
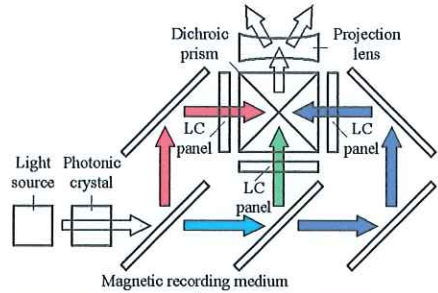
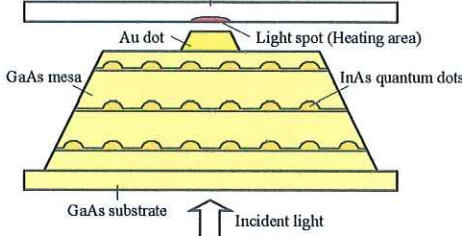



Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)



Name 氏名	Ryuichi Katayama	Title 職位	Professor	
Major 専門分野	Applied optics, Quantum optical engineering			
Master's Program 修士課程	Information Electronics			
Doctor's Program 博士課程	Material Science and Production Engineering			
e-mail	r-katayama@fit.ac.jp	URL		
Research introduction 研究紹介	<p>Novel functional optical devices for high-performance optical systems (Joint research with companies)</p> <ul style="list-style-type: none"> ● Example 1 High-brightness projectors using solid-state light sources (High-efficiency optics by control of polarization and intensity distribution of light using photonic crystals) ● Example 2 High-density heat-assisted magnetic recording (Formation of high-efficiency nano-light spot with plasmonic optical antenna using quantum dots) 			 
Publication list 論文リスト	<p>28 original papers with review including the followings</p> <ul style="list-style-type: none"> ● Ryuichi Katayama, "Simulation on Near-Field Light Generated by Au Nano-Dot on GaAs Substrate for Heat Assisted Magnetic Recording Heat Source", J. Appl. Phys., Vol. 115, No. 17, 17B728 (2014). ● Ryuichi Katayama, "Proposal for Angular Momentum Multiplexing in Microholographic Recording", Jpn. J. Appl. Phys., Vol. 52, No. 9, 09LD11 (2013). ● Ryuichi Katayama, "Design of Wavelength-Selective Waveplates Using Genetic Algorithm", Opt. Rev., Vol. 20, No. 2, pp. 248-253 (2013). ● Ryuichi Katayama and Shin Tominaga, "Proposal for Rewritable Microholographic Recording Using Polarization-Sensitive Materials", Jpn. J. Appl. Phys., Vol. 51, No. 8, 08JD04 (2012). ● Ryuichi Katayama, Yuichi Komatsu, and Masanao Natsumeda, "Microholographic Recording Using Single-Sided Optics with Electrical Beam Control", Jpn. J. Appl. Phys., Vol. 49, No. 8, 08KF02 (2010). 			
Other academic activities その他の学術活動	<ul style="list-style-type: none"> ● 2 book chapters, 12 conference proceedings, 60 presentations at international conferences (including 6 invited talks), 87 presentations at domestic conferences (including 1 invited talk), and 25 miscellaneous ● 125 granted patents (69 Japan, 42 US, 12 Europe, and 2 China) ● Chair and committee member for several international and domestic conferences, and editor and reviewer for several academic journals 			
Remark 備考	<ul style="list-style-type: none"> ● Received D.E. degree from the University of Tokyo in 1999 ● Experience for 27 years in research and development in NEC Corporation 			

Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)


Name 氏名	Baorong Ni	Title 職位	Professor	
Major 専門分野	1. Superconducting Electromagnetics and Engineering 2. Educational Technology			
Master's Program 修士課程	Information Electronics			
Doctor's Program 博士課程	Material Science and Production Engineering			
e-mail	nec@fit.ac.jp	URL	http://www.fit.ac.jp/research/search/profile/id/24	
Research introduction 研究紹介	<p>1. Enhancement of critical current characteristics in High-Tc superconducting cuprate oxides, superconducting MgB2 and iron-based superconductors The discoveries of superconducting cuprate oxides, superconducting MgB2 and iron pnictide superconductors brought us a great potentiality and a bright prospect to the practical applications of superconducting materials. Especially because of the much higher critical temperature of the superconducting oxide and the much lower fabrication cost of MgB2, many new applications, which were unthinkable in the past, become possible and realistic. However, as one of the most important factors in practical applications, critical current characteristics in these materials are not enough high at present, and have been becoming a serious obstacle to many significant applications. Although the critical current characteristic is also affected by the crystallinity and microstructure of the material, it is considered that the flux pinning, one of the most essential electromagnetic phenomena in superconductors, plays an important role which determines dominantly the magnetic field dependence and temperature dependence of the critical current density. In our laboratory, we estimate and study the critical current characteristics, magnetic field distributions and their dynamics in various superconducting materials by means of Campbell's method, dc magnetization measurement, ac susceptibility measurement and so on. Based on these experimental results, we are trying to enhance the critical current characteristic and develop the specialized flux pinning theory in the newly discovered superconductors.</p> <p>2. Development and practice of web applications for higher education The recent progress in information and communication technology (ICT) brought us various conveniences in higher education. In fact, using personal computers and the Internet in university becomes a daily experience these days. Therefore, the efficient providing of superior contents to the lectures and student's self-learning and the realizing of the real interactive teaching and learning are exceedingly important. In our laboratory, by using the up-to-date web technologies related to the Internet, we are developing a full-scale web application providing self-taught contents of mathematics, a real-time online lecture system between Japan and China which provides several novel functions, various tools supporting the daily working of the graduation studies. We are aiming to open up the new possibility and attractive prospect of ICT in the field of higher education.</p>			
Publication list 論文リスト	<ol style="list-style-type: none"> 1. Critical Current Characteristics and Flux Pinning in Fe-based Pnictide Superconductor, Materials Science Forum vol. 750 pp. 288-292 (2013). 2. Condensation energy density properties of Ba-122 pnictide superconductor with columnar defects introduced by heavy-ion irradiation, Physics Procedia vol. 36 pp. 693 – 697 (2012). 3. Evaluation of Critical Current Density of FeAs-based Superconductors, Superconductivity and Cryogenics vol. 14 pp. 1-7 (2012). 4. Critical current densities of Sr0.6K0.4Fe2As2 superconductors estimated from AC susceptibilities, Physica C vol. 484 pp.35 – 38 (2012) 5. Web Application Dynamically Generating Problems and Marking the Answers for the Exercises in Basic Mathematics, Proceedings of ITHET 2007, pp. 193-197 (2007). 			

Professor Information / 教員情報
(Graduate School of Engineering / 工学研究科)

Name 氏名	Cunwei Lu 盧存偉	Title 職位	Professor	
Major 専門分野	3-D Image measurement and pattern recognition			
Master's Program 修士課程	Information Electronics			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	lu@fit.ac.jp	URL	www.fit.ac.jp/~lu	
Research introduction 研究紹介	<p>(1) 3-D Camera(An Optimal 3-D Image Measurement system) and 3-D printer We measure the surface 3-D form and space 3-D coordinates of an object from one sheet digital photograph by use of optimal pattern light projection technique. The measurement result can be applied to broad fields, such as form measurement, quality control, and facial recognition, and can be applied also to 3D printer.</p> <p>(2) Image measurement and quality control of automobile body</p> <p>(3) Research about the measurement and the prediction of tsunami</p> 			
Publication list 論文リスト	<p>(1) C. Lu, L. Xiang: Optimal Intensity-Modulation Projection Technique for Three-Dimensional Shape Measurement, Applied Optics-IP, Vol.42, No.23, pp.4649-4657, August 2003.</p> <p>(2) C. Lu, G. Cho: Projection pattern intensity control technique for 3-D optical measurement, Optics Express, Vol. 13, No. 1, pp.106-114, 2005</p> <p>(3) C. Lu, H. Kamitomo, K. Sun, K. Tujino, G. Cho: Three-dimensional Camera: Development and Applications of a Three-dimensional Image Measurement System, The transactions of the Institute of Electrical Engineers of Japan. C, pp.320-328, Vol.131, No.2, 2011</p> <p style="text-align: center;">*****</p> <p>(1) About 3-D camera, Japan: No.4883517,USA: US7,583,391 B2,China: ZL200580039510.9</p> <p>(2) 3-D image measurement for move object, Japan: No.4986679, China: 101646919B</p> <p>(3) Image measurement for automobile, Japan: No.5224288</p>			
Other academic activities / その他の学術活動	<p>(1) Research about the measurement and the prediction of tsunami</p> <p>(2) 3-D facial recognition technique and its application for crime prevention system</p> <p>(3) 3-D shape measurement technique for high-temperature and large-size forging</p>			
Remark / 備考	<p>(1) Industry-university cooperation Research</p> <ul style="list-style-type: none"> • Image measurement and quality control of automobile body • Form measurement and quality control of forge object • 3-D image measurement of the form and size for a building <p>(2) Equipment: 3-D Camera, Multiple- spectrum Camera, 3-D Microscope, etc.</p> <p>(3) Scholarship: We have a scholarship original with our laboratory</p>			


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Xing-Zheng Wu	Title 職位	Professor	
Major 専門分野	Analytical Chemistry, Environmental Analysis			
Master's Program 修士課程	Life, Environment and Material Science			
Doctor's Program 博士課程	Material Science and Production Engineering			
e-mail	wu@fit.ac.jp	URL		
Research introduction 研究紹介	<p>The following research projects are carrying out in my Lab.</p> <ol style="list-style-type: none"> 1) Development of novel analytical methods for plants by making use of optical beam deflection and fluorescence 2) Capillary electrophoresis and its application in determination of sugar and study of protein-protein interaction. 3) Chemiluminescence methods for studying environmental and biochemical samples. 4) Au nanoparticle and its application in analytical chemistry 			
Publication list 論文リスト	<ol style="list-style-type: none"> 1. Determination of vanillin in vanilla perfumes and air by capillary electrophoresis Saaya Minematsu, Guang-Shan Xuan, Xing-Zheng WU, Journal of Environmental Sciences, 25 (suppl.) S8-S14 (2013). 2. Effect of acid solutions on plants studied by the optical beam deflection method Liangjiao Nie, Mitsutoshi Kuboda, Tomomi Inoue, Xing-Zheng Wu, Journal of Environmental Sciences, 25 (Suppl.), S93-S96 (2013). 3. Direct Sampling in Air of Capillary Electrophoresis Saaya Minematsu, Xing-Zheng WU, Anal. Sci., 29, 373-375 (2013). 4. キャピラリー電気泳動法による牛乳中のメラミン分析のための簡易試料前処理法の開発 加藤 雄一、呉 行正、分析化学, 61 (5), 419-423 (2012). 5. Ti/SnO₂.Sb₂O₅.RuO₂/α-PbO₂/β-PbO₂ electrodes for pollutants degradation, Yinghan Zheng, Wenqiu Su, Shengying Chen, <u>Xing-Zheng Wu</u>, Xueming Chen, <i>Chemical Engineering Journal</i>, 174, 304-309(2011) 			
Other academic activities / その他の学術活動				
Remark / 備考				


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Katsuji Watanabe	Title 職位	Professor	
Major 専門分野	Applied and Environmental Microbiology			
Master's Program 修士課程	Analytical method for microbial groups			
Doctor's Program 博士課程	Bioremediation using anaerobic microorganisms			
e-mail	k-watanabe@fit.ac.jp	URL	www.fit.ac.jp/~lu	
Research introduction 研究紹介	<p>① By using the newly developed system, microbial groups in various samples can be qualify and quantify without isolation. We have been trying to use these system and Microchip electrophoresis as 1) an ingredients label showing contained useful microbial groups in probiotic products etc., 2) microbiological indicator for fermentation process during composting, aerobic or anaerobic digestion of waste activated sludge, and alcohol fermentation, 3) surveillance method for microbial risk assessment against multi-drug resistant bacteria, food poisoning bacteria etc.</p> <p>② From the flooded field soils in Japan, and PCB contaminated river sediments in US, anaerobic microorganisms, which decreased the residual content of various kinds of POPs such as hexachlorobenzene, Endrin, Aldrin, Dieldrin, Lindane, decafluorobiphenyl, and decachlorobiphenyl, had been isolated. As these microorganisms were indigenous to soil or sediments and seemed to have novel dechlorination mechanism, they seemed to be useful for bioremediation of various kinds of POPs accumulated in soils and sediments.</p>			
Publication list 論文リスト	<p><u>K.Watanabe</u>, and N.Koga, Use of microchip electrophoresis system for estimation of bacterial phylogeny and analysis of NO₃ reducing bacterial flora in field soils. <i>Biosci.Biotechnol.Biochem.</i> 73, 479-488 (2009) <u>K.Watanabe</u>, Detection of protease genes in field soil applied with liquid livestock feces and speculation on their function and origin, <i>Soil.Sci.Plamt Nutr.</i> 55, 42-52 (2009) <u>K.Watanabe</u>, Application of multiple enzyme restriction fragment length polymorphism analysis and microchip electrophoresis for estimation of antibiotic-tolerant bacterial group. <i>J.Pesic.Sci.</i> 33, 249-260(2008). <u>K.Watanabe</u>, et.al., Newly developed system based on multiple enzyme restriction fragment length polymorphism An application to proteolytic bacterial flora analysis, <i>Soil.Sci.Plamt Nutr.</i> 54, 204-215 (2008). <u>K.Watanabe</u>, and H.Yoshikawa, Enrichment and isolation of anaerobic microorganisms concerned with reductive degradation of hexachlorobenzene from soils, <i>J.Pesic.Sci.</i> 33,166-170 (2008).</p>			
Other academic activities / その他の学術活動	<ol style="list-style-type: none"> 1) Member of Japanese Society of Microbial Ecology, 2) Member of Japanese Society for Bioscience, Biochemistry, and Agrochemistry 3) Member of Pesticide Science Society of Japan, 4) Member of Japanese Society of Soil Science and Plant Nutrition 			
Remark/ 備考				


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Junko Kuwahara	Title 職位	Assoc Prof	
Major 専門分野	Synthesis and Characterization of Soft Matter, Surfactants, Peptides and Biopolymers			
Master's Program 修士課程	Life, Environment and Material Science			
Doctor's Program 博士課程				
e-mail	j-kuwahara@fit.ac.jp	URL		
Research introduction 研究紹介	<p>1. Development of extraction method of collagen and gelatin derived from tilapia scales We are investigating a method of efficiently extracting gelatin and collagen by physical stimulation such as crushing and heating without using chemicals by acid and base as much as possible.</p> <p>2. Synthesis and characterization of hydrogels using biopolymers such as gelatin and polysaccharides In order to obtain disposable soft actuators, hydrogels are synthesized on the basis of gelatin and polysaccharides which are biopolymers.</p> <p>3. Influence of natural pigments on amino acid surfactants on solution physical properties (surface tension, electric conductivity, contact angle) To improve the quality of cosmetic products and toiletry products, we investigate the physical properties of mixed systems of surfactants and natural pigment used in these products.</p>			
Publication list 論文リスト	<p>1. The influence of surfactant on decomposition of pigment derived from <i>Basella alba</i> from Fukuoka prefecture by heating or artificial sunlight irradiation, Junko Kuwahara, <i>Journal of MMIJ</i> (2017) in press.</p> <p>2. Screening Evaluation of the Interaction of Linear-Chain or Branched-Chain Peptides with Multilamellar Vesicle, Using Confocal Laser Microscopy, Junko Kuwahara, Hajime Mita, Tetsuya Marume, <i>Journal of Oleo Sci.</i> (2017) in press.</p> <p>3. Conformational Analysis of Fish Collagen in Denaturation Process, Fumio Nakazawa, Riki Miura, Junko Kuwahara, Hajime Mita, <i>PEPTIDE SCIENCE</i> 2012, 371-374 (2013).</p>			
Other academic activities / その他の学術活動	Japan Oil Chemists' Society, Division of Interface Science, Secretary of Kyushu area			
Remark / 備考				


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Kawamura Y.	Title 職位	Professor	
Major 専門分野	Laser engineering, Mechanical control			
Master's Program 修士課程	Intelligent mechanical engineering			
Doctor's Program 博士課程	Intelligent mechanical engineering			
e-mail	kawamura@fit.ac.jp	URL	http://www.fit.ac.jp/~kawamura/	
Research introduction 研究紹介	<p>(1) Cooling of the thermal vibration of a micro cantilever down to the quantum vibration level. Using mechanical active control, the thermal vibration of a silicon micro cantilever is to be decreased down to the quantum limit of the vibration.</p> <p>(Key words: Fabry-perot interferometer, Michelson interferometer, quantum vibration, silicon micro cantilever, feed back control)</p> <p>(2) Experimental studies on the absorption of the infrared radiation by greenhouse gases for the prediction of the global warming.</p> <p>(Key words: greenhouse gases, global warming, CO₂, CH₄, Feed back control, radiative forcing)</p>			
Publication list 論文リスト	<p>(1) Y. Kawamura and R. Kanegae, "Feedback damping of a microcantilever at room temperature to the minimum vibration amplitude limited by the noise level", <i>Sci. Rep.</i> 6, 27843; doi: 10.1038/srep27843 (2016).</p> <p>(2) Y. Kawamura, "Measurement system for the radiative forcing of greenhouse gases on a laboratory scale", <i>REVIEW OF SCIENCE INSTRUMENTS</i>, Vol. 87, 016101 (2016), DIO:10.1063/1.4939483.</p> <p>(3) T. Tanaka, Y. Kawamura and T. Tanaka, "Development and Operations of Nano-Satellite FITSAT-1 (NIWAKA)", <i>Acta Astronautica</i>, Vol. 107, 112-129 (2015)</p> <p>(4) Y. Kawamura and T. Tanaka, "Transmission of the LED light from the space to the ground", <i>AIP Advances</i>, Vol.3, 102110 (2013), DOI:10.1063/1.4824853.</p> <p>(5) Taketo Mizota, Kouhei Kurogi, Yuji Ohya, Atsushi Okajima, Takeshi Naruo and Yoshiyuki Kawamura, "The strange flight behaviour of slowly spinning soccer balls", <i>Scientific Reports</i>, Vol. 3, Article number 1871, DOI: 10.1038/sre01871 (2013)</p> <p>(6) Y. Kawamura and T. Mizota, "Wind Tunnel Experiment of Bluff Body Aerodynamic Models Using a New Type of Magnetic Suspension and Balance System", <i>Journal of Fluid Engineering</i>, Vol. 135, No. 10, (2013) 101401-1~044502-5.</p> <p>(7) Y. Kawamura and T. Mizota, "Advanced Magnetic Suspension and Balance System Having Characteristics of Light Weight, Electrical Power Saving, and Fast Response", <i>Journal of Dynamic Systems, Measurement, and Control</i>, Vol. 134, No. 4, (2012) 044502-1~044502-7.</p>			


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Shijie Zhu	Title 職位	Professor	
Major 専門分野	Mechanical Behavior of Materials			
Master's Program 修士課程	Intelligent Mechanical Engineering			
Doctor's Program 博士課程	Material Science and Production Engineering			
e-mail	zhu@fit.ac.jp	URL	www.fit.ac.jp/~zhu	
Research introduction 研究紹介	<p>Relationship between microstructures and mechanical behavior is studied, which includes the following topics.</p> <p>(1) Fatigue of pure Cu films as conductive materials (2) Fracture of silicon nitride ceramics (3) Creep deformation and fracture of nano-composites (4) Evaluation of thermal barrier coatings</p>			
Publication list 論文リスト	<ol style="list-style-type: none"> 1. Y. Kodama, S.J. Zhu, Y. Nakahara, A. Usuki and M. Kato, Fatigue Fracture of Clay Reinforced Nylon Nanocomposites, Materials Science Forum, Vol. 750 (2013) 11-14. 2. Z. B. Chen, Z. G. Wang and S. J. Zhu, Tensile fracture behavior of thermal barrier coatings on superalloy, Surface & Coating Technology: 44 (23) (2011), 6251-6257. 3. Z. X. Chen, L. H. Qian and S. J. Zhu, Determination and analysis of crack growth resistance in plasma-sprayed thermal barrier coatings, Engineering Fracture Mechanics, 77(11) (2010) 2136-2144. 4. Z. B. Chen, Z. W. Huang, Z. G. Wang and S. J. Zhu, Failure behavior of coated nickel-based superalloy under thermomechanical fatigue, Journal of Materials Science: 44 (23) (2009), 6251-6257. 5. F.H. Yuan, Z.X. Chen, Z.W. Huang, Z.G. Wang, S.J. Zhu, Oxidation behaviour of thermal barrier coatings with HVOF and detonation sprayed NiCrAlY bondcoatings, Corrosion Science, 50 (6) (2008)1608-1617. 6. Shijie Zhu, Fatigue Behavior of Ceramic Matrix Composite Oxidized at Intermediate Temperatures, Mater. Trans., 47 (8) (2006) 1965-1967. 7. Shijie Zhu, Takashi Gomyou, Yasuo Ochi, Toshio Ogasawara and Takashi Ishikawa, "Effects of loading rate and temperature in tensile behavior of orthogonal three-dimensional woven Tyranno fiber/Si-Ti-C-O matrix composites", Journal of Materials Research, 19 (10) (2004) 2964-2973. 8. Shijie Zhu, Jian-Wu Cao, Mineo Mizuno, Yutaka Kagawa, "Time dependent deformation in an enhanced SiC/SiC composite", Metall. Mater. Trans. A, 35A (2004) 1853-2859. 9. M. Hasegawa, S.J. Zhu, Y. Kagawa, A.G. Evans, "Effect of metal layer thickness on the decohesion of high purity copper-sapphire interfaces", Acta Materialia, 51 (17) (2003) 5113-5121. 10. T. Tomimatsu, S.J. Zhu and Y. Kagawa, "Effect of thermal exposure on stress distribution in TGO layer of EB-PVD TBC", Acta Mater., 51(8) (2003)2397-2405. 			
Other academic activities / その他の学術活動				
Remark / 備考				


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Kazuhiro Ohyama	Title 職位	Professor	
Major 専門分野	Power electronics and motor control			
Master's Program 修士課程	Electrical Engineering			
Doctor's Program 博士課程	Electrical Engineering			
e-mail	ohyama@ee.fit.ac.jp	URL	http://www.fit.ac.jp/	
Research introduction 研究紹介	<ol style="list-style-type: none"> 1. <u>Electric Vehicle</u>: Several research projects concerning the design and the control of switched reluctance motors for electric vehicle are running. 2. <u>Wind Power Generation System</u>: Several research projects concerning the design of wind turbine and the control of wind power generation system using permanent magnet synchronous generator are running. 3. <u>Sensorless Vector Control System of AC Machine</u>: The stability analysis using global linear model is treated. Also the novel control algorithms are developing. 4. <u>Flexible Linear Actuator</u>: The linear actuator using wire cable are developing. The generation methods of propulsion are studied with the FEM analysis and experiments. 5. <u>Micro Hydraulic Generation System</u>: The micro hydraulic generation system with new turbine design using flutter phenomena are developing. 			
Publication list 論文リスト	<ol style="list-style-type: none"> 1. Improvement of Efficiency of Switched Reluctance Motor by Single Pulse Control Based on Linear Torque Equation, EPE2013 Conference Proceeding, CD-ROM 2. Simulation of Variable Speed Wind Generation System Using Boost Converter of Permanent Magnet Synchronous Generator, WILEY Inter Science, Electrical Engineering in Japan, Vol. 169, No.4, PP.37-54 3. Sensorless Vector Controlled Converter for Variable Speed Wind Generation System Using an Induction Generator, WILEY Inter Science, Electrical Engineering in Japan, Vol.159, No.4, pp. 62-75 4. Experimental Verification for Stability Improvement of Sensor-less Vector Control System of Induction Motor Using Real Time Tuning of Observer Gain, WILEY Inter Science, Electrical Engineering in Japan, Vol. 166, No. 1, PP. 67-81 5. Generation of Propulsion of Wire Cable Using Electro Magnetic Force, ICEMS2006 Conference Proceeding, CD-ROM 			
Other academic activities / その他の学術活動	Members of IEEJ and IEEE Collaborative research with Meiwa Manufacturing Co.			
Remark / 備考				


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Jiro Kitagawa	Title 職位	Professor	
Major 専門分野	Magnetic and superconducting materials			
Master's Program 修士課程	Applied Electrical Engineering			
Doctor's Program 博士課程				
e-mail	j-kitagawa@fit.ac.jp	URL	http://www.fit.ac.jp/~j-kitagawa/	
Research introduction 研究紹介	<p>1. Development of magnetic materials with new optical functions The optical control of spin is widely used in magneto-optical storage devices. The mechanism of control is based on the thermal effect by a tightly-focused laser-light. If we can develop another control-mechanism with no thermal effect, low power consumption devices would be realized. Recently our group has proposed a new control-mechanism based on the Kondo effect. The optical control of Kondo effect would enable not only a highly functional magneto-optical device but also a compact quantum-information device. Our purpose is the development of rare-earth-based semiconductors showing the optically-controllable Kondo effect.</p> <p>2. Material research on new superconductors Superconductors are now applied for the superconducting power transmission, which is expected to realize a transmission with negligible energy-loss. For the application, a material with high superconducting-transition-temperature is desired. Recently magnetic elements are actively used to increase the transition temperature. We are now carrying out the material research on new superconductors containing magnetic elements. We also analyze the band calculation to narrow down</p>			
Publication list 論文リスト	<p>1. "Possible phase transition and band gap closing in photoexcited semiconductor $CeZn_3P_3$" <u>J. Kitagawa</u> J. Phys. Soc. Jpn. 82 (2013) pp.125001(1)-125001(2)</p> <p>2. "Crystal polymorphism in $TmPd_3S_4$" <u>J. Kitagawa</u>, R. Yada, M. Ichihara, and M. Ishikawa Results in Physics 3 (2013) pp.80-83</p> <p>3. "Low-temperature magnetic properties of $RE_2Ni_{21}B_6$ (RE=Er, Tm, Yb and Lu)" <u>J. Kitagawa</u>, N. Takeda, and M. Ishikawa J. Alloys and Compounds 561 (2013) pp.101-104</p> <p>4. "Itinerant 5f electrons in $U_2T_{21}B_6$ (T=Ni and Co)" <u>J. Kitagawa</u> and M. Ishikawa Solid State Communications 153 (2013) pp.76-78</p>			
Other academic activities / その他の学術活動	Research Funds: Asahi Glass Foundation			
Remark / 備考	I hope a student who is interested in synthesizing materials.			



Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Satoshi Kitazaki	Title 職位	Assistant Professor	
Major 専門分野	Development of safe plasma devices for medical and agricultural field			
Master's Program 修士課程	Electrical Engineering			
Doctor's Program 博士課程				
e-mail	kitazaki@fit.ac.jp	URL	www.fit.ac.jp/~kitazaki	
Research introduction 研究紹介	<p>We have researched discharge plasmas for life science innovation.</p> <p>(1) Investigation of growth promotion of plants using discharge plasma irradiation.</p> <p>(2) Development of safety plasma irradiation devices for medical field.</p> <p>(3) Investigation of interaction between plasma and liquid using absorption spectroscopy method.</p>			
Publication list 論文リスト	<p>(1) S. Kitazaki, A. Tanaka, N. Hayashi: Sterilization of narrow tube inner surface using discharge plasma, ozone and UV light irradiation, Vacuum, 110, pp. 217-220 2014/12</p> <p>(2) S. Kitazaki, T. Sarinont, K. Koga, N. Hayashi, M. Shiratani: Plasma induced long-term growth enhancement of Raphanus sativus L. using combinatorial atmospheric air dielectric barrier discharge plasmas, Current Applied Physics, 14, pp. S149-S153 2014/7</p> <p>(3) S. Kitazaki, K. Koga, M. Shiratani, N. Hayashi: Growth Control of Dry Yeast Using Scalable Atmospheric Pressure Dielectric Barrier Discharge Plasma Irradiation, Japanese Journal of Applied Physics, 51, pp. 11PJ02-1 - 4 2012/11</p> <p>(4) S. Kitazaki, K. Koga, M. Shiratani, N. Hayashi: Growth Enhancement of Radish Sprouts Induced by Low Pressure O₂ RF Discharge Plasma Irradiation, Japanese Journal of Applied Physics, 51, pp. 01AE01-1 - 4 2012/1</p> <p>(5) N. Hayashi, A. Nakahigashi, M. Goto, S. Kitazaki, K. Koga, M. Shiratani: Redox Characteristics of Thiol Compounds Using Radicals Produced by Water Vapor Radio Frequency Discharge, Japanese Journal of Applied Physics, 50, pp. 08JF04-1 - 5 2011/8</p>			
Other academic activities / その他の学術活動	<p>(1) Investigation of electrical discharge in mechanical oil to clarify electrical pitting mechanism.</p> <p>(2) Development of low breakdown voltage discharge electrode.</p>			
Remark / 備考	We have been doing collaboration research with Kyushu university.			


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Daisuke Tashima	Title 職位	Assistant Professor	
Major 専門分野	Super capacitor, proton exchange membrane fuel cell			
Master's Program 修士課程	Electrical Engineering			
Doctor's Program 博士課程				
e-mail	tashima@fit.ac.jp	URL	http://www.fit.ac.jp/~tashima/	
Research introduction 研究紹介	<p>Studies on the use of electric double-layer capacitors (EDLCs) for use as energy storage devices in place of lead batteries are underway in Japan and other countries. EDLCs are a type of physical battery, and hence have attracted significant attention from the viewpoint of preventing global warming and satisfying the growing demand for energy. EDLCs, which contain activated carbon as the primary constituent, have a markedly longer life than normal batteries and have excellent discharge characteristics. In this research, we pay attention to carbon materials used for an electrode of a capacitor and develop a high-efficiency capacitor using new carbon materials. In addition, we study a new method to uniformly disperse a platinum catalyst used for polymer electrolyte fuel cells (PEFCs). We use it to uniformly disperse a platinum catalyst and increase the efficiency of a chemical reaction. In this way, a high-power PEFC is produced. We are also studying PEFC and EDLC hybrid vehicle as shown in this Fig. Journal reviewer: Electrochemistry, Electrochimica acta, Journal of Physics and Chemistry of Solids, Journal of Solid State Electrochemistry, Materials Chemistry and Physics, Microporous & Mesoporous Materials</p> 			
Publication list 論文リスト	<ol style="list-style-type: none"> 1. D. Tashima, et al., "Optimization of mixture ratio of electrolyte for reducing activation resistance of proton exchange membrane fuel cell", Process Safety and Environmental Protection, 92(6), pp.879-887, 2014 2. D. Tashima, et al., "Microporous activated carbons from used coffee grounds for application to electric double-layer capacitors", IEEJ Transactions on Electrical and Electronic Engineering, 9(4), pp.343-350, 2014 3. D. Tashima, et al., "Mesoporous graphitized Ketjenblack as conductive nanofiller for supercapacitors", Materials Letters, 110, pp.105-107, 2013 4. D. Tashima, et al., "Double layer capacitance of high surface area carbon nanospheres derived from resorcinol-formaldehyde polymers", Carbon, 49(14), pp.4848-4857, 2011 <p>total journals: 40, total international conferences: 67</p>			
Other academic activities / その他の学術活動	Journal reviewer: Electrochemistry, Electrochimica acta, Journal of Physics and Chemistry of Solids, Journal of Solid State Electrochemistry, Materials Chemistry and Physics, Microporous & Mesoporous Materials			
Remark / 備考	Equipment: vacuum glove box(for making supercapacitor), charge-discharge tester			


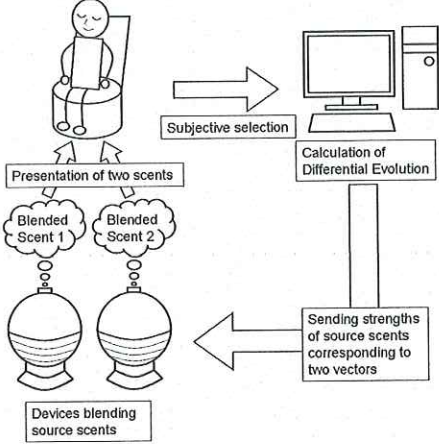
Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Hiroyuki Yamauchi	Title 職位	Professor	
Major 専門分野	Machine learning based VLSI design in Nano era			
Master's Program 修士課程	Computer Science and Engineering			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	yamauchi@fit.ac.jp	URL	www.fit.ac.jp/~yamauchi	
Research introduction 研究紹介	<p>In this laboratory, the following research themes are being considered.</p> <ol style="list-style-type: none"> 1) Study for Machine Learning Based VLSI Circuit Designs for Internet of Things (IoT) Based New IT Era. <ol style="list-style-type: none"> 1-1) Design solution for increasing robustness against a device mismatch and variations for Integration systems (IS). 1-2) Design solution for power saving in IS of VLSI 1-3) Design solution for lower voltage operated IS of VLSI. 1-4) Design solution for establishing of fault tolerant design. 2) Study for IS of VLSI Design Methodology for post-CMOS <ol style="list-style-type: none"> 2-1) Platform design for design solution w.r.t power control. 2-2) Platform design for device solution for embedded devices. 3) IoT application oriented system designs with Microcontroller <ol style="list-style-type: none"> 3-1) IoT Remote control via Internet with Arduino, Mbed, PIC 3-2) Rich sensor based IoT application (Agriculture,.. etc) 			
Publication list 論文リスト	<p>Refereed Journal Papers: >30 and Refereed Proceeding Papers: >51</p> <ol style="list-style-type: none"> 1) An RTN Variation Tolerant SRAM Screening Test Design with Gaussian Mixtures Approximations of Long-Tail Distributions, Journal of Electronic Testing Theory and Applications Vol. 30, No.2 ISSN pp.171-181 2014/1 2) A Sub-0.3 V Area-Efficient L-Shaped 7T SRAM With Read Bitline Swing Expansion Schemes Based on Boosted Read-Bitline, Asymmetric-Vth Read-Port, and Offset Cell VDD Biasing Techniques Solid-State Circuits, IEEE Journal of (Volume:48, Issue: 10) Volume:48 Issue: 10, pp.2558 - 2569 2013/10 3) An Offset-Tolerant Fast-Random-Read Current-Sampling-Based Sense Amplifier for Small-Cell-Current Nonvolatile Memory IEEE Journal of Solid-State Circuits Vol.48 No.3 864-877 2013/3 			
Other academic activities / その他の学術活動	<p>Grant from Government and Industries since 2006 Total is about 200,000 USD</p> <p>Program committee for the IEEE top-ranked international conferences:</p> <ol style="list-style-type: none"> (1) IEEE International Solid-State-Circuit Conference (2001-2010) (2) IEEE Symposium on VLSI Circuits (1995-2000, 2010-2015) (3) IEEE Asia- Solid-State-Circuit Conference (2009-2014) <p>Program committee chair for the international conferences:</p> <ol style="list-style-type: none"> (1) International Conference on Network and Computer Science(2014-2015) 			
Remark / 備考	<p>I have over-20-years experiences as a R&D engineer and a general manager in Panasonic who has responsibility for developments of the fundamental circuits and device technologies for a leading edge process VLSI's for world-wide major electronic companies. I sincerely wish to express my gratitude for a variety of assisting in my current state from the United States, Taiwan and a domestic companion. I will do my best to research so that I can repay the kindness to the people as soon as possible.</p>			



Professor Information / 教員情報

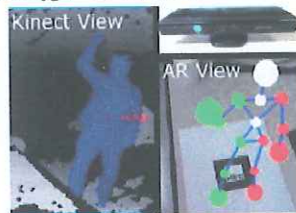
(Graduate School of Engineering / 工学研究科)

Name 氏名	Makoto FUKUMOTO	Title 職位	Professor	
Major 専門分野	Affective Computing, Soft Computing			
Master's Program 修士課程	Computer Science and Engineering			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	fukumoto@fit.ac.jp	URL	www.fit.ac.jp/~fukumoto	
Research introduction 研究紹介	<p>(1) Creation method of media contents suited to user's feelings (2) Interactive type of evolutionary computation with various algorithms (3) Investigation of psycho-physiological effects of media contents including music pieces, sounds, movies, and fragrances</p> <p><Example of a study (2) in the publication list> Right figure shows an Interactive Evolutionary Computation searching fragrance composition suited to user's feelings. The user evaluates fragrances with paired comparisons. Based on the repetitive comparisons, Differential Evolution, one the evolutionary algorithms, proceeds searching process of better fragrance composition.</p> 			
Publication list 論文リスト	<p>(1) M. Fukumoto, R. Nagamatsu: Feedback of Laughter by Detecting Variation in Respiration Amplitude for Augmenting Laughter, Proc. of IMIS2016, pp.139-142, 2016 (2) M. Fukumoto et al.: Interactive Differential Evolution Using Time Information Required for User's Selection: In A Case of Optimizing Fragrance Composition, Proc. IEEE CEC2015, pp.2192-2198, 2015 (3) M. Fukumoto: An Efficiency of Interactive Differential Evolution for Optimization of Warning Sound with Reflecting Individual Preference, IEEJ Transactions on Electrical and Electronic Engineering, 10(S1), pp.S77-S82, 2015 (4) M. Fukumoto and H. Kuroda: A Fundamental Study on the Effect of Combination on Fragrance and Color, Kansei Engineering International Journal, 11(4), pp. 191-198, 2012 (5) M. Fukumoto et al.: An Extended Interactive Evolutionary Computation Using Heart Rate Variability as Fitness Value for Composing Music Chord Progression, J. of Advanced Computational Intelligence and Intelligent Informatics, 15(9), pp.1329-1336, 2011</p>			
Other academic activities / その他の学術活動	<p>(1) A director of Japan Society of Kansei Engineering (2) An editor of Japan Society of Kansei Engineering</p>			
Remark / 備考				

Professor Information / 教員情報


(Graduate School of Engineering / 工学研究科)

Name 氏名	Makio Ishihara	Title 職位	Associate Professor	
Major 専門分野	Human Computer Interaction			
Master's Program 修士課程	Information Engineering			
Doctor's Program 博士課程	-			
e-mail	m-ishihara@fit.ac.jp	URL	www.fit.ac.jp/~m-ishihara/Lab	
Research introduction 研究紹介	<p>The research field of Human Computer Interaction focuses on how people use computers and discusses what makes them use computers intuitively, naturally, and comfortably. It is also known as User Interface. The research question is what is the best way for people to communicate with computers? In my laboratory, the students take various approaches to answer the question using Head-mounted displays, Data-gloves, 3D Displays, Kinect sensors, Leap Motion sensors, Wii remotes, AR techniques etc. The range of my research includes Getting-Lost Problem, Mixed Reality, Real-world Oriented User Interface, Pointing Interface, Spatial Interface and the details of these topics are introduced on the laboratory homepage: http://www.fit.ac.jp/~m-ishihara/Lab/</p>			
Publication list 論文リスト	<p>[1]Y. Ishihara and M. Ishihara, Correcting distortion of views into aquarium, Proc. of the 15th Int. Conf. on HCI, 163-170, Springer, July 2013 [2]M. Ishihara and Y. Ishihara, Calibrating screen coordinates of tabletop display using shadow-cursor, Proc. of the 15th Int. Conf. on HCI, 327-331, Springer, July 2013 [3]M. Ishihara and T. Nakashima, Laser pointer interaction and its properties in pointing performance, Proc. of the 15th Int. Conf. on HCI, 538-542, Springer, July 2013 [4]K. Kuroda and M. Ishihara, Impact of distance to screen upon spacial awareness, Proc. of the 14th Int. Conf. on HCI, 270-276, Springer, July 2011 [5]T. Kihara and M. Ishihara, A virtual mouse system using finger-gestures of twisting-in, Proc. of the 14th Int. Conf. on HCI, 161-165, Springer, July 2011 [6]Y. Ishihara and M. Ishihara, Locating projectors using intensity of reflected beams based on phong shading mode, Proc. of the 14th Int. Conf. on HCI, 36-40, Springer, July 2011</p>			
Other academic activities / その他の学術活動				
Remark / 備考				




Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Hiroshi Maeda	Title 職位	Professor	
Major 専門分野	Numerical analysis techniques for propagation of electromagnetic wave			
Master's Program 修士課程	Communication and Information Networking			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	hiroshi@fit.ac.jp	URL	http://www.fit.ac.jp/research/search/research/edit_lang_division/E/id/87	
Research introduction 研究紹介	<p>(1) Development of numerical analysis technique for composite media with large gap of material constants</p> <p>(2) Design and application of photonic crystal and periodic structure for signal processing in optical wave/microwave</p> <p>(3) Experimental study of photonic crystal and periodic structures in microwave frequency range</p>			
Publication list 論文リスト	<p>BOOK: H. Maeda, "Numerical Technique for Electromagnetic Field Computation Including High Contrast Composite Material", as Chapter 3 of book entitled "Optical Communications", pp.41-54, edited by Narottam Das, InTech Open Access Publisher, ISBN 978-953-51-0784-2(2012 Oct.).</p> <p>JOURNALS: (1) H. Maeda, "Simulation of Soliton Propagation in Slab Waveguide by Frequency Dependent FDTD Method", International Journal of Computer Systems Science and Engineering, Vol.25, No.2, pp.9-16(2010, Mar.) (2) Y. Zhang, H. Terashima, H. Maeda, "Study on X-Shaped Photonic Crystal Waveguide in 2D Triangular Lattice for WDM System", Journal of Mobile Multimedia, Vol.8, No.2, pp.105-113(2012, June) (3) H. Maeda, "Four-branching waveguide in 2D photonic crystal structure for WDM system", Journal of Space-Based and Situated Computing, Vol.3, No.4, pp.227-233(2013, Dec.) (4) H. Maeda, H. Chen, K. Tomiura, K. Yasumoto, "Numerical and experimental study on confinement in Y-shaped post wall branching waveguide", Journal of Mobile Information Systems, Vol.10, No.2, pp.217-228(2014, March)</p> <p>PROCEEDINGS: (4) H. Chen, Y. Bao, J. Jin, H. Maeda, "Propagation Constant Measurement in Two Dimensional Post Array Waveguide with Triangular Lattice by Metallic Pillars", Proc. of MAPWC-2014, pp.357-361 (2014, Nov.) (5) J. Jin, Y. Bao, H. Chen, H. Maeda, "Numerical Analysis of Y-shaped Branch Waveguide in Photonic Crystal Structures and Its Application", Proc. of MAPWC-2014, pp.362-365 (2014, Nov.) (6) Y. Bao, H. Chen, J. Jin, H. Maeda, "Experimental Study on Crank-shaped Waveguide in 2D Post Array", Proc. of MAPWC-2014, pp.366-370 (2014, Nov.) (7) H. Maeda, Y. Bao, "Numerical Analysis of Cavities in Photonic Crystal Waveguide for Filtering", Proc. of BWCCA-2015, to be published, (2015, Nov.) (8) Y. Bao, H. Maeda, N. Nakashima, "Studies on Filtering Characteristics of X-shaped Photonic Crystal Waveguide in Two-Dimensional Triangular Lattice by Microwave Model", Proc. of ISAP-2015, to be published, (2015, Nov.)</p>			
Other academic activities / その他の学術活動	Member of OSA, IEICE (電子情報通信学会)Japan, and JSAP(応用物理学会)			
Remark / 備考	KAKENHI No. 15K06043, Grant-in-Aid for Scientific Research (C) by Japan Society for the Promotion of Science (JSPS) in 2015-2017.			


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Fumio Akagi	Title 職位	Professor	
Major 専門分野	Production/Operations Management			
Master's Program 修士課程	Management and Systems Engineering			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	akagi@fit.ac.jp	URL	www.fit.ac.jp/~akagi	
Research introduction 研究紹介	<p>Studies on production and operations systems Assembly Line Balancing Work Study Time Study Motion Study</p>			
Publication list 論文リスト	<p>A method for assembly line balancing with more than one worker in each station, Int. J. Prod. Res., Vol.21, No.5, pp.755-770</p>			
Other academic activities / その他の学術活動	<p>Vice President of Japan Society of Production Management</p>			
Remark / 備考	<p>6 years till my retirement</p>			


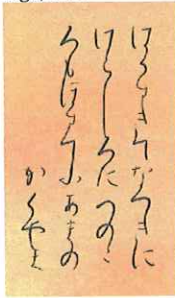

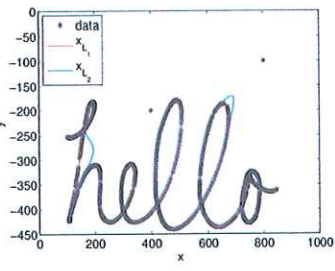
Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	SONG, Yu	Title 職位	Professor	
Major 専門分野	Operations Research			
Master's Program 修士課程	Management Engineering			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	song@fit.ac.jp	URL	www.fit.ac.jp/~song	
Research introduction 研究紹介	<p>Main research interest lies in the field of operations research and its application in business and social science for decision-making. Especially the following topics:</p> <ul style="list-style-type: none"> ● Queueing Theory ● Numerical Analysis and Optimization ● Supply Chain Management ● Quantitative Finance 			
Publication list 論文リスト	<p>Y. Song and M. Hasama, "Some Observations on Resource Allocation in Assembly-like Queueing Networks via Simulation Approach", <i>International Journal of Materials, Mechanics and Manufacturing</i>, Vol. 2, 146-149, 2014.</p> <p>Y. Song, "The Optimal Service Policies in an M/G/1 Queue with Consecutive Vacations", <i>International Journal of Modeling and Optimization</i>, Vol. 4, 100-103, 2014.</p> <p>M. Qiu, Y. Song and H. Masayoshi, "Empirical Analyses of the Dog of the Dow Strategy: Japanese Evidence", <i>International Journal of Innovative Computing, Information and Control</i>, Vol.9, pp. 3677-3687, 2013.</p> <p>G. Zhang, E. Love and Y. Song, "The optimal service time allocation of a versatile server to queue jobs and stochastically available non-queue jobs of different type", <i>Computer and Operations Research</i>, Vol. 34, pp. 1857-1870, 2007.</p>			
Other academic activities / その他の学術活動				
Remark / 備考				


Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Hiroyuki Fujioka	Title 職位	Professor	
Major 専門分野	Control Theory and Its Applications to Information Technology			
Master's Program 修士課程	Management and Systems Engineering			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	fujioka@fit.ac.jp	URL	www.fit.ac.jp/~fujioka	
Research introduction 研究紹介	<p>In our laboratory, we mainly have studied problems of optimally designing curves and surfaces. Such a basic problem is to design a curve (or surface) that passes through or near the given points, while the curve is smooth as much as possible. For such problems, we have developed effective design methods as well as the computational algorithms from mathematical and control theoretic viewpoints.</p> <p>Moreover, we have applied the design method of curves and surfaces to various applications in the field of information technology. Such applications include the construction of cursive characters (left fig), human calligraphic learning using augment reality (AR) (middle fig) and data compression of digital font which have been used in many electronic device e.g. tablet pc (right fig), etc.</p> <div style="display: flex; justify-content: space-around;">    </div>			
Publication list 論文リスト	<ul style="list-style-type: none"> ● H. Fujioka, H. Kano, and C. F. Martin Constrained Smoothing and Interpolating Spline Surfaces using Normalized Uniform B-splines, appeared to Communications in Information and Systems. ● H. Fujioka and H. Kano Compression of Digital-Ink with Pen Slip Using Optimal L1 Smoothing Splines, to be published in the Proceedings of 44th ISCIE International Symposium on Stochastic Systems Theory and Its Applications, Okinawa, Japan, Nov. 1-2, 2013. ● H. Fujioka, H. Kano, H. Nakata and H. Shinoda Constructing and Reconstructing Characters, Words and Sentences by Synthesizing Writing Motions, IEEE Trans. Systems, Man and Cybernetics, Part A, Vol.36, No.4, pp.661-670, 2006. 			
Other academic activities / その他の学術活動	<ul style="list-style-type: none"> ● Grants-in-Aid for Scientific Research for Young Researchers (B), Apr. 2013-Mar.2016 ● Joint Research with a Japanese company, project was on trajectory planning of large-size robot, Sept. 2010-Aug.2013 			
Remark / 備考	<p>We now have 3 master course students (2 Japanese + 1 Thailand persons). From this September, a Thailand master course student will be come in. Moreover, an undergraduate Chinese student in our lab is going to master course from April, 2015.</p>			

Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Masao YOKOTA	Title 職位	Professor	
Major 専門分野	Integrated Multimedia Understanding			
Master's Program 修士課程	System Management			
Doctor's Program 博士課程	Intelligent Information System Engineering			
e-mail	yokota@fit.ac.jp	URL	www.fit.ac.jp/~yokota/home.html	
Research introduction 研究紹介	<p>My research interests focus on AI, especially, on integrated multimedia understanding by robots as 'natural' as by humans. For this purpose, I have proposed 'Mental Image Directed Semantic Theory (MIDST)' based on a hypothesis that natural language understanding in humans is omniscient mental image processing. MIDST has been provided with an omniscient mental image model and a formal language so called 'Lmd (Language for Mental image Description)'. This formal language has been already implemented on several versions of the intelligent system IMAGES whose last version is the integrated multimedia understanding system IMAGES-M. I have been the leader of many projects concerning AI funded by Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT).</p>			
Publication list 論文リスト	<p>Khummongkol,R., Yokota,M.: "Simulation of Human Awareness Control in Spatiotemporal Language Understanding as Mental Image Processing", IEEE SSCI 2014, Orlando USA, Dec.2014.</p> <p>Yokota,M., Khummongkol,R.: "Representation and Computation of Human Intuitive Spatiotemporal Concepts as Mental Imagery", Proc. of IEEE iCAST2014, Paris France, Oct.2014.</p> <p>Yokota,M.: "Subjective Knowledge Representation for Intuitive Human-Robot Interaction Based on Mental Image Directed Semantic Theory". Horizons in Computer Science Research. Volume 7, Nova Science Publishing Co., 2012.</p> <p>Yokota,M.: "Integrated Multimedia Understanding for Ubiquitous Intelligence Based on Mental Image Directed Semantic Theory" in Handbook on Mobile and Ubiquitous Computing, CRC Press, 2012</p>			
Other academic activities / その他の学術活動	<p>I am the organizer of the special sessions entitled 'Intuitive Human-System Interaction' at several international conferences. My dream is to create such robots that can understand ordinary people who are often intuitive and sometimes rational.</p>			
Remark / 備考	<p>I welcome the foreign students who want to construct understanding systems of their first languages in order to facilitate language-centered human-robot interaction.</p>			

Professor Information / 教員情報

(Graduate School of Engineering / 工学研究科)

Name 氏名	Takuya Tajima	Title 職位	Associate Professor
Major 専門分野	Industrial Engineering and Sensor Application		
Master's Program 修士課程	Industrial Engineering		
Doctor's Program 博士課程	Electrical Engineering and Computer Science		
e-mail	t-tajima @fit.ac.jp	URL	www.fit.ac.jp/~t-tajima
Research introduction 研究紹介	<p>(1) Attribute Classification Method for Pedestrians Using Plantar Pressure Value This study aims to develop and improve an attribute classification method for pedestrians using plantar pressure value. Now, many retail businesses use some methods for collecting customers' information. However, these methods have some problems. One of the problems is instability for collecting data of customers' information. The member's card can not cover all customers. Moreover, manual classification includes dispersion by individual difference. Using pressure sensors has advantages. One of the advantages is that the pressure sensor does not occur a violation of object person's privacy, because pressure values from the sensors can not identify individual from a large indefinite number.</p> <p>(2) Interior Behavior Identification System Using Pressure Distribution Sensors This study aims to develop an indefinite complaint detection support system using pressure distribution sensors. In this study, the system detects the indefinite complaint by everyday physical movement states in a person's house.</p>		
Publication list 論文リスト	<p>(1) Junjirou Hasegawa, Takuya Tajima, Takehiko Abe, Haruhiko Kimura: Development Age Groups Estimation Method Using Pressure Sensors Array, Information Technology Convergence, Vol.253 No.2 pp.847-854 (2013).</p> <p>(2) Takuya Tajima, Takehiko Abe, Haruhiko Kimura: Development of Interior Behavior Identification System Using Pressure Distribution Sensors, The Japan Society for Welfare Engineering, Vol.14 No.1 pp.13-21 (2012)</p> <p>(3) Takuya Tajima, Takehiko Abe, Haruhiko Kimura: POS Data Analysis and Considerations for Improvement of Sales: Japan Society for Production Management, Vol.19 No.2 pp.91-98 (2013)</p>		
Other academic activities / その他の学術活動			
Remark / 備考			