

Technical Reports

Technical Report List

<ftp://ftp.u-aizu.ac.jp/u-aizu/doc/Tech-Report/>

2017-001

Satoshi Okui, Taro Suzuki and Yoshiki Iwata

Adapting subset construction to automata over list structures

Jan 10 2018, 15 pages

Projects

Projects

Project Supported by the Fukushima Prefectural Foundation for the Advancement of Science and Education 2017

1. Principal Investigator: Hirokuni Kurokawa
Title: Support Project of Programming Language Understanding Using PROVIT
Amount: ¥ 1,960,400

Research Project Supported by Collaborative Research, Commissioned Research and Grant Donation 2017

Collaborative Research

1. Financial Provider for Research: Aqua Clue
Research Representative: Yuichi Yaguchi
Title: Development of a Remote Centralized Management Device Utilizing Image Processing Technology
Amount: N/A
2. Financial Provider for Research: International Institute Of Advanced Science and Technology (AIST)
Research Representative: Takeaki Sampe and Saji Hameed
Title: Research and Development of sophistication of wide area prediction technology for electric generation by renewable energy
Amount: N/A
3. Financial Provider for Research: Japan Aerospace Exploration Agency (JAXA)
Research Representative: Keitaro Naruse
Title: Triangulation based simultaneous localization and mapping by massively distributed robots
Amount: N/A

Projects

4. Financial Provider for Research: Kitashiba Electric Co. Ltd.
Research Representative: Qiangfu Zhao
Title: Research about automation of inspection process in the motor manufacturing facility
Amount: ¥ 990,000

5. Financial Provider for Research: Socionext Inc.
Research Representative: Hiroshi Saito
Title: Research on the High-level Synthesis Technique for Asynchronous Circuits
Amount: ¥ 1,000,000

6. Financial Provider for Research: EWM Japan, Ltd.
Research Representative: Jiro Iwase (Hideyuki Fukuhara)
Title: Development for distributed computer system using nano grid photovoltaic solar energy
Amount: ¥ 1,000,000

7. Financial Provider for Research: SIMPLEX QUANTUM Inc.
Research Representative: Wenxi Chen
Title: Development of HRV frequency range parameter calculation (LF/HF)
Amount: ¥ 3,014,000

8. Financial Provider for Research: Toolmart Corporation
Research Representative: Keitaro Naruse
Title: Preliminary analysis for automatic detection of potential incidents from video taken from forklift
Amount: ¥ 110,000

9. Financial Provider for Research: Ai-NET Corporation
Research Representative: Lei Jing
Title: R & D of Mimamori Wrist Band for the Elders
Amount: ¥ 495,000

10. Financial Provider for Research: Institute of Space and Astronautical Science (ISAS), JAXA

Research Representative: Hirohide Demura

Title: Research of “obstruction detection method for evaluation of landing point in lunar and planetary exploration” and “tools for analysis and operation of irregularly shaped small bodies”

Amount: ¥ 1,282,832

11. Financial Provider for Research: East Japan Accounting Center Co.,Ltd.
Research Representative: Yuichi Yaguchi
Title: A Technology Survey to Establish Secure Drone Flight and Security Evaluation of a Feasible Demonstration
Amount: ¥ 1,346,400
12. Financial Provider for Research: Toolmart Corporation
Research Representative: Keitaro Naruse
Title: Analysis for automatic detection of potential incidents from video taken from forklift
Amount: ¥ 550,000
13. Financial Provider for Research: Mitsubishi Shindo Co. Ltd.
Research Representative: Qiangfu Zhao
Title: Automatic defect detection based on surface images of copper plate
Amount: ¥ 300,000
14. Financial Provider for Research: Alpine Electronics, Inc.
Research Representative: Qiangfu Zhao
Title: Situation awareness of nearby environment for a personal vehicle
Amount: ¥ 700,000
15. Financial Provider for Research: Mitsubishi Pencil Co., Ltd.
Research Representative: Lei Jing
Title: Research and Development on an E-Pen to Digitalize the Handwriting
Amount: ¥ 1,320,000
16. Financial Provider for Research: Ai-NET Corporation
Research Representative: Lei Jing
Title: R & D of Mimamori Wrist Band for the Elders (2)
Amount: ¥ 1,485,000

Projects

Commissioned Research

1. Financial Provider for Research: Japan Science and Technology Agency (JST)
Research Representative: Keitaro Naruse
Title: Enhancement of disaster resilient functions to prevent and reduce damages
Amount: ¥ 2,785,300
2. Financial Provider for Research: Japan Science and Technology Agency (JST)
Research Representative: Junbo Wang
Title: Dynamic Evolution of Smart-Phone Based Emergency Communications Network
Amount: ¥ 10,660,000
3. Financial Provider for Research: Fukushima Prefecture
Research Representative: Keitaro Naruse
Title: Development of farming support robot (weeding robot system for rice fields)
Amount: ¥ 9,930,000
4. Financial Provider for Research: Ministry of Internal Affairs and Communications
Research Representative: Toshiaki Miyazaki
Title: Tracking of Living Activity and Health Condition in Smart Home using Radio reflection and Big data
Amount: ¥ 10,855,000
5. Financial Provider for Research: Kikuchi Seisakusho Co., Ltd.
Research Representative: Yuichi Yaguchi
Title: “Data processing and collecting sample of acquirable 3D topography data using 3D mapping technology” and “Examination for a fall accident simulator development”
Amount: ¥ 7,000,000

6. Financial Provider for Research: Japan Society for the Promotion of Science (JSPS)
Research Representative: Ryuhei Yamada
Title: Lunar impact flash observation by ground stations among two nations and an application of the results to future lunar seismic explorations
Amount: ¥ 960,000

7. Financial Provider for Research: Japan ADvanced system co.,ltd
Research Representative: Keitaro Naruse
Title: Support of prototype development of advanced safety system for industrial workers
Amount: ¥ 500,000

8. Financial Provider for Research: FUJITSU LABORATORIES LTD.
Research Representative: Akihito Nakamura
Title: Study of Personal Data Stores API
Amount: ¥ 1,000,000

9. Financial Provider for Research: FSK Corporation
Research Representative: Makoto Yashiro
Title: General wheel type / Crawler type Robot Model and Simulation Contents Construction, Simulation Accuracy verification
Amount: ¥ 14,997,150

10. Financial Provider for Research: GClue, Inc.
Research Representative: Yuichi Okuyama
Title: Evaluation of an Extension Board Development for Embedded GPU
Amount: ¥ 495,000

Grant Donation

1. Donation Provider: Telecommunications Advancement Foundation
Research Representative: Anh T. Pham
Title: Hybrid Architecture and Cross-Layer Design for Free-space Optics/Millimeter-Wave Front/Backhaul of the Next-Generation Mobile Networks
Amount: ¥ 550,000

Projects

2. Donation Provider: Foundation for Research of Arteriosclerosis
Research Representative: Wenxi Chen
Title: Research for statistical analysis of blood pressure data and Blood pressure measurement at household
Amount: ¥ 1,000,000

3. Donation Provider: Nakajima Foundation
Research Representative: Yoichi Tomioka
Title: Establishment of Fast Camera Identification Method for videos captured by smartphones
Amount: ¥ 1,100,000

4. Donation Provider: JAL Information Technology Co., Ltd.
Research Representative: The University of Aizu
Amount: ¥ 500,000

5. Donation Provider: JAL Information Technology Co., Ltd.
Research Representative: The University of Aizu
Amount: ¥ 500,000

6. Donation Provider: Aiki Co., Ltd. / Yakuju Co., Ltd.
Research Representative: Wenxi Chen
Title: To encourage a research of the biomedical information measurement technique
Amount: ¥ 1,000,000

7. Donation Provider: Aizu-Wakamatsu City
Research Representative: Student Affairs Division and The University of Aizu Revitalization Center
Amount: ¥ 10,000,000

Research Project Supported by Grants-in-Aid (Kakenhi) 2017

Grant-in-Aid for Scientific Research

1. Category: Scientific Research (C)
Research Representative: Jung-pil Shin
Title: Automonous generation of ink brush characters and hand-writing characters with individuality and natural typographical fluctuation
Amount: ¥ 1,170,000
2. Category: Scientific Research (C)
Research Representative: Toshiaki Miyazaki
Title: Research on ultra-low-power software defined sensor network with self-repairing capability
Amount: ¥ 780,000
3. Category: Scientific Research (C)
Research Representative: Yong Liu
Title: Evolutionary Approaches to Learning Self-awareness for a Decentralized System
Amount: ¥ 1,040,000
4. Category: Scientific Research (C)
Research Representative: Anh T. Pham
Title: Study and development of smart supermarket by using visible light communication (VLC) and smartphone technologies
Amount: ¥ 1,040,000

Projects

5. Category: Scientific Research (C)
Research Representative: Yodai Watanabe
Title: Research on optimality and existence of confidence variance method
Amount: ¥ 1,170,000

6. Category: Scientific Research (C)
Research Representative: Alexander Vazhenin
Title: Service-oriented infrastructure for education of Tsunami modeling and English
Amount: ¥ 1,040,000

7. Category: Scientific Research (C)
Research Representative: Debopriyo Roy
Title: 3D Printing in Creative Factory Contexts for English Language Learning
Amount: ¥ 910,000

8. Category: Scientific Research (C)
Research Representative: Hiroshi Saito
Title: Tamper resistance evaluation of asynchronous circuit by batch data method using programmable delay element
Amount: ¥ 910,000

9. Category: Scientific Research (C)
Research Representative: Konstantin Markov
Title: Speech based emotional and depressive mental state prediction using Gaussian Process state-space models
Amount: ¥ 1,300,000

10. Category: Scientific Research (C)
Research Representative: Incheon Paik
Title: Web service discovery and linkage on big data of linked service network
Amount: ¥ 1,430,000

11. Category: Young Research (B)
Research Representative: Jeremy Perkins

Title: An Acoustic Typology of Creaky Voice
Amount: ¥ 390,000

12. Category: Young Research (B)
Research Representative: Younghyon Heo
Title: Improving English speaking with parsing training
Amount: ¥ 650,000
13. Category: Scientific Research (C)
Research Representative: Julian Villegas
Title: Saund: Simulation of auditory near-field distance
Amount: ¥ 1,170,000
14. Category: Scientific Research (C)
Research Representative: Qiangfu Zhao
Title: Research on action pattern recognition based on small-scale human-presence sensor network
Amount: ¥ 910,000
15. Category: Scientific Research (C)
Research Representative: Shuxue Ding
Title: Research on real-time processing system of compression sensing and sparse expression
Amount: ¥ 1,300,000
16. Category: Scientific Research (C)
Research Representative: Hisako Yasuda
Title: Introduction of Japanese comics analysis for English education: An application to academic writing of role word analysis
Amount: ¥ 1,040,000
17. Category: Scientific Research (C)
Research Representative: Emiko Kaneko
Title: Development of picture prompt with difficulty level information and its effect of characteristics for L2 deliverance
Amount: ¥ 780,000

Projects

18. Category: Young Researcher (B)
Research Representative: Peng Li
Title: A machine learning based system for storing and processing big spatial-temporal data
Amount: ¥ 1,820,000
19. Category: Young Researcher (B)
Research Representative: Yutaka Watanobe
Title: An intelligent programming study support environment
Amount: ¥ 910,000
20. Category: Young Researcher (B) (period extension)
Research Representative: Ryuhei Yamada
Title: Development study of wide range seismometer aiming for network deployment for extreme environment
Amount: ¥ 0
21. Category: Scientific Research (C)
Research Representative: Maxim V. Ryzii
Title: Computer modeling of cardiac conduction system with nonlinear oscillators
Amount: ¥ 1,040,000
22. Category: Scientific Research (C)
Research Representative: Evgeny Pyshkin
Title: Advancing interfaces and algorithms used in traveler-centric information systems supporting geographical, cultural and historical perspectives
Amount: ¥ 910,000
23. Category: Scientific Research (C)
Research Representative: Naru Hirata
Title: Spectral data analysis of Asteroid Itokawa based on high precision shape model
Amount: ¥ 2,210,000
24. Category: Young Researcher (B)
Research Representative: Yukihide Kohira

Title: Development of designing technology of integrated circuit which is resistant to delay dispersion and aging degradation
Amount: ¥ 1,300,000

25. Category: Young Researcher (B)
Research Representative: Sender Dovchin
Title: Integrating English language based Western social media in the EFL classrooms in Japanese universities
Amount: ¥ 1,690,000
26. Category: Young Researcher (B)
Research Representative: Jun Ogawa
Title: Evolved soft robotics for efficient development of irregular terrain capable robots in disaster scene
Amount: ¥ 1,040,000
27. Category: Young Researcher (B)
Research Representative: Chunhua Su
Title: Method of authentication and privacy protection in IoT environment
Amount: ¥ 1,085,373
28. Category: Young Researcher (B)
Research Representative: Yosuke Kira
Title: Breakthrough of social dilemma research by establishing large-scaled online experiment method
Amount: ¥ 1,170,000
29. Category: Scientific Research (B)
Research Representative: Shigeo Takahashi
Title: Research on dynamic configuration optimization for annotative visual information display
Amount: ¥ 7,110,000
30. Category: Publication of Scientific Research Results
Research Representative: Nobuyoshi Asai
Title: Hyper-Dictionary: Hyper English word origin dictionary
Amount: ¥ 1,700,000

Projects

31. Category: JSPS Research Fellow
Research Representative: Huawei Huang
Title: Conjoint optimization of routing and protection in software defined network
Amount: ¥ 780,000

Contribution from outside the University

1. Category: Scientific Research (A)
Research Representative: Hiroshi Saito
Title: Research on ultra-low-power consumption technology of high-speed serial communication mechanism
Distribution: National Institute of Informatics Amount: ¥ 500,000
2. Category: Scientific Research (C)
Research Representative: Emiko Kaneko
Title: Vocabulary and grammar coaching for improvement of English delivery profluency
Distribution: Kobe Gakuin University Amount: ¥ 60,000
3. Category: Scientific Research (S)
Research Representative: Maxim V. Ryzhii
Title: Creation of two-dimensional atomic lamina heterojunction and its application for terahertz opto-electronics device application
Distribution: Tohoku University Amount: ¥ 700,000
4. Category: Scientific Research on Innovative Areas
Research Representative: Shigeo Takahashi
Title: Enhancing visualization foundation encouraging space modeling
Distribution: Keio University Amount: ¥ 2,600,000
5. Category: Scientific Research (C)
Research Representative: Takao Maeda
Title: Production method of novel series by multi-dimensionalization and structuration and their mathematics and application
Distribution: Niigata University Amount: ¥ 100,000

6. Category: Scientific Research (C)
 Research Representative: Yodai Watanabe
 Title: Production method of novel series by multi-dimensionalization and structuration and their mathematics and application
 Distribution: Niigata University Amount: ¥ 100,000

7. Category: Scientific Research (B)
 Research Representative: Naohito Nakasato
 Title: Co-design of accelerator and software for accelerating multiple-precision integral calculation
 Distribution: Hitotsubashi University Amount: ¥ 500,000

8. Category: Scientific Research (B)
 Research Representative: Zhu Xin
 Title: Multi-hierarchical analysis of role of TRPM family in development mechanism of atrial fibrillation
 Distribution: Fukuoka University Amount: ¥ 500,000

9. Category: Scientific Research (B)
 Research Representative: Yosuke Kira
 Title: Commons moving with citizen society — Mathematical sociology research for enlivenment of hilly and mountainous areas
 Distribution: Shibaura Institute of Technology Amount: ¥ 45,000

10. Category: Scientific Research (A)
 Research Representative: Emiko Kaneko
 Title: CEFR-J (English skill achievement index) compliant CAN-DO coaching task and prototype development and publication
 Distribution: Tokyo University of Foreign Studies Amount: ¥ 250,000

11. Category: Scientific Research (C)
 Research Representative: Kenta Ofuji
 Title: Investigation of linguistic feature of effective evacuation call sentence on natural disaster — for more appeal on refuge psychology
 Distribution: Gunma Prefectural Women's University Amount: ¥ 153,000

Projects

12. Category: Scientific Research (B)

Research Representative: Shigeyuki Aoki

Title: Fundamental research for development of interactive educational material for discussion education

Distribution: Kyushu University Amount: ¥ 150,000