i>Ewim et al.</i>
	09:51	-	09:53	PC10	Chemically treated micropillars for enhanced condensation heat transfer. By <i>Oregon et al.</i>
	09:54	-	09:56	PC11	Effect of channel orientation on the flow boiling heat transfer and pressure drop in a 1.1 mm diameter channel. By <i>Pike-Wilson et al.</i>
	09:57	-	09:59	PC12	The effect of brine temperature and salinity on the rate of electromagnetic attenuation within it. By <i>Hales et al.</i>
	10:00	-	10:02	PC13	Thermocapillary convection for an evaporating meniscus with changing contact angle. By <i>Buffone</i>
	10:03	-	10:05	PC14	Ice pigging coolant jackets: heat transfer into the ice pig body. By <i>McBryde et al.</i>
	10:06	-	10:08	PC15	Ice formation and production in subcooled environments. By <i>Yun et al.</i>
	10:09	-	10:11	PC16	Effect of extreme wetting scenarios on pool boiling. By <i>Valente et al.</i>
	10:12	-	10:14	PC17	Experimental study on the thermal performance of two-phase closed-loop thermosyphon with liquid heat transfer agent at high heat flux. By <i>Wei et al.</i>
	10:15	-	10:17	PC18	Effect of substrate temperature on deposition pattern from nanofluid droplets. By <i>Zhong et al.</i>
	10:18	-	10:20	PC19	Numerical simulation of condensation in mini horizontal tubes with different cross-section shapes. By <i>Zhang et al.</i>
	10:21	-	10:23	PC20	On the use of phase change materials in low-temperature Fischer-Tropsch (LTFT) reactors. By <i>Odunsi et al.</i>
	10:24	-	10:26	PC21	An experimental investigation of the effect of control algorithm on the energy consumption and temperature distribution of a household refrigerator. By <i>Tolga et al.</i>
	10:27	-	10:29	PC22	Experimental investigation of bubble behaviours in a heat pump water heating system. By <i>Qin et al.</i>
Break	10:30	-	11:00	Coffee Break + Poster Viewing	
Keynote2	11:00	-	11:30	Keynote 2	Prof. Ping Cheng (Shanghai Jiaotong University, China): Recent numerical and analytical studies on effects of surface characteristics in phase-change heat transfer
11:30-12:30 Phase Change	11:30	-	11:32	PC23	Numerical Simulation of flow and heat transfer around vertical cylinder submerged in water. By <i>Ramadan et al.</i>
	11:33	-	11:35	PC24	Saturated Boiling of Water on Biphilic Surfaces under Sub-atmospheric pressure. By <i>Yamada et al.</i>
	11:36	-	11:38	PC25	On the evaporation of droplets with related initial and receding contact angles. By <i>Stauber et al.</i>

11:30-12:30 Poster Presentations Phase Change Session Chair: T. O'Donovan	11:39	-	11:41	PC26	Generation and Metastability of Interfacial Nanobubbles. By <i>Takahashi et al.</i>
	11:42	-	11:44	PC27	Optimization of Heating and Condensation System of a Water Condensed Type Washer Dryer Regarding Water Consumption. By <i>Top et al.</i>
	11:45	-	11:47	PC28/29*	Thermal Response of a Pulsating Heat Pipe on Board the Rexus 18 Sounding Rocket: PHOS Experiment Chronicles. By <i>Creatini et al.</i>
	11:48	-	11:50	PC30	Flow Boiling Heat Transfer in a Shallow Metallic Microchannel. By <i>Ozdemir et al.</i>
	11:51	-	11:53	PC31/32*	Vapour generation of perfectly wetting liquid by cyclone evaporator under variable gravity level. By <i>Glushchuk et al.</i>
	11:54	-	11:56	PC33	Flow Boiling Heat Transfer and Pressure Drop of R134a in a Multi Microchannel Metallic Evaporator. By <i>Mohammed et al.</i>
	11:57	-	11:59	PC34	Thermal Energy Storage Using Composite Phase Change Materials: Linking Materials Properties to Device Performance. By <i>Li et al.</i>
	12:00	-	12:02	PC35/36*	A Novel Type of Multi-Evaporator Closed Loop Two Phase Thermo-syphon: Thermal Performance Analysis and Fluid Flow Visualization. By <i>Mameli et al.</i>
	12:03	-	12:05	PC37	Numerical simulation of water-vapour condensation by means of a flow oriented scheme. By <i>Karadimou et al.</i>
	12:06	-	12:08	PC38	Surface tension of n-Butanol and steam mixture on metal surface. By <i>Jivani et al.</i>
	12:09	-	12:11	PC39	Effects of Vapour Velocity and Pressure on Marangoni Condensation of Steam-Butanol Mixtures on a Horizontal Tube. By <i>Jivani et al.</i>
	12:12	-	12:14	PC40	Study of a New Wick Material for Capillary-Driven Heat Pipes. By <i>De Schampheleire et al.</i>
	12:15	-	12:17	PC41/42*	Numerical Simulation of Flow Boiling in Micro-channels: Bubble Growth, Detachment and Coalescence. By <i>Georgoulas et al.</i>
	12:18	-	12:20	PC43	Evaporation/boiling heat transfer characteristics in an artery porous structure. By <i>Bai et al.</i>
	12:21	-	12:23	PC44	Experimental study on direct solar energy absorption of Au-Cu hybrid nanofluids. By <i>Bai et al.</i>
	12:24	-	12:26	PC45	Modelling of a tank containing paraffin as phase-change material for cold storage applications. By <i>Biosca-Taronger et al.</i>
	12:27	-	12:29	PC46	Thermal Analysis of a Novel Solar-biogas Hybrid System Integrated with PCM Insulation Closure. By <i>Lu et al.</i>
Lunch Break	12:30	-	13:45	Lunch Break + Poster Viewing until 13:15 + Poster Switchover	
Keynote3	13:45	-	14:15	Keynote 3	Prof. Yasuyuki Takata (<i>Kyushu University, Japan</i>): Pool boiling on superhydrophobic/philic surfaces
14:00-15:15 Poster Presentations Applications Session Chair: J. Christy	14:16	-	14:18	AP1	The Effect of Secondary Flow on Developing Flow in the Transitional Flow Regime. By <i>Everts et al.</i>
	14:19	-	14:21	AP2	Thermal conductivities of annular packed beds in axial fluid flow. By <i>Glass et al.</i>
	14:22	-	14:24	AP3	Heat Transfer Mechanisms for Single Rising Taylor Bubbles. By <i>Scammell et al.</i>
	14:25	-	14:27	AP4	Thermal characterisation of compact heat exchangers for automotive air conditioning. By <i>Torregrosa-Jaime et al.</i>
	14:28	-	14:30	AP5	Improving thermocouple measurement accuracy for Solid Oxide Fuel Cell application. By <i>Barari et al.</i>
	14:31	-	14:33	AP6	Investigation on thermal efficiency and cost-effective mode of a solid thermal package by utilizing off-peak power. By <i>Duan et al.</i>
	14:34	-	14:36	AP7	Development of an optical thermal history sensor based on the oxidation of divalent rare earth ion phosphor. By <i>Yanez-Gonzalez et al.</i>
	14:37	-	14:39	AP8	Measurement and Simulation of Low Temperature Packed Bed Regenerators. By <i>Pike-Wilson et al.</i>
	14:40	-	14:42	AP9	Variable Conductance Heat Pipes for Managing Thermal Stores By <i>Hislop et al.</i>
	14:43	-	14:45	AP10	Nanofluids for Heat Transfer Applications. By <i>Rudyak et al.</i>
	14:46	-	14:48	AP11	Flooding behaviour in countercurrent gas-liquid flow in vertical tubes with turbulence promoters. By <i>Spindler</i>
	14:49	-	14:51	AP12	Manipulating Phonon Heat Conduction by High Pressure Torsion in Silicon Based Thermoelectrics. By <i>Tabara et al.</i>
	14:52	-	14:54	AP13	Experimental Study of Unsteady and Conjugate Heat Transfer in Wavy Film Flows over an Inclined Heated Foil. By <i>Charogiannis et al.</i>

* These are poster-only contributions

Programme Schedule

Applications Session Chair: J. Christy	14:55	-	14:57	AP14	An experimental study of rotational pressure loss in rotor ducts. By <i>Chong et al.</i>
	14:58	-	15:00	AP15	The Effect of the Inclination Angle on Heat Transfer Performance in Back-ward Facing Step Utilizing Nanofluid. By <i>Etaig et al.</i>
	15:01	-	15:03	AP16/17*	Characterization of the Corona Discharge for Ionic Wind Heat Transfer Enhancement in Internal Flow Channels. By <i>Gallandat et al.</i>
	15:04	-	15:06	AP18	Novel Heat Transfer using Solid Phase Transport Medium. By <i>Alexander.</i>
	15:07	-	15:09	AP19	Dynamic Testing and Modelling of Solar Collectors. By <i>Guarracino et al.</i>
	15:10	-	15:12	AP20	A Self-Pumped Heat-Exchanger for Wave-Powered Desalination. By <i>Hellenschmidt et al.</i>
	15:13	-	15:15	AP21	Analysis and Experiment on Forced Convection Heat Transfer Coefficient and Pressure Drop of Diamond-Shaped Fin-Array. By <i>Hirasawa et al.</i>
Break	15:15	-	15:45	Coffee Break + Poster Viewing	
Keynote4	15:45	-	16:15	Keynote 4	Prof. Joe Quarini (University of Bristol, UK): Ice slurries, the cool, benevolent bringers of sustainable clean living
16:15-17:15 Poster Presentations Applications Session Chair: K. Sefiane	16:16	-	16:18	AP22	The imitation of the surface temperature variation characteristics of concrete road under periodical ambient conditions. By <i>Ye et al.</i>
	16:19	-	16:21	AP23	Improving the operation of a geothermal district heating network through the use of a heat storage tank. By <i>Kyriakis</i>
	16:22	-	16:24	AP24/25*	Sensitivity Analysis of a Capillary Pulsating Heat Pipe: Influence of the Tube Characteristics. By <i>Manzoni et al.</i>
	16:25	-	16:27	AP26	Effect of Hydraulic Diameter and Aspect Ratio on Single Phase Flow and Heat Transfer in a Rectangular Microchannel. By <i>Sahar et al.</i>
	16:28	-	16:30	AP27	Influence of the microstructure on the transport phenomena on horizontal tubes. By <i>Tomforde et al.</i>
	16:31	-	16:33	AP28	Development of a Solar Cooling System Based on a Fluid Piston Convertor. By <i>Mahkamov et al.</i>
	16:34	-	16:36	AP29	Performance Evaluation of Room Temperature Magnetic Refrigerator Using Corrugated Plate Regenerator. By <i>Kamran et al.</i>
	16:37	-	16:39	AP30	Heat Exchanger Analysis of Azeotropes in Organic Rankine Cycles. By <i>Kirmse et al.</i>
	16:40	-	16:42	AP31/32*	Parametric Design Study of Vacuum Glazed Windows. By <i>Ali et al.</i>
	16:43	-	16:45	AP33	Turbulent heat transfer between two horizontal planes under inherently stable and unstable conditions. By <i>Jackson et al.</i>
	16:46	-	16:48	AP34	Measuring the Heat Transfer Coefficient in a Direct Oil-Cooled Electrical Machine with Segmented Stator. By <i>Camilleri et al.</i>
	16:49	-	16:51	AP35	Run-around Coils for Energy Efficiency. By <i>Bentham et al.</i>
	16:52	-	16:54	AP36	Temperature Dependence of Energy Band Gaps In Triple Junction Solar Cell. By <i>Maka et al.</i>
	16:55	-	16:57	AP37	Penetrative convection in a unit aspect ratio enclosure heated by absorption of radiation. By <i>Amber et al.</i>
	16:58	-	17:00	AP38/39*	Exp and num. investigation on Natural Convection in Horizontal Channels Partially Filled with Aluminium Foam and Heated from Below. By <i>Buonomo et al.</i>
	17:01	-	17:03	AP40	Comparison of temperature and acoustic monitoring of ice pig passage. By <i>Lucas et al.</i>
	17:04	-	17:06	AP41	Feasibility Analysis of Molten-Salt Direct Reactor Auxiliary Cooling System. By <i>Le Brun et al.</i>
	17:07	-	17:09	AP42	III-V multi-junction cell temperature prediction under concentration and realistic atmospheric conditions. By <i>Theristis et al.</i>
	17:10	-	17:12	AP43	Identifying Thermal Performance of Two Heat Exchangers for Thermoelectric Generators with CFD. By <i>Li et al.</i>
	17:13	-	17:15	AP44	Heat Transfer Enhancement Using Partly Porous Channelsby. By <i>Nebbali et al.</i>
	17:16	-	18:00	Poster Viewing and Day 1 Announcements (Poster removal at 18:00)	
	19:30			Dinner	

* These are poster-only contributions

Applications Session

Poster-Only Contributions, Monday 7th Sept 2015

Day 1: Monday, 7 th Sept 2015 (POSTER-ONLY CONTRIBUTIONS)		
9:30-12:30 Phase Change Session Poster-Only Contributions	PC5*	CFD Modelling Of Low Pressure Evaporation. By <i>Ahmad et al.</i>
	PC6*	The effect of solid deposits on the wall temperature of a heated vessel boiling water at low pressure. By <i>Elsaye et al.</i>
	PC29*	Effect of Dead Volumes on Single Closed Loop Pulsating Heat Pipes. By <i>Creatini et al.</i>
	PC32*	Experimental study on in-tube convective condensation of inclined tubes in a single minichannel with HFE-7100 at low mass fluxes. By <i>Gallo et al.</i>
	PC36*	Numerical Simulation of a Sodium Thermosyphon. By <i>Manzoni et al.</i>
	PC42*	Numerical Simulation of Pool Boiling: The Effects of Initial Thermal Boundary Layer, Contact Angle and Wall Superheat. By <i>Georgoulas et al.</i>
9:30-12:30 Phase Change Session Poster-Only Contributions	AP17*	Experimental Study of Ionic Wind Heat Transfer Enhancement in Rectangular, Vertical Channels. By <i>Gallandat et al.</i>
	AP25*	Numerical Simulation of a Capillary Pulsating Heat Pipe in Various Gravity Conditions. By <i>Manzoni et al.</i>
	AP32*	Experimental and numerical study on heat transfer and pressure loss in concentric tube heat exchanger with inserts placed on coolant side. By <i>Abbasi et al.</i>
	AP39*	Numerical Investigation on a Latent Thermal Energy Storage with Aluminum Foam. By <i>Buonomo et al.</i>

Next Page for Tuesday's (8th Sept 2015) Programme

* These are poster-only contributions

Programme Schedule

Day 2: Tuesday, 8 th Sept 2015					
	07:30			Poster presenters set up their posters	
Keynote5	09:00	-	09:30	Keynote 5	Dr. Prashant Valluri (<i>The University of Edinburgh, UK</i>): Ultra-high resolution 3D direct numerical simulations for phase change applications
9:30-10:30 Poster Presentations Modelling <i>Session Chair:</i> Y. C. Lee	09:30	-	09:32	M1	Modelling of Polymer Plate Heat Exchangers. By <i>Wadekar</i>
	09:33	-	09:35	M2	A reduced numerical model for counter-current two-layer flows. By <i>Lavalle et al.</i>
	09:36	-	09:38	M3	On the generation of nonlinear 3D interfacial waves in gas-liquid flows. By <i>Naraigh et al.</i>
	09:39	-	09:41	M4	Heat transfer in falling liquid films at moderate Reynolds and high Peclet numbers. By <i>Ruyer-Quil et al.</i>
	09:42	-	09:44	M5	Numerical investigation of a two stage travelling-wave thermoacoustic engine driven heat pump with a hybrid configuration. By <i>Al-Kayiem.</i>
	09:45	-	09:47	M6	Fluid Flow & Heat Transfer Modelling of Adjacent Synthetic Jets. By <i>Alimohammadi et al.</i>
	09:48	-	09:50	M7	Numerical simulation of Heat Transfer Investigation in New Cooling Schemes of a Stationary Blade Trailing Edge. By <i>Beniaiche et al.</i>
	09:51	-	09:53	M8	Radiation Effect on Thermal Boundary Layer Flow past a Stretching Plate with Variable Thermal Conductivity. By <i>Ravins et al.</i>
	09:54	-	09:56	M9	SPRS – A Passively Cooled Sellafield Store. By <i>Moorcroft et al.</i>
	09:57	-	09:59	M10	Mixed Convection Boundary-Layer Flow near a Stagnation Point towards a Stretching/Shrinking surface in a Nanofluid. By <i>Yacob et al.</i>
	10:00	-	10:02	M11	Numerical Study on Heat Transfer in Wavy Annular Gas-Liquid Flow. By <i>Yang et al.</i>
	10:03	-	10:05	M12	Developing a scalable and flexible high-resolution DNS code for two-phase flows. By <i>Bethune et al.</i>
	10:06	-	10:08	M13	ALE-FEM for two-phase flows with heat and mass transfer. By <i>Anjos et al.</i>
	10:09	-	10:11	M14	Large Eddy & Interface Simulation (LEIS) of Disturbance Waves and Heat Transfer in Annular Flows. By <i>Yang et al.</i>
	10:12	-	10:14	M15	Impact of Fouling on Thermodynamics Performance of Heat Exchanger: A Computational Fluid Dynamics Study. By <i>Yang et al.</i>
	10:15	-	10:17	M16	Flow analysis in three-dimensional double-diffusive convection in an elongated porous enclosure. By <i>Mimouni et al.</i>
	10:18	-	10:20	M17	Identification of a Position and Time Dependent Heat Flux Using the Unscented Kalman Filter in 3D Nonlinear Heat Conduction. By <i>Pacheco et al.</i>
	10:21	-	10:23	M18	LSA of fingering in convective dissolution in porous media. By <i>Lucena et al.</i>
	10:24	-	10:26	M19	Application of Adomian Decomposition Method for a Stepped Fin Space Radiator with Internal Heat Generation. By <i>Singla et al.</i>
	10:27	-	10:29	M20	Heat Transfer Rate from Hydrogen to Tank Wall during Fast Refuelling Process. By <i>Monde et al.</i>
Break	10:30	-	11:00	Coffee Break + Poster Viewing	
Keynote6	11:00	-	11:30	Keynote 6	Dr. Francesco Coletti (<i>Hexxcell Ltd, UK</i>): Fouling – Is it Still the Major Unresolved Problem in Heat Transfer?
11:30-12:30 Poster Presentations Modelling <i>Session Chair:</i> P. Valluri	11:30	-	11:32	M21	Simulation of Droplet Heated by Laser for PCR Application. By <i>Wang et al.</i>
	11:33	-	11:35	M22	Three dimensional simulation of a focused infrared laser heated droplet in microchannels. By <i>Chen et al.</i>
	11:36	-	11:38	M23	A Computational Study of Thermal Losses in a Reciprocating Piston-Cylinder System. By <i>Taleb et al.</i>
	11:39	-	11:41	M24	Numerical and Experimental Investigation of Pulsating Flow for Fabric Drying Application. By <i>Zhao et al.</i>
	11:42	-	11:44	M25	Numerical Investigation on an Inclined Ventilated Roof with Different Exit Section. By <i>Buonomo et al.</i>
	11:45	-	11:47	M26	A Comment on Modelling and Analysis of Plasma Gasification as an Emerging Technology for Waste to Energy. By <i>Carpinioglu et al.</i>
	11:48	-	11:50	M27	Preliminary CFD Analysis of Natural Convection Fuel Tubes in Molten Salt Nuclear Reactors. By <i>Cioncolini et al.</i>

* These are poster-only contributions

11:30-12:30 Poster Presentations Modelling Session Chair: P. Valluri	11:51	-	11:53	M28	A three-dimensional numerical model of free convection in a tilted porous cavity. By <i>Guerrero et al.</i>
	11:54	-	11:56	M29	Simulating Heat and Mass Transfer in an Aggregate Dryer Using Coupled CFD and DEM. By <i>Hobbs</i>
	11:57	-	11:59	M30	CFD Modelling of Thermal Management in Downhole Tools. By <i>Hughes et al.</i>
	12:00	-	12:02	M31	Solving Direct and Inverse Nonlinear Heat Conduction Problems by Means of Trefftz Functions and Kirchhoff Transformation. By <i>Maciag</i>
	12:03	-	12:05	M32	Modelling the Free-Surface Turbulent Flow and Heat Transfer in an Unbaffled Vessel Agitated by a Pitched Three-Blade Turbine. By <i>Mahmud et al.</i>
	12:06	-	12:08	M33	Modeling the effect of thermotherapy on the inner layer of the bladder. By <i>Sadee et al.</i>
	12:09	-	12:11	M34	Decoupling of thermo-physical properties of glycol-water mixtures: insight from nano-scale simulation. By <i>Cannon et al.</i>
UKHTC Ends	12:12	-	12:30	Closing Remarks	
	12:30	-	13:45	Lunch Break + Posters Switchover for invitation-only Thermapower event	

UKHTC Conference Close & (Invitation-Only) THERMAPOWER (EU Funded) Session Begins