JST Press Release #1518

August 31, 2021

Japan Science and Technology Agency (JST)
5-3, Yonbancho, Chiyoda-ku, Tokyo

JST to fund four research projects for JST-NSF call on Digital Science for Post-COVID-19 Society under the Strategic International Collaborative Research Program (SICORP) framework

The Japan Science and Technology Agency (JST) has decided to fund four projects under the theme of Digital Science for Post-COVID-19 Society as a part of the Strategic International Collaborative Research Program (SICORP[1]) (Appendix 1).

Through this call JST is funding research in the digital sciences applicable to adjusting to a post-COVID-19 society jointly with the National Science Foundation (NSF) of the United States (Appendix 2).

The call saw a total of 25 proposals submitted, out of which 4 were selected for funding following an expert evaluation and consultation with NSF (Appendix 3).

The research period is scheduled to start in October 2021 and last for 3.5 years.

1) SICORP: https://www.jst.go.jp/inter/english/

Appendices

Appendix 1：List of Awarded Projects

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Contact

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List of Awarded Projects

Appendix 1

#	Project Title	Principal Investigators	Position and Institution	Project Abstract
1	Multimodal Data Analytics and Integration for Effective COVID-19, Pandemics and Compound Disaster Response and Management	SHIBASAKI Ryosuke (Japan)	Professor, Center for Spatial Information Science, The University of Tokyo	Building on several years of collaboration between the Japan and U.S. teams in emergency management and disaster response research, this research project aims to develop new and existing tools and algorithms to process and analyze multimodal big data, including from social media, GPS, urban transportation, public health and other sources, to support decision-making processes in a context of compound disasters such as natural disasters occurring during the COVID-19 pandemic. This research will also incorporate an active role of disaster resilience-relevant community stakeholders, including various companies and government agencies, to provide key insights for guiding the development of these tools.
		Shu-Ching Chen (United States)	Professor, School of Computing and Information Sciences, Florida International University	

#	Project Title	Principal Investigators	Position and Institution	Project Abstract
2	PanCommunity: Leveraging Data and Models for Understanding and Improving Community Response in Pandemics	NISHIURA Hiroshi (Japan)	Professor, Graduate School of Medicine, Kyoto University	This research aims to design new data- and model-informed methods to understand interactions, including information exchange, coordination, collaboration, and competition, among others, in a context of the COVID-19 pandemic across communities at multiple scales. Through Japan-US collaboration between teams with substantial policy-relevant modelling research experience, data will be collected for real-time and continuous analysis and decision-making by using models and simulations, including by estimating transmissibility of the disease, forecasting the spatio-temporal spread at different spatial scales, assessing the effect of travel controls, predicting the effect of school closures and assessing the impact of pharmaceutical interventions. The model allows for heterogeneity in accuracy and cost of sampling across the decision space, which, in the case of this project, includes data such as location and attributes of patients being tested.
		Kasim Candan (United States)	Professor, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University	

#	Project Title	Principal Investigators	Position and Institution	Project Abstract
3	Active Sensing and Personalized Interventions for Pandemic-Induced Social Isolation	HIGASHINO Teruo (Japan)	Dean and Professor, Faculty of Engineering, Department of Information and Computer Science, Kyoto Tachibana University	This project aims to develop novel technologies for detecting and mitigating isolation among elderly people whose situation has been worsened by the COVID-19 pandemic. The Japanese side consists of computer scientists working on camera and sensor-based inferencing of people and objects, geriatric psychiatrists, and a social scientist specializing in geriatric behavioral science, complemented by a U.S. side consisting of health care researchers and nursing specialists. In addition to developing sensing technologies for estimating isolation levels of the elderly, this project sets out to create methods for reducing elderly isolation and encouraging community engagement. By using experiments, the effectiveness of these methods will be tested in collaboration with local communities in Japan and single or low-income elderly households in the United States. Elderly care systems between the two countries will also be compared.
		Insup Lee (United States)	Cecilia Fitler Moore Professor, Department of Computer and Information Science, University of Pennsylvania	

#	Project Title	Principal Investigators	Position and Institution	Project Abstract
4	Hyperlocal Risk Monitoring and Pandemic Preparedness through Privacy-Enhanced Mobility and Social Interactions Analysis	YOSHIKAWA Masatoshi (Japan)	Professor, Graduate School of Informatics, Kyoto University	This research aims to develop a framework for risk monitoring and analysis for pandemic emergencies based on people's movement patterns and social network interactions which can be employed in public healthcare decision- and policy-making, while simultaneously taking into account relevant privacy and legal considerations. The Japanese side will develop privacy-preserving technologies for people's movement patterns, assess infection risks based on infectious disease internal medicine, analyze social interactions using social networks and search data, and clarify legal issues of personal data collection in public health emergencies. The U.S. side will conduct hyperlocal risk monitoring and elucidation of social risk factors and psychological responses through the analysis of mobility data and social interactions in terms of social data analysis, social epidemiology, spatial data analysis, and machine learning.
		Li Xiong (United States)	Professor, Department of Computer Science, Emory University	

Appendix 2

Call Outline

(1) Relevant Funding Framework

International research collaboration through JST's SICORP framework with the NSF Smart and Connected Communities (S&CC) program in the field of digital science for post-COVID-19 society.

(2) Applicant Eligibility (JST)

Any independent researcher affiliated with, and actively conducting research at, a domestic Japanese research institution, regardless of nationality, is eligible.

(3) Research Period

The research period is expected to last from October 2021 until March 2025.

(4) Amount of Funding (JST)

Up to 75 million yen per project (JST-funded side), inclusive of overhead costs (30 percent of direct costs).

(5) Evaluation Method

Proposals are evaluated through an expert evaluation.

(6) Evaluation Criteria (JST)

I. The proposal must satisfy the call application requirements
II. The proposed research must be in line with the target of this call
III. Scientific and technological potential
    a. Scientific quality and originality of the project
    b. Scientific and technical expertise of the team
    c. Expected scientific results and prospects for future development
IV. Potential for successful international cooperation
    a. Prior experience in international cooperation
    b. Potential for partnership development
    c. Quality of cooperation and synergies among participating institutions
V. Relevance and feasibility of the research plan (funding, objectives, duration)

Appendix 3

List of Evaluators

Name	Position and Institution	Role
IWANO Kazuo	Advisor, Mitsubishi Chemical Holdings	Program Officer
AIZAWA Masuo	Professor Emeritus, Tokyo Institute of Technology	Advisor
INOUE Junji	Technical Advisor, Remote Sensing Technology Center of Japan	Advisor
ENDO Kaoru	Professor, Faculty of Law, Gakushuin University	Advisor
OKUBO Takao	Professor, Institute of Information Security	Advisor
ONODERA Tamiya	Distinguished Engineer and Deputy Director, IBM Research - Tokyo	Advisor
KAJIKAWA Mikio	Outside Member of Board of Directors, NTT Docomo	Advisor
KANAMORI Junichiro	Executive Director, DENSO WAVE	Advisor
KIMURA Yasunori	Senior Fellow, Center for Research and Development Strategy, Japan Science and Technology Agency	Advisor
TANAKA Yuzuru	Professor Emeritus, Hokkaido University	Advisor
DOI Miwako	Auditor, National Institute of Information and Communications Technology	Advisor
NAMEKI Yoko	Distinguished Engineer and Technology Director, IBM Japan	Advisor
HAGITA Norihiro	Chair and Professor, Art Science Department, Osaka University of Arts	Advisor
HIDAKA Kazuyoshi	Professor, Department of Innovation Science, Tokyo Institute of Technology	Advisor
HIROSE Yayoi	Professor, Department of Information Networking for Innovation and Design, Toyo University	Advisor
MAEDA Eisaku	Professor, Department of System Engineering, Tokyo Denki University	Advisor
YASUURA Hiroto	Director-General, Fukuoka Asian Urban Research Center	Advisor
YAMASHITA Katsushi	President, YAMASHITA Technology and Engineering Office	Advisor
YUMA Kazuko	Chief Fellow, Information Society Research Department, Institute for International Socio-Economic Studies	Advisor