Hybrid Twinning Program

-Appendix-

Shibaura Institute of Technology

2013/2014
Fields and Supervisors to receive students for the Hybrid Twinning Program

Shibaura Institute of Technology

2013/2014
## Contents

<table>
<thead>
<tr>
<th>Electric and Electronic Engineering</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUGURUMA, Hitoshi</td>
<td>1</td>
</tr>
<tr>
<td>NISHIKAWA, Hiroyuki</td>
<td>2</td>
</tr>
<tr>
<td>MATSUMOTO, Satoshi</td>
<td>3</td>
</tr>
<tr>
<td>TAKAMI, Hiroshi</td>
<td>5</td>
</tr>
<tr>
<td>UENO, Kazuyoshi</td>
<td>7</td>
</tr>
<tr>
<td>FUJITA, Goro</td>
<td>10</td>
</tr>
<tr>
<td>SAITOH, Atsushi</td>
<td>12</td>
</tr>
<tr>
<td>HASEGAWA, Tadahiro</td>
<td>13</td>
</tr>
<tr>
<td>SHIMADA, Akira</td>
<td>14</td>
</tr>
<tr>
<td>AKATSU, Kan</td>
<td>17</td>
</tr>
<tr>
<td>CHEN, Xinkai</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information Science and Engineering</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>OHKURA, Michiko</td>
<td>21</td>
</tr>
<tr>
<td>MIYOSHI, Takumi</td>
<td>22</td>
</tr>
<tr>
<td>AIBA, Akira</td>
<td>25</td>
</tr>
<tr>
<td>USAMI, Kimiyoshi</td>
<td>28</td>
</tr>
<tr>
<td>KAMIOKA, Eiji</td>
<td>29</td>
</tr>
<tr>
<td>GYODA, Koichi</td>
<td>31</td>
</tr>
<tr>
<td>INOUE, Masahiro</td>
<td>35</td>
</tr>
<tr>
<td>KIMURA, Masaomi</td>
<td>37</td>
</tr>
<tr>
<td>NIITSU, Yoshihiro</td>
<td>41</td>
</tr>
<tr>
<td>MORINO, Hiroaki</td>
<td>43</td>
</tr>
<tr>
<td>MANO, Kazunori</td>
<td>45</td>
</tr>
<tr>
<td>KAMEKO, Masaki</td>
<td>49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Chemistry</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASADOME, Takashi</td>
<td>51</td>
</tr>
<tr>
<td>YAMASHITA, Mitsuo</td>
<td>52</td>
</tr>
<tr>
<td>HAMASAKI, Keita</td>
<td>55</td>
</tr>
<tr>
<td>NAKAMURA, Asao</td>
<td>57</td>
</tr>
<tr>
<td>NOMURA, Mikihiro</td>
<td>59</td>
</tr>
<tr>
<td>Subject</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Bio-Science and Engineering</td>
<td>62</td>
</tr>
<tr>
<td>KOMEDA, Takashi</td>
<td>63</td>
</tr>
<tr>
<td>YAMAMOTO, Shin-ichiro</td>
<td>64</td>
</tr>
<tr>
<td>YOSHIMI, Yasuo</td>
<td>66</td>
</tr>
<tr>
<td>SHIBATA, Masahiro</td>
<td>69</td>
</tr>
<tr>
<td>HANAFUSA, Akihiko</td>
<td>71</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>72</td>
</tr>
<tr>
<td>TAKASAKI, Akito</td>
<td>73</td>
</tr>
<tr>
<td>YAMADA, Jun</td>
<td>75</td>
</tr>
<tr>
<td>HASEGAWA, Hiroshi</td>
<td>77</td>
</tr>
<tr>
<td>ITO, Kazuhisa</td>
<td>79</td>
</tr>
<tr>
<td>Materials Science and Engineering</td>
<td>81</td>
</tr>
<tr>
<td>MURAKAMI, Masato</td>
<td>82</td>
</tr>
<tr>
<td>NODA, Kazuhiro</td>
<td>84</td>
</tr>
<tr>
<td>KYUNO, Kentaro</td>
<td>85</td>
</tr>
<tr>
<td>AIZAWA, Tatsuhiko</td>
<td>86</td>
</tr>
<tr>
<td>MATSUMURA, Kazunari</td>
<td>89</td>
</tr>
<tr>
<td>Architecture</td>
<td>90</td>
</tr>
<tr>
<td>AKAHORI, Shinobu</td>
<td>91</td>
</tr>
<tr>
<td>ITO, Yoko W.</td>
<td>93</td>
</tr>
<tr>
<td>MURAKAMI, Kimiya</td>
<td>95</td>
</tr>
<tr>
<td>AKIMOTO, Takashi</td>
<td>97</td>
</tr>
<tr>
<td>MIURA, Masao</td>
<td>99</td>
</tr>
<tr>
<td>SHINOZAKI, Michihiko</td>
<td>100</td>
</tr>
<tr>
<td>MINAMI, Kazunobu</td>
<td>102</td>
</tr>
<tr>
<td>NAKAMURA, Hitoshi</td>
<td>104</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>106</td>
</tr>
<tr>
<td>MORITA, Masaru</td>
<td>107</td>
</tr>
<tr>
<td>OKAMOTO, Toshiro</td>
<td>109</td>
</tr>
<tr>
<td>MATSUMURA, Takashi</td>
<td>111</td>
</tr>
</tbody>
</table>
Electric and Electronic Engineering
-Electric and Electronic Engineering-

MUGURUMA, Hitoshi

Field of Interest: Nanobiotechnology, Bioelectronics,

Title of Courses: Advanced Research Program on Functional Devices Technology
Bioelectronics

Topics for Thesis: Biochip, Bio Fuel Cells,

Publications and International Conference Papers:


Other Features:

- Committee member of Biomedical and Organic Electronics in IEICE
URL: http://www.sic.shibaura-it.ac.jp/~muguruma/
- Electric and Electronic Engineering -

NISHIKAWA, Hiroyuki

Field of Interest: Electrical, Electronic, and Optical Materials and Devices, Quantum Beam Applications, Micromachining, MEMS, Microfluidic Devices

Title of Courses: Advanced Research Program on Environmental Energy Engineering
Advanced Materials for Energy and Related Areas

Topics for Thesis: Optical Devices and Microfluidic Devices Fabricated by Proton Beam Writing, Fabrication of 3D-Microstructures Using Proton Beam Writing, Dielectrophoretic Devices for Filtering of Microbes

Publications and International Conference Papers:

8. R. Tsuchiya and H. Nishikawa, “Fabrication of silica-based three-dimensional structures by changing fluence using proton beam writing”, Transactions of the
Materials Research Society of Japan, Volume 36, Number 3, pp.325-328 (2011)


Other Features:
Member of Institute of Electrical Engineers of Japan, Member of Japan Society of Applied Physics, Member of Japan Institute of Electronics Packaging,
Secretary of the Technical Committee on Electronic Materials, Institute of Electrical Engineers of Japan (IEEJ)
-Electric and Electronic Engineering-

MATSUMOTO, Satoshi


Title of Courses: Advanced Research Program on Environmental Energy Engineering
Power Apparatus Technology, Sustainable New Energy System

Electric double layer capacitor (EDLC), Partial discharge measurement, PD sensor using electro-magnetic wave method
Transient electromagnetic surge analysis, Lightning protection
Signal processing using wavelet analysis for partial discharge detection
Oscillating waveform analysis under lightning impulse test

Publications and International Conference Papers:

Other Features:
Vice President of Power and Energy Society of the Institute of Electrical Engineers of Japan (IEEJ), Senior member of IEEE and IEEJ, CIGRE member
TAKAMI, Hiroshi

Field of Interest:  Energy Conversion System, AC Motor Drives, Robust Control
Title of Courses:  Advanced Research Program on Systems Control Engineering
                     Electric Machinery and Applications
Topics for Thesis:  Optimal Control for Industrial Drives by Inverse LQ Design Method
                     Development of Inverse LQ Controller for Electrical Vehicle
                     Design of Robust Maglev System Based on Transfer Matrix Theory

Publications and International Conference Papers:
 H. Takami, kanokpanthorn L, S. Chiba, Y. Muramatsu,. Nakamura, "Multi-Purpose Converter


Electrical and Electronic Engineering

UNEO, Kazuyoshi

Field of Interest: Advanced metallization for integrated circuits, Reliability of interconnection, Nano materials and processes

Title of Courses: Advanced Research Program on Functional Devices Technology

Nanoelectronics Research

Topics for Thesis: Advanced materials and processes for metallization in nanoelectronics

Publications and International Conference Papers:

Other Features:
- Electroless plating barrier processes for copper metallization.
- Nanocarbon interconnect technologies
- Low resistance and high reliability copper interconnect technologies
-Electric and Electronic Engineering-

FUJITA, Goro

Field of Interest: Power System Planning, Control, Analysis, Modeling
Title of Courses: Advanced Research Program on Environmental Energy Engineering
Electric Power System Engineering
Topics for Thesis: Power Quality Control and Evaluation

Publications and International Conference Papers:

Other Features:
(1) The laboratory including about 17 students including 2 Postdoctoral fellow, 2 D.C. students, 4 M.C. students, forming Power system analysis group, Power storage group, Power quality group, and, Dispersed power source group. 4 students have graduated D.C., and about 10 graduated M.C.
(2) Website: http://www.sic.shibaura-it.ac.jp/~gfujita/
SAITOH, Atsushi

Field of Interest: Development of Chemical Sensor and its application
Title of Courses: Advanced Research on Telecommunication Function Control
Telecommunication System
Topics for Thesis: Odor recognition system and odor generator
SAW wireless and passive multi-sensing device
Sensing system for recognition of activities of resident in a room
Development of intelligent table for watching over elderly person

Publications and International Conference Papers:

-Electric and Electronic Engineering-

HASEGAWA, Tadahiro

Field of Interest: Micro Total Analysis Systems, Micro Mechatronics
Title of Courses: Advanced Research Program on Systems Control Engineering
Micro Mechatronics
Topics for Thesis: Micro fluidic chip, Micro chemical chip, Portable healthcare device
Micro fabrication

Publications and International Conference Papers:

Other Features:
The lab researches and develops micro machines for medical use (μ-TAS : Micro Total Analysis Systems) using robotics and micro fabrication technologies. The lab focuses especially on healthcare devices such as a portable blood test kit enabling the checking of personal health anywhere, anytime. Research such as this will certainly contribute to the development of medical and bio areas from the engineering side.
-Electric and Electronic Engineering-

SHIMADA, Akira

Field of Interest: Motion control, robotics, and mechatronics
Title of Courses:
Advanced Research Program on Systems Control Engineering
Robotics and Mechatronics

Topics for Thesis:
1. Studies on disturbance observer based non-linear control
2. High speed motion control on autonomous mobile robots
3. Sensor-less grasping control on multi-fingered robot hands
4. Motion control on disaster relief robots

Publications and International Conference Papers:

9. Tadayuki Nakano, Akira Shimada, Syunnji Usui: An Approach to Robotization of
Rokogi-Wasen, ICCAS·SICE Joint Conference 2009, 1A·08·1, p.112-117,2009·8


Other Features:
Motion control technology is a fundamental component on today's robotics and mechatronics. It is based on dynamical modeling and feedback control engineering, which covers wide range of applied electronic and mechanical technologies. The motion control was begun by general motor drive systems and it has been expanded to robot control, vehicle control, and some other non-linear system control. Non-linear mechanical systems which we study have some physical constraints, such as position, velocity, and acceleration constraints. They are called non-holonomic systems and it is not easy to design the suitable motion controllers. The control technique we present is based on observer techniques which are useful components in modern control engineering. Furthermore, we recently try to connect motion control technology with software engineering using some system modeling tool such as UML and SysML.

Prof. Shimada was born in Japan, in 1958. He received the Ph.D from Keio University, in 1996. He worked at Seiko Instruments as a robotics engineer. He had developed several kinds of industrial robot controllers, and presented disturbance observer based control techniques (1983-2001). Concurrently, he was a part time lecturer (1995-1999) and a guest professor at Chiba Univ. (2000-2001). He was an associate prof. at Polytechnic Univ. (2001-2009). Now, he is a full professor at SIT. The considerable experiences of enterprise engineer and university professor are his forte.
- Electric and Electronic Engineering-

AKATSU, Kan

Field of Interest: Power Electronics, Energy conversion, Electric Machines, Advanced Control

Title of Courses: Advanced Research Program on Systems Control Engineering
Electric Machinery and Applications

Topics for Thesis: ✓ PM machine design for Electric Vehicle
✓ High efficiency motor control for general application
✓ High frequency Converter / Inverter
✓ Next generation rare earth free motors
✓ High frequency non-contact DC-DC converter e.t.c

Publications and International Conference Papers:

Shown only papers in FY2012 (more paper will be submitted),

- Takanori Nagai, Gaku Ando and Kan Akatsu, “Consideration of CSI Drive for SRM Compared with VSI Drive”, IPEMC (International Power Electronics and motion Control Conference) 2012, June 2-5, 2012, Harbin, China

Other Features:
Recent global warming is a critical issue in the world. It is required to reduce CO2 by developing higher efficiency power electronics equipments.

My laboratory especially focuses on the motor and the inverter called power electronics in the various field such as home appliance, railway system, industry equipments and electric / hybrid electric vehicles. The technique of the power electronics must help you in your carrier because almost every energy conversion must use the power electronics technique: machine design, converter / inverter design and control design.

We currently have many original motors including rare-earth less motors which are driven by original made inverters and controllers. Especially high frequency is a key issue in this field since the wide band gap power devices have been developed. You can design a motor and an inverter as you like by using Finite Element Analysis, circuit simulator, and some software.

Now I have 21 students, 3 Ph.D candidates, 11 master course students and 7 bachelors including 1 lady from Malaysia. We usually submit our papers to the international conferences sponsored by IEEE, IEEJ and so on. All master course students submit at least one paper to the international conference. Our field is in the IEEE IAS, IEEE PE and IEEJ Japan and sometimes we go to the EPE conference. I am an associate editor in IEEE IA.

Owing to a lot of student efforts, I have 10 joint researches with companies, 2 national research projects and some individual projects. I hope you will get a lot of experiences and techniques in my laboratory.
CHEN, Xinkai

Field of Interest: Control Systems Engineering, Robotics, Mechatronics
Title of Courses: Advanced Research Program on Systems Control Engineering
Research on Control Systems
Topics for Thesis: Adaptive Control for Piezo-Actuated Nano-Stage
Advanced Control for Robot Arm Driven by Artificial Muscles
Robust Control for Magnetostrictive Actuator
High Precision Control for XY-Table
Intelligent Visual Feedback Control for Helicopter
Robust Control Theory for Systems with Hysteresis
Path Planning for Mobile Robots

Publications and International Conference Papers (Recent Three Years):

8. X. Chen and N. Nagaya, “Adaptive control for piezo-actuated stage based on continuous-time approach atuated stage based on continuous-time approach,” IEEE Int. Conf. on Mechatronics and Automation, August 5-8, 2012, Chengdu, China.

Other Features: The research in this laboratory covers a wide-range of topics related to systems and controls, intelligent systems, robotics and mechatronics. The overall goal of our research is to provide a systematic methodology to design the controllers that will cause the systems to behave in the desired manner, or to give a systematic solution/analysis for the considered systems.

Dr. Chen has published many papers at the prestigious journals in Systems and Control (such as IEEE Transactions on Automatic Control, Automatica, IEEE Transactions on Industrial Electronics, etc). He has been served as Program Chair, Program Co-Chair, and Program Committee Members for many well-known international conferences, and editors for several leading journals in Systems and Control (such as IEEE Transactions on Automatic Control).
Information Science and Engineering
-Information Science and Engineering-

OHKURA, Michiko

Field of Interest: Interactive Systems, Virtual environment, Usability of Information Systems, Emotional (Kansei) engineering, Medication Interface to Prevent Medical Accident

Title of Courses: Advanced Research Program on Systems Control Engineering Information System Engineering

Topics for Thesis: Evaluation of emotional aspects of Interactive Systems, Collaborative Virtual Environment for Distance Education, Interactive system for visually impaired, Interactive system for rehabilitation, Medication Interface to Prevent Medical Accident

Main Publications and International Conference Papers from 2010:

11. S. Tivatansakul, S. Tanupaprungsun, K. Areekijseree, T. Achalakul and M.


Other Features:
- Served as one of the scientific advisory boards of the 1st International Conference on Affective and Pleasurable Design (2012)
- Served as one of the scientific advisory boards of the 2nd International Conference on Human Factors and Ergonomics in Healthcare (2012), and the 1st International Conference on Human Factors and Ergonomics in Healthcare (2010)
- Served as an organizer of 15th International Conference on Human-Computer Interaction (HCI International 2013), 14th International Conference on Human-Computer Interaction (HCI International 2011), 13th International Conference on Human-Computer Interaction (HCI International 2009), 12th International Conference on Human-Computer Interaction (HCI International 2007), and 11th International Conference on Human-Computer Interaction (HCI International 2005)
MIYOSHI, Takumi

Field of Interest: Internet Technology, Multimedia Communication, Peer-to-Peer Communication, Grid Computing, Mobile Ad Hoc / Sensor Network, E-Learning

Title of Courses: Advanced Research on Telecommunication Function Control, Information Networking Systems


Publications in recent 4 years (English reviewed papers only):


Other Features:

Two doctoral students of Hybrid Twinning Program have successfully got their Ph.D. degrees in September 2009 and 2012, after their three-year study. Another doctoral student has joined from Hanoi Institute of Science and Technology, Vietnam, since November 2012. He is currently studying traffic control mechanism on peer-to-peer (P2P) video streaming services. A master-course student has also joined from Hanoi since November 2012. Her research topic is related to the quality of experience (QoE) of users on video streaming services.

In 2012, I have five Japanese master-course students. For undergraduate research, seven Japanese students are studying in my laboratory. Their researches include: traffic analysis and modeling on P2P video streaming, traffic control on P2P video streaming, network design and routing strategy on wireless ad-hoc network, and QoE evaluation on mobile network and applications.

I was a visiting scholar in Laboratoire d’Informatique de Paris 6 (LIP6), UPMC Sorbonne Universités, Paris, France. I have started some collaborative study with professors in LIP6 and in HUST on P2P, overlay, and wireless sensor networks research field. I also have many national research collaborations with Tokyo Metropolitan University, Waseda University, Sophia University, Asahi University, and NTT Communications Corp. I strongly expect that high motivated students would have interest in these topics.
-Information Science and Engineering-

AIBA, Akira


Title of Courses: Advanced Research on Telecommunication Function Control

Studies on Problem Solving Systems

Topics for Thesis: Pedestrian Navigation System using Extended Reality,
Cooperative Scheduling By n-ary negotiation in Distributed Constraint Solving,
Robustness of Multi-agent System in Dynamic Environment

Publications and International Conference Papers:


Other Features:
Recent Research Topics
1. Research on information infrastructure system for wheel-chair users
2. Recognition of historical hand written Japanese character HIRAGANA
- Information Science and Engineering -

USAMI, Kimiyoshi

Field of Interest: Computer Architecture, LSI design
Title of Courses: Advanced Research Program on Systems Control Engineering
Computer Architecture and LSI Design
Topics for Thesis: Energy efficient computer architecture and LSI chips

Publications and International Conference Papers:


Other Features:

- Department head of Electrical Engineering and Computer Science in Graduate School of Science and Engineering since 2012.
- Collaborative research with Keio Univ., Kyoto Univ., Univ. of Electro-Communications and Japanese companies under the Japanese national project (LEAP) since 2011 on ultra low-power microprocessor design technology.
- Collaborative research with Univ. Tokyo, Keio Univ., Tokyo Univ. of Agriculture and Technology and Univ. of Electro-Communications under the Japanese national project (CREST) from 2006 to 2011 on low-power/high-performance system LSI.
- Member of IEEE, ACM and IEICE.

URL: http://www.usamilab.ise.shibaura-it.ac.jp/
KAMIOKA, Eiji

Field of Interest: Ubiquitous Computing, Context-Aware Computing, Mobile Computing, Mobile Multimedia Applications

Title of Courses: Advanced Research on Telecommunication Function Control
Research in acoustic communication and information systems

Topics for Thesis: Personal Communications in Ubiquitous Environment
Context-aware Applications for Ubiquitous Computing
Quality of Mobile Multimedia Communications

Publications and International Conference Papers:

1. Quang Tran Minh, Muhammad Ariff Baharudin, and Eiji Kamioka, "Synergistic Approaches to Mobile Intelligent Transportation Systems Considering Low Penetration Rate", Pervasive and Mobile Computing, Elsevier, (accepted).
3. Quang Tran Minh, Muhammad Ariff Baharudin, and Eiji Kamioka, "Context-Aware Mobile Intelligent Transportation Systems ", Proceedings of the 76th Vehicular Technology Conference (VTC2012-Fall), September 3-6, Quebec, Canada, 2012, CD-ROM.
8. Quang Tran Minh, Muhammad Ariff Baharudin and Eiji Kamioka, "Uncertain Low Penetration Rate – A Practical Issue in Mobile Intelligent Transportation


Other Features:
- Served as the chair of Technical Committee on Mobile Multimedia Communications, IEICE, May 2009 - May 2011. Currently, one of the advisory board members of Technical Committee on Mobile Multimedia Communications.
- Served as the publication chair of 7th IEEE International Conference on Mobile Data Management (MDM2006).
- Served as a technical program co-chair of 3rd IPSJ International Conference on Mobile Computing and Ubiquitous Networking (ICMU2006).

English Website:
http://www.kamioka.ce.shibaura-it.ac.jp/index-e.html
Information Science and Engineering

GYODA, Koichi

Field of Interest: Wireless Communications network, Disaster communications
Title of Courses: Advanced Research on Telecommunication Function Control

Wireless Communication Systems Engineering

Topics for Thesis:
Research on Ad Hoc Network Performance for Disaster Communication Models
Research on Communication Performance for Search Robot Rescue System by use of Hybrid ad hoc Network

Publications and International Conference Papers:
7. K. Gyoda, Y. Hada and O. Takizawa, “Performance analysis of the network model


Other Features:
Website: http://www.glab.ce.shibaura-it.ac.jp/WCNLAB_EN/
INOUUE, Masahiro

Field of Interest: Ubiquitous Network, M2M (Machine to Machine Communication)  
Home Network, Networked Embedded System, Systems Engineering  
Project Management, Engineering Education

Title of Courses: Advanced Research on Telecommunication Function Control  
Information Networking Systems

Topics for Thesis: Architecture of Consumer and Home Network  
Disaster Information System, Home Energy Management System,  
Sensor Network, M2M System  
Embedded Systems Engineering, Model Based Systems Engineering,  
Project Management Education

Publications and International Conference Papers:


Other Features:
Dr. Masahiro Inoue is a professor of College of Systems Engineering and Science, Shibaura Institute of Technology. His field of research includes embedded system, ubiquitous network, M2M(Machine to Machine), systems engineering, and project management. He received his B.S. and M.S degree in Applied Physics from Waseda University and Ph. D degree in Computer Science from Shizuoka University. He was engaged in research and development at Mitsubishi Electric Corporation. During 1990-1991, He was a visiting research scientist at the University of Michigan. In 2005, He became a professor of Shibaura Institute of Technology. He is a Professional Engineer in Japan (PEJp) and a Project Management Professional (PMP).
KIMURA, Masaomi

Field of Interest:  Data engineering, fundamental studies and applications of databases, data mining and text mining techniques, Topic Maps, Complex networks, analyses of data related to medical safety

Title of Courses:  Advanced Research Program on Systems Control Engineering Data Engineering

Topics for Thesis:  Development of novel data/text mining techniques Development of novel databases (e.g. Topic Maps database) Application of data/text mining techniques to data in medical area Fundamental studies and applications of complex networks

Publications and International Conference Papers:
8. Ryo Okuya, Hirotatsu Ishida, Keita Nabeta, Masaomi Kimura, Michiko Ohkura,


**Other Features:**
In 2012, we have 8 master course students, 8 undergraduate students in our laboratory. We believe that enhancement of communication between members is a key to promote the studies that make data useful for human life. We look forward to inviting you as a new member of our laboratory.
NIITSU, Yoshihiro

Field of Interest: Context-aware Technology, Ubiquitous Networking, Mobile Ad-hoc Networks, Sensor Networks, Network Service Systems for Supporting Elderly or Handicapped Persons

Title of Courses: Advanced Research on Telecommunication Function Control

Information Networking Systems

Topics for Thesis: Context-aware Applications for Ubiquitous Networking
Network Configuration and Routing on Mobile Ad-hoc Networks / Sensor Networks
Intelligent Sensing and Context Presumption for Network Applications
Service Control Mechanism on NGN and Web Service Cooperation

Publications and International Conference Papers:
4. Itaru Sekita and Yoshihiro Niitsu, "A Study on Control Method of Movable Nodes for Sensor Networks", International Conference in Intelligence of Networks (ICIN2010), Berlin Germany, S6b-1 pp.1-6, October 2010.

Other Features:
- Fellow of the Institute of Electronics, Information and Communication Engineers (IEICE)
- Senior Member of IEEE
- Currently serving as a Technical Program Committee Member of ICIN
MORINO, Hiroaki

Field of Interest: Mobile Information Networking, Timely Information Providing System using Wireless Networks, Peer-to-peer Communication, Participatory Sensing using Wireless Networks and Sensors

Title of Courses: Advanced Research on Telecommunication Functional Control Telecommunication Networks

Topics for Thesis: Contents-Aware Bandwidth Sharing in Mobile Networks Topology Design and Routing Control for P2P Networks Human Motion Detection Using Wireless LANs and Sensors

Publications and International Conference Papers:


[16] Hiroaki Morino, Takumi Miyoshi and Masakatsu Ogawa,

[17] Hoang Nam Nguyen and Hiroaki Morino,

[18] Hiroaki Morino, Takumi Miyoshi and Masakatsu Ogawa,

[19] Hiroaki Morino, Takumi Miyoshi and Masakatsu Ogawa,

[20] Hiroaki Morino, Tadao Saito and Mitsuo Nohara,

[21] Hiroaki Morino, Tadao Saito and Mitsuo Nohara,

[22] Hiroaki Morino, Nguyen Hoaison, Thai Thach Bao, Hitoshi Aida and Tadao Saito,


Other Features:
Examples of master thesis titles are as follows:

Remote Estimation of Crowdedness in Indoor Shops by Collecting Acceleration Sensor Data of Users’ Mobile Phones

Topology-aware relay node selection in P2P multicast streaming considering Network Centrality

Fast route reconstruction using VLAN spanning trees for wireless mesh networks

English Web Site : www.morino.ce.shibaura-it.ac.jp/eng/index.html
MANO, Kazunori

Field of Interest:
(1) Speech, audio and language information processing
(2) Multimedia data compression, retrieval, and mining.
(3) Statistical signal processing.

Title of Courses:
Advanced Research on Telecommunication Function Control (Doctor Course).
Advanced Communication Design (Master Course)

Topics for Thesis:
(1) Higher resolution speech coding and synthesis system by using case-based large databases and statistical signal processing approaches.
(2) Media conversion system from linguistic and emotional information of speech to animated texts and images for effective foreign language learning.
(3) Multimedia data compression, retrieval, and mining systems for human communication services.

Publications and International Conference Papers:


Other Features:
- Member of IEEE, Senior Member of IEICE, Member of ASJ, and Member of IPSJ.
- 64 patents, some of which are incorporated in current mobile speech codec standards.
- URL: http://www.sic.shibaura-it.ac.jp/~mano/index_e.html
KAMEKO, Masaki

Field of Interest: Algebraic Topology
Title of Courses: Advanced Research Program on Systems Control Engineering
Applied Mathematical Science/Exercise 1
Topics for Thesis: Hit problem, cohomology of classifying spaces

Publications and International Conference Papers:

Other Features:
I am a mathematician. You may find my name in the Mathematics Genealogy Project http://genealogy.math.ndsu.nodak.edu/
Applied Chemistry
Field of Interest: Analytical Chemistry, Environmental Analytical Chemistry
Title of Courses: Advanced Research Program on Eco-materials Engineering
Environmental Analytical Chemistry
Topics for Thesis: Sequential Injection Immunoassay for Environmental Pollutants, Determination of Environmental Pollutants Using Microfluidic Polymer Chip Integrated with an ISE Detector, Immunoassay for Environmental Pollutants based on a Surface Plasmon Resonance Sensor

Publications and International Conference Papers:
1) B. Tossanaitada, T. Masadome, T. Imato, "Sequential injection analysis of nitrate ion using a microfluidic polymer chip with an embedded ion-selective electrode", Analytical Methods, in press.
11) T. Masadome, Y. Yano, "Response of surface-plasmon resonance sensor based on gold


**Other Features:**
2) The Takeda Techno-Entrepreneurship Award 2001, “Development of Portable Immunosensor for Endocrine Disruptors Based on Surface Plasmon Resonance with Assistance of Sequential Injection Technique”.
YAMASHITA, Mitsuo

Field of Interest: Biological Chemistry, Microbiology, Gene Technology
Title of Courses: Advanced Research Program on Eco-materials Engineering
Life Science

Topics for Thesis:
- Lipoteichoic acids from Lactobacillus plantarum L137 elicit strong interleukin 12-inducing activities,
- Allergen synthesis in microorganisms for prototype of the allergens detection chip,
- Optimization of seleno-oxanions reduction and recovery of elemental and gaseous selenium using selenate reducing bacterium, Pseudomonas stutzeri NT-I

Publications and International Conference Papers:

Other Features:
Member of the Society for Biotechnology, Japan
Member of Japan Society for Bioscience, Biotechnology, and Agrochemistry
Member of the Japanese Biochemical Society
Member of Japanese Association for Food Immunology Society
HAMASAKI, Keita

Field of Interest: Chemical biology
Title of Courses: Advanced Research Program on Bio-function Control Study on chemical biology
Topics for Thesis: HIV-1 Tat fused fluorescent proteins, their synthesis and characterization as protein-probes for drug discovery. Cyclodextrin-peptide hybrids, their synthesis and evaluation as dynamic nano-materials Nucleobase tagged neamines as binding inhibitors for HIV-1 TAR-Tat

Publications and International Conference Papers:
1. Host-guest-bridge induces irreversible helix folding in a short peptide
   Yuki Nakamura; Kazuya Nakazawa; Keita Hamasaki
   Chemistry Letters, (2012), 41, 9, 908-909

2. A synthetic approach to aromatic aminoglycoside as a neamine mimic
   Ryo Inoue; Sho Matsuda; Yosiki Oda; irofumi Ooyama; Akihiro Yoshida; Keita Hamasaki; Takashi Yamanoi
   Heterocycles (2010), 52, 2, 1335-1343

3. 6,7,8,10-Tetra-O-benzyl-1,2,3,4-tetradeoxy-α-D-gluco-dec-5-ulopyranosyl 2,3,4,6-Tetra-O-benzyl-α-D-glucopyranoside
   Takashi Yamanoi, Ryo Inoue, Yoshiki Oda, Keita Hamasaki
   Molbank, (2010), 33-4

4. Formation of O-glycosidic linkages from 1-hydroxy sugars by bismuth(III) triflate-catalyzed dehydrative glycosidation
   Takashi Yamanoi, Inoue, Matsuda Ryo, Sho Matsuda, Kazuya Iwao, Yoshiki Oda; Akihiro Yoshida, Keita Hamasaki
   Heterocycles, (2009), 77(1), 445-460

5. Bismuth(III) triflate-catalyzed dehydrative glycosidation using 1-hydroxy sugars
   Takashi Yamanoi, Ryo Inoue, Sho Matsuda, Keita Hamasaki

6. Synthesis of trehalose mimics by bismuth(III) triflate or bis(trifluoromethane)sulfonimide-catalyzed 1-C-methyl-α-D-hexopyranosylation
   Takashi Yamanoi, Ryo Inoue, Sho Matsuda, Kaname Katsuraya, Keita Hamasaki


Proceedings

1. Nucleobase modified neamines, their synthesis and binding specificity for HIV TAR RNA
   Watanabe, Kenatarou; Katou, Toyofusa; Yasunori; Ikezawa; Yajima, Saki; Shionoya, Hirohito; Akagi, Takashi; Hamasaki, Keita

2. Amino disaccharides having an α-(1→4) or a β-(1→4) linkage, their synthesis and evaluation as a potential inhibitor for HIV-1 TAR·tat
   Iguchi, Takashi; Ishikawa, Hirohumi; Matumoto, Hiroharu; Mizuno, Mamoru; Goto, Kohtaro; Hamasaki, Keita
   Nucleic Acids Symposium Series (2005), (49), 169-170

Other Features:

HAVE A TICKET? Come on board to our ship, CHEMICAL BIOLOGY. Here we go to the voyage on the ocean of GENOME! Let's explore the RNA continent to find treasure of the HISTORY of LIFE!

Nowadays, all we know that human genome is constructed with 3 X 10⁹ base pairs of DNA. Even though, only 2% of it is used as the information of protein of which construct our body. What is other 98% of genomic information? Is that junk? On the other hand, 70% of genome is transcribed toward RNA. Definitely, there is SOMETHING ABOUT RNA! We have been voyage the ocean of genome, focus on RNA and RNA binding protein, small molecules and looking for the rules for the recognition and correct folding of those biological molecules. CHEMICAL BIOLOGIST manages tool sets of organic, inorganic, analytical and physical chemistry, molecular biology as well. At the end of this voyage, you might have a broad knowledge and experimental skills for CHEMISTRY and BIOLOGY. All you need now is a ticket for CHEMICAL BIOLOGY. Just ride on our ship, start voyage to find amazing treasures on the RNA continent.
-Applied Chemistry-

NAKAMURA, Asao

Field of Interest: Supramolecular Chemistry, Organic Photochemistry, Photomedicine
Title of Courses: Advanced Research Program on Eco-materials Engineering
Supramolecular Chemistry
Topics for Thesis:
• Use of microreactor in organic photochemical reactions
• Development of fluorescent probes for medical uses
• Photodynamic therapy
• Photochemical control of the bio-inspired mineralization

Publications and International Conference Papers:

Other Features:
Research collaboration is going on with National Institute of Health Sciences and National Institute of Radiological Sciences.
NOMURA, Mikihiro

Field of Interest: Energy and Water treatment based on Chemical Engineering
Title of Courses: Advanced Research Program on Eco-materials Engineering
Energy Engineering
Topics for Thesis: Development silica RO membranes for water purification
Preparation of MOR zeolite membranes for improvement of petrochemical complexes
High temperature H₂ separation through Pd membranes

Publications and International Conference Papers:


Other Features:
Bio-Science and Engineering
-Bio Science and Engineering-

KOMEDA, Takashi

Field of Interest:  Biomedical Robotics, Rehabilitation engineering
Title of Courses:  Advanced Research Program on Systems Control Engineering
Research on Bio Functional and Bio System
Topics for Thesis:  Master-slave system for operation
Haptic device for rehabilitation use
Human robot interface

Publications and International Conference Papers:


Other features:

Research title for doctor course students
- Development of a patient simulator for upper limb to train the therapist
- Master slave system for assistive technology
YAMAMOTO, Shin-ichiroh

Field of Interest: Physiological Engineering, Rehabilitation Engineering

Title of Courses:
- Advanced Research Program on Systems Control Engineering
- Research on welfare and rehabilitation support system

Topics for Thesis:
- Novel Development of Gait Training System for Spinal Cord Injury and Stroke
- Biomechanical Analysis of Posture Control for Standing and Walking in Human

Publications and International Conference Papers:


11. Y. Agarie, T. Uchikawa, S. Yamamoto, T. Kubo: Comparison of 3-dimensional Force Affected by Ischial-Ramal Containment (IRC) Socket's each Wall in Different Socket Depths, Asian Prosthetic and Orthotic Scientific Meeting 2009 (APOS2009), Hong Kong, 2009.8

12. Y. Shibata, Y. Agarie, H. Ohtsuka, S. Yamamoto: Development of the Upper limb Orthosis to Apply Neuro-Rehabilitation for Brachial Plexus Paralysis, Asian Prosthetic and Orthotic Scientific Meeting 2009 (APOS2009), Hong Kong, 2009.8


-Bio-Science and Engineering-

YOSHIMI, Yasuo

Field of Interest:
- Biomimetic Chemical Engineering for Clinical Use
- Artificial Organs
- Design of Molecularly Recognitive Polymers for Biosensors

Title of Courses: Advanced Research Program on Bio-function Control Chemical Engineering

Topics for Thesis:
- Monitoring Drugs in Blood using Molecularly Imprinted Polymers
- An Implantable Glucose Sensor for Diabetes Using Molecularly Imprinted Polymer
- Development of Artificial Synapse using an Electrochemical Micropump
- A Novel Separation Process using a Molecularly Imprinted Nanoparticles
- A Voltage Imaging of Central Nervous System

Publications and International Conference Papers:


8. K. Hattori, Y. Yoshimi, T. Ito, K. Hirano, F. Kohori and K. Sakai: Effect of Electrostatic Interactions on Gate Effect in Molecularly Imprinted Polymers, Electrochemistry, 72, 508-510, 2004


**Other Features:**

Human body is an integration of ideal chemical plants. Then philosophy of chemical engineering is available for development for artificial organs. Then we are developing novel devices for artificial organs based on chemical engineering.

We are preparing the following themes for the HBT.

**(A) Development of biomimetic sensor for artificial organs**

Increasing of diabetic patients is very serous for newly developed countries. Artificial pancreas controlling blood sugar automatically needs implantable glucose sensor. However conventional
enzymatic glucose sensor cannot endure sterilization process. Then we are developing an “enzyme free” glucose sensor using molecularly recognised synthetic polymers.

(B) Basic Artificial Sense Organs

Development of prosthesis technology of sense organs (eyes, ears, etc.) or brain progresses behind that of heart or kidney. So we are challenging the development of basic technology or artificial sense organs (artificial synapse and voltage imaging of neuronal networks.)

We need your young power for developing the new frontier in chemical engineering.

I was a secretary general of 14th Symposium of Young Asian Biochemical Engineers’ Community held in 2008, Tokyo. So I have personal connections with many Asian scientists of Biochemical Engineering.
SHIBATA, Masahiro

Field of Interest: Vascular Biomechanics, Regenerative medicine, Microvascular hemodynamics and oxygen dynamics

Title of Courses: Advanced Research Program on Bio-function Control System research in biomedical control

Topics for Thesis: Oxygen measurement in Microcirculation Capillary angiogenesis for regenerative tissue Experimental and theoretical evaluation of vascular wall elasticity In vivo imaging of capillary blood flow

Publications and International Conference Papers:


-Bio-Science and Engineering-

HANAFUSA, Akihiko

Field of Interest: Welfare and Human Engineering, Rehabilitation Engineering
Title of Courses: Advanced Research Program on Bio-function Control
Research on welfare and rehabilitation support system
Topics for Thesis: Development of welfare and rehabilitation systems.
Development of computer assisted design system for welfare and medical equipments including human body model.
Brain computer interfaces for welfare equipments.

Publications and International Conference Papers:
Mechanical Engineering
Mechanical Engineering

TAKASAKI, Akito


Title of Courses:
- Advanced Research Program on Eco-materials Engineering
- Structure and Properties of Materials for Mechanical Engineering

Topics for Thesis:
- Synthesis of Novel Hydrogen Storage Materials
- Hydrogenation Properties of Advanced Materials
- Powder Metallurgy
- Functional Materials (Shape Memory Alloys, Thin Films)

Publications and International Conference Papers:

11. A. Takasaki, T. Okuyama, J.S. Szmyd, Synthesis of Ti-Zr-Ni Amorphous and Quasicrystal Powders by Mechanical Alloying, and their Electrochemical Properties, Journal of
Materials Research, 25(8), (2010) 1575-1582

(Number 3 to 5 are publications with a HBT student)

Other Features:

- http://www.qsys.se.shibaura-it.ac.jp/m-mecha/
-Mechanical Engineering-

YAMADA, Jun

Field of Interest: Radiation Transfer in Thermal System, Skin Optics, Computational Electromagnetics

Title of Courses: Advanced Research Program on Environmental Energy Engineering

Topics for Thesis: Studies on Radiation Transfer

Radiative Characteristics of Surface with Nano-structure

Publications and International Conference Papers:


Other Features:
-Mechanical Engineering-

HASEGAWA, Hiroshi

Field of Interest: Optimal Design, Conceptual Design, Computational Engineering and Science, Emergent and Intelligent Systems

Title of Courses: Advanced Research Program on Systems Control Engineering Research in Systems Design

Topics for Thesis: Memetic Algorithm for Optimal Design Methodology of Creative and Inventive Design Support System (CDSS) Creativity for Conceptual Design

Publications and International Conference Papers:


ITO, Kazuhisa

Field of Interest: Robust Control of mechatronic systems (NOT including robotics), Water hydraulic systems, Energy saving system, Agricultural engineering

Title of Courses: Advanced Research Program on Systems Control Engineering

Topics for Thesis: Robust controller design for water hydraulic servo system and analysis of its energy saving performance

Publications and International Conference Papers:


Other Features:

Research topic candidates:
- Robust water hydraulic actuator control
- Energy regenerating control for water hydraulic system
- Generator governor control with water hydraulic system
- Agricultural engineering
Materials Science and Engineering
MURAKAMI, Masato

Field of Interest: Synthesis and characterization of superconducting materials, Applications of superconductivity, Ferrous shape memory alloys

Title of Courses: Study of High Functional Materials

Topics for Thesis: Magnetic characterization of high temperature superconductors
Processing of high temperature superconductors
Applications of bulk high temperature superconductors
Applications and characterization of Fe-Mn-Si shape memory alloys

Publications and International Conference Papers:


**Other Features:**

- URL http://moniko.s26.xrea.com
Field of Interest: Electrochemistry, Corrosion Science
Title of Courses: Advanced Research Program on Eco-materials Engineering
Material Chemistry
Topics for Thesis: Atmospheric Corrosion
Electrodeposition of Metal
Materials of Fuel Cell

Publications and International Conference Papers:


Other Features:
KYUNO, Kentaro

Field of Interest: Solid State Physics, Surface Science, Physics of Thin Films
Title of Courses: Advanced Research Program on Functional Devices Technology
Semiconductor Materials
Topics for Thesis: Crystallization of Amorphous Si Thin Films for Solar Cells
Crystal Growth of Ge Thin Films for Thin-Film Transistors

Publications and International Conference Papers:


Other Features:
Electronic Properties of Thin Films
Resistive Switching Properties of Oxide Thin Films
- Materials Science and Engineering-

AIZAWA, Tatsuhiko

Field of Interest: Manufacturing-Materials Science & Engineering
Title of Courses: Advanced Research Program on Eco-materials Engineering
Nano Structuring for Advanced Material Systems

Topics for Thesis:
Sustainable Manufacturing
Nano-Columnar DLC Coating for Dry Micro-Stamping
Micro-Texturing for Medical and Bio-Engineering
Advanced Plasma Technology for Dies and Molds
Femto/Pico-Second Laser Technologies for Dies and Molds
New Carbon Technologies for Dies and Molds
Micro- and Nano-Manufacturing

Publications and International Conference Papers:
28. “Micro-dry stamping of AISI 304 stainless steel sheet by nano-laminated DLC


**Other Features:**

1) Working as a Research Professor in the University of Toronto since 2005 till now
2) Working as a Visiting Professor in the University of Technology in Malaysia since 2008 till now
3) Working as a Professor in the University of Brawijaya, Indonesia since 2011 till now
-Materials Science and Engineering-

MATSUMURA, Kazunari

Field of Interest: Biomaterials for Bio-sensing, Bio-inspired Chemistry, Interface and Colloid science

Title of Courses: Advanced Research Program on Eco-materials Engineering, Biomaterials Science and Engineering


Publications and International Conference Papers:


Other Features:
Architecture
AKAHORI, Shinobu

Field of Interest: Architecture
Title of Courses: Advanced Research Program on Regional Environmental Design
Architectural Design
Topics for Thesis: Urban Design and Cultural Patrimonies

Publications and International Conference Papers:

- S. AKAHORI, M. TORIUMI, “Urban Design in France”, Syokokusya, 07/10
- S. AKAHORI, “Contemporary Architecture in Luxembourg”, architects 6, JIA, p20, 04/10
- S. AKAHORI, “Role of Architects as a profession”, architect 548, Osaka AABE, p13, 02/10
- S. AKAHORI, “Promenade Plains-Green promenade born by Train way abandoned”, CHIKAI 302, 2009 summer pp18-19
- S. AKAHORI, M. TORIUMI, “Projets Urbains Francais 6 Lyon”, Shinkenchiku 0904, pp195-198, 03/09
- S. AKAHORI, M. TORIUMI, “Projets Urbains Francais 5 Bordeaux The public space by light and plantations”, Shinkenchiku 0903, pp215-218, 02/09
- S. AKAHORI, M. TORIUMI, “Projets Urbains Francais 4 La Defense to offense ”, Shinkenchiku 0902, pp201-204, 01/09
- S. AKAHORI, M. TORIUMI, “Projets Urbains Francais 3 Nantes”, Shinkenchiku 0901, pp182-185, 12/08
- S. AKAHORI, M. TORIUMI, “Projets Urbains Francais 2 Paris after Grand Projets”, Shinkenchiku 0812, pp210-213, 11/08
- S. AKAHORI, M. TORIUMI, “Projets Urbains Francais 1 Euralille 20 years after”, Shinkenchiku 0811, pp178-183, 12/08
- S. AKAHORI, “La Defense”, architects 5, JIA, p19, 06/08
- S. AKAHORI, “Construction a school in DJIBOUTI”, SFJTI tome 54 no 1, pp.40-43,05/08
- S. AKAHORI, Institut franco-Japonais du Kansai, Selection of JIA 2005, 2005
- S.AKAHORI, Institute Franco-Japanese, Architecture ASIA, new heritage, a journal of the architects regional council Asia (ARCASIA)  p48-49, may 2005
- S. AKAHORI, Renovation and re-structure, Institute Franco-Japanese of Kansai, Symposium franco-japonais sur les cites du futur 2003, 2004
- S. AKAHORI, Spatial interpenetration in Modernism and Material as appearance, JA Modern Houses II, p6-7, 04/98

S.AKAHORI, Architecture française, SHINKENCHIKU (Japon) (l'exercice
professionnelle en France, conditions de production d’un projet, relation architecte / maîtrise d’ouvrage public ou privé) 06/91
S. AKAHORI, Fragments de la ville (Paris. mémoire de la ville) Signe de B (Japon) 07/92
S. AKAHORI, L’école d’architecture Paris-Belleville KENCHIKUBUNKA (Japan) 12/93 (série d’interviews des différents enseignants de cette école avec présentation de projets d’étudiants et de réalisations d’anciens étudiants)
S. AKAHORI, Les conditions économiques de la construction en France, JIA NEWS (Japon) 08/94

Other Features:
EXPOSITIONS;

PROJECTS :
Guide d’architecture de la METROPOLE LILLOISE, Le passage, 2004
Patrimoine industriel et urbanisme, Le site de Philidor-Maraîchers, SÉDP, 2003
Profil, at (Japon) 04/91
Concours de l’école maternelle et halte-garderie, Le Moniteur Architecture AMC 02/91
Stand du moniteur architecture, Le Moniteur Architecture AMC 12/90
Prix Cogedim 1990 de la première oeuvre, Le Moniteur Architecture AMC 11/90
Projet d’une médiathèque, D’A 09/90
Profil Les élus 1989, Le Moniteur Architecture AMC 03/90
Projet d’une école de danse, Cahier de Pavillon de l’Arsenal 12/89

REALISATIONS:
Lycée Français International de Tokyo, 2012
IT House, 2009
Scénographie de l’exposition “Road of Koreans messengers”, AJI, 2007
Rénovation de l’Institut franco-japonais du Kansai à Kyoto, 2003
Rénovation d’une crèche à Paris 12ème, Le Moniteur, 1998
Ecole maternelle et halte-garderie à Divonne, Le Moniteur Architecture AMC (France), 03/93, 12/93, SHINKENCHIKU, 02/94, THE JAPAN ARCHITECT (JA), 01/95, Le Moniteur Architecture AMC 1985-1995 CD-ROM

92
ITA, Yoko W.

Field of Interest: Architectural History, Urban History
Preservation engineering of Cultural Properties

Title of Courses: Advanced Research Program on Regional Environmental Design
History of Architecture

Topics for Thesis: Reconstruction of Historical Architecture
Preservation and Renovation for Cultural Properties
Design Survey for World Heritage Proposals
Experimental Verification Comparing Virtual and Real Spaces
Trials for Reconstruction Design Methods using VR spaces

Publications and International Conference Papers:


Other Features:
-Architecture-

MURAKAMI, Kimiya

Field of Interest: Building Environmental Engineering  
Title of Courses: Advanced Research Program on Regional Environmental Design  
Research of Building and Community System  
Topics for Thesis: Evaluation Method of Efficiency of Heat Source System

Publications and International Conference Papers:


Other Features:
AKIMOTO, Takashi

Field of Interest: Thermal Comfort, HVAC, LCA, Environmental Design
Title of Courses: Advanced Research Program on Regional Environmental Design, Building Environmental Engineering
Topics for Thesis: Thermal Comfort and Productivity, Task/Ambient Conditioning System, Assessment System of Buildings

Publications and International Conference Papers:

4. Y. Kawano, T. Akimoto, Comfortable Bedroom controlled by Mechanical Air Conditioner and Natural Ventilation, Healthy Buildings 2012, 10th International conference, (Brisbane, Australia), 2012.7
8. Y. Watanuki and T. Akimoto, Verification of Renewal Actions in Long-Life Office Building by CASBEE, INDOOR AIR 2011, The 12th International Conference on Indoor Air Quality and Climate, (Austin, Texas), 2011.6
15. S. Nakamura, T. Akimoto, and N. Miura, Floor-Supply Displacement Air-conditioning System applied for Office Space faced to Void - Laboratory Experiment and CFD Analysis based on the Experimental Results-, ROOMVENT 2009, (Busan, Korea), 2009.5
MIURA, Masao

Field of Interest: Urban Environment, Building Environment and Architecture
Title of Courses: Advanced Research Program on Regional Environmental Design
Urban Environment Systems
Topics for Thesis: Study on Theories and Methods for Urban Environment Improvement

Publications and International Conference Papers:

1. Abdul Azeez Kadar Hamsa, Masao Miura, Shuhei Inokuma and Yosuke Nishimura, Perception Analysis of Living Environment at Taman Melati Residential Areas, Journal of Design and Built Environment(An International Refereed Journal Published by Faculty of Built Environment, University of Malaya), Vol. 7, pp.1-13, 2010

Other Features:
-Architecture-

SHINOZAKI, Michihiko

Field of Interest: Design Science in Architecture and Urban Studies
Title of Courses: Advanced Research Program on Regional Environmental Design
Environmental Design
Topics for Thesis: Sustainable Urban Design in Asian Cities,
Visual Landscape Assessment,
Design Computing in Urban Morphological Study

Publications and International Conference Papers:

12. Saito, K., Shinozaki, M., “Urban Landscape Visualization and Analysis for Buildings Skyline Study using 3DGIS Technology”, The 12th International Conference of Computer on Civil and

Other Features:

Deputy Chair, City Planning Council, Koto Ward, Tokyo
Deputy Chair, Landscape Design Committee, Kazusa Academia Park, Chiba Pref.
Director, Urban Simulation Lab., Tokyo
Member, Urban Design Council, Sumida Ward, Tokyo
Member, Environmental Impact Assessment Council, Saitama City
Member, Committee for CASBEE/Urban Development, Institute for Building Environment and Energy Conservation
MINAMI, Kazunobu  Ph.D (University of Tokyo), S.M.Arch (MIT)

Field of Interest: Architectural Design Theory and Method
Title of Courses: Advanced Research Program on Regional Environmental Design
Architectural Planning
Topics for Thesis: Study on Long-Term Occupancy Records of Public Housing

Publications and International Conference Papers:
3. An education of the urban tissue design studio to reorganize the urban environments in downtown Tokyo –A case study of the Shimbashi areas of Tokyo –, Kazunobu MINAMI, pp.91-95, EDUCATION FOR AN OPEN ARCHITECTURE Proceedings of the Joint Conference of CIB W104 and W110, October 20-22, 2008, College of Architecture and Planning Ball State University Muncie, Indiana


Other Features:

Member: Science Council of Japan, Architectural Institute of Japan, CIB, DOCOMOMO International

Awards

· 1986 Tucker-Voss Awards, Department of Architecture, School of Architecture and Planning, Massachusetts Institute of Technology
· 2000 Chiba Prefecture Architecture and Culture Award
· 2001 International Illumination Design Awards, Edwin F. Guth Award for Interior Lighting Design, Special Citation for Innovative Use of Emerging Lamp Technology
· 2004 Best paper Award, Paper Competition on the Development and Control of City Architecture, The Architectural Institute of Japan
· 2005 Award for the Distinguished Activity of Arts, The City of Aomori
-Architecture-

NAKAMURA, Hitoshi

Field of Interest: Urban Planning and Design, Disaster Risk Management
Title of Courses: Advanced Research Program on Regional Environmental Design
City Planning
Topics for Thesis:

Comparison of the community-based recovery processes from the 3.11 earthquake disaster
Reevaluations of the seismic resilience of the densely built-up areas to define new measures for earthquake risk reduction
Evaluating the community-based environmental improvement activities in the densely built-up areas
Land use planning and environmental design for adapting to the global climate change
Relationship between "Flood maps" and land use measures
Evaluating the community-based collaborative activities against mega flood hazards in the urban areas
Biodiversity-friendly spatial planning for disaster mitigation
Development of pre-disaster image training programs for post-disaster urban recovery
Development of the geospatial disaster management mash-up system
Inductive development of new urban planning theory on city diversity and resilience

Publications and International Conference Papers:


Other Features:
As proved once again by 2011 mega-earthquake that hit Japan, a lot of communities and cities in Japan and across the Globe are exposed to the risk of disasters, like flood, quake, fire and tsunami.

Urban Safety Planning & Design Laboratory was started by Dr. H. Nakamura in April 2012, in pursuit of more livable and sustainable way of urban planning and designing. Research projects in the laboratory focus on multidisciplinary studies across architectural, environmental, social and urban-engineering fields with an emphasis on how to build a safe, resilient, diverse and vibrant city rather than disaster-protected but unlivable area.

English Website:
http://www.planktonik.com/nakamurajin/english/
Civil Engineering
-Civil Engineering-

MORITA, Masaru

Field of Interest: Urban Hydrology, Groundwater Hydrology
Title of Courses: Advanced Research Program on Regional Environmental Design
Urban Environmental Engineering
Topics for Thesis: Watershed Modeling for Interaction between Surface and Subsurface Flows
Flood Risk Management for Urban Drainage System

Publications and International Conference Papers:

(INTERNATIONAL JOURNALS):

(PROCEEDINGS):


Other Features:

- Academic expert in flood prevention and water resources planning at policy-making committees of the national and local governments.
OKAMOTO, Toshiro

Field of Interest: Soil Mechanics, Geotechnical Engineering, Fill dam Engineering, Rock Mechanics

Title of Courses: Advanced Research Program on Regional Environmental Design Geotechnical Engineering

Topics for Thesis: Title of Okamoto’s Doctor Thesis: deformation and strength characteristics of sedimentary soft rock and its time-dependency
- Stability of concrete and asphalt facing of rockfill dam by New-Mark equivalent linear seismic FEM analysis
- Density and permeability anisotropy of vibratory compacted soil layer
- Settlement of embankment by Elasto-plastic analysis
- Seismic stability of earthfill, concrete dam and railway upon or near active fault in Japan
- Seismic or seepage stability and geotechnical characteristics of river embankment and the foundation

Publications and International Conference Papers:

- Statical analysis of measured elastic wave velocity of rockfill dam, T. Okamoto, 5th Dam Engineering, 2007.2
- Seismic stability evaluation and criteria of rockfill dam basing on residual deformation, T. Okamoto, proc. of 16th Intern. Conf. on Soil Mechanics and Geotechnical Engineering, vol.2, pp.1897-1900, 2005.9
- Recent trend for earthquake induced residual settlement of rockfill dam and some consideration of affecting factors, T. Okamoto, proc. of 4th International Conference on Dam Engineering, New Development in Dam Engineering, Balkema, pp.704-716, 2004.10
- Centrifuge test of rockfill dam and seismic stability evaluation basing on seismic response and residual deformation by existing shaking table tests and in-situ observation results, T. Okamoto, Y. Uchida, S. Tsuruta, Y. Hoshino and T. Matsuda, 13th World Conference on Earthquake Engineering, 2004.8
- Evaluation of crest deflection of rockfill dams in long-term duration and first filling, T. Okamoto, 2004
Okamoto, proc. of 3rd International Conference on Dam Engineering, pp.247- 253, 2002.3

Evaluation of crest settlement of rockfill dams after embankment, T. Okamoto, proc. of 3rd International Conference on Dam Engineering, pp.239- 246, 2002.3


Other Features:
The best paper award for young researchers, Japanese Geotechnical Society for mechanical property of sedimentary soft rock, 1987,
President Award, Central Research Institute of Electric Power Industry, 1992 for Development of construction technology of nuclear power plant on Quaternary ground,
Achievement Awards, Japanese Geotechnical Society, 2006 for achievement as vice-president

http://www.db.shibaura-it.ac.jp/%7Eoakomo/
-Civil Engineering-

MATSUMURA, Takashi

Field of Interest: Environmental Policy Planning and Management
Title of Courses: Advanced Research Program on Regional Environmental Design
Environmental Policies Studies
Topics for Thesis: Environmental Pollution Control and Management

Publications and International Conference Papers:
4.
5.
6.

Other Features:
Please be noted that nuclear power plant accidents are out of possible research topics. As listed above, conventional environmental pollution caused by accidents are major topics.