

## MIGRATE Workshop - June 29 – 30, 2017

### Bulgarian Academy of Sciences, SOFIA

Workshop day 1: June 29, 2017	
08:15 – 08:45	<b>Registration</b>
08:45 – 09:00	<b>Welcome Address</b> Prof. Vasil Kavardjиков (Bulgarian Academy of Sciences) - Prof. Emil Manoach, (Bulgarian Academy of Sciences) - Dr. Katja Haas-Santo (KIT) Dr. Lucien Baldas (Univ. of Toulouse) – Prof. Stefan Stefanov (Bulg. Acad. of Sciences)
09:00 – 10:00	<b>Keynote Lecture 1</b> <b><u>Avshalom Manela</u></b> <a href="#"><u>APPLICATION OF THERMAL BOUNDARY CONDITIONS AT THE MICROSCALE: A MEANS FOR FLOW GENERATION AND CONTROL</u></a> Session Chair: D. Valougeorgis
<b>10:00 – 10:30</b>	<b>Coffee break</b>
10:30 – 12:00	<b>Session 1 – Pumps &amp; Actuators</b> Session Chair: I. Graur-Martin
10:30	THERMALLY DRIVEN FLOWS IN LONG TAPERED CHANNELS <i>Giorgos Tatsios</i>
10:45	PRESSURE AND TEMPERATURE-DRIVEN FLOWS THROUGH A SINGLE RECTANGULAR MICRO-CHANNEL <i>Ricardo Brancher</i>
11:00	ACTIVE FLOW CONTROL OF RAMP FLOW BY FLUIDIC OSCILLATORS <i>Shiqi Wang</i>
11:15	ON THE EFFICIENT CONFIGURATIONS FOR RADIOMETRIC PUMPS <i>Ehsan Roohi</i>
11:30	REVIEWING THE EARLY STAGES OF A KNUDSEN PUMP DESIGN: MODELING AND MANUFACTURING <i>Guillermo Lopez Quesada</i>
11:45	LASER OPTICAL MICRO ACTUATION INDUCED BY EFFECTS OF RAREFIED GAS DYNAMICS <i>Masahiro Ota</i>
<b>12:00 – 13:45</b>	<b>Lunch</b>
13:45 – 14:45	<b>Keynote Lecture 2</b> <b><u>Felix Sharipov</u></b> <a href="#"><u>SAMPLING OF GASEOUS MIXTURES BY LONG CAPILLARIES. INFLUENCE OF VARIOUS FACTORS ON REPRESENTATIVENESS OF SAMPLES</u></a> Session chair: S. Stefanov
14:45 – 15:30	<b>Session 2 – Two-Phase Flows</b> Session Chair: S. Le Calvé
14:45	A NUMERICAL STUDY OF INTERFACIAL TEMPERATURE JUMPS IN THE EVAPORATION OF WATER <i>Aldo Frezzotti</i>
15:00	MOLECULAR WATER LAYER EVAPORATION & CONDENSATION <i>Moritz Wolf</i>
15:15	GAS-LIQUID MICRO-SEPARATORS FOR TRAPPING OF VOLATILE ORGANIC COMPOUNDS <i>Daniel Mariuta</i>

15:30 – 15:45	<b>Poster Session</b> Session Chair: S. Le Calvé
15:30 - P	NUMERICAL SIMULATION OF EVAPORATION AND CONDENSATION PHENOMENA AROUND A SMALL CONDENSED PHASE DROPLET <i>Vinicius Braga Leite</i>
15:35 - P	SOLUTION OF EVAPORATION AND CONDENSATION PROBLEMS BASED ON THE CONJUGATE APPROACH <i>Irina Shishkova</i>
15:40 - P	EXPERIMENTAL RESEARCH OF THE STRUCTURE OF SUPERSONIC UNDEREXPANDED FLAT AIR MICROJETS <i>Ivan Timofeev</i>
<b>15:45 – 16:30</b>	<b>Coffee break &amp; Discussions around posters</b>
16:30 – 17:30	<b>Session 3A – Sensors &amp; Measurement Techniques</b> Session Chair: S. Colin
16:30	MICRO PHOTO IONIZATION DETECTOR FOR BTEX ANALYSIS: REVIEW REPORT OF PERFORMANCE INFLUENCING PARAMETERS <i>Gustavo Coelho Rezende</i>
16:45	THERMAL BEHAVIOUR OF A SAW TRANSDUCER FOR PRESSURE MEASUREMENTS <i>Sofia Toto</i>
17:00	MEASUREMENT OF PERMEABILITY OF LOW POROUS MEMBRANES <i>Martin-Viktor Johansson</i>
17:15	A COMPARISON OF MASS FLOW RATE EXPERIMENTAL DATA OBTAINED USING TWO DIFFERENT EXPERIMENTAL SETUPS BY MEANS OF THE DYNAMIC CONSTANT VOLUME TECHNIQUE <i>Ernane Silva</i>

**17:30 – End of Day 1**

**19:30 – Bus for Gala Dinner – Meeting point: in front of the House of Scientist**

<b>Workshop day 2: June 30, 2017</b>	
08:30 – 09:45	<b>Session 4 – Manufacturing Techniques &amp; Interactions Gas/Materials</b> Session chair: M. Rojas-Cardenas
08:30	CHALLENGES OF EXTREME ULTRA VIOLET LITHOGRAPHY IN LOW PRESSURE GAS ENVIRONMENT <i>Erik Arlemark</i>
08:45	MODELING OF GAS FLOW WITH VOCS ADSORPTION ON A FIXED BED PRECONCENTRATOR <i>Alireza Sharifi</i>
09:00	CONCEPTION AND DEVELOPMENT OF MICROFABRICATED ELEMENTS FOR MICROFLUIDIC ANALYTICAL DEVICES <i>Irene Lara-Ibeas</i>
09:15	EFFECT OF SURFACE ROUGHNESS ON LOCAL FRICTION FACTOR OF GAS FLOW THROUGH MICROTUBES <i>Chungpyo Hong</i>
09:30	EFFECT OF MINOR LOSSES ON DETERMINATION OF FRICTIONAL BEHAVIOR OF SHORT MINI TUBES <i>Danish Rehman</i>
<b>09:45 – 10:30</b>	<b>Coffee break &amp; Discussions around posters</b>
10:30 – 12:15	<b>Session 5 – Gas Microflows</b> Session chair: A. Frijns
10:30	RAREFIED GAS FLOW BETWEEN TWO PARALLEL PLATES WITH BOTTOM INJECTION AND TOP SUCTION <i>Alireza Sharifi</i>
10:45	GENERALIZED BERNOULLI TRIAL COLLISION SCHEME IN DSMC APPLIED TO NANOCAVITY FLOW <i>Ehsan Roohi</i>
11:00	RAREFIED CYLINDRICAL POISEUILLE GAS FLOW DUE TO HARMONICALLY OSCILLATING PRESSURE GRADIENT <i>Alexandros Tsimpoukis</i>
11: 15	GAS FLOW IN A MICRO-CHANNEL WITH AN ELASTIC OBSTACLE <i>Shterev Kiril</i>
11:30	LATTICE BOLTZMANN STUDY OF RAREFIED FLOWS <i>Victor Sofonea</i>
11:45	GAS MIXING IN SIMPLE GEOMETRICAL CONFIGURATIONS <i>Stavros Meskos</i>
<b>12:00 – 13:45</b>	<b>Lunch</b>

13:45 – 14:45	<p align="center"><b>Keynote Lecture 3</b> <b><i>Christian J. Kaehler</i></b> <u>VISUALIZATION OF 3D VELOCITY AND TEMPERATURE FIELDS WITH MICRON RESOLUTION</u> Session chair: G. L. Morini</p>
14:45 – 15h15	<p align="center"><b>Session 6 – Heat Transfer</b> Session chair: G. L. Morini</p>
14:45	<p align="center">EVALUATION OF WALL HEAT FLUX BOUNDARY CONDITION IN DSMC IMPLEMENTED IN OPENFOAM <i>Ehsan Roohi</i></p>
15:00	<p align="center">ADVANCED CFD METHODOLOGY TO SIMULATE HIGH TEMPERATURE MICRO HEAT EXCHANGERS <i>Jojomon Joseph</i></p>
<b>15:15 – 16:00</b>	<b>Coffee break &amp; Discussions around posters</b>
16:00 – 17:15	<p align="center"><b>Session 2B – Sensors &amp; Measurement Techniques</b> Session chair: R. Enright</p>
16:00	<p align="center">ACETONE AND DIACETYL PHOSPHORESCENCE AT LOW PRESSURES FOR MOLECULAR TAGGING VELOCIMETRY IN CONFINED RAREFIED GAS FLOWS <i>Dominique Fratantonio</i></p>
16:15	<p align="center">CHARACTERIZATION OF NON-ENCAPSULATED THERMOCHROMIC LIQUID CRYSTALS AS BULK MATERIAL AND AS AN EMULSION FOR APPLICATION IN MICRO-DEVICES <i>Natasa Djordjevic</i></p>
16:30	<p align="center">CHARACTERIZATION OF THIN INDIUM TIN OXIDE (ITO) COATED SAPPHIRE SENSOR FOR APPLICATIONS IN SIMULTANEOUS OPTICAL IMAGING AND NON-INTRUSIVE SURFACE TEMPERATURE MEASUREMENT OF GAS MICROFLOWS <i>Vikash Kumar</i></p>
16:45	<p align="center">OPTICAL DETECTION OF BTEX, REVIEW OF DIFFERENT TECHNIQUES <i>Sulaiman Khan</i></p>
17:00	<p align="center">PRELIMINARY INVESTIGATION ON TEMPERATURE DEPENDENCY OF ACETONE VAPOR LUMINESCENCE FOR MOLECULAR TAGGING THERMOMETRY <i>Varun Yeachana</i></p>
17:15 – 17:25	<b>Closing Address</b>

**17:30 – 18:30 Migrate Network General Assembly**