

**Large-scale Data Utilization in Economics of Information and Management Sciences:  
Theory, Computation, and Experiment (updated on Nov. 30, 2023)**

<<Title>> **Large-scale Data Utilization in Economics of Information and Management Sciences:  
Theory, Computation, and Experiment**

<<Acronym>> EconManag

<<Workshop Style>> In-Person

International Conference

Date: 15-18 December, 2023

Venue: Sorrento, Italy

<http://bigdataieee.org/BigData2023/>

<<Introduction to Workshop>>

The purpose of this workshop is to discuss how large-scale data are dealt with in economics and management sciences including marketing, finance, and accounting interdisciplinary among practitioners, engineers, and researchers. In particular, we intend to clarify what kinds of effect it has in our social institutions and share what are obstacles to promoting its utilization in those fields. For instance, in a workshop held for IEEE BigData 2022, participants discussed a topic on matching mechanisms for the mandatory initial clinical training system. The introduction of that system has changed the medical care and education in Japan. Since Japanese systems are fundamentally different from the American medical systems, the data usage developed in the U.S. does not work in the same way. In this year, the goal of this workshop is to explore the utilization of large-scale data in consideration of such social or cultural backgrounds across broader disciplines with practitioners, engineers, and researchers in information engineering and computer science.

As special topics, furthermore, we intend to discuss about some methods of experiments for the interactions between computers and cognitive or emotional aspects of human behavior in digital marketing, accounting informatics, and personnel management as well as financial issues, urban planning, and energy supply. Topics related to practical use of technologies on large-scale data are provided from the viewpoints of information engineering and computer science, while the estimation of the value of data is also discussed from the viewpoints of economics of information.

<<Research Topics>>

We call for papers written by anyone who are interested in the following topics related to this workshop.

Data-oriented Applications in Management:

- Economics of Information and Organization
- Statistical Techniques and Algorithms
- Financial Risk and Security
- Digital Marketing and Marketing Science
- Management Accounting and Informatics
- Dynamical Systems and Econophysics
- Information Engineering
- Computer Science
- Computational Social Science
- Experimental Social Science

- Human-Computer Interaction

- Social Simulation and Numerical Studies
- Computational Experiments
- Lab and Field Experiments
- Remote and In-person Experiments

Markets for Data Transaction:

- Process and Technologies for Data Exchange
- Pricing Data and Data Platform
- Data Acquisition and Sensors
- Strategic Manipulation and Incentives
- Fairness and Social Welfare

Case Studies:

- Methods for Evaluation of Data Utilization
- Curation and Management of Data
- Trust, Resilience, Privacy Issues
- Urban Planning and Transportation
- Generation and Supply of Renewable Energy

Practical Use of Technologies:

- Text and Data Mining, Summarization, Topic Analysis, and Report Generation
- Machine Learning for Social Data
- Reinforcement Learning in Economics
- Retrieval/Recommender systems
- Big Data Optimization
- Causality Estimation in Management
- People Analytics and Personnel Issues

Methods of Experiments:

- Behavioral Science and Modeling
- Cognitive Science and Human Behavior

<<Important Dates>>

**June 30 (Fri), 2023: Workshop Paper Submission Starts (PC sends out Call for Paper on June 7)**

**Oct 14 (Sat), 2023: Due date for full workshop paper submission (US-EST), updated on Sept 25**

**Oct 31 (Tue), 2023: Due date for workshop paper submission (US-EST) for papers transferred from the main conference and special sessions, updated on Oct 9**

**Oct 30 (Mon), 2023: Notification of paper acceptance to authors who submitted by Oct 14 (US-EST)**

**Nov 26 (Mon), 2023: Camera-ready of accepted papers (US-EST)**

**Dec 16 (Sat) 14:00-18:00, 2023: Workshop will be held. (CET)**

<<Schedule>>

<b>Large-scale Data Utilization in Economics of Information and Management Sciences: Theory, Computation, and Experiment</b>		
<i>Workshop Chairs: Naoki Watanabe</i>		
<b>Time</b>	<b>Title</b>	<b>Presenter/Author</b>
14:00-14:10	<b>Opening Notes: Naoki Watanabe</b>	
14:10-14:30	Conducting an Experiment at Multiple Sites with Small Subject Pools	Kazuhito Ogawa, Yusuke Osaki, Tetsuya Kawamura, Hiromasa Takahashi, Satoshi Taguchi, Yoichiro Fujii, Kengo Kurosaka, Kohei Iyori, Naoki Watanabe
14:30-14:50	CultureBERT: Measuring Corporate Culture with Transformer-based Language Models	Sebastian Koch, Stefan Pasch
14:50-15:10	Toward a Novel Methodology in Economic Experiments: Simulation of the Ultimatum Game with Large Language Models	Ayato Kitadai, Yudai Tsurusaki, Yusuke Fukasawa, Nariaki Nishino
<b>Coffee Break</b>		
15:20-15:40	Port Arrival Reservation System Using Auctions for Fuel Consumption Reduction	Rintaro Rai, Takuya Nakashima, Nariaki Nishino
15:40-16:00	Mathematical Model Analysis of Photovoltaic-induced Land Use Transition	Yumi Watahiki, Hiroyasu Ando, Isamu Takahara
16:00-16:20	Efficiency in a College Admission Experiment: A Preliminary Simulation with Cognitive Ability Scores	Naoki Watanabe, Tetsuya Kawamura, Kazuhito Ogawa
<b>Coffee Break</b>		
16:30-16:50	Does Double-entry Bookkeeping Information Generated Using node2vec Contribute to Forecasting Future Performance?	Ryoki Motai, Masato Kamebuchi, Sora Watanabe, Ryo Matsumoto, Yukihiko Okada
16:50-17:10	Digital Finance, Market Competition, and Risk-Taking: A Study of Rural Commercial Banks in China	Chonghuang Hu, Minkang Li, Hufeng Yang, Minghao Li, Jichao Li, Jiang Jiang
17:10-17:30	Lower Alertness Entails More Competition: Evidence from Prisoner's Dilemma and Coordination Games	Toshio Kokubo, Nobuhito Kon, Morimitsu Kurino, Wakuo Saito, Natsumi Shimada, Masashi Yanagisawa

17:30-17:50	Evaluating the Alleviation of Traffic Congestion through Bus Rapid Transit Using Multi-agent Simulation	Zeyu Zhou, Mizuki Kobayashi, Uta Sato, Kazuma Akashi, Ayato Kitadai, Soma Sugihara, Yusuke Fukasawa, Masanori Fujita, Nariaki Nishino
17:50-18:00	<b>Closing Remarks: Naoki Watanabe</b>	

**The workshop will be held on December 16 jointly with a Special Session on Understanding New Markets by Data Science, Social Science, and Economics.**

<https://tetsuwaka.net/UNMDSSSE2023/>

schedule: December 16, 8:30-12:35

<https://tetsuwaka.net/UNMDSSSE2023/schedule.html>

### <<Program Committee>>

#### **Organizers**

Naoki Watanabe, Keio University, Japan (**Chair-in-Chief**): Game Theory  
 Kazuhito Ogawa, Kansai University, Japan (**Co-Chair**): Experimental Economics  
 Satoshi Takahashi, The University of Electro-Communications, Japan (**Co-Chair**): Operations Research

#### **PC Members** (Organizers are omitted in this list.)

Teruaki Hayashi, The University of Tokyo, Japan: Information Engineering  
 Hiroki Sakaji, The University of Tokyo, Japan: Natural Language Processing  
 Hiroyasu Matsushima, Shiga University, Japan: Multi-Agent Simulation  
 Nariaki Nishino, The University of Tokyo, Japan: Service Engineering  
 Zhen Li, Kansai University, Japan: Digital Marketing

#### **Supporting Members** (those who support the organizers and the PC members)

Tetsuya Kawamura, Tezukayama University, Japan: Experimental Economics  
 Yoichiro Fujii, Meiji University, Japan: Actuarial Science  
 Yusuke Osaki, Waseda University, Japan: Finance  
 Yoichi Izunaga, Kyushu University, Japan: Operations Research  
 Takashi Yamada, Yamaguchi University, Japan: Social Simulation  
 Satoshi Taguchi, Doshisha University, Japan: Management Accounting  
 Rei Goto, Keio University, Japan: Medical and Health Economics  
 Taro Kumano, Yokohama National University, Japan: Mechanism Design  
 Eizo Akiyama, The University of Tsukuba, Japan: Human and Computer Interaction  
 Morimitsu Kurino, Keio University, Japan, Matching Theory  
 Nobuyuki Hanaki, Osaka University, Japan, Experimental Economics, Multi-Agent Simulation

### <<Paper Submission>>

Submission Starts on June 30 (Fri). Every Paper is limited to 10 pages in the IEEE double column format, including the bibliography and appendices. (In this year, the page limit is extended from 8 pages to 10 pages. Updated on August 9 for this Workshop) Papers with more than 10 pages will be rejected without review. The templates (tex, docx) are available at

<https://www.ieee.org/conferences/publishing/templates.html>

Accepted papers will be published in the Proceedings volume in the IEEE Xplore Digital Library. Those papers should not be submitted to other journals, conferences, and workshops. Extra page fee will be charged for papers with more than 8 pages in the publication. Blow is the site for on-line paper submission. Choose no. 18 and click on the title of the WS.

(Download this pdf file, and then click on the following URL, if necessary.)

[https://wi-lab.com/cyberchair/2023/bigdata23/scripts/ws\\_submit.php](https://wi-lab.com/cyberchair/2023/bigdata23/scripts/ws_submit.php)

Submission site was closed on October 31, 2023.

**<<Corresponding Organizer>>**

Naoki Watanabe (Organizer-in-Chief)

Graduate School of Business Administration, Keio University

4-1-1 Hiyoshi, Kohoku, Yokohama, Kanagawa 223-8526, JAPAN

E-mail: naoki50<AT>keio.jp (replace <AT> with @)

Website: <http://labs.kbs.keio.ac.jp/naoki50lab/index.html>