

# HEFAT 2019

Wicklow, Ireland

22 – 24 July 2019



Heat Transfer, Fluid Mechanics and Thermodynamics

## 21/07/2019

12:00 - 17:00

### **CHECK-IN & REGISTRATION**

Venue: Foyer

18:00 - 19:00

### **WELCOME**

Venue: Foyer

## 22/07/2019

07:00 - 08:30

### **REGISTRATION**

Venue: Foyer

08:30 - 09:00

### **OPENING ADDRESS BY CONFERENCE CHAIR**

Venue: Ballroom

Prof. Josua Meyer, University of Pretoria

09:00 - 09:40

### **KEYNOTE**

TURBULENCE CHARACTERISTICS AND BOUNDARY LAYER BEHAVIORS IN A TUMBLE-ENHANCED GASOLINE ENGINE

Venue: Ballroom

Prof. Masayasu Shimura, Tokyo Institute of Technology

09:40 - 10:20

### **SECRETIVE HYDRODYNAMICS DURING PHASE-CHANGE**

Venue: Ballroom

Dr Prashant Valluri, University of Edinburgh

10:20 - 10:40

### **MID-MORNING TEA/COFFEE BREAK**

Venue: Foyer

10:40 - 11:00	<p>AERODYNAMICS 1</p> <p>OVERVIEW OF MODELING FOR UNDEREXPANDED GAZ LEAK INTO A LIQUID</p> <p>Venue: Ballroom Mr Alexandre Allou, CEA</p>	<p>TWO-PHASE FLOW 1</p> <p>EXPERIMENTAL STUDY ON LIQUID DISTRIBUTION IN A VANE TYPE PROPELLANT TANK BY DROP TOWER TEST</p> <p>Venue: Glencree &amp; Roundwood Dr. Wen Li, Beijing Institute of Control Engineering</p>	<p>AIR CONDITIONING AND REFRIGERATION</p> <p>CFD MODELING OF AIRFLOWS INSIDE THE UPPER CABIN OF AN INDUSTRIAL BEVERAGE COOLER</p> <p>Venue: Laragh &amp; Glenealy Dr Farzin Abbasian, Sheridan College</p>	<p>HEAT EXCHANGERS 1</p> <p>PRESSURE DROP CHARACTERISTICS OF TRANSITIONAL FLOW THROUGH A SMOOTH TUBE WITH PERIPHERAL U-CUT TWISTED TAPE INSERTS</p> <p>Venue: Enniskerry Dr. Marilize Everts, University of Pretoria</p>	<p>NON-LINEAR THERMAL FLUID PHENOMENA</p> <p>A NEW GENERALIZED IBL MODEL FOR FLOW DOWN AN INCLINE</p> <p>Venue: Heritage Suite U-Prof. Serge D'Alessio, University of Waterloo</p>
11:00 - 11:20	<p>COMPARISON OF HYBRID MULTI-DIMENSIONAL NUMERICAL MODELS OF A BI-STABLE LOAD-SWITCHED SUPERSONIC FLUIDIC OSCILLATOR</p> <p>Venue: Ballroom Gary Rankin, University of Windsor</p>	<p>EXPERIMENTAL ANALYSIS OF THE DEPOSITION OF MAGNETIC BEADS ON THE WALL OF MICROCHANNELS</p> <p>Venue: Glencree &amp; Roundwood Dr Sylvana Varela Ballesta, Universitat Rovira i Virgili</p>	<p>ABOUT USING THE MINIMUM ENERGY DISSIPATION TO FIND THE STEADY-STATE FLOW DISTRIBUTION IN NETWORKS</p> <p>Venue: Laragh &amp; Glenealy phD. Victor-Manuel Soto-Frances, Universitat Politècnica València</p>	<p>INFLUENCE OF THE WORKING FLUID ON THE PERFORMANCES OF AN AIR TO AIR PULSATING HEAT PIPE COOLER</p> <p>Venue: Enniskerry Dr Bruno Agostini, ABB Switzerland Ltd.</p>	<p>BASIC FLOWS AND HEAT TRANSFER OF THERMAL MARANGONI CONVECTION IN RECTANGULAR LIQUID FILM</p> <p>Venue: Heritage Suite Dr. Takahiro Tsukahara, Tokyo University of Science</p>
11:20 - 11:40	<p>NON-UNIFORM HEATING CORRECTION FOR TEMPERATURE DECLINE THERMOGRAPHY</p> <p>Venue: Ballroom Mr Stefan von Hoesslin, MTU Aero Engines AG</p>	<p>AN EXPERIMENTAL STUDY OF FLOW BOILING IN FRACTAL-LIKE MINICHANNELS FABRICATED BY SELECTIVE LASER MELTING</p> <p>Venue: Glencree &amp; Roundwood Mr Yao Song See, Nanyang Technological University</p>	<p>QUANTIFICATION OF LOCAL AIR-SIDE HEAT TRANSFER COEFFICIENT USING COLOR-CHANGE COATINGS</p> <p>Venue: Laragh &amp; Glenealy Prof. Stefan Elbel, University of Illinois at Urbana-Champaign</p>	<p>INVESTIGATION OF AN INNOVATIVE ADSORBENT COATED ADSORPTION CYCLE</p> <p>Venue: Enniskerry Dr Muhammad Wakil Shahzad, King Abdullah University of Science and Technology</p>	<p>TEMPERATURE BEHAVIOR OF SALT-BITUMEN MIX</p> <p>Venue: Heritage Suite Dr Paul Jourda, CEA/DEN</p>
11:40 - 12:00	<p>COUNTER-ROTATING CENTRIFUGAL COMPRESSOR DESIGN AND OPTIMIZATION</p> <p>Venue: Ballroom Mr Cheikh Brahim Abed, Arts &amp; Métiers ParisTech</p>	<p>PRESSURE DROP OF HIGH-QUALITY AIR-WATER TWO-PHASE FOAM FLOW IN A VERTICAL CIRCULAR PIPE</p> <p>Venue: Glencree &amp; Roundwood Prof Ji Hwan Jeong, Pusan National University</p>	<p>THE EFFECTS OF AIRFLOW NONUNIFORMITY ON FIN-AND-TUBE HEAT EXCHANGERS: AN EXPERIMENTAL STUDY</p> <p>Venue: Laragh &amp; Glenealy Mr. Josip Batista, University of Rijeka, Faculty of Engineering</p>	<p>NUMERICAL SIMULATION OF THE HEAT TRANSFER PROCESS OF A NON-NEWTONIAN FLUID</p> <p>Venue: Enniskerry Dr Juan Ignacio Corcoles Tendero, Castilla -La Mancha University</p>	
12:00 - 12:20	<p>FLOW-FIELDS FOR</p>	<p>REACTIVE AND NON-</p>	<p>CFD ANALYSIS OF SOLAR</p>	<p>IMPROVEMENTS OF HEAT</p>	

	UPSTREAM FILM COOLING CONFIGURATION IN A VANE CASCADE Venue: Ballroom Mrs Barbara Huyssen, University of Pretoria	REACTIVE LIQUID-LIQUID DISPERSED FLOW IN A SERPENTINE MINI REACTOR Venue: Glencree & Roundwood Dr Sumana Ghosh, Indian Institute of Technology Roorkee	COLLECTOR WITH TRUNCATED HEMISPHERICAL VORTEX GENERATORS Venue: Laragh & Glenealy Mr. Parag Jyoti Bezbaruah, National Institute of Technology Meghalaya	EXCHANGERS SUITED FOR THE HIGH-TECH ELECTRONICS Venue: Enniskerry Prof Vaclav Vacek, CZech Technical University in Prague	
12:20 - 12:40	MEANDERING MECHANISMS OF AN ACTUATED WING-TIP VORTEX USING PROPER ORTHOGONAL DECOMPOSITION (POD) Venue: Ballroom Mohsen Ferchichi, Royal Military College of Canada		MICROCHANNEL HEAT EXCHANGER AIR SIDE HEAT TRANSFER ANALYSIS AND OPTIMIZATION Venue: Laragh & Glenealy Dr. Vladimir Glazar, University of Rijeka	SHELL-AND-TUBE HEAT EXCHANGER OPTIMIZATION - IMPACT OF PROBLEM FORMULATION AND COST FUNCTION Venue: Enniskerry Dr Jussi Saari, LUT University	
12:40 - 13:40	<b>LUNCH</b> Venue: Foyer				
13:40 - 14:00	MULTIPHASE FLOW 1	EXPERIMENTAL METHODS	CONDENSATION	COMPUTATIONAL FLUID DYNAMICS 1	SPRAYS
	USING COUPLED CFD-PBM AND TOMOGRAPHY TO ANALYZE GAS DISPERSION IN AN AERATED TANK EQUIPPED WITH A COAXIAL MIXER Venue: Ballroom Professor Farhad Ein-Mozaffari, Ryerson University	ADVANCED PRESSURE SWING ADSORPTION DESALINATION CYCLE COMBINED WITH THERMAL VAPOR COMPRESSION Venue: Glencree & Roundwood Dr. Doskhan Ybyraiymkul, King Abdullah University of Science and Technology	MICRO-STRUCTURED SURFACES IN CONDENSATION: EXPERIMENTAL APPROACH AND HEAT TRANSFER ANALYSIS Venue: Laragh & Glenealy Mr. Prof. Dr. Mehmet Arik, Özyegin University	A NUMERICAL STUDY ON THE FINITE-VOLUME BASED TOPOLOGY OPTIMIZATION FOR THE AERO-THERMAL PERFORMANCE OF A FIN-SHAPED STRUCTURE Venue: Enniskerry Mr Jun Seok Lee, Pusan National University	EXPERIMENTAL STUDY ON THE HEAT TRANSFER CHARACTERISTICS OF CRYOGEN SPRAY COOLING COUPLED WITH COLD AIRJET Venue: Heritage Suite Ms Guo Xiaoxing, Xi'an Jiaotong University
14:00 - 14:20	EFFECTS OF GRAVITATIONAL FORCES ON SELF-PROPELLED DROPLET JUMPING Venue: Ballroom Mr. Patric Figueiredo, RWTH Aachen University	CONJUGATE NATURAL CONVECTION AND SURFACE RADIATION IN A PARTIALLY OPEN DIFFERENTIALLY HEATED CAVITY WITH A DISCRETE HEAT SOURCE AT BOTTOM Venue: Glencree & Roundwood Prof. Swarup Kumar	AN EFFECT OF EXTERNAL ELECTRIC FIELD ON DYNAMICS OF A LEVITATING CLUSTER OF WATER DROPLETS Venue: Laragh & Glenealy Dr Leonid Dombrovsky, Joint Institute for High Temperatures	NUMERICAL INVESTIGATION OF NATURAL CONVECTION HEAT TRANSFER FROM BENT PLATE WITH CONSTANT WALL HEAT FLUX Venue: Enniskerry Mr Shibajee Behera, IIT Kharagpur	EXPERIMENTAL INVESTIGATION OF HYDRODYNAMICS AND HEAT TRANSPORT DURING VERTICAL COALESCENCE OF TWO DROPS CONSEQUENTLY IMPACTING ONTO A HOT WALL Venue: Heritage Suite

Mahapatra, Indian Institute of  
Technology Bhubaneswar

Apl. Prof. Dr. Sc. Tatiana  
Gambaryan-Roisman,  
Technische Universität  
Darmstadt

14:20 - 14:40

THE BEHAVIOR OF  
AERODYNAMICALLY  
DRIVEN RIVULET FLOWS  
Venue: Ballroom  
Mr Johannes Feldmann, TU  
Darmstadt

EXPERIMENTAL ANALYSIS  
OF PARAMETERS  
INFLUENCING THE  
HUMIDIFICATION OF AIR IN  
BUBBLE COLUMNS FOR  
THERMAL WATER  
TREATMENT SYSTEMS  
Venue: Glencree &  
Roundwood  
Mr Elias Eder, Vorarlberg  
University of Applied Sciences

LAMINAR FILM  
CONDENSATION ON A  
VERTICAL SURFACE WITH  
AN UPWARD VAPOR FLOW  
Venue: Laragh & Glenealy  
Dr. Kentaro Kanatani,  
Tsukuba University of  
Technology

EFFECT OF FLOW AND  
GEOMETRIC  
CONFIGURATION ON  
OXYGEN SEPARATION  
PRODUCTIVITY OF ION  
TRANSPORT MEMBRANES  
Venue: Enniskerry  
Prof. Rached Ben-Mansour,  
KFUPM

FAST SPRAY COOLING:  
EFFECT OF THE LIQUID  
TEMPERATURE  
Venue: Heritage Suite  
Mr Fabian M. Tenzer, TU  
Darmstadt

14:40 - 15:00

TREND OF EXPERIMENTAL  
NATURAL CONVECTION OF  
NANOFLUIDS  
Venue: Ballroom  
Prof Sohel Murshed, Instituto  
Superior Técnico

NEAR-INFRARED  
TEMPERATURE  
MEASUREMENT OF WATER  
NEAR MICRO-MAGNETIC  
PARTICLES IN THE  
MICROFLUIDIC CHANNEL  
UNDER HIGH-FREQUENCY  
INDUCTION HEATING  
Venue: Glencree &  
Roundwood  
Mr Han Van Cuong, Tokyo  
Metropolitan University

EXPERIMENTAL STUDY OF  
A HEAT EXCHANGER  
INTEGRATING THE  
PUMPING FUNCTION  
Venue: Enniskerry  
Dr. Marc Miscevic, University  
of Toulouse

INVESTIGATIONS OF A  
PIPE-JET WITH AN  
ANNULAR CAVITY INTO A  
CROSSFLOW  
Venue: Laragh & Glenealy  
Mr. Jeremy Bonifacio,  
California State University

15:00 - 15:20

NUMERICAL  
INVESTIGATION OF THE  
EFFECT OF CONJUGATE  
HEAT TRANSFER ON  
SULFURIC ACID  
CONDENSATION IN A  
LARGE TWO-STROKE  
MARINE DIESEL ENGINE  
Venue: Laragh & Glenealy  
Jiun Cai Ong, Technical  
University of Denmark

NUMERICAL SIMULATION  
OF FREEZING PROCESS  
OF STRAWBERRY UNDER  
COLD NITROGEN BLAST  
Venue: Enniskerry  
Prof. Hongbo Xu, Technical  
Institute of Physics and  
Chemistry, CAS

15:20 - 15:40

**MID-AFTERNOON TEA/COFFEE BREAK**  
Venue: Foyer

15:40 - 16:00

HEAT TRANSFER  
ENHANCEMENT 1

COOLING, CRYOGENICS  
AND ELECTRONIC

ENERGY STORAGE 1

TURBULENCE AND  
TURBULENCE FLOWS 1

UNSTEADY FLOWS

	AIR FREE CONVECTION OVER A TWO-SIDED PLATE EXTENDED BY RECTANGULAR HOLLOW BLOCKS Venue: Ballroom Dr Vadim Dubovsky, Ben-Gurion University of the Negev	COOLING SIMULATION OF HEAT TRANSFER AND PRESSURE DROP IN FLOW BOILING CO2 FOR COOLING SYSTEMS OF PARTICLE PHYSICS DETECTORS Venue: Glencree & Roundwood Prof. Dr. Stéphan Barbe, Cologne University of applied Sciences	LOW TEMPERATURE THERMAL STORAGE AS A RANKINE CYCLE COOLING SOLUTION Venue: Laragh & Glenealy Dr. Alan O'Donovan, Limerick Institute of Technology	BOUNDARY LAYER TURBULENCE AND FREESTREAM TURBULENCE INTERFACE, TURBULENT SPOT AND FREESTREAM TURBULENCE INTERFACE, LAMINAR BOUNDARY LAYER AND FREESTREAM TURBULENCE INTERFACE Venue: Enniskerry Prof. Xiaohua Wu, Royal Military College of Canada	INFLUENCE OF PULSATION FREQUENCIES ON THE HEAT TRANSFER IN LAMINAR FREE SURFACE JET IMPINGEMENT Venue: Heritage Suite Mr Claas Ehrenpreis, RWTH Aachen University
16:00 - 16:20	COZYCAR: DESIGN AND ANALYSIS Venue: Ballroom Dr. haifa El-Sadi, Wentworth Institute of Technology	NUMERICAL INVESTIGATION OF MULTI-PULSED CRYOGEN SPRAY COOLING FOR SKIN COLD PROTECTION IN LASER LIPOLYSIS Venue: Glencree & Roundwood Ms Hui Xin, Xi'an Jiaotong University	INVESTIGATION INTO HEAT TRANSFER OF A FLUID-COOLED BATTERY DEPENDING ON DRIVING PROFILE OF ELECTRIC BUSES VIA THERMAL IMPULSE RESPONSE TECHNIQUE Venue: Laragh & Glenealy Mr. Sebastian Angermeier, MAHLE International GmbH	MEASUREMENT OF TURBULENT WALL SKIN FRICTION IN AN 8 DEGREE CONICAL DIFFUSER Venue: Enniskerry Dr. Robert Derksen, University of Manitoba	COMPUTATIONAL FLUID DYNAMIC MODEL OF A SYNTHETIC JET EJECTOR AND TEST FACILITY Venue: Heritage Suite Gary Rankin, University of Windsor
16:20 - 16:40	NUMERICAL INVESTIGATION OF JET IMPINGEMENT HEAT TRANSFER IN SOLAR RECEIVERS Venue: Ballroom Prof Ken Craig, University of Pretoria	EXERGY-BASED METHODS APPLIED TO THE LOW-TEMPERATURE PROCESSES Venue: Glencree & Roundwood Prof. Tatiana Morosuk, Technical University Berlin	PERFORMANCE CHARACTERISTICS OF PHASE CHANGE ENERGY STORAGE CYLINDRICAL ANNULUS Venue: Laragh & Glenealy Mohamed Alnaakeeb, Faculty of Engineering	TURBULENT SCALAR FIELDS AND HEAT OR MASS TRANSFER EQUATIONS FOR TUBE FLOWS WITH LARGE RANGE OF PRANDTL OR SCHMIDT NUMBER Venue: Enniskerry Mr Houjian Zhao, Tsinghua University	INVESTIGATIONS OF UNSTEADY CONDENSATION OF R134A IN A HORIZONTAL PIPE Venue: Heritage Suite Ms Diksha Juggurnath, University of Mauritius
16:40 - 17:00	CORRELATION BETWEEN DIFFERENT PARAMETERS OF THE VORTEX TUBE AND THE REYNOLDS NUMBER OF THE VORTEX TUBE Venue: Ballroom Ms Rutika Godbole, Indian	NUMERICAL STUDY OF THE CRYOGENIC COOLING OF AMPLIFIERS FOR HIGH POWER LASERS Venue: Glencree & Roundwood Dr. Morgane Bellec, Univ.	EXPERIMENTAL STUDY OF THERMAL PROCESSING LUNAR REGOLITH SIMULANT Venue: Laragh & Glenealy DR Chao Wang, China Academy of Space	NUMERICAL STUDY OF PROPANE AND HYDROGEN TURBULENT PREMIXED FLAMES IN A SMALL SCALE OBSTRUCTED CHAMBER Venue: Enniskerry Mr. Mohamed Elshimy,	

16:40 - 17:00	Institute of Technology Madras HEAT TRANSFER OF LIQUID-LIQUID TWO-PHASE FLOW IN MICROCHANNELS Venue: Ballroom Mr. Ayoub Abdollahi, UoA	Grenoble Alpes, CEA, INAC, SBT EXPERIMENTAL INVESTIGATION ON THE START-UP TIME OF A SMALL-SCALE DIFFUSION ABSORPTION REFRIGERATION (DAR) UNIT Venue: Glencree & Roundwood Prof Christos Markides, Imperial College London	Technology EXPERIMENTAL EVALUATION OF NOVEL FABRIC THERMAL STORE Venue: Laragh & Glenealy Dr Ahmed Elsayed, Kingston University	Loughborough University FLOW PAST A ROUGH HEMISPHERE MOUNTED ON HORIZONTAL SURFACE IN A CONFINED CHANNEL Venue: Enniskerry Dr. Afshin Goharzadeh, Khalifa University of Science and Technology	
23/07/2019					
08:00 - 09:00	REGISTRATION Venue: Foyer				
09:00 - 09:40	KEYNOTE ADVANCES IN MODELING AND SIMULATION OF TRANSPORT PHENOMENA IN HETEROGENEOUS MEDIA Venue: Ballroom Prof. Marcelo De Lemos, Instituto Tecnologico de Aeronautica - ITA				
09:40 - 10:20	TUNING PHONON TRANSPORT: FROM INTERFACES TO NANOSTRUCTURES Venue: Ballroom Prof Pamela Norris, University of Virginia				
10:20 - 10:40	MID-MORNING TEA/COFFEE BREAK Venue: Foyer				
10:40 - 11:00	DUCT AND CHANNEL FLOW EXPERIMENTAL ANALYSIS OF FLUID FLOW FLUCTUATIONS IN THE INTAKE PORT OF A SMALL INTERNAL COMBUSTION ENGINE Venue: Ballroom Prof. Dr. Peter Heidrich, University of Applied Science of Kaiserslautern	CONVECTION HEAT TRANSFER 1 EFFECT OF INCLINATION BUOYANCY ON THE FULLY DEVELOPED FRICTION FACTORS IN THE LAMINAR AND TRANSITIONAL FLOW REGIMES OF SMOOTH TUBE Venue: Glencree & Roundwood Dr. Marilize Everts, University of Pretoria	BOILING 1 ENHANCEMENT OF POOL BOILING HEAT TRANSFER USING 3D PRINTED POLYMER FIXTURES Venue: Laragh & Glenealy Dr. Roger Kempers, York University	POROUS FLOWS AND MEDIA PRESSURE DROP THOUGH RANDOMLY PACKED BEDS OF ELLIPSOIDAL PARTICLES Venue: Enniskerry Dr Jaap Hoffmann, Stellenbosch University	GAS TURBINES THERMALLY DRIVEN CHILLER AND POWER GENERATION TO ENHANCE GAS TURBINE PRODUCTION DURING PEAK DEMAND Venue: Heritage Suite Dr. Nicolas Tauveron, CEA
11:00 - 11:20	EVALUATION OF THE 1D MODELLING OF FORCED	EXTENSIONS OF NODAL INTEGRAL METHODS FOR	COOLING OF MOLTEN MATERIAL IN THE BOTTOM	DETERMINATION OF AN OPTIMAL INITIAL	ENDWALL ADIABATIC FILM-COOLING EFFECTIVENESS

	CONVECTION HEAT TRANSFER IN DUCTS Venue: Ballroom Prof Charl Du Toit, North- West University	HEAT AND MASS TRANSFER PROBLEMS IN ARBITRARY GEOMETRIES Venue: Glencree & Roundwood Prof. Rizwan Uddin, University of Illinois	OF THE VESSEL OF A NUCLEAR REACTOR DURING A SEVERE ACCIDENT Venue: Laragh & Glenealy Dr. Sergio Quezada, Universidad Nacional Autónoma de México	CONDITION FOR THERMALLY STABLE DEEP DISPOSAL OF HIGH LEVEL RADIOACTIVE WASTE Venue: Enniskerry Mr Minseop Kim, KAIST	WITH UPSTREAM FILM COOLING SCHEMES IN A FILLETED VANE CASCADE Venue: Heritage Suite Mrs Barbara Huysen, University of Pretoria
11:20 - 11:40	CONJUGATE HEAT TRANSFER IN THERMAL INKJET PRINTHEADS Venue: Ballroom Dr Sam Mallinson, Memjet	CONVONICS: ACOUSTIC FIELD ASSISTED CONFINED NATURAL CONVECTIVE HEAT TRANSFER Venue: Glencree & Roundwood Miss Akshita Swaminathan, SRM Institue of Science and Technology	EXPERIMENTAL STUDY OF THE COOLING OF MOVING STRIP Venue: Laragh & Glenealy Prof. Jean-Marie Buchlin, von Karman Institute for Fluid Dynamics	ENHANCEMENT OF PACKED BED REACTOR PERFORMANCE WITH A STATIC MIXER Venue: Enniskerry Prof. Abraham Kribus, Tel Aviv University	A NUMERICAL STUDY ON NON-PREMIXED COMBUSTION OF LIQUID FUEL WITH SWIRL FLOW AND DILUTION AT HIGH PRESSURE CONDITIONS Venue: Heritage Suite Mr. Subhankar Mohapatra, Indian Institute of Technology Kharagpur
11:40 - 12:00	THREE-DIMENSIONAL FLUID FLOW STRUCTURE AND REATTACHMENT CHARACTERISTICS OF A BACKWARD-FACING STEP FLOW IN A RECTANGULAR DUCT Venue: Ballroom Dr Zou Shuai, Doshisha University	REGIMES OF VALIDITY OF THE BOUSSINESQ APPROXIMATION FOR NATURAL CONVECTION FROM A VERTICAL CYLINDER IN POWER-LAW FLUIDS Venue: Glencree & Roundwood Mr. Subhasisa Rath, Indian Institute of Technology Kharagpur	DETERIORATION OF BOILING HEAT TRANSFER ON BIPHILIC SURFACES UNDER VERY LOW PRESSURES Venue: Laragh & Glenealy Dr. Biao Shen, Kyushu University	NUMERICAL SIMULATION OF HEAT TRANSFER AND FLUID FLOW IN PRESENCE OF NANO FLUIDIC ENCLOSURE PLACED INSIDE A FLUID SATURATED POROUS CAVITY Venue: Enniskerry Prof. Swarup Kumar Mahapatra, Indian Institute of Technology Bhubaneswar	
12:00 - 12:20	NAVIER-STOKES CFD ASSESSMENT OF TWO MULTI-NOZZLE ANNULAR JET PUMPS WITH A DESIGN OPTIMISATION STUDY Venue: Ballroom Mr Andrew Morrall, Lancaster University	AUGMENTATION OF NON- BOUSSINESQ EFFECTS DUE TO SHEAR-RATE DEPENDENT VISCOSITY IN NATURAL CONVECTION FROM FINS Venue: Glencree & Roundwood Mr. Subhasisa Rath, Indian Institute of Technology Kharagpur	SURFACE PROPERTIES INFLUENCE ON HEAT TRANSFER DURING COOLING OF HIGH- TEMPERATURE CYLINDRICAL BODIES IN LIQUIDS Venue: Laragh & Glenealy Dr. Arslan Zabirov, NRU	THERMAL EFFECTS OF MATERIALS CONTAINING PCM Venue: Ballroom prof. Jiri Militky, Technical university of Liberec	
12:20 - 12:40	THERMOHYDRAULIC	PILOT SCALE	ANALYTICAL	EXPERIMENTAL	

	CHARACTERISTICS OF TRANSITIONAL FLOW IN A CIRCULAR TUBE WITH INLET DISTURBANCES Venue: Enniskerry Dr. Suvanjan Bhattacharyya, University of Pretoria	EXPERIMENTS OF A PILLOW PLATE THERMOSIPHON REBOILER Venue: Glencree & Roundwood Prof. Dr.-Ing. Stephan Scholl, Technische Universität Braunschweig	CALCULATION OF HEAT TRANSFER UNDER UNSTEADY NUCLEATE BOILING Venue: Laragh & Glenealy Dr. Anatoliy Levin, Melentiev Energy Systems Institute	INVESTIGATION OF FULLY DEVELOPED FLOWS OF AIR IN STRAIGHT RECTANGULAR DUCTS WITH ADJACENT OPEN AND POROUS-METAL-FOAM DOMAINS Venue: Enniskerry Professor Bantwal Rabi Baliga, McGill University
12:40 - 13:40	<b>LUNCH</b> Venue: Foyer			
13:40 - 14:00	MULTIPHASE FLOW 2	THERMAL MANAGEMENT AND CONTROL 1	ENERGY AND ENVIRONMENTAL SYSTEMS 1	NUMERICAL SIMULATION 1 MISCELLANEOUS 1
	SUBCOOLED POOL BOILING OF SODIUM CHLORIDE SOLUTIONS Venue: Ballroom Prof. Chin Pan, City University of Hong Kong	EXPERIMENTAL COMPARISON OF THE REFRIGERATION PERFORMANCE OF R32 AND R410A IN FULL AND PARTIALLY FILLED CONDITIONS Venue: Glencree & Roundwood Prof Mario Farrugia, University of Malta	EXPERIMENTAL STUDY AND MODELLING OF A HIGH-PRESSURE RATIO LIQUID PISTON COMPRESSOR Venue: Laragh & Glenealy Dr. Mathieu Specklin, Arts et Métiers ParisTech	NEW 3D GUI ADVANCE OF THE RELAPSCDAPSIM 3.4 CODE Venue: Enniskerry Ms. Heriberto Sánchez-Mora, Universidad Nacional Autónoma de México
14:00 - 14:20	KEROSENE DROP IMPACT ONTO A DEEP WATER POOL Venue: Ballroom Dr. Parmod Kumar, Indian Institute of Technology Mandi	EXPERIMENTAL EVALUATION OF REFRIGERATION PERFORMANCE OF DEGASSING AND REGASSING OF AN INVERTER DRIVEN R410A SYSTEM Venue: Glencree & Roundwood Prof Mario Farrugia, University of Malta	ANALYTICAL OPTIMIZATION OF A SOLAR-DRIVEN COOLING SYSTEM ENHANCED WITH A PHOTOVOLTAIC EVAPORATIVE CHIMNEY Venue: Laragh & Glenealy Dr Javier Ruiz Ramírez, Miguel Hernández University	A NUMERICAL STUDY OF THE EFFECT OF A PLANE HORIZONTAL COVERING SURFACE ON NATURAL CONVECTIVE HEAT TRANSFER FROM A DOWNWARD FACING CIRCULAR HORIZONTAL HEATED ISOTHERMAL SURFACE Venue: Enniskerry Dr. Patrick Oosthuizen, Queen's University
14:20 - 14:40	MODELLING OF BUBBLY FLOW IN BUBBLE COLUMN REACTORS WITH A	A ONE-DIMENSIONAL HEAT AND MASS TRANSFER MODEL OF SORPTION	PERFORMANCE ANALYSIS OF DIFFERENT TWO-STAGE TRANSCRITICAL	NUMERICAL AND EXPERIMENTAL STUDIES OF NATURAL CONVECTIVE AN INVESTIGATION INTO PHASE CHANGE MATERIALS FOR THERMAL



14:40 - 15:00	MODIFIED BUBBLE BREAKAGE MODEL COUPLED WITH BUBBLE-INDUCED TURBULENCE Venue: Ballroom Professor Xiaogang Yang, University of Nottingham Ningbo China	CELLS Venue: Glencree & Roundwood Mr Avshalom Davidesko, Ariel university	CARBON DIOXIDE CYCLES FOR RESIDENTIAL APPLICATIONS FOR COLD CLIMATE Venue: Laragh & Glenealy Mr. Ahmad Mhanna, Ryerson University	HEAT TRANSFER FROM TWO-SIDED DIAGONALLY INCLINED SQUARE PLATES HAVING A FINITE THICKNESS Venue: Enniskerry Dr. Patrick Oosthuizen, Queen's University	MANAGEMENT AND EFFICIENCY IMPROVEMENT OF PHOTOVOLTAIC POWER HARVESTING SYSTEMS Venue: Heritage Suite Mr Veli Cosar, Ozyegin University
	LES SIMULATION OF BUBBLY FLOW IN A CYLINDRICAL BUBBLE COLUMN REACTOR Venue: Ballroom Ms Shanshan Long, University of Nottingham Ningbo China	CONTROL OF THERMAL DEMAND IN THE RESIDENTIAL SECTOR THROUGH THE MANAGEMENT OF SHADE DEVICES AND ZONING HVAC SYSTEM Venue: Glencree & Roundwood	AN EXERGY ANALYSIS OF SINGLE TO MULTI-STAGE EVAPORATIVE COOLING SYSTEMS FOR DIFFERENT CLIMATIC CONDITIONS ACROSS INDIA Venue: Laragh & Glenealy Dr. Santanu Prasad Datta, BITS Pilani- Hyderabad Campus	IMPROVING SAMPLING DEPTH OF LASER SPECKLE IMAGING FOR SKIN TISSUE: AN THEORETICAL STUDY Venue: Enniskerry Ms Hui Xin, Xi'an Jiaotong University	EXPERIMENTAL INVESTIGATION OF THE EFFECT OF CAVITATION ON THE PERFORMANCE OF A CENTRIFUGAL PUMP WORKING AT HIGH ROTATION SPEEDS Venue: Heritage Suite Ing Ludovic Lamoot, INSA Centre Val de Loire
15:00 - 15:20	DAMPING OF GAS BUBBLE SMALL RADIAL OSCILLATIONS IN FLUID Venue: Ballroom Ms Mariana Lopushanski, Moscow Institute of Physics and Technology	AN EFFICIENT THERMAL ANALYSIS SYSTEM FOR ASSEMBLED BATTERY MANAGEMENT Venue: Glencree & Roundwood Mr Godine Raja Sekhar, Ritsumeikan University	A 75+ POINT PLAN FOR RETRO-COMMISSIONING FACILITIES Venue: Laragh & Glenealy dr David Dyer, Auburn University	NUMERICAL SIMULATION OF THERMAL INKJET DROPLET EJECTION Venue: Enniskerry Dr Sam Mallinson, Memjet	EXPERIMENTAL STUDY ON IMPACT AND SPREADING OF DROPLET FLOW UNDER DIFFERENT TUBE SPACINGS Venue: Heritage Suite Mr. Shanlin Liu, Dalian University of Technology
15:20 - 15:40	<b>MID-AFTERNOON TEA/COFFEE BREAK</b> Venue: Foyer				
15:40 - 16:00	TWO-PHASE FLOW 2  OPTIMIZATION OF GEOMETRIC AND FLOW PARAMETERS OF HORIZONTAL RECTANGULAR MICROCHANNELS IN SUBCOOLED TWO-PHASE FLOW Venue: Ballroom Professor Tunde Bello-Ochende, University of Cape Town	HEAT EXCHANGERS 2  PREDICTION OF THE HEAT TRANSFER RATE OF A FIN AND TUBE HEAT EXCHANGER - USING ARTIFICIAL NEURAL NETWORK TRAINED AND TESTED WITH EXPERIMENTAL DATA Venue: Glencree & Roundwood Ms Feyza Sahin, FRITERM Termal Devices Co.	TURBULENCE AND TURBULENCE FLOWS 2  NUMERICAL ASSESSMENT OF CONFINEMENT EFFECT AND FLOW STRUCTURE IN CASE OF HYDROGEN RELEASE IN A TWO-VENTED CAVITY Venue: Laragh & Glenealy Mr. Yanshu Wang, CEA - Saclay DEN / LIMSI - CNRS	COMPUTATIONAL FLUID DYNAMICS 2  AN ENERGY EFFICIENT THERMAL MANAGEMENT STRATEGY OF A LITHIUM-ION BATTERY FOR HYBRID VEHICLES Venue: Enniskerry Dr. Santanu Prasad Datta, BITS Pilani- Hyderabad Campus	CONVECTION HEAT TRANSFER 2  NEAR-INFRARED MEASUREMENT OF TEMPERATURE AND FLOW FIELD FORMED BY FREE CONVECTION FROM A SMALL HEATING SPHERE IN WATER Venue: Heritage Suite Prof Naoto Kakuta, Tokyo Metropolitan University

16:00 - 16:20	<p>PRESSURE DROP AND VOID FRACTION OF HORIZONTAL AIR-WATER STRATIFIED FLOWS AT ATMOSPHERIC PRESSURE</p> <p>Venue: Ballroom Mr Igor Matteo Carraretto, Politecnico di Milano</p>	<p>SHELL-AND-TUBE HEAT EXCHANGER OPTIMIZATION – CONSIDERING PROBLEM FORMULATION AND TUNING FOR DIFFERENT TYPES OF METHODS</p> <p>Venue: Glencree &amp; Roundwood Dr Jussi Saari, LUT University</p>	<p>SENSITIZATION OF EDDY-VISCOSITY MODELS TO BUOYANCY EFFECTS FOR PREDICTING NATURAL CONVECTION FLOWS</p> <p>Venue: Laragh &amp; Glenealy Mr syed mohd saad jameel, University of Pau</p>	<p>AIR COOLING ENHANCEMENT OF A HIGH-PRECISION HIGH-VOLTAGE RESISTOR</p> <p>Venue: Enniskerry Dr Federico Favre, Universidad de la República Uruguay</p>	<p>DIRECT NUMERICAL SIMULATION OF CONVECTION HEAT TRANSFER OVER SCANNED AND MATHEMATICALLY GENERATED SURFACE ROUGHNESS</p> <p>Venue: Heritage Suite Dr Pourya Forooghi, Karlsruhe Institute of Technology</p>
16:20 - 16:40	<p>EXPERIMENTAL INVESTIGATION OF TWO PHASE FLOW AND CONDENSATION OF PROPYLENE IN HORIZONTAL TUBES OF INDUSTRIAL SCALE</p> <p>Venue: Ballroom Mr. Simon Fries, University of Kassel</p>	<p>STUDY OF CONVECTIVE CONDENSATION IN A THERMOSIPHON LOOP</p> <p>Venue: Glencree &amp; Roundwood Mr Majededdine Moustaid, LaTEP</p>	<p>EFFECTS OF THE STREAMWISE EXTENT OF PERIODIC COMPUTATIONAL DOMAINS ON TURBULENT FLOW AND HEAT TRANSFER IN RIB-ROUGHENED COOLING CHANNELS</p> <p>Venue: Laragh &amp; Glenealy Dr. Sebastian Ruck, Karlsruhe Institute of Technology (KIT)</p>	<p>TOWARDS THE GASDYNAMICS OF A PULSED ELECTRIC ARC IN THE A TRANSVERSAL MAGNETIC FIELD</p> <p>Venue: Enniskerry Dr. Ivan Moralev, Joint Institute for High Temperatures RAS</p>	<p>THE EFFECTS OF OPERATING CONDITIONS ON THE HIGH-TEMPERATURE STEAM GENERATOR FOR HYDROGEN PRODUCTION</p> <p>Venue: Heritage Suite Dr Seong-Ryong Park, Korea Institute of Energy Research</p>
16:40 - 17:00	<p>AN EXPERIMENTAL INVESTIGATION OF STEAM PRESSURE DROP IN A PARTIAL CONDENSER FOR THE DESIGN OF PRACTICAL CONDENSERS.</p> <p>Venue: Ballroom Mr Jacques Du Plessis, Stellenbosch University</p>	<p>AN EXPERIMENTAL INVESTIGATION OF THE CONFINEMENT EFFECT ON DIFFUSION FLAME IMPINGING THE CEILING IN A COMPARTMENT FIRE</p> <p>Venue: Glencree &amp; Roundwood Miss Aijuan Wang, INSA Centre Val de Loire</p>	<p>CORE BREAKUP OF TURBULENT ANNULAR LIQUID SHEETS</p> <p>Venue: Laragh &amp; Glenealy Dr. Khaled Sallam, Oklahoma State University</p>	<p>MAGNETO-HYDRODYNAMIC FLOW OF NANOFLUID IN A SEMI POROUS CHANNEL: NUMERICAL INVESTIGATION USING SOFT COMPUTING TECHNIQUE</p> <p>Venue: Enniskerry Dr Ziya Uddin, BML Munjal University Gurugram, India</p>	<p>PLANAR DUCT HEAT TRANSFER WITH TURBULATORS: ENTRY LENGTH REGION</p> <p>Venue: Heritage Suite Prof. Gordon Andrews, University of Leeds</p>
17:00 - 17:20	<p>EXPERIMENTAL AND NUMERICAL STUDY OF INTERACTION OF ULTRASOUND WITH MICROBUBBLES</p> <p>Venue: Ballroom Mr. Saikat Chakraborty, IIT Madras</p>	<p>HIGH-EFFICIENCY MINI AND MICRO HEAT EXCHANGERS FOR DISPERSED POWER GENERATION</p> <p>Venue: Glencree &amp; Roundwood Prof. Dariusz Mikielewicz,</p>	<p>SECONDARY FLOW IMPACT ON VELOCITY AND THERMAL FIELDS OF A STRUCTURED TURBULENT CHANNEL FLOW</p> <p>Venue: Laragh &amp; Glenealy Dr.-Ing. Alexander Stroh, Karlsruhe Institute of</p>	<p>NUMERICAL INVESTIGATION OF NATURAL CONVECTION HEAT TRANSFER OF A VERTICAL SOLID FRUSTUM SUSPENDED IN AIR</p> <p>Venue: Enniskerry Mr Avishek Padhi, Indian</p>	

**24/07/2019**

08:00 - 09:00

**REGISTRATION**

Venue: Foyer

09:00 - 09:40

**KEYNOTE****LIQUEFIED NATURAL GAS POWER GENERATION FROM GAS TURBINE AND STIRLING ENGINE**

Venue: Ballroom

Professor Fei Duan, Nanyang Technological University

09:40 - 10:20

**A DISRUPTIVE TECHNOLOGY TO IMPROVING ENERGY EFFICIENCY OF AIR CONDITIONING**

Venue: Ballroom

Professor Kim Choon Ng, King Abdullah University of Science &amp; Technology

10:20 - 10:40

**MID-MORNING TEA/COFFEE BREAK**

Venue: Foyer

10:40 - 11:00

**NUMERICAL SIMULATION 2 CONDUCTION 1**CFD ANALYSIS OF AN  
INNOVATIVE VACUUM  
MICRO-GRIPPER

Venue: Ballroom

Prof. Adriano Lezzi, University  
of BresciaEVALUATION OF A NEW  
OPTIMIZATION  
METHODOLOGY APPLIED  
TO PARAMETERS OF HEAT  
SOURCES IN NUMERICAL  
SIMULATIONS OF THE  
GTAW WELDING PROCESS  
OF LAP JOINTS  
Venue: Glencree &  
Roundwood  
Msc Rodrigo Martins Farias,  
Federal University of  
Uberlandia**ENERGY STORAGE 2**HEAT TRANSFER  
CHARACTERISTICS OF A  
TOPOLOGY OPTIMIZED  
STRUCTURE FOR PCM-  
BASED THERMAL  
MANAGEMENT DEVICES  
Venue: Laragh & Glenealy  
Prof Kai Choong Leong,  
Nanyang Technological  
University**HYDRODYNAMICS**APPLICATION OF AN  
IMPLICIT DISCONTINUOUS  
GALERKIN SCHEME FOR  
SHALLOW WATER  
EQUATIONS  
Venue: Enniskerry  
Prof Haegyun Lee, Dankook  
University**MISCELLANEOUS 2**BASIS FOR BOILER  
CONDITION ASSESSMENT  
Venue: Heritage Suite  
Mr. Salamah Al-Anizi, Saudi  
Boilers Company

11:00 - 11:20

FINITE ELEMENT  
IMPLEMENTATION OF THE  
EIGENFUNCTION SERIES  
SOLUTION FOR A  
TRANSIENT HEAT  
CONDUCTION PROBLEM IN  
THERMO-MECHANICAL  
SYSTEMS

Venue: Ballroom

Dr. Abdullah Al Shabibi,  
Sultan Qaboos UniversityNUMERICAL  
CHARACTERIZATION AND  
VALIDATION OF THE  
THERMAL RESPONSE OF A  
PARTIALLY FILLED ISO  
CONTAINER EXPOSED TO  
REAL WEATHER  
CONDITIONS  
Venue: Glencree &  
Roundwood  
Mr. Ken Blecker, Stevens  
Institute of TechnologyEFFECT OF CRYOGENIC  
HEAT TRANSFER AT  
SUPERCRITICAL  
CONDITIONS ON LIQUID  
AIR ENERGY STORAGE  
(LAES) PERFORMANCE - A  
COMBINED EXPERIMENTAL  
AND NUMERICAL  
ANALYSIS  
Venue: Laragh & Glenealy  
Dr Adriano Sciacovelli,  
University of BirminghamEXPERIMENTAL AND  
NUMERICAL STUDY OF  
TOLUENE-WATER SLUG  
FLOW IN SERPENTINE  
MINICHANNEL  
Venue: Enniskerry  
Dr Sumana Ghosh, Indian  
Institute of Technology  
RoorkeeINVESTIGATING THE  
EFFECTS OF HEAT INPUT  
ON MECHANICAL  
PROPERTIES AND  
MICROSTRUCTURE OF A  
DISSIMILAR WELDED  
JOINT OF A283 GR C TO  
A240 304L STAINLESS  
STEEL WITH TWO  
METHODS OF SMAW AND  
GTAW  
Venue: Heritage Suite  
Mr. Amir Khaledi, Oil Refinery

11:20 - 11:40	NUMERICAL ANALYSIS OF THE THERMOPHYSICAL PROPERTIES OF R600A REFRIGERANT ENHANCED WITH DIAMOND NANOPARTICLES IN VAPOUR COMPRESSION REFRIGERATING SYSTEM Venue: Ballroom Dr Moradeyo Odunfa, University of Ibadan	1D AND 3D CFD MODELS OF THE HEAT TRANSFER IN A PRISMATIC BLOCK OF A VHTR Venue: Glencree & Roundwood Mr. Gert Nel, North-West University	NANOPARTICLE-PARAFFIN-TAILING CERAMIC COMPOSITE PHASE CHANGE MATERIALS FOR THERMAL ENERGY STORAGE Venue: Laragh & Glenealy Dr Xili Duan, Memorial University of Newfoundland	ASYMPTOTIC ANALYSIS OF THE UNDULAR HYDRAULIC JUMP OVER VANISHING BOTTOM SLOPE Venue: Enniskerry Mr. Dominik Murschenhofer, TU Wien	CO. RADIATION EFFECT ON GROWTH OF MIST DROPLETS Venue: Heritage Suite Ms. Xinchang Li, University of Illinois
11:40 - 12:00	MODELING AND ESTIMATION OF THE VISCOSITY OF TiO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> /EG COMPOSITE NANOFLUID BY ARTIFICIAL NEURAL NETWORK AND CORRELATION Venue: Ballroom Dr Moradeyo Odunfa, University of Ibadan	COUPLED 3D AND 1D MODELS OF THE HEAT TRANSFER IN A PRISMATIC BLOCK OF A VHTR Venue: Glencree & Roundwood Mr. Ockert Koekemoer, North-West University	TRANSIENTS OF THERMAL PLUME IN SHALLOW GEOTHERMAL ENERGY RESERVOIR OF PUGA, LADAKH, INDIA Venue: Laragh & Glenealy Dr Shibani Khanra Jha, Birla Institute of Technology and Science	HEAT TRANSFER ENHANCEMENT THROUGH THE USE OF AN OSCILLATORY FLOW IN CIRCULAR-ORIFICE BAFFLED TUBES: AN EXPERIMENTAL STUDY Venue: Enniskerry Dr. Damián Crespí-Llorens, Universidad Miguel Hernández	A CORRELATION OF CONDENSATION HEAT TRANSFER COEFFICIENT IN FALLING FILM HORIZONTAL TUBES EXCHANGER BY USING ARTIFICIAL NEURAL NETWORK (ANN) Venue: Heritage Suite Dr. Mama Chacha, University of Wollongong in Dubai
12:00 - 12:20	THERMAL CHARACTERISATION OF THE UMBILICAL CORD AT BIRTH THROUGH NON INVASIVE METHODS Venue: Ballroom Ms Andrea Caravia, Facultad de Ingeniería - Udelar	A PARAMETRIC STUDY ON THE OPERATION OF AN ANODE BAKING FURNACE USING A PROCESS MODEL Venue: Glencree & Roundwood Dr. Yasar Kocaefe, University of Quebec at Chicoutimi	DYNAMICS OF HEAT AND MASS TRANSPORT DURING HYDRATE DISSOCIATION AND REFORMATION IN SEDIMENTS Venue: Laragh & Glenealy Ms Mojdeh Zarifi, University of Bergen	EQUILIBRIUM FORMS OF ELLIPSOID DROPS Venue: Enniskerry Ms Mariana Lopushanski, Moscow Institute of Physics and Technology	HYBRID ABSORPTION CYCLE FOR FLEXIBLE USE OF HEAT PUMP AND REFRIGERATION SYSTEM Venue: Foyer Dr. Sung Joo Hong, Chonbuk National University
12:20 - 13:20	<b>LUNCH</b> Venue: Foyer				
13:20 - 13:40	THERMAL MANAGEMENT AND CONTROL 2 THE DELETERIOUS EFFECT OF THERMAL CYCLING ON THERMOELECTRIC GENERATORS Venue: Ballroom	RENEWABLE ENERGY HEAT TRANSFER MODEL FOR A PARABOLIC SOLAR CONCENTRATOR Venue: Glencree & Roundwood Dr. Sergio Quezada,	CONVECTION HEAT TRANSFER 3 COUPLED TRANSIENT CFD-FE SIMULATION FOR HEAT TRANSFER INVESTIGATIONS FOR A LARGE GAS ENGINE Venue: Laragh & Glenealy	HEAT TRANSFER ENHANCEMENT 2 THE DYNAMIC BEHAVIOR OF NATURAL CONVECTION OF WATER IN OPEN ENDED TALL VERTICAL ANNULUS Venue: Enniskerry Dr Saeed Alqaed, Najran	MISCELLANEOUS 3 HIGH-TEMPERATURE HEAT PUMPS – POTENTIAL TECHNOLOGY FOR HEAT RECOVERY AND PRODUCTION OF PROCESS HEAT

	Seamus O'Shaughnessy, University of Dublin Trinity College	Universidad Nacional Autónoma de México	Mr Martin Kober, LEC	University	Venue: Heritage Suite Prof. Dariusz Mikielawicz, Gdańsk University of Technology
13:40 - 14:00	FINE-TUNING LIQUID PHASE SEPARATION TOWARDS BREATH FIGURE FORMATION IN POLYMER THIN-FILMS Venue: Ballroom Mr. Philip Darragh, Trinity College Dublin	EXPERIMENTAL INVESTIGATION OF THE EFFECT OF COOLING THE HIGH-SPEED GENERATOR OF A RADIAL-FLOW MICROTURBINE ON THE ELECTRIC POWER OF AN ORC SYSTEM Venue: Glencree & Roundwood PhD, Eng. Tomasz Zygmunt Kaczmarczyk, Institute of Fluid Flow Machinery Polish Academy of Sciences	EFFECTS OF PRANDTL NUMBER AND SEPARATION DISTANCE ON LAMINAR NATURAL CONVECTION HEAT TRANSFER FROM TWO VERTICALLY ALIGNED HORIZONTAL CYLINDERS. Venue: Laragh & Glenealy Mr Manoj Kumar Dash, Indian Institute of Technology Kharagpur	EXPERIMENTAL STUDY OF HEAT TRANSFER ENHANCEMENT BY PULSATING FLOW IN A RECTANGULAR MINICHANNEL Venue: Enniskerry Mr. Parth Kumavat, Trinity College Dublin	TECHNO - ECONOMIC ASSESSMENT OF HYBRID ENERGY COMBINATION OPTIONS FOR A MAJOR EDUCATIONAL INSTITUTION IN NIGERIA Venue: Heritage Suite Dr Chukwuemeka Diji, University of Ibadan
14:00 - 14:20	AN INVESTIGATION ON APPLICABILITY OF SELF- SIMILARITY HEAT SINK TO A THERMO-ELECTRIC MODUL Venue: Ballroom Prof. Licheng SUN, Sichuan University	DEVELOPMENT OF A SIMULATION ENVIRONMENT FOR ANALYZING MULTI- ENERGY NETWORKS Venue: Glencree & Roundwood Mr. Dennis Cronbach, Fraunhofer Institute for Energy Economics and Energy System Technology	NUMERICAL INVESTIGATION OF HEAT TRANSFER AND SINGLE- PHASE FLOW IN A MANIFOLD MICROCHANNEL HEAT SINK Venue: Laragh & Glenealy Dr Xiaochen Lv, China Academy of Space Technology	QUANTIFYING THERMAL CONDUCTANCE OF THIN FILM THERMOELECTRICS USING FREQUENCY DOMAIN THERMOREFLECTANCE Venue: Enniskerry Prof. David McCloskey, Trinity College Dublin	EXPERIMENTS ON DENSITY INTERFACE WITH SUCCESSIVE VORTEX RINGS Venue: Heritage Suite Mr. Advait S, Indian Institute of Science
14:20 - 14:40	NUMERICAL ANALYSIS OF 2-D LAMINAR NATURAL CONVECTION HEAT TRANSFER FROM SOLID HORIZONTAL CYLINDRICAL HEAT SINKS WITH LONGITUDINAL FINS Venue: Ballroom Mr Avishek Padhi, Indian Institute of Technology Kharagpur	COMPARISON OF SODIUM AND MOLTEN SALT RECEIVER OUTPUT THROUGH DIURNAL CSP PLANT OPERATION Venue: Glencree & Roundwood Dr Ronan Grimes, University of Limerick	NUMERICAL OPTIMIZATION OF COMBINED COOLING OF MICROCHANNEL HEAT EXCHANGERS WITH HOLLOW AND SOLID VERTICAL FINS Venue: Laragh & Glenealy Professor Tunde Bello- Ochende, University of Cape Town	PREDICTING THE HEAT TRANSFER BETWEEN A LAMINAR IMPINGING JET AND AN INHOMOGENEOUSLY HEATED SURFACE Venue: Enniskerry MSc. Enno Sabelberg, RWTH Aachen University	AERODYNAMICS OF GRID PLATE FLAME STABILIZERS Venue: Heritage Suite José Ramón Quiñonez Arce, School of Chemical and Process Engineering University of Leeds
14:40 - 15:00	DROPLET THERMAL AND WETTING FOOTPRINT ON	HEAT TRANSFER ENHANCEMENT IN A	EFFECT OF BENCHES ON THE NATURAL	AUGMENTATION OF HEAT TRANSFER IN AIR HEATING	HYDRODYNAMIC PERFORMANCE OF

15:00 - 15:20	HEATED SURFACE Venue: Ballroom Ryan Enright, NOKIA	SOLAR RECIEVER TUBE USING POROUS MEDIA Venue: Glencree & Roundwood Dr. Manabendra Pathak, Indian Institute of Technology Patna	CONVECTION IN A SINGLE- SPAN THREE- DIMENSIONAL GREENHOUSE Venue: Laragh & Glenealy Dr. Sunita Kruger, University of Johannesburg	FLAT PLATE COLLECTOR BY FINS AND TWISTED TAPES Venue: Enniskerry Prof. Prabha Chand, National Institute of Technology Jamshedpur	JOUKOWSKI BASED HYDROKINETIC TURBINE FOR USE IN THE AMAZON RIVERS Venue: Heritage Suite Mr Pedro Baracat, UNICAMP
		DESIGN AND ANALYSIS OF RADIAL AND AXIAL TURBOMACHINERY OF SUPERCRITICAL CO2 POWER CYCLES Venue: Glencree & Roundwood Dr Alexis Cantizano, Universidad Pontificia Comillas	GRID INDEPENDENCE STUDY OF A 1D THERMAL TOPOLOGY OPTIMIZATION PROBLEM FOR HEAT SINKS Venue: Laragh & Glenealy Mr Yang Zhou, KU Leuven	HEAT TRANSFER IN SUPERCRITICAL FLUIDS: RECONCILING THE RESULTS OF PULSE AND STATIONARY EXPERIMENTS Venue: Enniskerry Prof. Pavel Skripov, Russian Academy of Sciences	DIRECT STEAM CONDENSATION AT SUB- ATMOSPHERIC PRESSURE: EXPERIMENTAL TESTS AND SIMILITUDE ANALYSIS Venue: Heritage Suite Mr Guglielmo Giambartolomei, University of Pisa
15:20 - 15:40	<b>MID-AFTERNOON TEA/COFFEE BREAK</b> Venue: Foyer				
15:40 - 16:00	COMBUSTION	COMPUTATIONAL FLUID DYNAMICS 3	CONDUCTION 2	BOILING 2	NUMERICAL SIMULATION 3
	MODELING URBAN FIRE SPREAD BASED ON SPECIFIC CHARACTERISTICS OF SUBSTANDARD HOUSING IN SPAIN Venue: Ballroom Dr Alexis Cantizano, Universidad Pontificia Comillas	OBSERVATIONS ON FIXED- GRID NUMERICAL SIMULATIONS OF STEADY ICE-WATER SYSTEMS IN RECTANGULAR PLATE-FIN GEOMETRIES WITH LAMINAR NATURAL CONVECTION IN THE LIQUID Venue: Glencree & Roundwood Mr Osaid Matar, McGill University	3D PRINTING OF PITCH CARBON FIBER COMPOSITES FOR HEAT EXCHANGER APPLICATIONS Venue: Laragh & Glenealy Dr. Roger Kempers, York University	PRELIMINARY INVESTIGATION INTO THE EFFECT OF STEP CHANGES IN BOILING HEAT FLUX ON R134A IN A HORIZONTAL MACRO TUBE Venue: Enniskerry Mr. Wilhelm Johann van den Bergh, University of Pretoria	ANALYSIS OF THE SEVERE ACCIDENT WITH CORIUM SLUMPING IN A BWR Venue: Heritage Suite Dr Mindaugas Valinčius, Lithuanian Energy Institute
16:00 - 16:20	EMISSIONS REDUCTION FROM PELLET STOVES THROUGH BURNER POT MODIFICATIONS Venue: Ballroom Prof. Adriano Lezzi, University of Brescia	DESIGN OF A LABORATORY UNIT FOR ALUMINUM FILTRATION THROUGH PHYSICAL AND MATHEMATICAL MODELLING Venue: Glencree & Roundwood	HEATQUIZ: GAME-BASED LEARNING IN HEAT AND MASS TRANSFER Venue: Laragh & Glenealy Dr. Wilko Rohlf, RWTH Aachen University	EFFECT OF PATTERN GEOMETRY ON BUBBLE DYNAMICS AND HEAT TRANSFER ON BIPHILIC SURFACES Venue: Enniskerry Mr Pedro Pontes, IN+ Instituto Superior Tecnico	PREDICTION OF THE POWER COEFFICIENT OF STRAIGHT BLADED VERTICAL AXIS WIND TURBINES AT LOW WIND VELOCITIES Venue: Heritage Suite Mr Pedro Baracat, UNICAMP

		Prof. Duygu Kocaefe, University of Quebec at chicoutimi		Universidade de Lisboa	
16:20 - 16:40	1D SIMULATION OF SODIUM-WATER REACTION (SWR) Venue: Ballroom Mr Lucas David, CEA	NUMERICAL INVESTIGATION OF A TWO- DIMENSIONAL MULTI-SPAN NATURALLY VENTILATED GREENHOUSE CONTAINING STACKED BENCHES Venue: Glencree & Roundwood Dr. Sunita Kruger, University of Johannesburg Mr Awikal Dwivedi, University of Johannesburg	UNDERSTANDING THE PARTICLE-SCALE HEAT TRANSFER MECHANISMS IN PACKED BEDS USING PARTICLE-RESOLVED DIRECT NUMERICAL SIMULATIONS (PR-DNS) Venue: Laragh & Glenealy Dr. Richard Gould, North Carolina State University	IMPACT OF SURFACE MODIFICATION AND ELECTROHYDRODYNAMIC ENHANCEMENT ON NUCLEATE POOL BOILING Venue: Enniskerry Mr. Mark Edward Newton, University of Kassel	DEVELOPMENT OF A SMALL MODULAR REACTOR OF NHR-200 II IN CHINA Venue: Heritage Suite Dr. Yan Wang, Tsinghua University
16:40 - 17:00	IMPACT OF SWIRL NUMBER ON HEAT TRANSFER ENHANCEMENT TO AN AXIAL LAMINAR FLOW Venue: Ballroom Dr Jie Hu, Kitami Institute of Technology	NUMERICAL MODELLING OF EVAPORATING BUBBLES IN MICROCHANNELS Venue: Glencree & Roundwood Dr. Thomas Abadie, Dublin City University	CFD-DEM CHARACTERIZATION OF EFFECTIVE THERMAL CONDUCTIVITY IN PACKED BEDS Venue: Laragh & Glenealy Dr. Richard Gould, North Carolina State University	BUBBLE NUCLEATORS TO ENHANCE POOL BOILING IN TUBE BUNDLES Venue: Enniskerry Mr Roy Bartle, University of Oxford	FUNDAMENTAL STUDY ON ELEMENTAL ANALYSIS OF METAL IN AQUEOUS SOLUTION USING ULTRASOUND Venue: Heritage Suite Dr. Hideharu Takahashi, Tokyo Institute of Technology
17:00 - 17:20		INVESTIGATING THE FLOWFIELD PHYSICS WITHIN COMPRESSIBLE BOUNDARY LAYERS Venue: Glencree & Roundwood Prof. Frederick Ferguson, North Carolina A&T State University	THERMAL STABILITY OF COMPRESSION MOLDED RICE AND COFFEE HUSK FIBER REINFORCED POLYPROPYLENE COMPOSITES Venue: Laragh & Glenealy Dr Michael Lubwama, Makerere University		
19:30 - 20:30	<b>PRE-DINNER DRINKS</b> Venue: Foyer				
20:30 - 22:30	<b>BANQUET DINNER</b> Venue: Ballroom				