

## List of selected projects for Discretionary Collaborative Research Project 2018, IFS, Tohoku University

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member	Institution
J18L005	Numerical analysis of the active species dynamics between discharge plasma and biological surface	Satoshi Uchida	Tokyo Metropolitan University	Takehiko Sato	Tohoku University
J18L010	Formation of functional materials by oxidation / nitridation using ion/radical flux control technique	Kosuke TAKENAKA	Osaka University	Takeru Okada	Tohoku University
J18L014	Prevention of blast induced traumatic brain injury	Atsuhiko Nakagawa	Tohoku University	Kiyonobu Ohtani	Tohoku University
J18L017	Applications of the analysis of turbulence structure using eigenvectors of rate-of-strain tensor	Takashi Ishihara	Okayama University	Yuji Hattori	Tohoku University
J18L018	Theoretical simulation on epitaxial growth of functioning thin film	Satoru Kaneko	KISTEC	Takashi Tokumasu	Tohoku University
J18L023	Numerical Prediction of Flow Characteristics around Moving Objects in Multiphase Flow	Shun Takahashi	Tokai University	Shigeru Obayashi	Tohoku University
J18L024	Application of Two-phase thermo-fluid Simulation for Accurate Design of Oscillating Heat Pipe	Shun Takahashi	Tokai University	Hiroki Nagai	Tohoku University
J18L025	Numerical simulation and experimental observation of the blood cells behavior in microcirculation	Tomohiro Fukui	Kyoto Institute of Technology	Toshiyuki Hayase	Tohoku University
J18L033	Control of radiative transfer by nano-micro particulate coating	Hiroki Gonome	Yamagata University	Junnosuke Okajima	Tohoku University
J18L039	Elucidation of emission gas formation mechanism of solid fuel	Yasuhiro Ogami	Akita Prefectural University	Hisashi nakamura	Tohoku University
J18L049	Numerical study on gas lubrication system using micro/nanoscale dimples	Shigeru Yonemura	Tohoku University	Bondar, Yevgeniy	ITAM, SBRAS
J18L051	Research of application of highly functional nano devices fabricated by using functional nanomaterials	YASUO TAKAHASHI	Hokkaido University	Seiji Samukawa	Tohoku University
J18L052	Application of a data assimilation methodology to a numerical simulation of pedestrian flow	Fumiya Togashi	Applied Simulations Inc.	Shigeru Obayashi	Tohoku University
J18L063	Application of Data Assimilation to Aviation Safety System	Shinkyu Jeong	Kyunghee University	Shigeru Obayashi	Tohoku University
J18L064	Development of accurate temperature measurement method by infrared camera	Takuma Kogawa	National Institute of Technology, Hachinohe College	Junnosuke Okajima	Tohoku University

List of selected projects for Discretionary Collaborative Research Project 2018, IFS, Tohoku University

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member	Institution
J18L069	Mechanism of generation and stabilization of fine bubbles generated by plasma in water	Takehiko Sato	Tohoku University	NAKATANI Tatsuyuki	Okayama University of Science
J18L074	Proposal of VS-TOL Aircraft Concept using USB and its Aerodynamic Characteristics	Hiromitsu Kawazoe	Tottori University	Shigeru Obayashi	Tohoku University
J18L076	Development of hydrogen production process by MHD mixing	Yuhiro Iwamoto	Nagoya Institute of Technology	Hidemasa Takana	Tohoku University
J18L077	The quantitative density measurement of unsteady flow around a projectile	Masanori Ota	Chiba University	Hiroki Nagai	Tohoku University
J18L087	Mathematical modelling of nanoparticles production in thermal plasmas	Pierre Proulx	Université de Sherbrooke	Hidemasa Takana	Tohoku University
J18L088	Aeroacoustics of Low Reynolds Number Flows Via Dynamic Hybrid RANS/LES and Stochastic Noise Generation and Radiation	Adrian Sescu	Mississippi State University	Yuji Hattori	Tohoku University
J18L095	Molecular Dynamics Simulation of Droplet Shearing	Akinori Fukushima	University of Fukui	Takashi Tokumasu	Tohoku University
J18L098	Attitude control of supersonic projectile by detached shock pulsation	MIZUKAKI, Toshiharu	Tokai University	Shigeru Obayashi	Tohoku University
J18L100	Numerical analysis on charge transport in water after single pulsed discharge to the water surface	Kazuyuki UENO	Iwate University	Takehiko Sato	Tohoku University
J18L106	Transition of pumping-up flow patterns with high viscosity in a centrifugal force field by rotating cones	Adachi Takahiro	Akita University	Junnosuke Okajima	Tohoku University
J18L107	Mechanism of charge transport in water by irradiation of cold atmospheric plasma for disinfection	Tetsuji Shimizu	AIST	Takehiko Sato	Tohoku University
J18L111	Computational fluid dynamics study of euro-endovascular treatments for cerebrovascular diseases	Shintaro Nakajima	Juntendo University	Makoto Ohta	Tohoku University

27 selected projects