

XIII Workshop & Summer School "Modelling Multiphase Flows in Thermochemical Systems"**13-15.06.2019****Wieżyca k/ Gdańska, Poland (www.wiezycacw.pl)**

13.06.2019 Thursday	
since 11 ⁰⁰	Registration and welcome coffee
12 ¹⁵ -12 ³⁰	Opening – prof. J. Kiciński (Director of IFFM PAN)
12 ³⁰ -13 ¹⁵	Summer School lecture (<i>Chairman: R. Mosdorf</i>): <i>Multi-fluid models for gas-liquid flows: consolidation of CFD modelling and innovative concepts. Part I (45')</i> (D. Lucas)
13 ¹⁵ -14 ³⁰	lunch
14 ³⁰ -16 ⁰⁰	Summer School lectures (<i>Chairman: T. Wiśniewski</i>): <i>Multi-fluid models for gas-liquid flows: consolidation of CFD modelling and innovative concepts. Part II (45')</i> (D. Lucas) <i>Hot issues in boiling heat transfer - flow in mini gaps. Part I (45')</i> (M. Piasecka)
16 ⁰⁰ -16 ⁴⁰	coffee break
16 ⁴⁰ -18 ⁰⁰	regular session (20' per participant) - (<i>Chairman: J. Cieśliński</i>) <i>Optimization of SNCR technology for the reduction of NOx in a large-scale CFB boiler</i> (R. Kobyłecki) <i>Examination of the stationarity of two-phase flows by the correlation method of data converted from video images</i> (A. Rysak) <i>Modeling of surface wetting phenomenon with the immersed boundary method</i> (M. Marek) <i>Particles in wall-bounded turbulent flows: interactions between particles and surfaces</i> (C. Henry)
18 ³⁰ -22 ⁰⁰	evening meal (grill)
14.06.2019 Friday	
8 ⁰⁰ -9 ⁰⁰	breakfast
9 ¹⁵ -10 ⁴⁵	Summer School lectures (<i>Chairman: D. Lucas</i>): <i>Hot issues in boiling heat transfer - flow in mini gaps. Part II (45')</i> (M. Piasecka) <i>VOF and beyond: introduction, advanced examples and perspectives for computational methods for multiphase flows with interfaces. Part I (45')</i> (W. Aniszewski)
10 ⁴⁵ -11 ¹⁵	coffee break
11 ¹⁵ -12 ⁴⁵	Summer School lectures (<i>Chairperson: M. Piasecka</i>): <i>VOF and beyond: introduction, advanced examples and perspectives for computational methods for multiphase flows with interfaces. Part II (45')</i> (W. Aniszewski) <i>Combustion experiments in engines: cross-validation of experiment and numerics. Part I (45')</i> (D. Emberson)
13 ⁰⁰ -14 ⁰⁰	lunch
14 ⁰⁰ -14 ⁴⁵	Summer School lecture (<i>Chairman: J. Badur</i>): <i>Combustion experiments in engines: cross-validation of experiment and numerics. Part II (45')</i> (D. Emberson)
14 ⁴⁵ -15 ³⁰	introduction to PhD poster session (2-3 slides) - (<i>Chairman: R. Kobyłecki</i>)
15 ³⁰ -16 ³⁰	discussion at posters (drinks and cookies available)
16 ³⁰ -17 ¹⁵	Summer School lecture (<i>Chairman: J. Pozorski</i>): <i>Microfluidics of tomorrow: exciting experiments and application challenges. Part I (45')</i> (P. Korczyk)
17 ¹⁵ -18 ¹⁵	regular session (20' per participant) - (<i>Chairman: P. Duda</i>): <i>Identification of Turbulent Liquid Flow based on experimental methods</i> (P. Duda) <i>Numerical investigation of emissions from combustion of diesel fuels using Stochastic Reactor Model</i> (M. Lewandowski) <i>Numerical analysis of the possibility to improve the separation efficiency of large-scale commercial cyclones</i> (R. Zarzycki)
19 ⁰⁰ -21 ⁰⁰	the Workshop dinner
21 ⁰⁰ -22 ⁰⁰	music in the Hunter's Hall
22 ⁰⁰ -23 ⁵⁹	social evening with snacks
15.06.2019 Saturday	
8 ⁰⁰ -9 ⁰⁰	breakfast
9 ¹⁵ -10 ⁰⁰	Summer School lecture (<i>Chairman: D. Kardaś</i>):

XIII Multiphase Workshop and Summer School: Prefinal programme

	<i>Microfluidics of tomorrow: exciting experiments and application challenges. Part II</i> (45') (P. Korczyk)
10 ⁰⁵ -11 ¹⁵	introduction to regular poster session (3 min. each, language: English or Polish) (Chairman: D. Emberson)
11 ¹⁵ -12 ³⁰	coffee break and discussion at the posters
12 ³⁰ -12 ⁴⁵	round table discussion, closure of the meeting (J.Pozorski, D. Kardaś)
13 ⁰⁰ -14 ⁰⁰	lunch
14 ⁰⁰ -16 ⁰⁰	sightseeing programme (for interested participants): National Anthem Museum (Będomin) or Szymbark Regional Centre (https://cepr.pl/) or Railway Museum (Kościerzyna)

PhD poster session:

1. *Application of the Discrete Element Method to create granular beds consisting of non-spherical particles* (E. Budzianowska)
2. *Flow maldistribution in mini heat exchangers* (P. Dąbrowski)
3. *Innovative construction of the shell-and-tube heat exchanger with the impinging jets and minichannels technologies in a bundle of pipes* (R. Bochniak)
4. *Boiling and heat transfer of refrigerants at high saturation temperature* (S. Głuch)
5. *Hybrid photovoltaic tile – analysis of a heat recovery intensification* (A. Gołąbek)
6. *Numerical simulation of two-phase flows using diffused interface model in pseudo-incompressible approach* (A. Kajzer)
7. *Using computed tomography for the analysis of single wood particle pyrolysis* (P. Kazimierski)
8. *Multiphase issues occurring in solid oxide fuel cells* (B. Kraszewski)
9. *Multiphase CFD-DEM coupling for comminution simulations in high-velocity mills* (M.J. Marijnissen)
10. *A robust method for the wetting phenomena within Smoothed Particle Hydrodynamics* (M. Olejnik)
11. *Dynamics of a two-phase mixture of nitrous oxide in a tank and a rocket engine injector* (J. Szyborski)

Regular poster session:

1. *A comprehensive thermodynamic model of full spectrum phenomena during a coke production* (J.Badur)
2. *Development of an Electrical Impedance Tomography (EIT) system for studies of 2-phase flow hydrodynamics in packed beds* (V. Sokolenko)
3. *Image processing for reconstruction of gas bubble motion* (J. Augustyniak)
4. *Thermo-economic analysis of a 70 MWe CCGT block in Gorzów Wielkopolski in the context of the capacity market* (S. Gotzman)
5. *Investigation of gas structures dynamics in non-stationary two-phase flows by correlation method* (M. Gregorczyk)
6. *Effective multi-GPU implementation of plastic deformation of grains in LBM* (A. Grucelski)
7. *Numerical modelling of Super Hydrophobic Surfaces Using Lattice Boltzmann method* (G. Gruszczyński)
8. *Recurrence quantification analysis of the dynamic characteristics of two-phase flow patterns during flow boiling in a single minichannel* (I. Gruszczyńska)
9. *A new identification method of pressure fluctuations in boiling flow in minichannels* (I. Gruszczyńska)
10. *Consideration of heat transfer processes and separation from chemical reactions in small wood particle pyrolysis – a novel approach to biomass pyrolysis modelling and study* (P.Hercel)
11. *Thermal dynamics of a building* (R. Matysko)
12. *An identification method of flow pattern oscillations during boiling in minichannel* (G. Rafałko)
13. *Analysis of changes in three-phase flow dynamics (water / glycerol / air) in a mini-channel by means of multi-gate correlation* (G. Rafałko)
14. *Experimental and numerical analysis of the air blast-cryogenic freezing* (A. Sachajdak)
15. *Some aspects of a catalytic combustion in an ordered porous structure* (P. Ziółkowski)