

Program Overview

Oct. 16 (Mon)	Oct. 17 (Tue)	Oct. 18 (Wed)	Oct. 19 (Thu)	Sites
8:00-20:00 Registration (Building C12 Hall, Nanjing University of Aeronautics and Astronautics)	8:20-8:50 Opening	8:30-9:10 Keynote III Prof. Nikolai Kornev	8:30-9:10 Keynote V Prof. Chaoqun Liu	Building A18-529*, Nanjing University of Aeronautics and Astronautics
	8:50-9:30 Keynote I Prof. Alan Jeffrey Giacomini 9:30-10:20 Session 1	9:10-10:20 Session 3	9:10-10:20 Session 5	
	10:20-10:35 Break			
	10:35-12:05 Session 1	10:35-12:05 Session 3	10:35-12:05 Session 5	
	12:05-13:30			Chinese restaurant
	13:30-14:00 Keynote II Prof. Lixing Zhou 14:00-15:30 Session 2	13:30-14:10 Keynote VI Prof. Daniel New Tze How 14:10-15:30 Session 4	13:30-15:30 Session 6	Building A18-529*, Nanjing University of Aeronautics and Astronautics
	15:30-15:45 Break			
	15:45-17:45 Session 2	15:45-17:45 Session 4	15:45-17:45 Session 6	
	18:00-20:00 Dinner		18:00-20:00 Dinner	Chinese restaurant
			18:30-21:00 Banquet	Chinese restaurant

* Optional: Building C12-619, Nanjing University of Aeronautics and Astronautics

Program

Monday, Oct. 16, 2023

Time	Activity	Address
8:00-20:00	Registration	Building C12 Hall, Nanjing University of Aeronautics and Astronautics
18:00-20:00	Reception	Chinese restaurant

Tuesday, Oct. 17, 2023

Building A18-529, Nanjing University of Aeronautics and Astronautics				
Time	Activity	Chair: Prof. Xiande Fang, Nanjing University of Aeronautics and Astronautics, China		
8:20-8:50	Opening	Vice-President, Prof. Bin Jiang, Nanjing University of Aeronautics and Astronautics, China		
Morning, Chair: Prof. Nikolai Kornev, University of Rostock, Germany				
Time	Activity	Paper No.	Corresponding author	Title
8:50-9:30	Keynote speech	K01	Alan Jeffrey Giacomini (Queen's University, Canada)	Recent Advances in Polymer Viscoelasticity from General Rigid Bead-Rod Theory
9:30-9:45	Oral	008	Leslie K. Norviihoho, Jing Yin, Shuyan Chen, Dongqing Zhu, Zhifu Zhou, Bin Chen (Xi'an Jiaotong University, China)	Numerical study on the dispersion of human expectorated cough droplets with seasonal influenza in an office
9:50-10:05	Oral	042	Xiaohuan Li, Xiande Fang (Nanjing University of Aeronautics and Astronautics, China)	Analysis of wall temperature hysteresis in pool boiling experiment under normal-gravity and hypergravity
10:05-10:20	Oral	071	Long Xia, Weijian Chen, Qianlong Ding, Hao Shen, Dong Shen (Nanjing University of Aeronautics and Astronautics, China)	Analysis of the influence of dynamic characteristics of large droplets on collection coefficient
10:20-10:35	Break			
Chair: Prof. Huixiong Li, Xi'an Jiaotong University, China				

10:35-10:50	Oral	006	Tong Zhao, Yalei Bai, Chuanyu Gao, Lei Ding ,Wangbo Wang (Nanjing University of Aeronautics and Astronautics, China)	Numerical investigation of flow separation control over an hump airfoil using sweeping jet actuator
10:50-11:05	Oral	047	Zhiqiang He , Xiande Fang , Xinyi Wang , Yeqi Qin (Nanjing University of Aeronautics and Astronautics, China)	Evaluation analysis of correlations of heat transfer coefficient of saturated flow boiling in helically coiled tubes
11:05-11:20	Oral	069	Chaowu Xiang, Weijian Chen, Zekun Mei, Shuai Xu, Penglei Zhang (Nanjing University of Aeronautics and Astronautics, China)	Modeling and verification of plate fin heat exchanger
11:20-11:35	Oral	041	Jieyu Feng, Yanjun Li, Jingyu Zhao, Li Yu, Ziyi Song (Nanjing University of Aeronautics and Astronautics, China)	Estimation of ejection speed of parachute shelter based on flow analysis
11:35-11:50	Oral	058	Yanjun Li, Zhen Liu, Ziyue Chen, Wei Wang (Nanjing University of Aeronautics and Astronautics, China)	Effect of the confined flow on concurrent-flow flame spread in microgravity
11:50-12:05	Oral	050	Yuxiang Fang, Xiande Fang , Xinyi Wang , Yeqi Qin (Nanjing University of Aeronautics and Astronautics, China)	Modelling of heat transfer coefficient of single-phase flow in spiral tubes
12:05-13:30 Lunch				
Afternoon, Chair: Prof. Bin Chen, Xi'an Jiaotong University, China				
Time	Activity	Paper No.	Presenter	Title

13:30-14:00	Keynote speech	K02	Lixing Zhou (Tsinghua University, China)	Progress in validation of the SOM turbulent combustion model by DNS
14:00-14:15	Oral	065	Fan Wang, Minqi Zhang, Yudong Wang, Yuxuan Han, Jie Jin (Beihang University, China)	Kerosene duel swirl two phase combustion simulation with algebraic second order moment model
14:15-14:30	Oral	059	Ziqi Fu, Juli Fan (Nanjing University of Aeronautics and Astronautics, China)	Numerical study on drying process of lyoprotectant solutions
14:30-14:45	Oral	007	Hengyuan Wang, Fucheng Chang, Jiacheng Lou, Yeming Liu, Zongrui Feng , Huixiong Li (Xi'an Jiaotong University, China)	Numerical simulation of heat transfer deterioration and heat transfer non-uniform characteristics in helically-coiled tube with large heat flux
14:45-15:00	Oral	039	Yuanliang Xie, Yi Zhou (Nanjing University of Science and Technology, China)	Relevance of the viscous superlayer to pure shear layers in a temporally evolving turbulent planar jet
15:00-15:15	Oral	052	Pucheng Yang, Xiande Fang, Qiumin Dai (Nanjing University of Aeronautics and Astronautics, China)	Modelling of drag coefficient of stratospheric airship
15:15-15:30	Oral	043	Xiaoyang Li, Xiaohui Lin, Changyue Xu , Zhuopei Li (Nanjing University of Aeronautics and Astronautics, China)	Numerical simulation of transient heat load of a sightseeing airship cockpit
15:30-15:45	Break			
	Chair: Prof. Fang Wang, Beihang University, China			
15:45-16:00	Oral	002	Shuqin Xue, Jing Yin, Shuyan Chen, Dongqing Zhu, Zhifu Zhou*, Bin Chen (Xi'an Jiaotong University, China)	Experimental and numerical investigation of the evaporation characteristics of ethanol droplet in complex conditions
16:00-16:15	Oral	030	Liuyun Lu, Huixiang Wu, Xiaohui Lin,	The flow patterns in the pipeline with twisting column

			Changyue Xu (Nanjing University of Aeronautics and Astronautics, China)	
16:15-16:30	Oral	055	Yevhenii Shkvar , Jonas Kandume (Zhejiang Normal University, China)	Numerical and experimental study of the vortical flow generated by ellipsoidal dimples
16:30-16:45	Oral	003	Galina Ya. Dynnikova (Lomonosov Moscow State University, Russia)	High-Resolution meshless simulation of a viscous incompressible fluid flow around an elliptical cylinder
16:45-17:00	Oral	014	Musfequs Salehin, A. B. M. Toufique Hasan (BSMR Aviation and Aerospace University, Bangladesh)	Effects of airfoil thickness on aerothermal characteristics at supersonic transitional rarefied conditions
17:00-17:15	Oral	017	Alexandra Kolganova, Iliia Marchevsky, Evgeniya Ryatina (Bauman Moscow State Technical University, Russia)	Fast algorithm for a boundary integral equations solving in 2D flows simulation using vortex particle method
17:15-17:30	Oral	009	Zhiyuan Shan, Xiaoyuan Sun, Feng Deng (Nanjing University of Aeronautics and Astronautics, China)	Numerical study on the hydrodynamic characteristics of skipping stones
17:30-17:45	Oral	063	Nikolai Kornev, Sina Samarbakhsh , Pascal Anschau (University of Rostock, Germany)	Vortex structures of ships and their influence on vibration of energy saving ducts
18:00-20:00	Buffet			

Wednesday, Oct. 18, 2023

Building A18-529, Nanjing University of Aeronautics and Astronautics

Morning, Chair: Prof. Alan Jeffrey Giacomin, Queen's University, Canada

Time	Activity	Paper No.	Corresponding author	Title
8:30-9:10	Keynote speech	K03	Nikolai Kornev (University of Rostock, Germany)	$V\pi$ LES- hybrid vortex and grid based method for simulation of turbulent flows at high Re numbers
9:15-9:30	Oral	038	Yahao Song, Zhi Wei, Changyue Xu, Ke Liu (Nanjing University of Aeronautics and Astronautics, China)	Detached eddy simulation of transonic buffet on a supercritical airfoil
9:30-9:45	Oral	040	Nailiang Zhuang, Yangyang Li, Zhiling Guan, Hetong Li, Xiaobin Tang (Nanjing University of Aeronautics and Astronautics, China)	Numerical simulation of structural evolution of secondary flow in variable curvature spiral tube of steam generator
9:50-10:05	Oral	066	Ziyue Chen, Yanjun Li, Li Yu (Nanjing University of Aeronautics and Astronautics, China)	Optimization of parafoil design based on Isight
10:05-10:20	Oral	020	Fang Wang , Yudong Wang , Yunfan Wang, Min Zhang (Beihang University, China)	The two phase turbulence combustion simulation with IBM method and applications
10:20-10:35	Oral	046	Yiyang Guo, Xiande Fang, Xinyi Wang, Yeqi Qin (Nanjing University of Aeronautics and Astronautics, China)	Analysis of friction factor correlations of single-phase flow in spiral tubes
10:35-10:50	Break			
	Chair: Prof. Changyue Xu, Nanjing University of Aeronautics and Astronautics, China			
10:50-11:05	Oral	010	Yanxin Yin, Ruiyang Lu, Jianxin Liu,	Real gas effects on receptivity to roughness in hypersonic swept blunt flat-plate

			Zhangfeng Huang (Tianjin University, China)	boundary layers
11:05-11:20	Oral	064	Shuyue Liang, Weijian Chen, Hui Ma, Guangya Zhu, Yan Wu (Nanjing University of Aeronautics and Astronautics, China)	Numerical simulation of vortex oil filter performance improvement
11:20-11:35	Oral	070	Shengfang Lu, Weijian Chen, Dalin Zhang, Guangya Zhu, Penglei Zhang (Nanjing University of Aeronautics and Astronautics, China)	Research and optimization design of aircraft windshield hot gas rain removal system
11:35-11:50	Oral	053	Wenbo Yang, Xuehao Sang, Bin Chen (Xi'an Jiaotong University, China)	Numerical Simulation of R410A closed-loop spray cooling system
11:50-12:05	Oral	049	Chong Li, Xiande Fang (Nanjing University of Aeronautics and Astronautics, China)	Numerical analysis on flow pattern of flow boiling in a horizontal tube
12:05-13:30 Lunch				
Afternoon, Chair: Prof. Zhifu Zhou, Xi'an Jiaotong University, China				
Time	Activity	Paper No.	Corresponding author	Title
13:30-14:10	Keynote speech	K04	New Tze How (Nanyang Technological University, Singapore)	Recent insights on vortex rings colliding with solid boundaries and density interfaces
14:10-14:25	Oral	031	Yulia Izmailova, Iliia Marchevsky, Kseniia Sokol, Evgeniya Ryatina (Bauman Moscow State Technical University, Russia)	The VM2D source code for incompressible flow simulation around airfoils using vortex methods: innovations and approaches for FSI problems
14:25-14:40	Oral	061	Xiaohui Lin , Bin Wang, Zongru Li, Changyue Xu	Numerical simulation of the compressible flow past a tabbed cylinder involving yawed angle

			(Nanjing University of Aeronautics and Astronautics, China)	
14:45-15:00	Oral	062	T. H. New , R. You and W. L. Chan (Nanyang Technological University, Singapore)	Standoff shock and shear layer vortex behaviour in supersonic impinging jets
15:00-15:15	Oral	011	Gen Li, Yiling Zhao, Xiande Fang, Yuetian Liu (Chongqing Jiaotong University, China)	Study on flow boiling heat transfer characteristics of Al ₂ O ₃ -water nanofluids under low-hypergravity conditions
15:15-15:30	Oral	032	Daren Zheng, Pei Li, Jianhong Sun, Changyue Xu, Zhi Sun (Nanjing University of Aeronautics and Astronautics, China)	Thermal performance enhancement of a rectangular channel with dual grooves
15:30-15:45	Break			
	Chair: Prof. Ilia Marchevsky, Bauman Moscow State Technical University, Russia			
15:45-16:00	Oral	037	Gennadii Voropaiev, Yevhenii Shkvar, Yaroslav Zagumennyi (Institute of Hydromechanics of NASU, Ukraine)	Vortex formation by oscillating bodies
16:00-16:15	Oral	026	Takeo Haruki, Shogo Ando , Tetsuya Yagi , Hiroshi Amano , Yasumasa Iwatani , Kotaro Takamure , Tomomi Uchiyama (Nagoya University, Japan)	Particle collection characteristics of a prismatic two-stage electrostatic precipitator
16:15-16:30	Oral	036	Daisuke Kobayashi , Kotaro Takamure, Tomomi Uchiyama (Nagoya University, Japan)	Visualized measurement of the wake of a sphere having a uniaxial through-hole
16:30-16:45	Oral	028	D. Kotsopoulos, K. Kalogiannis, A. Romeos, A. Giannadakis, K. Perrakis,	Refrigerant spray cooling of electronics

			Th. Panidis and B. Chen (University of Patras, Greece)	
16:45-17:00	Oral	018	Masato Ogawa and Kota Fukuda (Tokai University, Japan)	Fundamental study on physics informed neural network model based on vortex methods
17:00-17:15	Oral	035	Xiande Fang, Zhiqiang He, Xinyi Wang, Yeqi Qin (Nanjing University of Aeronautics and Astronautics, China)	New correlation of heat transfer coefficient for saturated flow boiling in helically coiled tubes
17:15-17:30	Oral	068	Chenlu Wang, Jianhong Su, Hao Liu, Changyue Xu, Daren Zheng (Nanjing University of Aeronautics and Astronautics, China)	Aerodynamic design of airfoil in ground effect based on the conditional generative adversarial network
17:30-17:45	Oral	034	Yaroslav Demchenko, Vasily Vedeneev, Alexander Zubkov (Lomonosov Moscow State University, Russia)	Torsional aero-elastic oscillations of an elastically mounted circular cylinder
18:00-20:00	Banquet			

Thursday, Oct. 19, 2023

Building A18-529, Nanjing University of Aeronautics and Astronautics

Morning, Chair: Prof. Daniel New Tze, Nanyang Technological University, Singapore

Time	Activity	Paper No.	Corresponding author	Title
8:30-9:10	Keynote speech	K05	Chaoqun Liu (University of Texas at Arlington, USA)	Liutex – unique and rigorous definition and identification of vortex
9:15-9:30	Oral	033	Iliia Marchevsky, Georgy Shcheglov, Sergey Dergachev (Bauman Moscow State Technical University, Russia)	Three-dimensional meshless vortex loops method for hydrodynamic loads estimation acting on structures in the flow
9:30-9:45	Oral	001	Zhanru Zhou, Shenghong Huang , Huanchun Huang , Menglai Jiang , Zhiwei Pan (University of Science and Technology of China, China)	A new correlation of the subcooled flow boiling heat transfer coefficient for hybrid micro/nanostructured surfaces with high heat flux incidence
9:50-10:05	Oral	015	Yingjie Zhao, Guozeng Feng, Rui Hong, Yueteng Guo, Xiaoyong Zuo (Jiangsu University of Science and Technology, China)	Energy saving design of heating coil and heating system for liquid cargo cabin of 15000DWT asphalt carrier
10:05-10:20	Oral	027	Lincheng Xu, Gang Wang (Northwestern Polytechnical University, China)	Performance analysis of anguilliform swimming fish with different body sections in large eddy simulations using adaptive Cartesian grids
10:20-10:35	Oral	048	Ranran Huang, Jie Wu (Huazhong University of Science and Technology, China)	Measurement of the hypersonic turbulent boundary layer using two-point focused laser differential interferometry
10:35-10:50	Break			
	Chair: Prof. Xiaowei Zhu, Beihang University, China			

10:50-11:05	Oral	016	Chunqi Wang, Kotaro Takamure, Tomomi Uchiyama (Nagoya University, Japan)	Experimental Investigation on Jet Issuing from Two-Dimensional Nozzle Equipped with Cut Airfoil of NACA0036
11:05-11:20	Oral	060	Yalei Bai, Min Zheng (Nanjing University of Aeronautics and Astronautics, China)	Numerical study of a flapping foil in energy harvesting with suction and blower based control
11:20-11:35	Oral	012	Pengcheng He	The new combined waves theory
11:35-11:50	Oral	024	Yi Liu, Xiangwei Lin, Dongqing Zhu, Zhifu Zhou, Bin Chen (Xi'an Jiaotong University, China)	Numerical study on heat transfer of refrigerant R410A flash spray cooling
11:50-12:05	Oral	045	Yanting Zhang, Nailiang Zhuang (Nanjing University of Aeronautics and Astronautics, China)	Two-phase flow pattern transition in variable curvature helical coil
12:05-13:30 Lunch				
Afternoon, Chair: Prof. Yanjun Li, Nanjing University of Aeronautics and Astronautics, China				
Time	Activity	Paper No.	Corresponding author	Title
13:30-13:45	Oral	067	Zihao Zhang, Weijian Chen, Qinyang Li, Zhiyuan Qu, Dalin Zhang (Nanjing University of Aeronautics and Astronautics, China)	Engine lip jet impingement and film heating coupled anti-icing structure
13:45-14:00	Oral	005	Guohua Li *, Jie Gong, Ran Liu, Zijuan Wang (Beijing Institute of Spacecraft Environment Engineering, China)	Numerical calculation of gas-liquid two-phase flow in Tesla valve
14:00-14:15	Oral	023	Bin Wang, Yahao Song, Xiaohui Lin, Changyue Xu (Nanjing University of Aeronautics and	Numerical investigation on transonic buffet of supercritical airfoils

			Astronautics, China)	
14:15-14:30	Oral	004	Yisheng Gao, Jiajun Long, Fei Qin (Nanjing University of Aeronautics and Astronautics, China)	Implementation of liutex-based direct integrated field inversion and machine learning framework in PHengLEI solver
14:30-14:45	Oral	057	Helei Zhang, Xiande Fang, Yuying Zhang, Huixiang Wu (Nanjing University of Aeronautics and Astronautics, China)	Investigation on gas-liquid-solid three-phase flow characteristics in aircraft wastewater pipes
14:45-15:00	Oral	022	Yukun Yong, Jianhong Sun, Yang Tao, Hao Liu, Changyue Xu, Daren Zheng (Nanjing University of Aeronautics and Astronautics, China)	Numerical investigation of active control of airfoil involving ground effect
15:00-15:15	Oral	029	Xiaoyingjie Huang, Jiabao Chen, Yan Wang (Nanjing University of Aeronautics and Astronautics, China)	Rotated lattice boltzmann flux solver based on adaptive mesh refinement for numerical simulation of compressible flows with complex shock structures
15:15-15:30	Oral	019	Yuanyuan Wang, Chengyue Wang (Nanjing University of Science and Technology, China)	Investigation on the vortex dynamics of jellyfish-like flapping wings based on particle image velocimetry
15:30-15:45	Oral	013	Quanzheng Li, Xiaoyu Sun, Gang Wang (Northwestern Polytechnical University, China)	Detached-eddy simulation of the vortex system on the high-lift common research model
18:00-20:00				Buffet

- Tips:

Keynote speeches are limited to 40 minutes which includes:

35 minutes for the report if 40 minutes, and 25 minutes for the report if 30 minutes

5 minutes for questions/discussions

Presentations are limited to 15 minutes which includes:

12 minutes for the report

3 minutes for questions/discussions