

Preliminary Conference Schedule

Wednesday, September 7, 2022				Thursday, September 8, 2022				Friday, September 9, 2022							
8:00-9:00		Registration		8:00-9:00		Registration		8:00-9:00		Registration					
9:00-9:15		Room V1	Opening ceremony		9:00-10:45		Room V2	Room V14	Room V15	9:00-9:45		Room V2	Prof. Nicholas Lawson Invited Lecture #5		
9:15-10:00		Room V1	Prof. Beverley McKeon Invited Lecture #1				AERO1	MULTI+FM	FD1	9:45-10:30		Room V2	Prof. Bernd R. Noack Invited Lecture #6		
10:00-10:45		Room V1	Prof. Ali Beskok Invited Lecture #2				3, 13, 15, 46, 97, 98, 104	7, 23, 31, 32, 57, 66, 74	4, 5, 8, 77, 89, 92, 106	10:30-11:00		Coffee break			
10:45:11:15		Coffee break		10:45:11:15		Coffee break		10:30-11:00		Coffee break					
11:15-12:45		Room V2	Room V14	Room V15	11:15-12:00		Room V2			11:00-12:00		Room V2	Room V14	Room V15	
		EXP	COM+FC	CFD1			IS2 - Industry Session					FD2	TURB	HEAT	
		18, 26, 59, 99, 76	42, 65, 68, 73, 112, 85	56, 61, 71, 80, 114, 116	12:00-12:45			Room V2	Room V14	Room V15	67, 69, 78, 83	11, 51, 52, 72	45, 53, 60, 91		
		IS1					CFD2	MICRO-BIO	AERO2	12:00-12:30		Room V2	Closing Conference Ceremony		
							6, 19, 22	12, 28, 96	95, 105, 113			12:30-14:00			Lunch
12:45-14:30		Lunch		12:45-14:00		Lunch		12:30-14:00		Lunch					
14:30-16:00		Room V2		14:00-15:30		Trip to Krasiczyn		14:00-15:30		Trip to Bóbrka					
		JW ELSNER Competition 14, 21, 37, 49, 82, 86				15:30-16:00				Afternoon tee in castle courtyard					
16:00-16:30		Coffee break		16:00-18:00		Kraciczyn Castle Tour		15:30-17:30		Visiting Bóbrka Ignacy Łukasiewicz Museum of Oil and Gas Industry					
16:30-18:00		Poster Sesion 10, 20, 24, 25, 33, 34, 35, 36, 44, 48, 50, 54, 58, 62, 63, 87, 88, 93, 100, 101, 103, 107, 111, 115, 117													
18:00-19:00		Get-together party		18:00-18:45		Prof. Andrzej Herczyński Invited Lecture #4		17:30-19:00		Dinner in Bóbrka Restaurant					
				18:45-19:00		JW Elsner Competition Results									
19:00-19:30		Połoniny Concert		19:00-22:00		Conference dinner in Krasiczyn Castle		19:00-20:30		Return trip to Rzeszow					
19:30-21:30		Rzeszów Tour								22:00-23:30		Return trip to Rzeszow			

The numbers appearing in the sessions are the numbers of the abstracts.

AERO: Aerodynamics
 CFD: Computational Fluid Dynamics
 COMB: Combustion
 EXP: Experimental Fluid Mechanics and Measurement Techniques
 FC: Flow Control and Optimisation
 FD: General Fluid Dynamics
 FM: Flow Machinery
 HEAT: Interdisciplinary Areas in Heat and Fluid Flow
 MICRO-BIO: Micro-, Nano- and Bio-flows,
 MULTI: Multi-phase Flows
 TURB: Turbulence
 IS: Industry Session

Wednesday, September 7, 2022 11:15-12:45					
EXP - Room V2		COMB+FC - Room V14		CFD1 - Room V15	
18	Suresh Thanushree AEROACOUSTIC INVESTIGATIONS OF ROD VORTEX GENERATORS ON WIND TURBINE BLADE	42	Medina Méndez Juan A., González-Castaño Miriam, Baena-Moreno Francisco M., Arellano-García Harvey CO2 METHANATION: ON THE MODELING OF REACTING LAMINAR FLOWS IN STRUCTURED Ni/MGAL2O4 CATALYSTS	56	Marek Maciej STATISTICAL ANALYSIS OF FLOW VELOCITY FIELD INSIDE RANDOM PACKED BEDS
26	Bobiński Tomasz, Yadav Nikesh, Gepner Stanisław EXPERIMENTAL INVESTIGATION OF FLOWS IN CORRUGATED CHANNEL	65	Stempka Jakub, Tyliczszak Artur LES OF AN EXCITED RECTANGULAR FLAME	61	Paluszewska Agata, Boguslawski Andrzej, Wawrzak Karol THE SUBGRID-SCALE VELOCITY FIELD ESTIMATION PROCEDURE FOR AN INCOMPRESSIBLE TURBULENT FLOW
59	Duda Daniel, Yanovych Vitalii, Horáček Vít, Uruba Václav STROUHAL NUMBER AND VORTICES IN FAR WAKE OF CYLINDER	68	Kaminski Piotr, Tyliczszak Artur NUMERICAL ANALYSIS OF THE INFLUENCE OF WALL ROUGHNESS ON THE TURBULENT BOUNDARY LAYER SEPARATION	71	Pahlavanzadeh Mohammadsadegh, Wróblewski Włodzimierz, Rusin Krzysztof MODELLING OF WALL SHEER STRESSES ON ROUGH AND SMOOTH WALLS UNDER DIFFERENT CONDITIONS
99	Gumowski Konrad, Kubacki Sławomir EXPERIMENTAL STUDY OF LAMINAR-TO-TURBULENT TRANSITION IN ADVERSE PRESSURE GRADIENT FLOW	73	Rutkowski Mariusz, Gryglas Wojciech, Szumbariski Jacek, Leonardi Christopher, Łaniewski-Wojcik Łukasz OPEN-LOOP OPTIMAL CONTROL OF A FLAPPING WING USING AN ADJOINT LATTICE BOLTZMANN METHOD	80	Szymanek Ewa, Tyliczszak Artur, Marek Maciej IN THIS WORK, NON-ISOTHERMAL TURBULENT FLOW IS STUDIED WITHIN GRANULAR LAYERS OF SPHERICAL AND NONSPHERICAL PARTICLES USING HIGH ORDER FLOW SOLVER AND VOLUME PENALISATION METHOD FOR THE TREATMENT OF IMMERSSED BOUNDARIES.
76	Pawłowska Agnieszka, Boguslawski Andrzej, Tyliczszak Artur EXPERIMENTAL STUDY UPON FORCED POLYGONAL JETS	112	Yadav Nikesh, Gepner Stanisław, Szumbariski Jacek MODULATION OF TRAVELING WAVE INTO STANDING WAVE FOR COUETTE-POISEUILLE FLOW IN GROOVED CHANNEL	114	Sokolenko Vasyi, Elsner Witold, Drózd Artur, Gnatowska Renata, Kubacki Sławomir, Rarata Zbigniew EXPERIMENTAL ANALYSIS OF THE IMPACT OF ACOUSTIC EXCITATION ON THE SEPARATED BOUNDARY LAYER BEHAVIOUR
IS1 - Industry Session		85	Walenta Zbigniew, Słowicka Agnieszka DETONATION DAMPERS FOR DUCTS TRANSPORTING GASEOUS FUELS	116	Kraskowski Marek PARAMETRIC CFD OPTIMIZATION OF THE LONGITUDINAL VOLUME DISTRIBUTION OF THE SHIP HULL IN RESPECT OF RESISTANCE

Wednesday, September 7, 2022 14:30-16:00	
JW ELSNER Competition - Room V2	
14	Wasiłczuk Filip, Flaszynski Paweł, Doerffer Piotr TURBINE LEAKAGE FLOW REDUCTION USING FLUIDIC SEALING
21	Rajek Michał KINEMATIC SIMULATIONS AS A SUBGRID-SCALE MODEL FOR PARTICLE MOTION IN A PRIORI LES OF HOMOGENEOUS ISOTROPIC TURBULENCE
37	Spricigo Eleonora, Pozorski Jacek SIMULATION OF THE MOON POOL WITH SPH
49	Żyła Daria EXPERIMENTAL VALIDATION OF A PERFECT TRANSMISSION IN A WAVEGUIDE WITH SURFACE PIERCING METAMATERIAL
82	Caban Lena, Tyliczszak Artur DEVELOPMENT OF THE LES-ADM APPROACH FOR COMBUSTION MODELLING USING HIGH-ORDER FILTERS
86	Prokop Tomasz, Szmyd Janusz, Brus Grzegorz A PARAMETRIC ANALYSIS OF CONCENTRATION LOSSES IN AN ANODE OF A SOLID OXIDE FUEL CELL

Wednesday, September 7, 2022

16:30-18:00

Poster Sessions

10	Gajek Stanisław, Rarata Zbigniew, Kubacki Sławomir INVESTIGATION OF ACOUSTIC FEEDBACK LOOP MECHANISM BY MEANS OF NUMERICAL SIMULATIONS
20	Suchanek Grzegorz, Filipek Roman ANALYSIS OF AERODYNAMIC PHENOMENA AROUND A MULTI-ROTOR FLYING ROBOT FOR AIR POLLUTION INSPECTION
24	Poćwierz Marta AN ANALYSIS OF WIND CONDITIONS AT PEDESTRIAN LEVEL IN THE SELECTED TYPES OF MULTI FAMILY HOUSING
25	Fabisiak Jakub, Gepner Stanisław SYMMETRY BREAKING INSTABILITY AND IMPROVED MIXING IN LOW REYNOLDS NUMBER FLOWS
33	Kizilova Natalia, Naqvi Saiyadhasan BIOMIMETIC FRACTAL STRUCTURES FOR EFFICIENT HEATING/COOLING
34	Hasani Malekshah Emad, Wróblewski Włodzimierz MODIFIED CAVITATION MODEL BASED ON MERGING THEORY FOR COMPRESSIBLE CAVITATING FLOW WITH NON-CONDENSABLE GAS
35	Filip Bartłomiej, Antos Dorota, Bochenek Roman FLUID FLOW RESEARCH IN LIQUID CHROMATOGRAPHY BY COMPUTATIONAL FLUID DYNAMICS (CFD) METHOD
36	Merdjani Abdelhakim, Kizilova Natalia FRACTAL DISTRIBUTORS FOR UNIFORM FLUID DELIVERY
44	Mohammadi Moein, Nowak Jakub, Malinowski Szymon MICROPHYSICAL MEASUREMENTS OF HYDROMETEORS USING SHADOWGRAPH IMAGING TECHNIQUE
48	Urbanowicz Kamil, Stosiak Michał, Bergant Anton ABOUT GENERALIZATION OF CALOGERO-AHMED SUMMATION FORMULAS
50	Król Stanisław, Malinowski Szymon RECURRENCE QUANTIFICATION ANALYSIS OF TEMPERATURE TIME SERIES FROM MARINE CUMULUS CLOUDS DURING EUREC4A
54	Krzysiak Andrzej BOTTOM DRAG MEASUREMENTS IN EXPERIMENTAL WIND TUNNEL TESTS
58	Kopryś Mateusz OPTIMUM DISTANCE BETWEEN SHORT-CHANNEL STRUCTURES IN A CATALYTIC CHEMICAL REACTOR
62	Kańtoch Robert, Wawrzak Agnieszka, Tyliczszak Artur NUMERICAL ANALYSIS OF INFLUENCE OF VARIOUS BLUFF-BODY SHAPES ON DIFFUSION FLAME DYNAMICS
63	Staško Tomasz, Dykas Sławomir, Majkut Mirosław, Smolka Krystain NUMERICAL CFD MODELLING OF A FAN WITH A CYCLOIDAL ROTOR
87	Błoński Dominik, Kudela Henryk APPLICATION OF HIGH ACCURACY PENALIZED VORTEX IN CELL METHOD FOR THE HIGH REYNOLDS NUMBER TURBOMACHINERY FLOWS
88	Błoński Dominik, Strzelecka Katarzyna ACOUSTIC DOPPLER VELOCIMETER WAKE MEASUREMENTS BEHIND AIRFOIL WITH TRAPPING VORTEX CAVITY
93	Sobkowiak Marta, Ples Marek, Wolański Wojciech, Majewski Wojciech RESULTS COMPARISON OF THE FLOW ANALYSIS WITH PIV METHOD USING DIFFERENT BLOOD SUBSTITUTE
100	Marchewka Emil, Sobczak Krzysztof, Reorowicz Piotr, Obidowski Damian, Jóźwik Krzysztof INFLUENCE OF TIP SPEED RATIO ON THE EFFICIENCY OF SAVONIUS WIND TURBINE WITH DEFORMABLE BLADES
101	Plusa Tomasz, Duda Piotr MODELLING OF FREE-SURFACE SHAPE IN UNBAFFLED TANKS
103	Gajewska Karolina EFFECT OF THE UPSTREAM CYLINDER SHAPE ON THE FLOW AROUND THE DOWNSTREAM RECTANGULAR OBJECT IN TANDEM
107	Badur Janusz, Ochrymiuk Tomasz, Kowalczyk Tomasz, Dudda Waldemar, Ziółkowski Paweł FROM FLUID MECHANICS BACKGROUNDS TO MODERN FIELD THEORY
111	Kmiotek Małgorzata, Smusz Robert EFFECT OF HEIGHT THIN OBSTACLES ON HEAT TRANSFER AND FLOW CHARACTERISTICS IN MICROCHANNELS
115	Antonowicz Arkadiusz PIV AND CFD COMPARISON OF 3D PRINTED BLOOD VESSELS MODELS
117	Kordos Adrian PECULIARITIES OF FLOW IN NANOCHANNELS WITH NANOCAVITIES

Thursday, September 8, 2022 9:00-10:45					
AERO1 - Room V2		MULTI+FM - Room V14		FD1 - Room V15	
3	Szulc Oskar, Suresh Thanushree, Flaszynski Pawel ROTORCRAFT THICKNESS NOISE CONTROL	7	Shabani Sima, Majkut Miroslaw, Dykas Slawomir, Smolka Krystian, Cia Xiaoshu LIQUID PHASE IDENTIFICATION IN WET STEAM TRANSONIC FLOWS BY MEANS OF MEASUREMENT METHODS	4	Gepner Stanislaw FROM HYDRODYNAMIC INSTABILITY TO CHAOTIC MIXING
13	Flaszynski Pawel, Wasilczuk Filip, Piotrowicz Michal, Telega Janusz, Mitraszewski Karol, Hansen Kurt S. NUMERICAL PREDICTION OF UPSTREAM WIND SPEED REDUCTION ON OFFSHORE WIND FARM	23	Michel Antoine, Rosa Bogdan, Ababaei Ahmad COALESCENCE OF WATER DROPLETS CONSIDERING MANY-BODIES AERODYNAMIC INTERACTIONS	5	Wiśniewski Piotr, Dykas Slawomir, Majkut Miroslaw, Smolka Krystian ANALYSIS OF THE MOIST AIR TRANSONIC FLOW IN THE SYMMETRIC AND ASYMMETRIC NOZZLE OF THE LOW EXPANSION
15	Suresh Thanushree AEROACOUSTIC INVESTIGATIONS OF ROD VORTEX GENERATORS ON WIND TURBINE BLADE	31	Waclawczyk Tomasz EFFECT OF NONEQUILIBRIUM AGITATION ON TWO-PHASE FLOW	8	Kajzer Adam, Pozorski Jacek DENSITY DIFFUSION IN NEARLY INCOMPRESSIBLE FLOWS
46	Joseph Arun TEST SECTION DESIGN FOR TRANSONIC FLOW INVESTIGATIONS IN HIGHLY LOADED COMPRESSOR STATOR	32	Ababaei Ahmad, Rosa Bogdan, Michel Antoine COLLISION EFFICIENCY OF WATER DROPLETS SETTLING IN QUIESCENT AIR CONSIDERING LUBRICATION INTERACTIONS, MOBILITY OF INTERFACES AND NON-CONTINUUM MOLECULAR EFFECTS	77	Wawrzak Karol, Boguslawski Andrzej, Tyliczszak Artur STUDY ON GLOBAL INSTABILITY IN VARIABLE DENSITY COUNTER-CURRENT ROUND JETS
97	H. Hanfy Ahmed, Flaszynski Pawel, Kaczyński Piotr EXPERIMENTAL INVESTIGATION OF TRANSONIC EFFECTS ON A FAN BLADE REPRESENTATIVE PROFILE	57	Klamka Michal, Remer Michal, Bobiński Tomasz FLOW AROUND A DROPLET LEVITATING ON AIR BOUNDARY LAYER	89	Klotz Lukasz, Bukowski Karol EXPERIMENTAL INVESTIGATION OF THE INFLUENCE OF POROUS MATERIALS ON VORTICAL STRUCTURES FORMED BEHIND A BACKWARD-FACING STEP
98	Piotrowicz Michal NUMERICAL INVESTIGATIONS OF BOUNDARY LAYER EFFECT ON SHOCK WAVE INDUCED SEPARATION ON SUCTION SIDE OF TRANSONIC COMPRESSOR PROFILE	66	Uruba Vaclav, Duda Daniel, Yanovych Vitalii ON DYNAMICS OF FLOW PAST A STAGE AXIAL AIR TURBINE	92	Klotz Lukasz, Lemoult Grégoire, Avila Kerstin, Hof Björn PHASE TRANSITION TO TURBULENCE IN SPATIALLY EXTENDED SHEAR FLOWS
104	Sokolenko Vasyi, Elsner Witold, Drózd Artur, Gnatowska Renata, Kubacki Slawomir, Rarata Zbigniew EXPERIMENTAL ANALYSIS OF THE IMPACT OF ACOUSTIC EXCITATION ON THE SEPARATED BOUNDARY LAYER BEHAVIOUR	74	Jagodzińska Idalia, Olszański Bartosz, Gumowski Konrad, Kubacki Slawomir INVESTIGATION OF A FLOW THROUGH A TRANSONIC TURBINE CASCADE	106	Słowicka Agnieszka, Xue Nan, Sznajder Paweł, Nunes Janine K., Stone Howard A., Ekiel-Jeżewska Maria L. SHORT-TIME DYNAMICS OF ELASTIC FIBERS IN A SHEAR FLOW

Thursday, September 8, 2022 11:15-12:00					
IS2 - Industry Session - Room V2					
Thursday, September 8, 2022 12:00-12:45					
CFD2 - Room V2		MICRO-BIO - Room V14		COMB - Room V15	
6	Gałecki Jakub, Szumbariski Jacek REDUCING THE COST OF INCOMPRESSIBLE FLOW CONTROL PROBLEMS USING STABILIZED OUTFLOW BOUNDARY CONDITIONS	12	Pellegrino Michele, Hess Berk ASYMMETRIC OVERDAMPED MOTION OF CONTACT LINES OVER HIGH-FRICTION HYDROPHILIC SUBSTRATES	95	Kaczyński Piotr, Szwaba Ryszard, Piotrowicz Michal, Flaszynski Pawel, Doerffer Piotr WIND TUNNEL INVESTIGATIONS OF AIRCRAFT AIRFOIL IN CRUISE CONDITIONS
19	Lancmanová Anna, Bodnár Tomáš, Keslerová Radka ON THE NUMERICAL SIMULATION OF FLUID FLOW IN BRANCHED CHANNELS USING SIMPLE IMMERSSED BOUNDARY CODE	28	Bodnar Tomas, Sequeira Adelia NUMERICAL SIMULATIONS JOHNSON-SEGALMAN VISCOELASTIC FLUIDS FLOWS IN SHEAR-THINNING REGIME	105	Muchowski Jan, Krzysiak Andrzej, Szumski Marek WIND TUNNEL TEST OF GYRODYNE AERODYNAMIC CHARACTERISTICS IN HOVER
22	Kajzer Adam CONSERVATIVE WEAKLY COMPRESSIBLE SMOOTHED PARTICLE HYDRODYNAMICS APPLIED TO FLOWS WITH HIGH VORTICITY	96	Korczyk Piotr MICROFLUIDICS AS A TOOL FOR CHEMICAL AND BIOLOGICAL RESEARCH	113	Stryczniewicz Wit, Stalewski Wienczyslaw SILENT CONDITIONS TESTING OF PULSED JET ACTUATOR

Friday, September 9, 2022
11:00-12:30

FD2 - Room V2		TURB - Room V14		HEAT - Room V15	
67	DENG Nan, Pastur Luc, Morzynski Marek, Noack Bernd R. DEEP MEAN-FIELD MODELING OF WAKE DYNAMICS WITH MULTI-ATTRACTOR BEHAVIOR	11	Waclawczyk Marta, Nowak Jakub L, Malinowski Szymon P NON-EQUILIBRIUM DISSIPATION SCALING IN ATMOSPHERIC TURBULENCE	45	Górecki Bartosz FEM BASED REDUCED-ORDER CFD MODELS FOR HEAT TRANSFER MODELLING IN BATTERY PACKS OF ELECTRIC VEHICLES
69	Cornejo Maceda Guy, Li Yiqing, Lusseyran François, Morzyński Marek, Noack Bernd R. STABILIZATION OF SHEAR FLOWS WITH GRADIENT-ENRICHED MACHINE LEARNING CONTROL	51	Drózd Artur, Niegodajew Paweł, Romańczyk Mathias, Elsner Witold UNIVERSAL LOGARITHMIC BEHAVIOUR OF CONVECTION VELOCITY IN ADVERSE PRESSURE GRADIENT FLOWS	53	Rejwer-Kosińska Ewa, Rybarska-Rusinek Liliana, Linkov Aleksandr MODELING COUPLED PROBLEMS FOR HYDRAULICALLY DRIVEN FRACTURES BY ACCELERATED EXPLICIT TEMPORAL INTEGRATION
78	Li Songqi, Li Wenpeng, Noack Bernd Control-oriented full-state flow estimation exemplified for the fluidic pinball	52	Niegodajew Paweł, Drózd Artur, Elsner Witold EFFECTIVE USE OF WAVY SURFACE TO CONTROL FLOW SEPARATION	60	Iwaniszyn Marzena FLOW AND TRANSPORT CHARACTERISTICS OF PERIODIC OPEN CELLULAR STRUCTURES (POCS) FOR CATALYTIC PROCESSES
83	Li Yiqing, Yang Zhigang, Morzyński Marek, Noack Bernd EXPLORATIVE GRADIENT METHOD FOR ACTIVE WAKE CONTROL WITH MULTIPLE INPUTS	72	Baj Paweł LARGE-SCALE MOTIONS IN A BAFFLED VON KARMAN TANK	91	Pleskacz Lukasz, Fornalik-Wajs Elzbieta, Famulski Bartłomiej, Roszko Aleksandra, Gurgul Sebastian, Kwapisz Elzbieta MAGNETICALLY ALTERED TURBULENT FORCED CONVECTION OF SILVERWATER NANOFUID: A NUMERICAL STUDY