

## Programme Overview

The registration and all the sessions take place in the rooms (ERATO, ALEXANDROS II, AMFITRION I, AMFITRION II) at the Makedonia Hotel, Thessaloniki, Greece

*For allocated rooms see detailed coloured programme guide*

### Sunday, 21<sup>st</sup> August 2011

18:00-19:30 **Welcome Reception and Registration (Makedonia Hotel room ARISTOTELIS I or VERANDA)**

### Monday, 22<sup>nd</sup> August 2011

#### DAY 1

8.00	<b>Registration</b>		
8:45	<b>Welcome</b>		
9.00-10.00	<b>Plenary Lecture:</b> Professor George E. Karniadakis		
10.00-10.30	<b>Two Phase Keynote:</b> Professor John Richard Thome		
10.30-10.50	<b>Coffee Break</b>		
10.50-1.00	<b>BioMedical Expert Overview Session 1</b>  (3 papers)	<b>Single Phase Session 1</b> Gas Flows: Analysis  (3 papers)	<b>Two Phase Session 1</b> Mixing: Analysis & Measurement  (5 papers)
13.00-14.00	<b>Lunch</b>		
14.00-15.40	<b>BioMedical Expert Overview Session 2</b>  (3 papers)	<b>Single Phase Session 2</b> Gas Flows: Design & Measurement  (3 papers)	<b>Two Phase Session 2</b> Boiling  (4 papers)
15.40-16.00	<b>Coffee Break</b>		
16.00-18.00	<b>BioMedical Expert Overview Session 3</b>  (3 papers)	<b>Single Phase Session 3</b> Electric and other Field Effects  (5 papers)	<b>Two Phase Session 3</b> Condensation & Binary mixtures  (6 papers)

**DAY 2**

8.00	<b>Registration</b>		
	<b>Special Session: <i>Uncertainty</i></b>		
9.00-10.20	<b>SS1-SS3 + Discussion</b>		
10.20-10.40	<b>Coffee Break</b>		
10.40-12.00	<b>SS4-SS7+ Discussion</b>		
12.00-12.30	<b>Single Phase Keynote: Dr Xu Jinliang</b>		
12.30-13.00	<b>Generic Stream 1</b> Non-Newtonian 1  <b>(2 papers)</b>	<b>Generic Stream 2</b> Wall Surface Effects 1  <b>(2 papers)</b>	<b>Generic Stream 3</b> Nanofluids 1  <b>(2 papers)</b>
13.00-14.00	<b>Lunch</b>		
14.00-14.30	<b>Keynote Lecture: Professor Koichi Hishida</b>		
14.30-15.40	<b>Generic Stream 1</b> Non-Newtonian 2  <b>(4 papers)</b>	<b>Generic Stream 2</b> Wall Surface Effects 2  <b>(5 papers)</b>	<b>Generic Stream 3</b> Nanofluids 2  <b>(5 papers)</b>
15.40-16.00	<b>Coffee Break</b>		
16.00-18.00	<b>Generic Stream 1</b> Multiscale  <b>(3 papers)</b>	<b>Generic Stream 2</b> Wall Surface Effects 3  <b>(3 papers)</b>	<b>Generic Stream 3</b> Nanofluids 3  <b>(3 papers)</b>
19.30-22.30	<b>Conference Dinner</b>		

**DAY 3**

8.00	<b>Registration</b>		
9.00–9.30	<b>Biomedical Keynote:</b> Professor Axel Pries		
9.30-10.30	<b>BioMedical Session 1</b> Applications 1  (3 papers)	<b>Single Phase Session 1</b> Applications 1  (3 paper)	<b>Two Phase Session 1</b> Bubbles, Droplets & Solids in Fluids 1  (3 Paper)
10.30-10.50	<b>Coffee Break</b>		
10.50-1.00	<b>BioMedical Session 2</b> Applications 2  (4 papers)	<b>Single Phase Session 2</b> Applications 2  (5 papers)	<b>Two Phase Session 2</b> Bubbles, Droplets & Solids in Fluids 2  (4 papers)
13.00-14.00	<b>Lunch</b>		
14.00-15.40	<b>BioMedical Session 3</b> Blood Cells & Aggregates  (4 papers)	<b>Single Phase Session 3</b> Applications 3  (5 papers)	<b>Single Phase Session 3a</b> Heat Transfer 1  (5 papers)
15.40-16.00	<b>Coffee Break</b>		
16.00-18.00	<b>Biomedical Session 4</b> Haemodynamics  (3 papers)	<b>Single Phase Session 4</b> Applications & Porous Media  (3 papers)	<b>Single Phase Session 4a</b> Heat Transfer 2  (3 papers)
18.00-18.15	<b>Closing Ceremony – Reception Cheese &amp; Wine</b>		

## Information for the presenters

### Oral presentations

The time allocated for each presentation is:

- **Plenary lecture:** 45 minutes + discussion.
- **Keynote speakers:** 25 minutes + 5 minutes discussion.
- **Biomedical Expert Overview speakers:** 20 minutes + discussion.
- **Paper presentations:** 15 minutes + 5 minutes discussion.
- **Special Session:** 15 minutes in total.

The presentations (PowerPoint 2007 or older versions, Adobe pdf) should be put on a USB-stick and copied on to the computer in the presentation room about half an hour before the session starts. Please see Session Chair if you have any problems. The presentations will take place in the hotel rooms indicated in the Programme Overview coloured guide.

## Sunday, 21<sup>st</sup> August 2011

**18:00-19:30**      **Welcome Reception and Registration (Makedonia Hotel room ARISTOTELIS I or VERANDA)**

## Monday, 22<sup>nd</sup> August 2011

**08.00**      **Registration**

**08.45**      **Welcome**

**09.00**      **Plenary Paper – *Multiscale Modeling of Physical and Biological Systems***

Professor G. E. Karniadakis, Brown University, USA.

**Session Chair:      T. G. KARAYIANNIS**

**10.00**      **Two Phase Keynote – *On-Chip Micro-Evaporation: Experimental Evaluation of Liquid Pumping and Vapor Compression Cooling Systems*, Professor J. R. Thome & J. B. Marcinichen, Laboratory of Heat and Mass Transfer (LTCM), Lausanne, Switzerland**

**Session Chair:      S. G. KANDLIKAR**

**10.30**      **Coffee/Tea Break**

**10.50**      **BioMedical Expert Overview Session 1 – Micro and Nano Flows in Medicine: The Way Ahead**

**Session Chair:      T. YAMAGUCHI**

- ***Iron Oxide Nanoparticles and Derivatives for Biomedical Imaging and Application in Cancer Diagnosis and siRNA Therapy*, M. V. Yigit & Z. O. Medarova**
- ***Detection and Isolation of Circulating Tumour Cells with Single-Cell Resolution: A Successful Lab-on-a-Chip Device*, G. Medoro**
- ***Multiscale Modelling of Vascular Tumour Growth and Angiogenesis*, H. Perfahl & H. Byrne**

**10.50**      **Single Phase Session 1 – Gas Flows: Analysis**

**Session Chair:      D. VALOUGEORGIS**

- ***Treatments of Flows through Micro-channels Based on the Extended Navier-Stokes-Equations*, F. Durst, R. N. Krishnan, D. Filimonov, R. Sambasivam & S. K. Das**
- ***Analytical Treatments of Micro-Channel and Micro-Capillary Flows*, T. Adachi, R. Sambasivam, F. Durst & D. Filimonov**
- ***Rarefied Flow between Plates of Finite Length via the Coupling Approach*, O. Rovenskaya & G. Croce**

**10.50**      **Two Phase Session 1 – Mixing: Analysis & Measurement**

**Session Chair:      K. A. MOUZA**

- ***Mixing in a T-Type Micromixer at High Reynolds Numbers*, A. V. Minakov, V. Y. Rudyak, A. A. Gavrilov & A. A. Dekterev**

- ***Modeling and Simulation of the Mixing Process of Fluids in Microchannels Promoted by Acoustic Streaming***, S. O. Catarino, J. M. Miranda, S. Lanceros-Mendez & G. Minas
- ***Experimental and Numerical Investigation of Thermal Chaotic Mixing in a T-Shaped Microchannel***, B. Xu, T. N. Wong & N.T. Nguyen
- ***Liquid-Liquid Flows in Microchannels***, D. Tsaoulidis, V. Dore & P. Angeli
- ***Investigation of Liquid Phase Characteristics in an Inclined Open Microchannel***, A. D. Anastasiou, A. Gavriilidis & A. A. Mouza

13.00

Lunch

14.00  
Ahead

**BioMedical Expert Overview Session 2 – Micro and Nano Flows in Medicine: The Way**

**Session Chair: E. KALIVIOTIS**

- ***Regulation of Endothelial Cell Activation and Vascular Inflammation by Shear Stress***, P. C. Evans
- ***Micro Flows in the Cardio-Pulmonary System: Surgical Perspective***, V. A. Karagounis
- ***Rheometrical Detection of Incipient Clots Formed Under Physiologically Relevant Conditions***, K. Hawkins, A. Sowedan, P. A. Evans, M. J. Lawrence & P. R. Williams

14.00

**Single Phase Session 2 - Gas Flows: Design & Measurement**

**Session Chair: D. LOCKERBY**

- ***Gas Flow through a Micro-Orifice Due to Small Pressure Difference***, S. Pantazis & D. Valougeorgis
- ***Design of Gas Micro Distribution Systems Consisting of Long Tubes***, S. Misdanitis & D. Valougeorgis
- ***Flow Rate Measurement of Rarefied Binary Gases in Long Rectangular Microchannels***, L. Szalmas, S. Colin & D. Valougeorgis

14.00

**Two Phase Session 2 – Boiling**

**Session Chair: N. ANDRITSOS**

- ***Control of Pool Boiling Incipience in Confined Space: Dynamic Morphing of the Wall Effect***, L. Leal, P. Lavieille, M. Miscevic, F. Pigache & L. Tadrist
- ***Boiling Instabilities in Microtubes***, A. Kaya, M. R. Özdemir & A. Koşar
- ***Parametric Effects on Dryout of Propane in a Vertical Circular Mini-Chanel***, M. H. Maqbool, B. Palm & R. Khodabandeh
- ***Flow Boiling Pressure Drop of R134a in Micro Diameter Tubes: Experimental Results and Assessment of Correlations***, M. M. Mahmoud, T. G. Karayiannis & D. B. R. Kenning

15.40

Coffee/Tea Break

**16.00  
Ahead**

**BioMedical Expert Overview Session 3 – Micro and Nano Flows in Medicine: The Way**

**Session Chair: A. PRIES**

- ***Digital Optical and Scanning Probe Microscopy for Biocells Inspection and Manipulation***, S. A. Chizhik, L. S. Drozd & N. A. Fomin
- ***Coherent Microscopy and Optical Coherence Tomography for Biomedical Applications***, J. M. Coupland
- ***High Speed Single Cell Processing and Characterisation with Microfluidics***, H. Morgan

**16.00**

**Single Phase Session 3 – Electric and other Field Effects**

**Session Chair: J. S. LEWIS**

- ***Numerical Characterization of Silicon DC Electro-Osmotic Pumps: The Role of the Micro-channel Geometry***, M. Geri, M. Lorenzini & G. L. Morini
- ***Control of Convection by Different Buoyancy forces***, N. Dahley, B. Futterer & C. Egbers
- ***Lagrangian Flow Structures in 3D AC Electro-Osmotic Microflows***, M. F. M. Speetjens, H. N. L. De Wispelaere & A. A. Van Steenhoven
- ***CFD-Based, Lagrangian-Eulerian Coupling Approach for Magnetophoretic Particle Capture***, S. A. Khashan & E. Furlani
- ***Evaluation of Electroosmotic Pumping Effect in Microporous Media Flow***, B. Li & Y. Yan

**16.00**

**Two Phase Session 3 – Condensation & Binary Mixtures**

**Session Chair: D. DEL COL**

- ***Condensation in a Square Minichannel: Application of the VOF Method***, E. Da Riva, S. Bortolin & D. Del Col
- ***Destabilization and Dry-Spot Nucleation in Thin Liquid Films on Partially Wetting Substrates using a Low-Pressure Air-Jet***, C. W. J. Berendsen, J. C. H. Zeegers & A. A. Darhuber
- ***The Separation of Falling Binary Liquid Film in the Presence of Inert Components by Diffusion Distillation***, Z. Ziobrowski & R. Krupiczka
- ***Gas Separation through Carbon Nanotubes***, D. Mantzalis, N. Asproulis & D. Drikakis
- ***Binary-Mixture Droplet Evaporation: Lubrication Approximation and Coffee Ring Formation***, M. Tembely, A. G. Mercier, C. Nayoze & A. Soucemarianadin
- ***Flow Patterns and Heat Transfer in a Square Cross-Section Micro Condenser Working at Low Mass Fluxes***, G. El-Achkar, M. Miscevic, P. Lavieille, J. Lluc & J. Hugon

**17.40**

**End of Sessions**

## Tuesday, 23<sup>rd</sup> August 2011

08.00 Registration

### Special Session: *Uncertainty*

09.00 SS1-SS3 + Discussion

Session Chair: D. DRIKAKIS & M. W. COLLINS

- *Computational Uncertainty in Hybrid Atomistic-Continuum Frameworks*, D. Drikakis & N. Asproulis
- *Uncertainty Quantification (UQ)*, G. E. Karniadakis
- *Reliability of Large-Eddy Simulation*, B. J. Geurts

10.20 Coffee/Tea Break

10.40 SS4-SS7 + Discussion

Session Chair: J. J. BRANDNER & M. W. COLLINS

- *An Experimental Investigation of Structured Roughness on Heat Transfer during Single-Phase Liquid Flow at Microscale*, T.Y. Lin & S. G. Kandlikar
- *Numerical Optimization of Passive Chaotic Micromixers*, A. Sarkar, A. Narváez & J. Harting
- *Structure - Property Relationships for Nanofluids*, P. Song, S. Witharana & Y. Ding
- *Microstructure Devices for Process Intensification: Influence of Manufacturing Tolerances and Measurement Uncertainties*, J. J. Brandner

12.00 Single Phase Keynote – *Boundary Condition, an Old but not Well Solved Problem, Linked from Nanometer to Macroscale*, Dr X. Jinliang & L. Yuxiu, North China Electrical Power University, Beijing, China

Session Chair: N. ASPROULIS

12.30 Generic Stream 1 Session 1 – Non-Newtonian 1

Session Chair: Y. YAN

- *Boger Fluid Flow through Hyperbolic Contraction Microchannels*, L. Campo-Deaño, F. J. Galindo-Rosales, M. S. N. Oliveira, M. A. Alves & F. T. Pinho
- *Extensional Flow of Newtonian and Boger Fluids through a Flow Focusing Microdevice*, M. S. N. Oliveira, F. T. Pinho & M. A. Alves

12.30 Generic Stream 2 Session 1 – Wall Surface Effects 1

Session Chair: B. JOHN

- *Internal Pressure Measurements in Microchannels of Different Shapes*, V. M. Aniskin, K. V. Adamenko & A. A. Maslov
- *Numerical Simulation of Microflow over Superhydrophobic Surfaces by Lattice Boltzmann Method*, W. N. Zhou & Y. Y. Yan

**12.30 Generic Stream 3 Session 1 – Nanofluids 1**

**Session Chair: E. SOKOLOV**

- ***Measurement of Thermal and Electrical Conductivities of Graphene Nanofluids***, K. S. K. Gandhi, M. Velayutham, S. K. Das & S. Thirumalachari
- ***Numerical Investigation of Aspect Ratio Effect on Thermal Parameters in Laminar Nanofluid Flow in Microchannel Heat Sink***, S. S. Hosseini & A. Abbassi

**13.00 Lunch**

**14.00 Keynote Lecture – Combined Laser- Based Measurements for Micro- and Nano-Scale Transport Phenomena**

Professor K. Hishida & Y. Sato, Keio University, Yokohama, Japan

**Session Chair: J. COUPLAND**

**14.30 Generic Stream 1 Session 2 – Non-Newtonian 2**

**Session Chair: G. TANG**

- ***Experimental Study on Non-Newtonian Fluid Flow in Microchannels***, G. H. Tang, F. F. Wang, S. X. Zhang, Y. B. Lu & W. Q. Tao
- ***Self-Diffusion and Viscosity Coefficients of Fluids in Nanochannels***, V. Y. Rudyak, A. A. Belkin, D. A. Ivanov & V. A. Andrushenko
- ***Modeling of Micro Flows Using Perturbation Method***, M. S. Khalili, M. Saghafian, A. Sedaghat, E. Shirani & A. Saberian
- ***Significance of Microfluidic Concepts for the Improvement of Macroscopic Models of Transport Phenomena***, M. Krol

**14.30 Generic Stream 2 Session 2 – Wall Surface Effects 2**

**Session Chair: J. HARTING**

- ***Dissipative Particle Dynamics Simulation of Flow in Periodically Grooved Three-Dimensional Nano- and Micro Channels***, D. Kasiteropoulou, T. E. Karakasidis & A. Liakopoulos
- ***Single-Phase Laminar Flow Heat Transfer from Confined Electron Beam Enhanced Surfaces***, A. Ferhati, T. G. Karayiannis, J. S. Lewis, R. J. McGlen & D. A. Reay
- ***Numerical Investigation of Laminar Flow in Micro-tubes with Designed Surface Roughness***, A. F. Mahrous, S. Mahmoud, R. K. Al-Dadah & A. M. Elsayed
- ***An Experimental Investigation on Friction Characteristics of Air Flow in Microtube with Structured Surface Roughness***, T. Y. Lin, C. W. Chen, C. Y. Yang & S. G. Kandlikar
- ***A Numerical Study on Slip Flow Heat Transfer in Micro-Poiseuille Flow***, A. Saberian, M. Saghafian, M. S. Khalili & A. Sedaghat

**14.30 Generic Stream 3 Session 2 – Nanofluids 2**

**Session Chair: Y. DING**

- ***Force Convective Heat Transfer in Nanofluids and Its Applications: A Review***, C. Y. Ji, D. M. Mullen & K. V. Lynn



- **Performance Analysis of Non-Circular Microchannels Flooded with CuO-Water Nanofluid**, R. Gautam, A. K. Sharma and K. D. Gupta
- **Turbulent Convective Heat Transfer and Pressure Drop of Dilute CuO (Copper Oxide) – Water Nanofluid Inside a Circular Tube**, E. Djajadiwinata, H. A. Al-Ansary, K. Al-Dakkan, A. Bagabas, A. Al-Jariwi & M. F. Zedan
- **Thermal Conductivity Modeling of Nanofluids**, K. Farhadi & T. N. Croft
- **Electrical Conductivity for Copper Oxide (CuO) Nanofluids in the Superconducting Phase. A generation of Type II Superconductivity Hydrodynamics Behavior**, G. E. Vekris, C. K. Manavis, N. N. Kyriakoudis, M. Hadjinicolaou, W. Balachnadrán & A. Karayannis

## 15.40 Coffee/Tea Break

### 16:00 Generic Stream 1 Session 3 – Multiscale Session Chair: B. GUERTS

- **Exploiting Timescale Separation in Micro and Nano Flows**, D. A. Lockerby, C. A. Duque Daza, M. K. Borg & J. M. Reese
- **Transport Properties of Fluids in Nanochannels: Bridging Nano to Macro**, F. Sofos, T. E. Karakasidis, A. Giannakopoulos & A. Liakopoulos
- **Coupled Continuum Hydrodynamics and Molecular Dynamics Method for Multiscale Simulation**, M. K. Borg, D. A. Lockerby & J. M. Reese

### 16:00 Generic Stream 2 Session 3 – Wall Surface Effects 3 Session Chair: G. PONTRELLI

- **A Second-Order Slip Model for Arbitrary Accommodation at the Wall**, L. Gibelli
- **Sustainability of Apparent Slip in Micro-Channel Flows**, R. N. Govardhan, P. S. Pawar & M. S. Bobji
- **Time Dependent Superhydrophobicity of Drag Reducing Surfaces**, M. S. Bobji, G. Balan & R. N. Govardhan

### 16:00 Generic Stream 3 Session 3 – Nanofluids 3 Session Chair: M. BORG

- **Numerical Investigation of Heat Laminar Flow Transfer through Helically Coiled Tubes Using Al<sub>2</sub>O<sub>3</sub> Nanofluids**, A. M. Elsayed, R. K. Al-Dadah, S. Mahmoud & A. F. Mahrous
- **Implementation of a Simplified Method for Actuation of Ferrofluids**, E. Kurtoğlu, A. Bilgin, M. Şeşen, H. F. Yağci Acar & A. Koşar
- **Forced Boiling of Nanofluids, Effects of Contact Angle and Surface Wettability**, M. Hasheminia, M. H. Fard, S. G. Etemad & S. H. Hashemabadi

## 19.30-10:30 Conference - Dinner

## Wednesday, 24<sup>th</sup> August 2011

08.00 Registration

09.00 **Biomedical Keynote – *Microcirculatory Blood Flow: Functional Implications of a Complex Fluid***, Professor A. R. Pries & T. W. Secomb, Institute for Physiology at the Charité Berlin, Germany & Arizona Research Laboratories, University of Arizona, Tucson, USA  
**Session Chair: C. KÖNIG**

09.30 **BioMedical Session 1 – Applications 1**  
**Session Chair: J. SOULIS**

- ***Multicompartmental Poroelastic Modelling for CSF Production and Circulation***, J. C. Vardakis, B. Tully, J. Byrne & Y. Ventikos
- ***Non-Newtonian 3D Ciliary Fluid Flow in a Semi-Infinite Domain***, D. Isvoranu & S. Danaila
- ***Flow and Particle Deposition Using an Integrated CFD Model of the Respiratory System***, A. H. Alexopoulos, P. Karakosta & C. Kiparissides

09.30 **Single Phase Session 1 – Applications 1**  
**Session Chair: S. PARAS**

- ***Eccentric Taylor-Couette Flow with Orbital Motion of the Inner Cylinder***, A. Christl, N. Herzog & C. Egbers
- ***Numerical Meshing Issues for Three-Dimensional Flow Simulation in Journal Bearings***, M. Schmidt, P. Stücker & M. Nobis
- ***Design and Optimization of a Micro Heat Sink for Concentrating Photovoltaic/Thermal (CPVT) Systems***, I. K. Karathanassis, E. Papanicolaou, V. Belessiotis & G. C. Bergeles

09.30 **Two Phase Session 1 – Bubbles, Droplets & Solids in Fluids 1**  
**Session Chair: J. R. THOME**

- ***Simulation of Droplet-Based Microfluidic Lab-on-a-Chip Applications***, N. Gleichmann, D. Malsch, P. Horbert & T. Henkel
- ***Study on the Behavior of Small Droplet Impinging onto a Hot Surface***, M. Kohno, S. Fukuda, K. Tagashira, N. Ishihara, S. Hidaka, M. Arita & Y. Takata
- ***Reversion Scheme for Droplet Parameters with Rainbow Refractometry Based on Debye Theory***, F. Song, Z. Yao, C. Xu & S. Wang

10.30 Coffee/Tea Break

10.50 **BioMedical Session 2 – Applications 2**  
**Session Chair: P. EVANS**

- ***Experimental Study and Model for Healthy and Pathological Synovial Fluid***, T. B. Goudoulas & E. G. Kastrinakis
- ***Fabrication and Modeling of a Continuous-Flow Microfluidic Device for on-Chip DNA Amplification***, G. Kokkoris, D. C. Moschou, E. Mavraki, S. Chatzandroulis & A. Tserepi

- ***Oblique Shock Wave Effects on Biological Membranes***, D. Sourmaidou, S. Dufourmantelle, N. Asproulis, D. Drikakis & S. Pal
- ***Wall Shear Stress and Low Density Lipoprotein Concentration in Stented Arteries***, J. V. Soulis, D. K. Fytanidis, K. V. Seralidou, V. C. Karagkiozaki & G. D. Giannoglou

**10.50**      **Single Phase Session 2 – Applications 2**  
**Session Chair:            K. HISHIDA**

- ***Development of a Micro Flow Sensor for Microfluidic Systems***, S. Loane, P. R. Selvaganapathy & C. Y. Ching
- ***The Hybrid Grid Implemented DSMC Method Used in 2D Triangular Micro Cavity Flows***, N. Şengil
- ***Experimental Design with Integrated Temperature Sensors in MEMS: An Example of Application for Rarefied Gases***, A. Vittoriosi, J. J. Brandner & R. Dittmeyer
- ***Study of a Micro-Structured PHE for the Thermal Management of a Fuel Cell***, I. A. Stogiannis, A. A. Mouza & S. V. Paras
- ***Experimental Investigation on Self-similar Heat Sinks for Liquid Cooled Electronics***, F. Brighenti, N. Kamaruzaman, J. J. Brandner

**10.50**      **Two Phase Session 2 – Bubbles, Droplets & Solids in Fluids 2**  
**Session Chair:            P. ANGELI**

- ***Three-Dimensional Micro-Droplet Collision Simulation Using the Lattice Boltzmann Method***, D. J. Lycett-Brown & K. H. Luo
- ***Nonlinear Effects on Migration of Charged Spherical Rigid/Soft Particle in an Unbounded Electrolyte Solution***, S. Bhattacharyya & P. P. Gopmandal
- ***Online Fabrication and Characterization of Capsule Populations with a Flow-Focusing Microfluidic System***, T. X. Chu, E. Leclerc, A. V. Salsac, D. Barthes-Biesel, L. Griscom & F. Edwards-Levy
- ***Impact and Spreading of Microdrops on Homo- and Heterogeneous Solids: Modelling and Benchmark Simulations***, J. E. Sprittles & Y. D. Shikhmurzaev

**13.00**      **Lunch**

**14.00**      **BioMedical Session 3 – Blood Cells & Aggregates**  
**Session Chair:            H. PERFAHL**

- ***The Lattice Boltzmann Method as a General Framework for Large-Scale Blood Flow Simulations***, S. Melchionna, M. Bernaschi, M. Bisson & S. Succi
- ***Particle Based Modeling and Simulation of the Red Blood Cell Infected by Malaria –Mechanism of the Margination of the Infected Red Blood Cell-***, T. Yamaguchi, T. Ishikawa & Y. Imai
- ***Flow Field Characterisation of Aggregating Human Blood in Bifurcating Microchannels***, J. M. Sherwood, J. Dusting, E. Kaliviotis & S. Balabani

- ***Near Wall Haemodynamics: Modelling the Glycocalyx and the Endothelial Surface***, G. Pontrelli, I. Halliday, T. J. Spencer, C. M. Care, C. S. König & M. W. Collins

**14.00**      **Single Phase Session 3 – Applications 3**  
**Session Chair:**      **L. CAMPO - DEAÑO**

- ***An Experimental Study on Heat Transfer and Pressure Drop of MTHE***, C. S. Dai, Q. X. Wang & B. Li
- ***Residence Time Distribution of Gas Flows in Microreactors: Measurement and Model Comparison***, W. Wibel, E. Anurjew, J. J. Brandner, R. Dittmeyer, U. Schygulla, B. Leyrer & T. Blank
- ***The Effect of Flow Coefficient on the Design of Miniature Centrifugal Impeller***, G. Liu & W. K. Chan
- ***The Structure of Supersonic Underexpanded Nitrogen Microjets***, V. M. Aniskin, S. G. Mironov & A. A. Maslov
- ***Performance Comparison between Planar and Pyramidal Microdiffuser for Valveless Micropump***, G. Abo Elyamin & N. Qin

**14.00**      **Single Phase Session 3a – Heat Transfer 1**  
**Session Chair:**      **X. JINLIANG**

- ***Heat and Fluid Flow of a Rarefied Gas through a Bed of Spheres***, E. Afrasiabian, L. Marino & C. M. Casciola
- ***Forced Convection Heat Transfer Simulation Using Dissipative Particle Dynamics with Energy Conservation***, T. Yamada, A. Kumar, A. Yutaka & M. Faghri
- ***Thermal Transpiration Flow***, M. Rojas, I. Graur, P. Perrier & J. G. Meolans
- ***Non-Equilibrium Heat Transfer in Acceleration and Pressure-Driven Poiseuille Flows: A Comparative Study***, B. John, X. J. Gu & D. R. Emerson
- ***The Effect on the Nusselt Number of the Non-linear Axial Temperature Distribution of Gas Flows through Commercial Microtubes***, Y. Yang, G. L. Morini, H. Chalabi & M. Lorenzini

**15.40**      **Coffee/Tea Break**

**16.00**      **BioMedical Session 4 – Haemodynamics**  
**Session Chair:**      **A. G. KOUTSIARIS & M. W. COLLINS**

- ***Oscillating Shear Index, Wall Shear Stress and Low Density Lipoprotein Accumulation in Human RCAs***, J. V. Soulis, D. K. Fytanidis, V. C. Papaioannou & G. D. Giannoglou
- ***Severity Parameter and Global Importance Factor of Non-Newtonian Models in a 3D Reconstructed Human Left Coronary Artery***, J. V. Soulis, K. V. Seralidou, Y. S. Chatzizisis & G. D. Giannoglou
- ***How Good Are the Fits to the Experimental Velocity Profiles in Vivo?***, A. G. Koutsiaris, S. V. Tachmitzi & A. D. Giannoukas

**16.00**

**Single Phase Session 4– Applications & Porous Media**

**Session Chair: M. KOHNO**

- ***Thrust Effectiveness of Micronozzle***, E. I. Sokolov
- ***On the Influence of Tube Row Number for Mixed Convection Around Micro Tubes***, C. S. Dai, Q. X. Wang & B. Li
- ***Microchannels Analogues for the Study of Viscoelastic Fluid Flows through Porous Media***, F. J. Galindo-Rosales, L. Campo-Deaño, M. S. N. Oliveira, M. A. Alves, F. T. Pinho, E. V. Bokhorst & P. J. Hamersma

**16.00**

**Single Phase Session 4a – Heat Transfer 2**

**Session Chair: A. KANARIS**

- ***Rarefaction and Thermal Creep Effects in Square Cross-Section Microchannels***, S. Palle & S. Aliabadi
- ***Total Temperature Measurements of Laminar Gas Flow at Micro-tube Outlet: Cooled from the Wall***, C. Hong, Y. Uchida, Y. Asako, I. Ueno & M. Motosuke
- ***Transient Micro Heat Transfer in a Gas Confined between Parallel Plates Due to a Sudden Increase of the Wall Temperature***, O. Buchina, M. Vargas, D. Valougeorgis & S. Stefanov

**17.40**

**Closure – Future Plans and Vote of Thanks**

**18.00**

**End of Conference – Reception: Cheese & Wine**

# Programme Guide

<b>Sunday, 21<sup>st</sup> August 2011</b>	
18:00-19:30	<b>Welcome Reception and Registration</b> Room: Makedonia Hotel room ARISTOTELIS I or VERANDA

<b>Monday, 22<sup>nd</sup> August 2011</b>	
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from 8:00	<b>Registration – room ERATO</b>
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08:45-09:00	<b>Welcome</b>
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09:00-10:00	<b>Plenary Paper:</b> “Multiscale Modeling of Physical and Biological Systems” Professor George E. Karniadakis Room: ALEXANDROS II Chair: T. G. Karayiannis
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10:00-10:30	<b>Two Phase Keynote:</b> “On-Chip Micro-Evaporation: Experimental Evaluation of Liquid Pumping and Vapor Compression Cooling Systems” Professor John R. Thome Room: ALEXANDROS II Chair: S. G. Kandlikar
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10:30-10:50	<b>Coffee/Tea ALEXANDROS I</b>
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	<b>BioMedical Overview Expert Micro &amp; Nano Flows in Medicine: The Way Ahead</b>	<b>Single Phase Gas Flows: Analysis</b>	<b>Two Phase Mixing: Analysis &amp; Measurement</b>
10:50-13:00	Session 1 Room: <b>AMFITRION I</b> Chair: <b>T. Yamaguchi</b> Paper: <b>Iron Oxide Nanoparticles and Derivatives for Biomedical Imaging and Application in Cancer Diagnosis and siRNA Therapy</b> Authors : M. V. Yigit & Z. O. Medarova Paper: <b>Detection and Isolation of Circulating Tumour Cells with Single-Cell Resolution: A Successful Lab-on-a-Chip Device</b> Authors : G. Medoro Paper: <b>Multiscale Modelling of Vascular Tumour Growth and Angiogenesis</b> Authors H. Perfahl & H. Byrne.	Session 1 Room: <b>ALEXANDROS II</b> Chair: <b>D. Valougeorgis</b> Paper: <b>Treatments of Flows through Micro-channels Based on the Extended Navier-Stokes-Equations</b> Authors : F. Durst, R. N. Krishnan, D. Filimonov, R. Sambasivam & S. K. Das Paper: <b>Analytical Treatments of Micro-Channel and Micro-Capillary Flows</b> Authors : T. Adachi, R. Sambasivam, F. Durst & D. Filimonov Paper: <b>Rarefied Flow between Plates of Finite Length via the Coupling Approach</b> Authors : O. Rovenskaya & G. Croce	Session 1 Room: <b>AMFITRION II</b> Chair: <b>K. A. Mouza</b> Paper: <b>Mixing in a T-Type Micromixer at High Reynolds Numbers</b> Authors : A. V. Minakov, V. Y. Rudyak, A. A. Gavrillov & A. A. Dekterev Paper: <b>Modeling and Simulation of the Mixing Process of Fluids in Microchannels Promoted by Acoustic Streaming</b> Authors : S. O. Catarino, J. M. Miranda, S. Lanceros-Mendez & G. Minas Paper: <b>Experimental and Numerical Investigation of Thermal Chaotic Mixing in a T-Shaped Microchannel</b> Authors : B. Xu, T. N. Wong & N.T. Nguyen Paper: <b>Liquid-Liquid Flows in Microchannels</b> Authors : D. Tsaoulidis, V. Dore & P. Angeli Paper: <b>Investigation of Liquid Phase Characteristics in an Inclined Open Microchannel</b> Authors : A. D. Anastasiou, A. Gavriilidis & A. A. Mouza

13:00-14:00	<b>Lunch ALEXANDROS I</b>
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	<b>Micro &amp; Nano Flows in Medicine: The Way Ahead</b>	<b>Gas Flows: Design &amp; Measurement</b>	<b>Boiling</b>
14:00-15:40	Session 2 Room: <b>AMFITRION I</b> Chair: <b>E. Kaliviotis</b> Paper: <b>Regulation of Endothelial Cell Activation and Vascular Inflammation by Shear Stress</b> Authors : P. C. Evans Paper: <b>Micro Flows in the Cardio-Pulmonary System: Surgical Perspective</b> Authors : V. A. Karagounis Paper: <b>Rheometrical Detection of Incipient Clots Formed Under Physiologically Relevant Conditions</b> Authors : K. Hawkins, A. Sowedan, P. A. Evans, M. J. Lawrence & P. R. Williams	Session 2 Room: <b>ALEXANDROS II</b> Chair: <b>D. Lockerby</b> Paper: <b>Gas Flow through a Micro-Orifice Due to Small Pressure Difference</b> Authors : S. Pantazis & D. Valougeorgis Paper: <b>Design of Gas Micro Distribution Systems Consisting of Long Tubes</b> Authors : S. Misdanitis & D. Valougeorgis Paper: <b>Flow Rate Measurement of Rarefied Binary Gases in Long Rectangular Microchannels</b> Authors : L. Szalmas, S. Colin & D. Valougeorgis	Session 2 Room: <b>AMFITRION II</b> Chair: <b>N. Andritsos</b> Paper: <b>Control of Pool Boiling Incipience in Confined Space: Dynamic Morphing of the Wall Effect</b> Authors : L. Leal, P. Lavieille, M. Miscevic, F. Pigache & L. Tadrict Paper: <b>Boiling Instabilities in Microtubes</b> Authors : A. Kaya, M. R. Özdemir & A. Koşar Paper: <b>Parametric Effects on Dryout of Propane in a Vertical Circular Mini-Chanel</b> Authors : M. H. Maqbool, B. Palm & R. Khodabandeh Paper: <b>Flow Boiling Pressure Drop of R134a in Micro Diameter Tubes: Experimental Results</b>

			<b>and Assessment of Correlations</b> Authors : M. M. Mahmoud, T. G. Karayiannis & D. B. R. Kenning
15:40-16:00	<b>Coffee/Tea ALEXANDROS I</b>		
	<b>BioMedical Overview Expert Micro &amp; Nano Flows in Medicine: The Way Ahead</b>	<b>Single Phase Electric and other Field Effects</b>	<b>Two Phase Condensation &amp; Binary Mixtures</b>
16:00-18:00	Session 3 Room: <b>AMFITRION I</b> Chair: <b>A. Pries</b>	Session 3 Room: <b>ALEXANDROS II</b> Chair: <b>J. S. Lewis</b>	Session 3 Room: <b>AMFITRION II</b> Chair: <b>D. Del Col</b>
	Paper: <b>Digital Optical and Scanning Probe Microscopy for Biocells Inspection and Manipulation</b> Authors : S. A. Chizhik, L. S. Drozd & N. A. Fomin	Paper: <b>Numerical Characterization of Silicon DC Electro-Osmotic Pumps: The Role of the Micro-channel Geometry</b> Authors : M. Geri, M. Lorenzini & G. L. Morini	Paper: <b>Condensation in a Square Minichannel: Application of the VOF Method</b> Authors : E. Da Riva, S. Bortolin & D. Del Co
	Paper: <b>Coherent Microscopy and Optical Coherence Tomography for Biomedical Applications</b> Authors : J. M. Coupland	Paper: <b>Control of Convection by Different Buoyancy forces</b> Authors : N. Dahley, B. Futterer & C. Egbers	Paper: <b>Destabilization and Dry-Spot Nucleation in Thin Liquid Films on Partially Wetting Substrates using a Low-Pressure Air-Jet</b> Authors : C. W. J. Berendsen, J. C. H. Zeegers & A. A. Darhuber
	Paper: <b>High Speed Single Cell Processing and Characterisation with Microfluidics</b> Authors : H. Morgan	Paper: <b>Lagrangian Flow Structures in 3D AC Electro-Osmotic Microflows</b> Authors : M. F. M. Speetjens, H. N. L. De Wispelaere & A. A. Van Steenhoven	Paper: <b>The Separation of Falling Binary Liquid Film in the Presence of Inert Components by Diffusion Distillation</b> Authors : Z. Ziobrowski & R. Krupiczka
		Paper: <b>CFD-Based, Lagrangian-Eulerian Coupling Approach for Magnetophoretic Particle Capture</b> Authors : S. A. Khashan & E. Furlani	Paper: <b>Gas Separation through Carbon Nanotubes</b> Authors : D. Mantzalis, N. Asproulis & D. Drikakis
		Paper: <b>Evaluation of Electroosmotic Pumping Effect in Microporous Media Flow</b> Authors : B. Li & Y. Yan	Paper: <b>Binary-Mixture Droplet Evaporation: Lubrication Approximation and Coffee Ring Formation</b> Authors : M. Tembely, A. G. Mercier, C. Nayoze & A. Soucemarianadin
			Paper: <b>Flow Patterns and Heat Transfer in a Square Cross-Section Micro Condenser Working at Low Mass Fluxes</b> Authors : G. El-Achkar, M. Miscevic, P. Lavielle, J. Lluc & J. Hugon
17:40	<b>End of Sessions</b>		

<b>Tuesday, 23<sup>rd</sup> August 2011</b>	
from 8:00	<b>Registration – room ERATO</b>
09:00-09:20	<b>Special Session 1+ Discussion Uncertainty</b> Room: <b>ALEXANDROS II</b> Chair: <b>D. Drikakis &amp; M. W. Collins</b>
09:20-10:20	Paper: <b>Computational Uncertainty in Hybrid Atomistic-Continuum Frameworks</b> Authors: D. Drikakis & N. Asproulis Paper: <b>Uncertainty Quantification (UQ)</b> Authors: G. E. Karniadakis Paper: <b>Reliability of Large-Eddy Simulation</b> Authors: B. J. Geurts
10:20-10:40	<b>Coffee/Tea ALEXANDROS I</b>
10:40-11:40	<b>Special Session 2+ Discussion Uncertainty</b> Chair: <b>J. J. Brandner &amp; M. W. Collins</b>
	Paper: <b>An Experimental Investigation of Structured Roughness on Heat Transfer during Single-Phase Liquid Flow at Microscale</b> Authors: T.Y. Lin & S. G. Kandlikar
	Paper: <b>Numerical Optimization of Passive Chaotic Micromixers</b> Authors: A. Sarkar, A. Narváez & J. Harting
	Paper: <b>Structure – Property Relationships for Nanofluids</b> Authors: P. Song, S. Witharana & Y. Ding
	Paper: <b>Microstructure Devices for Process Intensification: Influence of Manufacturing Tolerances and Measurement Uncertainties</b> Authors: J. J. Brandner

12:00-12:30	<b>Single Phase Keynote:</b> <b>“Boundary Condition, an Old but not Well Solved Problem, Linked from Nanometer to Macroscale”</b> Dr Xu Jinliang Room: <b>ALEXANDROS II</b> Chair: <b>N. Asproulis</b>		
	<b>Generic Stream 1 Non-Newtonian 1</b>	<b>Generic Stream 2 Wall Surface Effects 1</b>	<b>Generic Stream 3 Nanofluids 1</b>
12:30-13:00	Session 1 Room: <b>AMFITRION I</b> Chair: <b>Y. Yan</b> Paper: <b>Boger Fluid Flow through Hyperbolic Contraction Microchannels</b> Authors : L. Campo-Deaño, F. J. Galindo-Rosales, M. S. N. Oliveira, M. A. Alves & F. T. Pinho Paper: <b>Extensional Flow of Newtonian and Boger Fluids through a Flow Focusing Microdevice</b> Authors : M. S. N. Oliveira, F. T. Pinho & M. A. Alves	Session 1 Room: <b>ALEXANDROS II</b> Chair: <b>B. John</b> Paper: <b>Internal Pressure Measurements in Microchannels of Different Shapes</b> Authors : V. M. Aniskin, K. V. Adamenko & A. A. Maslov Paper: <b>Numerical Simulation of Microflow over Superhydrophobic Surfaces by Lattice Boltzmann Method</b> Authors : W. N. Zhou & Y. Y. Yan	Session 1 Room: <b>AMFITRION II</b> Chair: <b>E. Sokolov</b> Paper: <b>Measurement of Thermal and Electrical Conductivities of Graphene Nanofluids</b> Authors : K. S. K. Gandhi, M. Velayutham, S. K. Das & S. Thirumalachari Paper: <b>Numerical Investigation of Aspect Ratio Effect on Thermal Parameters in Laminar Nanofluid Flow in Microchannel Heat Sink</b> Authors : S. S. Hosseini & A. Abbassi
13:00-14:00	<b>Lunch ALEXANDROS I</b>		
14:00-14:30	<b>Keynote Lecture:</b> <b>“Combined Laser- Based measurements for Micro- and Nano-Scale Transport Phenomena”</b> <b>Professor Koichi Hishida</b> Room: <b>ALEXANDROS II</b> Chair: <b>J. Coupland</b>		
	<b>Non-Newtonian 2</b>	<b>Wall Surface Effects 2</b>	<b>Nanofluids 2</b>
14:30-15:40	Session 2 Room: <b>AMFITRION I</b> Chair: <b>G. Tang</b> Paper: <b>Experimental Study on Non-Newtonian Fluid Flow in Microchannels</b> Authors : G. H. Tang, F. F. Wang, S. X. Zhang, Y. B. Lu & W. Q. Tao Paper: <b>Self-Diffusion and Viscosity Coefficients of Fluids in Nanochannels</b> Authors : V. Y. Rudyak, A. A. Belkin, D. A. Ivanov & V. A. Andrushenko Paper: <b>Modeling of Micro Flows Using Perturbation Method</b> Authors : M. S. Khalili, M. Saghafian, A. Sedaghat, E. Shirani & A. Saberian Paper: <b>Significance of Microfluidic Concepts for the Improvement of Macroscopic Models of Transport Phenomena</b> Authors : M. Krol	Session 2 Room: <b>ALEXANDROS II</b> Chair: <b>J. Harting</b> Paper: <b>Dissipative Particle Dynamics Simulation of Flow in Periodically Grooved Three-Dimensional Nano- and Micro-Channels</b> Authors : D. Kasiteropoulou, T. E. Karakasidis & A. Liakopoulos Paper: <b>Single-Phase Laminar Flow Heat Transfer from Confined Electron Beam Enhanced Surfaces</b> Authors : A. Ferhati, T. G. Karayiannis, J. S. Lewis, R. J. McGlen & D. A. Reay Paper: <b>Numerical Investigation of Laminar Flow in Micro-tubes with Designed Surface Roughness</b> Authors : A. F. Mahrous, S. Mahmoud, R. K. Al-Dadah & A. M. Elsayed Paper: <b>An Experimental Investigation on Friction Characteristics of Air Flow in Microtube with Structured Surface Roughness</b> Authors : T. Y. Lin, C. W. Chen, C. Y. Yang & S. G. Kandlikar Paper: <b>A Numerical Study on Slip Flow Heat Transfer in Micro-Poiseuille Flow</b> Authors : A. Saberian, M. Saghafian, M. S. Khalili & A. Sedaghat	Session 2 Room: <b>AMFITRION II</b> Chair: <b>Y. Ding</b> Paper: <b>Force Convective Heat Transfer in Nanofluids and Its Applications: A Review</b> Authors : C. Y. Ji, D. M. Mullen & K. V. Lynn Paper: <b>Performance Analysis of Non-Circular Microchannels Flooded with CuO-Water Nanofluid</b> Authors : R. Gautam, A. K. Sharma and K. D. Gupta Paper: <b>Turbulent Convective Heat Transfer and Pressure Drop of Dilute CuO (Copper Oxide) – Water Nanofluid Inside a Circular Tube</b> Authors : E. Djajadiwinata, H. A. Al-Ansary, K. Al-Dakkan, A. Bagabas, A. Al-Jariwi & M. F. Zedan Paper: <b>Thermal Conductivity Modeling of Nanofluids</b> Authors : K. Farhadi & T. N. Croft Paper: <b>Electrical Conductivity for Copper Oxide (CuO) Nanofluids in the Superconducting Phase. A generation of Type II Superconductivity Hydrodynamics Behavior</b> Authors : G. E. Vekris, C. K. Manavis, N. N. Kyriakoudis, M. Hadjinicolaou, W. Balachnadrans & A. Karayannis
15:40-16:00	<b>Coffee/Tea ALEXANDROS I</b>		
	<b>Multiscale</b>	<b>Wall Surface Effects 3</b>	<b>Nanofluids 3</b>
16:00-18:00	Session 3 Room: <b>AMFITRION I</b> Chair: <b>B. Guerts</b> Paper: <b>Exploiting Timescale Separation in Micro and Nano Flows</b> Authors : D. A. Lockerby, C. A. Duque Daza, M. K. Borg & J. M Reese Paper: <b>Transport Properties of Fluids in Confined Nanochannels: Bridging Nano to Macro</b>	Session 3 Room: <b>ALEXANDROS II</b> Chair: <b>G. Pontrelli</b> Paper: <b>A Second-Order Slip Model for Arbitrary Accommodation at the Wall</b> Authors : L. Gibelli Paper: <b>Sustainability of Apparent Slip in Micro-Channel Flows</b>	Session 3 Room: <b>AMFITRION II</b> Chair: <b>M. Borg</b> Paper: <b>Numerical Investigation of Heat Laminar Flow Transfer through Helically Coiled Tubes Using Al<sub>2</sub>O<sub>3</sub> Nanofluids</b> Authors : A. M. Elsayed, R. K. Al-Dadah, S. Mahmoud & A. F. Mahrous Paper: <b>Implementation of a Simplified Method for Actuation of Ferrofluids</b>



	Authors : F. Sofos, T. E. Karakasidis, A. Giannakopoulos & A. Liakopoulos	Authors : R. N. Govardhan, P. S. Pawar & M. S. Bobji	Authors : E. Kurtoğlu, A. Bilgin, M. Şeşen, H. F. Yağci Acar & A. Koşa
	Paper: <b>Coupled Continuum Hydrodynamics and Molecular Dynamics Method for Multiscale Simulation</b> Authors : M. K. Borg, D. A. Lockerby & J. M. Reese	Paper: <b>Time Dependent Superhydrophobicity of Drag Reducing Surfaces</b> Authors : M. S. Bobji, G. Balan & R. N. Govardhan	Paper: <b>Forced Boiling of Nanofluids, Effects of Contact Angle and Surface Wettability</b> Authors : M. Hashemina, M. H. Fard, S. G. Etemad & S. H. Hashemabadi
18:00	<b>End of Sessions</b>		
	<b>Conference Dinner ARISTOTELIS I</b>		

<b>Wednesday, 24<sup>th</sup> August 2011</b>			
from 8:00	<b>Registration – room ERATO</b>		
09:00-09:30	<b>BioMedical Keynote:</b> <b>“Microcirculatory Blood Flow: Functional Implications of a Complex Fluid”</b> <b>Professor Axel R. Pries &amp; Timothy W. Secomb</b> Room: <b>ALEXANDROS II</b> Chair: <b>C. König</b>		
09:30-10:30	<b>BioMedical Overview Applications 1</b> Session 1	<b>Single Phase Applications 1</b> Session 1	<b>Two Phase Bubbles, Droplets &amp; Solids in Fluids 1</b> Session 1
	Room: <b>AMFITRION I</b>	Room: <b>ALEXANDROS II</b>	Room: <b>AMFITRION II</b>
	Chair: <b>J. Soulis</b>	Chair: <b>S. Paras</b>	Chair: <b>J. R. Thome</b>
	Paper: <b>Multicompartmental Poroelastic Modelling for CSF Production and Circulation</b> Authors : J. C. Vardakis, B. Tully, J. Byrne & Y. Ventiko	Paper: <b>Eccentric Taylor-Couette Flow with Orbital Motion of the Inner Cylinder</b> Authors : A. Christl, N. Herzog & C. Egbers	Paper: <b>Simulation of Droplet-Based Microfluidic Lab-on-a-Chip Applications</b> Authors : N. Gleichmann, D. Malsch, P. Horbert & T. Henkel
	Paper: <b>Non-Newtonian 3D Ciliary Fluid Flow in a Semi-Infinite Domain</b> Authors : D. Isvoranu & S. Danaila	Paper: <b>Numerical Meshing Issues for Three-Dimensional Flow Simulation in Journal Bearings</b> Authors : M. Schmidt, P. Stücker & M. Nobis	Paper: <b>Study on the Behavior of Small Droplet Impinging onto a Hot Surface</b> Authors : M. Kohnno, S. Fukuda, K. Tagashira, N. Ishihara, S. Hidaka, M. Arita & Y. Takata
Paper: <b>Flow and Particle Deposition Using an Integrated CFD Model of the Respiratory System</b> Authors : A. H. Alexopoulos, P. Karakosta & C. Kiparissides	Paper: <b>Design and Optimization of a Micro Heat Sink for Concentrating Photovoltaic/Thermal (CPVT) Systems</b> Authors : I. K. Karathanassis, E. Papanicolaou, V. Belessiotis & G. C. Bergeles	Paper: <b>Reversion Scheme for Droplet Parameters with Rainbow Refractometry Based on Debye Theory</b> Authors : F. Song, Z. Yao, C. Xu & S. Wang	
10:30-10:50	<b>Coffee/Tea ALEXANDROS I</b>		
10:50-13:00	<b>Applications 2</b> Session 2	<b>Applications 2</b> Session 2	<b>Bubbles, Droplets &amp; Solids in Fluids 2</b> Session 2
	Room: <b>AMFITRION I</b> Chair: <b>P. Evans</b>	Room: <b>ALEXANDROS II</b> Chair: <b>K. Hishida</b>	Room: <b>AMFITRION II</b> Chair: <b>P. Angeli</b>
	Paper: <b>Experimental Study and Model for Healthy and Pathological Synovial Fluid</b> Authors : T. B. Goudoulas & E. G. Kastrinakis	Paper: <b>Development of a Micro Flow Sensor for Microfluidic Systems</b> Authors : S. Loane, P. R. Selvaganapathy & C. Y. Ching	Paper: <b>Three-Dimensional Micro-Droplet Collision Simulation Using the Lattice Boltzmann Method</b> Authors : D. J. Lycett-Brown & K. H. Luo
	Paper: <b>Fabrication and Modeling of a Continuous-Flow Microfluidic Device for on-Chip DNA Amplification</b> Authors : G. Kokkoris, D. C. Moschou, E. Mavraki, S. Chatzandroulis & A. Tserepi	Paper: <b>The Hybrid Grid Implemented DSMC Method Used in 2D Triangular Micro Cavity Flows</b> Authors : N. Şengil	Paper: <b>Nonlinear Effects on Migration of Charged Spherical Rigid/Soft Particle in an Unbounded Electrolyte Solution</b> Authors : S. Bhattacharyya & P. P. Gopmandal
	Paper: <b>Oblique Shock Wave Effects on Biological Membranes</b> Authors : D. Sourmaidou, S. Dufourmantelle, N. Asproulis, D. Drikakis & S. Pal	Paper: <b>Experimental Design with Integrated Temperature Sensors in MEMS: An Example of Application for Rarefied Gases</b> Authors : A. Vittoriosi, J. J. Brandner & R. Dittmeyer	Paper: <b>Online Fabrication and Characterization of Capsule Populations with a Flow-Focusing Microfluidic System</b> Authors : T. X. Chu, E. Leclerc, A. V. Salsac, D. Barthes-Biesel, L. Griscom & F. Edwards-Levy
	Paper: <b>Wall Shear Stress and Low Density Lipoprotein Concentration in Stented Arteries</b> Authors : J. V. Soulis, D. K. Fytanidis, K. V. Seralidou, V. C. Karagkiozaki & G. D. Giannoglou	Paper: <b>Study of a Micro-Structured PHE for the Thermal Management of a Fuel Cell</b> Authors : I. A. Stogiannis, A. A. Mouza & S. V. Paras	Paper: <b>Impact and Spreading of Microdrops on Homo- and Heterogeneous Solids: Modelling and Benchmark Simulations</b> Authors : J. E. Sprittles & Y. D. Shikhmurzaev
		Paper: <b>Experimental Investigation on Self-similar Heat Sinks for Liquid Cooled Electronics</b> Authors : F. Brighenti, N. Kamaruzaman & J. J. Brandner	

13:00-14:00	<b>Lunch ALEXANDROS I</b>		
	<b>BioMedical Blood Cells &amp; Aggregates</b>	<b>Single Phase Applications 3</b>	<b>Single Phase Heat Transfer 1</b>
14:00-15:40	Session 3 Room: <b>AMFITRION I</b>	Session 3 Room: <b>ALEXANDROS II</b>	Session 3a Room: <b>AMFITRION II</b>
	Chair: <b>H. Perfahl</b>	Chair: <b>L. Campo - Deaño</b>	Chair: <b>X. Jinliang</b>
	Paper: <b>The Lattice Boltzmann Method as a General Framework for Large-Scale Blood Flow Simulation</b> Authors : S. Melchionna, M. Bernaschi, M. Bisson, & S. Succi	Paper: <b>An Experimental Study on Heat Transfer and Pressure Drop of MTHE</b> Authors : C. S. Dai, Q. X. Wang & B. Li	Paper: <b>Heat and Fluid Flow of a Rarefied Gas through a Bed of Spheres</b> Authors : E. Afrasiabian, L. Marino & C. M. Casciola
	Paper: <b>Particle Based Modeling and Simulation of the Red Blood Cell Infected by Malaria – Mechanism of the Margination of the Infected Red Blood Cell-</b> Authors : T. Yamaguchi, T. Ishikawa & Y. Imai	Paper: <b>Residence Time Distribution of Gas Flows in Microreactors: Measurement and Model Comparison</b> Authors : W. Wibel, E. Anurjew, J. J. Brandner, R. Dittmeyer, U. Schygulla, B. Leyrer & T. Blank	Paper: <b>Forced Convection Heat Transfer Simulation Using Dissipative Particle Dynamics with Energy Conservation</b> Authors : T. Yamada, A. Kumar, A. Yutaka & M. Faghri
	Paper: <b>Flow Field Characterisation of Aggregating Human Blood in Bifurcating Microchannels</b> Authors : J. M. Sherwood, J. Dusting, E. Kaliviotis & S. Balabani	Paper: <b>The Effect of Flow Coefficient on the Design of Miniature Centrifugal Impeller</b> Authors : G. Liu & W. K. Chan	Paper: <b>Thermal Transpiration Flow</b> Authors : M. Rojas, I. Graur, P. Perrier & J. G. Meolans
	Paper: <b>Near Wall Haemodynamics: Modelling the Glycocalyx and the Endothelial Surface</b> Authors : G. Pontrelli, I. Halliday, T. J. Spencer, C. M. Care, C. S. König & M. W. Collins	Paper: <b>The Structure of Supersonic Underexpanded Nitrogen Microjets</b> Authors : V. M. Aniskin, S. G. Mironov & A. A. Maslov	Paper: <b>Non-Equilibrium Heat Transfer in Acceleration and Pressure-Driven Poiseuille Flows: A Comparative Study</b> Authors : B. John, X. J. Gu & D. R. Emerson
		Paper: <b>Performance Comparison between Planar and Pyramidal Microdiffuser for Valveless Micropump</b> Authors : G. Abo Elyamin & N. Qin	Paper: <b>The Effect on the Nusselt Number of the Non-linear Axial Temperature Distribution of Gas Flows through Commercial Microtubes</b> Authors : Y. Yang, G. L. Morini, H. Chalabi & M. Lorenzini
15:40-16:00	<b>Coffee/Tea ALEXANDROS I</b>		
	<b>BioMedical Haemodynamics</b>	<b>Single Phase Applications &amp; Porous Media</b>	<b>Single Phase Heat Transfer 2</b>
16:00-17:40	Session 4 Room: <b>AMFITRION I</b>	Session 4 Room: <b>ALEXANDROS II</b>	Session 4a Room: <b>AMFITRION II</b>
	Chair: <b>A. G. Koutsiaris &amp; M. W. Collins</b>	Chair: <b>M. Kohno</b>	Chair: <b>A. Kanaris</b>
	Paper: <b>Oscillating Shear Index, Wall Shear Stress and Low Density Lipoprotein Accumulation in Human RCAs</b> Authors : J. V. Soulis, D. K. Fytanidis, V. C. Papaioannou & G. D. Giannoglou	Paper: <b>Thrust Effectiveness of Micronozzle</b> Authors : E. I. Sokolov	Paper: <b>Rarefaction and Thermal Creep Effects in Square Cross-Section Microchannels</b> Authors : S. Palle & S. Aliabadi
	Paper: <b>Severity Parameter and Global Importance Factor of Non-Newtonian Models in a 3D Reconstructed Human Left Coronary Artery</b> Authors : J. V. Soulis, K. V. Seralidou, Y. S. Chatzizisis & G. D. Giannoglou	Paper: <b>On the Influence of Tube Row Number for Mixed Convection Around Micro Tubes</b> Authors : C. S. Dai, Q. X. Wang & B. Li	Paper: <b>Total Temperature Measurements of Laminar Gas Flow at Micro-tube Outlet: Cooled from the Wall</b> Authors : C. Hong, Y. Uchida, Y. Asako, I. Ueno & M. Motosuke
	Paper: <b>How Good Are the Fits to the Experimental Velocity Profiles in Vivo?</b> Authors : A. G. Koutsiaris, S. V. Tachmitzi & A. D. Giannoukas	Paper: <b>Microchannels Analogues for the Study of Viscoelastic Fluid Flows through Porous Media</b> Authors : F. J. Galindo-Rosales, L. Campo-Deaño, M. S. N. Oliveira, M. A. Alves, F. T. Pinho, E. V. Bokhorst & P. J. Hamersma	Paper: <b>Transient Micro Heat Transfer in a Gas Confined between Parallel Plates Due to a Sudden Increase of the Wall Temperature</b> Authors : O. Buchina, M. Vargas, D. Valougeorgis & S. Stefanov
17:40-18.00	<b>Closing Ceremony ALEXANDROS II</b>		
	<b>End of Conference – Reception: Cheese &amp; Wine</b>		