

## Research Project Supported by Competitive Research Funding 2012

### General Research

1. Principal Investigator: Anh T. Pham  
Detailed Research Area: Young  
Title: Enabling Technologies and Architecture for Future Broadband Home Networks  
Amount: ¥ 1,447,000
2. Principal Investigator: Yutaka Watanobe  
Detailed Research Area: Young  
Title: Incorporating the AIDA Language in Aizu Online Judge System  
Amount: ¥ 1,273,000
3. Principal Investigator: Stanislav Sedukhin  
Detailed Research Area:  
Title: Synthesis of Extremely Scalable Parallel Algorithms/Architecture for 3-Dimensional Linear Transforms  
Amount: ¥ 850,000
4. Principal Investigator: Song Guo  
Detailed Research Area: Young  
Title: Self-Organizing Techniques for Cyber-Physical Systems Linear Transforms  
Amount: ¥ 1,010,000
5. Principal Investigator: Abderazek Ben  
Detailed Research Area: Seedbed  
Title: High-Radix Network-on-Chip Architecture for Future Many-Core Systems  
Amount: ¥ 1,119,000
6. Principal Investigator: Gennadiy Nikishkov  
Detailed Research Area: Others

## Projects

Title: Mesh generation for curved composite coupons  
Amount: ¥ 568,000

7. Principal Investigator: Cong-Thang Truong  
Detailed Research Area: Young  
Title: Client-based Adaptive Video Streaming with Dynamic Resource Prediction  
Amount: ¥ 808,000
8. Principal Investigator: Lei Jing  
Detailed Research Area: Young  
Title: Wearable2Cloud: A Framework for Transparently Selecting and Loading Cloud Services Using Wearable Device  
Amount: ¥ 734,000
9. Principal Investigator: Takafumi Hayashi  
Detailed Research Area: Seedbed/Collaborative  
Title: Design of High Performance Sequences and its application to Instrumentation, Communications, and Information Security  
Amount: ¥ 797,000
10. Principal Investigator: Jung-pil Shin  
Detailed Research Area: Seedbed  
Title: A Study on Pen Computing  
Amount: ¥ 975,000
11. Principal Investigator: Yukihide Kohira  
Detailed Research Area: Young  
Title: Design Automation for Noise Tolerance in Printed Circuit Board and Package Routing  
Amount: ¥ 767,000
12. Principal Investigator: Emiko Kaneko  
Detailed Research Area: Seedbed/Others  
Title: Comparison between spontaneous L2 speech and the scores provided by two representative English speaking tests  
Amount: ¥ 646,000

13. Principal Investigator: Xin Zhu  
 Detailed Research Area: Young  
 Title: Computer simulation of cardiac defibrillation: a tool for implantable cardioverter defibrillator therapy  
 Amount: ¥ 662,000
  
14. Principal Investigator: Neil Yuwen Yen  
 Detailed Research Area: Young  
 Title: Cyber Eye: A computational engine for information seeking, management and reuse  
 Amount: ¥ 739,000
  
15. Principal Investigator: Michael Cohen  
 Detailed Research Area: Others  
 Title: Avatar Expressiveness in Virtual Environments  
 Amount: ¥ 1,138,000
  
16. Principal Investigator: Tatsuki Kawaguchi  
 Detailed Research Area: Others  
 Title: "Autonomous learners" in the global era: An interdisciplinary approach to the investigation of learning motivation to meet the challenge of global living  
 Amount: ¥ 556,000
  
17. Principal Investigator: Vitaly Klyuev  
 Detailed Research Area: Seedbed  
 Title: An Opinion Mining Technique for Blogs  
 Amount: ¥ 557,000
  
18. Principal Investigator: Kazuyoshi MORI  
 Detailed Research Area: Collaborative  
 Title: Iterative Optimization by Two-Stage Stabilization Procedures  
 Amount: ¥ 740,000
  
19. Principal Investigator: Wenxi Chen  
 Detailed Research Area: Seedbed

## Projects

Title: System Development for Fetal and Maternal Health Surveillance  
Amount: ¥ 1,040,000

20. Principal Investigator: Incheon Paik  
Detailed Research Area: Seedbed  
Title: Active Situation Awareness Framework on Smart Mobile Services  
Amount: ¥ 1,071,000
21. Principal Investigator: Maxim Ryzhii  
Detailed Research Area: Seedbed  
Title: Theoretical studies and modeling of graphene-based optical modulators for terahertz bandwidth  
Amount: ¥ 647,000
22. Principal Investigator: Yuichi Okuyama  
Detailed Research Area: Young  
Title: An Implementation of 2DCDP Algorithm in FPGA  
Amount: ¥ 759,000
23. Principal Investigator: Yuichi Yaguchi  
Detailed Research Area: Young  
Title: Codelogy: Visualizing Programming Codes Association  
Amount: ¥ 1,019,000
24. Principal Investigator: Nobuyoshi Asai  
Detailed Research Area: Seedbed  
Title: Codelogy: Synesthetic Color Scheme  
Amount: ¥ 682,000
25. Principal Investigator: Lubashevskiy Igor  
Detailed Research Area: Seedbed  
Title: On-Off Intermittency in Stochastic Systems Caused by Bounded Capacity of Human Perception  
Amount: ¥ 1,019,000

26. Principal Investigator: Hitoshi Oi  
 Detailed Research Area: Collaborative  
 Title: Power-Efficient System Design with Multicore Processors  
 Amount: ¥ 718,000
  
27. Principal Investigator: Konstantin Markov  
 Detailed Research Area: Seedbed  
 Title: Improved Real Time Pronunciation Evaluation System based on Neural Network  
 Amount: ¥ 657,000
  
28. Principal Investigator: Jason Ginsburg  
 Detailed Research Area: Young  
 Title: Analysis of the Syntactic and Phonetic Structures of Interrogative Constructions in the Aizu Dialect  
 Amount: ¥ 643,000

## Mid-Term Category

1. Principal Investigator: Alexander Vazhenin  
 Detailed Research Area: Strategic  
 Title: Service-Oriented Multistage Tsunami Modeling Tools  
 Amount: ¥ 1,945,000
  
2. Principal Investigator: Chikatoshi Honda  
 Detailed Research Area: CAIST  
 Title: Development of optical instruments on Hayabusa-2 and next space missions  
 Amount: ¥ 800,000
  
3. Principal Investigator: Naohito Nakasato  
 Detailed Research Area: Strategic  
 Title: Development of Parallel Algorithms for a Heterogeneous System  
 Amount: ¥ 1,840,000
  
4. Principal Investigator: Subhash Bhalla  
 Detailed Research Area: CAIST

## Projects

Title: Making Cloud Computing Systems Usable for Medical-care and Health-care

Amount: ¥ 787,000

5. Principal Investigator: Tuan D. Pham  
Detailed Research Area: CAIST  
Title: Personalized identification of abdominal wall hernia meshes on computed tomography  
Amount: ¥ 1,439,000
6. Principal Investigator: Naru Hirata  
Detailed Research Area: CAIST  
Title: Integration of planetary exploration data to a GIS-based system for analysis, archive and distribution  
Amount: ¥ 1,570,000

## Mid-Term Category

1. Principal Investigator: Toshiaki Miyazaki  
Detailed Research Area: R&D local industry  
Title: Die-hard sensor network II: toward fully WiFi-based system (2nd year)  
Amount: ¥ 1,515,000
2. Principal Investigator: Qiangfu Zhao  
Detailed Research Area: R&D local industry  
Title: Morphing based steganography and its application to user authentication  
Amount: ¥ 1,075,000
3. Principal Investigator: Keitaro Naruse  
Detailed Research Area: R&D local industry  
Title: Motion Control of Mobile Robot of Wheel Slip Dynamics in Loose Soil  
Amount: ¥ 1,510,000
4. Principal Investigator: Jie Huang  
Detailed Research Area: R&D local industry

## Projects

Title: Analysis and enhancement of HRTFs for the improvement of a 3-D sound system constructed by horizontally arranged loudspeakers  
Amount: ¥ 795,000

5. Principal Investigator: Takahiro Tsuchiya  
Detailed Research Area: Development  
Title: Analysis the diffusion of the radioactive substance  
Amount: ¥ 746,000
  
6. Principal Investigator: Haruo Terasaka  
Detailed Research Area: R&D local industry  
Title: R&D for Japanese style "Green Whell"  
Amount: ¥ 1,370,000