

List of selected projects for Discretionary Collaborative Research Project 2020, IFS, Tohoku University (as 7th May, 2020)

Project Code	Project Title	Applicant	Institution	IFS responsible member or non-IFS responsible member	Institution
J20L006	Development of Conservative Kinetic Force Method Near Equilibrium	Vladimir Saveliev	Institute of Ionosphere, National Center of Space Researches and Technologies	Shigeru Yonemura	Institute of Fluid Science, Tohoku University
J20L012	Analysis of transport phenomena of oxygen ion in dual-phase electrolyte material	Takashi Tokumasu	Institute of Fluid Science, Tohoku University	Ahn, Jeongmin	Syracuse University
J20L013	Mechanism of generation and stabilization of fine bubbles generated by plasma in water	Takehiko Sato	Institute of Fluid Science, Tohoku University	Tatsuyuki Nakatani	Okayama University of Science
J20L017	Surface Pressure Measurement of a Re-Entry Model in Ballistic Range Facility using Motion-Capturing Pressure-Sensitive Paint Method	Hiroataka Sakaue	Department of Aerospace and Mechanical Engineering, University of Notre Dame	Hiroki Nagai	Institute of Fluid Science, Tohoku University
J20L019	Comparison between h-BN and Mxene as promising 2D materials for biolubricant additives: Molecular Dynamic Simulation Perspective	Takashi Tokumasu	Institute of Fluid Science, Tohoku University	Yusuf Rodjali, Nasruddin	Universitas Indonesia
J20L027	Study of coaxial inversion rotor aimed at realizing Mars helicopter	Hiroki Nagai	Institute of Fluid Science, Tohoku University	Koichi Yonezawa	Central Research Institute of Electronic Power Industry
J20L031	Development of prediction method in protein GPI modification prediction	Kenji Etchuya	Aoyama Gakuin University	Makoto Ohta	Institute of Fluid Science, Tohoku University
J20L038	Clarifying interaction mechanisms between plasma and catalysis by using neutral beam	Masaharu Shiratani	Kyushu University	Susumu Toko	Institute of Fluid Science, Tohoku University
J20L046	Feasibility study of the transportation system with a flying vehicle for improvement of isolated islands	Seiichiro Morizawa	National Institute of Technology, Okinawa College	Shigeru Obayashi	Institute of Fluid Science, Tohoku University
J20L050	Geothermal Onsen Seminar	Anna Suzuki	Institute of Fluid Science, Tohoku University	Horne, Roland N.	Stanford University
J20L051	Internal defect of plastic-fabricated Carbon Fiber Reinforced Thermo Plastics	Noboru Nakayama	Shinshu University Faculty of Engineering	Hiroyuki Miki	Institute of Fluid Science, Tohoku University
J20L058	Quantum molecular dynamics analysis of bubble inception in cryogenic liquid hydrogen	Shinn-ichi Tsuda	Kyushu University	Takashi Tokumasu	Institute of Fluid Science, Tohoku University
J20L060	Fluid flow analysis of an atmospheric-pressure micro-plasma ejected from a narrow nozzle	Hiroyuki Yoshiki	National Institute of Technology, Tsuoka College	Takehiko Sato	Institute of Fluid Science, Tohoku University
J20L066	Experimental and Computational Study on Unsteady Aerodynamic Characteristics of Rotating and Moving Wing Under Low Reynolds Number Region	Daisuke Sasaki	Kanazawa Institute of Technology	Koji Shimoyama	Institute of Fluid Science, Tohoku University
J20L067	Experiment and Simulation of a Rotating Hollow Cylinder in Flight	Katuya Hirata	Doshisha University	Jun Ishimoto	Institute of Fluid Science, Tohoku University
J20L072	Analysis of formation of surface nanobubbles by molecular simulation	Takuma Hori	Tokyo University of Agriculture and Technology	Gota Kikugawa	Institute of Fluid Science, Tohoku University
J20L080	Developing an interaction model of fibers and electric flow field for nanocellulose mono-fiber creation using flow focusing	Yukitaka Ishimoto	Akita Prefectural University	Hidemasa Takana	Institute of Fluid Science, Tohoku University
J20L085	Clarification of the transition mechanism of cavitation instabilities	Donghyuk Kang	Saitama University	Yuka Iga	Institute of Fluid Science, Tohoku University
J20L086	Analysis and definition of vortical axes by local axis geometry theory	Katsuyuki Nakayama	Aichi Institute of Technology	Yuji Hattori	Institute of Fluid Science, Tohoku University
J20L098	Development and application for Accurate Design of Oscillating Heat Pipe	Shun Takahashi	Tokai University	Hiroki Nagai	Institute of Fluid Science, Tohoku University
J20L106	Development of PSP measurement technique using structured illumination	Yu Matsuda	Waseda University	Hiroki Nagai	Institute of Fluid Science, Tohoku University
J20L108	Modeling of the contact line and contact angle dynamics based on the molecular dynamics simulation	Akinori Fukushima	University of Fukui	Takashi Tokumasu	Institute of Fluid Science, Tohoku University

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