INSTITUT TEKNOLOGI BANDUNG

JALAN GANESHA NO. 17 BANDUNG 40132 TELP/ FAX +62-22-2504282

7 Juli 2010

Nomor : 181/K01.6.3.2/LN/2010
Perihal : Special Scholarship Program (SSP)

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Yang terhormat,
Dekan Fakultas/Sekolah
Institut Teknologi Bandung
Jalan Ganesha No. 10
Bandung

Bersama ini kami sampaikan dengan hormat informasi penawaran beasiswa *Doctoral Program* untuk mengikuti *Research Projects for Special Scholarship Program* (SSP) di Kochi University of Technology, Jepang (terlampir).

Informasi lebih lanjut dapat diakses di:
http://www.kochi-tech.ac.jp/gs_e/admission/index.html

Berkas aplikasi mohon diserahkan ke International Relation Office - ITB (IRO - ITB), Jalan Ganesha No. 17, paling lambat **tanggal 30 Agustus 2010, pukul 15.00 WIB**.

Mohon bantuannya untuk menyebarluaskan informasi ini di lingkungan yang Bapak/Ibu pimpin.

Atas perhatian dan kerjasama Bapak/Ibu, kami ucapkan terima kasih.

Asisten Direktur Bidang
Hubungan Internasional,

Dr. Tatacipta Dirgantara
NIP. 197004242006041018

Tembusan:
Direktur Kemitraan dan Hubungan Internasional (sebagai laporan)

KOCHI UNIVERSITY OF TECHNOLOGY

- Back to Admission page
- Graduate School Information Booklet 2011 (PDF) Information concerning Advisor is available from here

Research Projects for Special Scholarship Program

April and October 2011

Please choose the project which you wish to do at KUT and list it on the SSP application form.
*SSP applicant must have a high ability of writing and communication in English with the intention, adequate knowledge and research skill to work as a research assistant under the one of the following research projects.

Last Updated: June 30, 2010

Research Field	Project Leader	Project Name	PDF	Required Skills	
Environmental Systems Engineering					
Biochemistry/ Molecular Biology	Prof. ENOMOTO Keiichi	Nano-Biotechnology based on Protein Engineering		- Chemistry of natural products - Biochemistry/Molecular biology - Protein engineering - Biochemical pharmacology	Available
Functional Organomaterial Chemistry	Prof. SAIGO Kazuhiko	Invention of Functional Phosphorus Compounds with Chirality		- Organic Synthesis - NMR Analysis - X-ray crystallographic Analysis (if possible)	Available
Molecular Genetic Analyses of a Unicellular Green Alga Chlamydomonas Reinhardtii	Prof. OHAMA Takeshi	Molecular genetics of RNA interference and epigenetic gene silencing in a unicellular green alga *Chlamydomonas*		- High English ability -Research experience in Molecular biology - Knowledgeble of Eukaryotic transcription and translation	Available
Materials Engineering, Superconductive Materials	Prof. MAEDA Toshihiko	Improvement of current performance of pulsed-laser-deposited oxide superconductor films for wire application		- Solid-state physics and chemistry (especially crystallography and crystal chemistry) - Materials science - Basic knowledge of high-temperature superconductivity	Available
Environmental Energy Engineering	Associate Prof. HORII Shigeru	Development of Energy Oxide Materials using a High-Magnetic-Field Process and its Crystal-chemistry		- Material science - Inorganic chemistry	Available

Synthetic Organic Chemistry	Assoc. Prof. NISHIWAKI Nagatoshi	Development of Novel Methods for Polyfunctionalized Compound Preparation Using Nitro Systems	- Organic Chemistry - Synthetic Chemistry	Available

Intelligent Mechanical Systems Engineering

Fluid Dynamics	Prof. CHONO Shigeomi Associate Prof. TSUJI Tomohiro	Development of Liquid Crystaline Micro Actuators	- Good knowledge on mechanical & mathematical skills	Available
Robotics, Human Dynamics, Mechanical Vibration	Prof. INOUE Yoshio	Intelligent Wearable Sensors for Human Motion Analysis and Rehabilitation Robots	- Mathematics, Physics, Dynamics, Control - C language, MATLAB, ANSYS	Available from April 2011
Robotics, Control Engineering	Prof. WANG Shuoyu	Development of a novel walking training machine	- Control（Robust, Adaptive） - Programming（VC++, Java） - Robotics（Dynamics, Intelligence)	Available
Automatic Control, Mechatronics	Prof. OKA Koichi	Development of Novel Magnetic Suspension System	- Linear and Nonlinear Control System, Electromagnetics, Magnetic Suspension	Available
Nano Manufacturing, Atomic and Nuclear Physics, Material Physics, Nano Manufacturing	Associate Prof. MOMOTA Sadao	Micro-nano manufacturing and modification of materials by use of ion beams	- Dynmics, Electromagnetics, - Material science, Electronics	Available
		Production and application of radioactive isotope beams	- Material science - Radiation detection - Electromagnetism	Available
Thermal Engineering	Associate Prof. MOROZUMI Yoshio	Research on thermofluid dynamics in Microdroplets	- Fundamental knowledge on heat transfer, fluid dynamics & reaction kinetics - Experiences in computational fluid dynamics - Programming (Fortran, C etc.)	Available
		Heat and power output in human skeletal muscle under exercise and heat/moisture transfer through clothing		Available

Electronic and Photonic Systems Engineering

Optical communication	Prof. IWASHITA Katsushi	High capacity optical network	- Fundamental Knowledge on analog circuit, optical/electrical devices and signal processing	Available
Plasma Science and Engineering	Prof. HATTA Akimitsu	Growth of Nano-structural Material and Fabrication of Micro-electronic Devices by Micro-plasma Jet Processing in SEM (Nano Center)	- Dynamics, Electromagnetics, Electronics, Material Science	Available
VLSI Design and Electronic Design Automation	Prof. TACHIBANA Masayoshi	Built-In-Self-Test systems for Analog-Mixed-Signal system LSI	- Programming(VHDL, SPICE, UNIX - Analog Circuit Design	Available
Intelligent System, Electronic Circuit System, Embedded System	Assoc. Prof. HOSHINO Yukinobu	Development of a pattern classification hardware system based on artificial intelligence and image processing technique	- Programming skills: (C, C++, OpenCV) - Circuit design skills: VerilogHDL design on FPGA - Fundamental mathematical skills: Linear algebra, Calculus,	Available

			Statistics, Set and Logic - Digital image processing skills: (Linear filtering, Principal component analysis, Morphological Image Processing)	

Information Systems Engineering

For applicants from following universities that have Academic Agreement with Information Systems Engineering at KUT, please click HERE.
Beijing Institute of Technology, Fudan University, Jilin University and Tsinghua University (In alphabetical order)

Hardware Systems Design	Prof. IWATA Makoto	Dependable and Energy-Aware MPSoC Architecture	- High motivation to conduct basic research on computer science and engineering - Programming skill (Java, C++, perl, shell and so on) - Circuit design skill including language (VHDL or Verilog HDL) and VLSI CAD tools (circuit simulator, synthesis, P&R and so on) and ability in mathematics are preferred	Available
Telecommunications	Prof. SHIMAMURA Kazunori	Communications Protocols for Virtual RF-Tags Connections	- Computer programming skill - Mathematical ability - Analytic attitude	Available
Theoretical Physics, Quantum Engineering	Prof. CHEON Taksu	Foundation of Quantum Technology	- College level mathematics, programming skill	Available
Vision Psychophysics	Prof. SHINOMORI Keizo	Human-centered Utilizatin of Visual Information for Surrounding Computing	- Ability to adapt quickly to new research areas - High motivation to do basic research on human being - Programming skill (METLAB, C, Delphi and so on) and ability in mathematics are preferred	Available from October 2011
		Elucidation of Human Visual Information Processing through Psychophysical Approaches and Subsequent Application Development by Computational Model Simulation	- Ability to adapt quickly to new research areas - High motivation to do basic research on human being - Programming skill (METLAB, C, Delphi and so on) and ability in mathematics are preferred	Available from October 2011
Human-Computer Interaction	Prof. REN Xiangshi	Designing User Interface Software, Interaction Technology, and Human-Computer Interaction Models	- Willing to conduct basic qualitative data collection on user - High motivation to do basic research on human computer interaction - Programming skill (Java, C and so on) and ability of mathematics are preferred	Available
		Frontiers of User Interface Research: modeling human performance, designing multimodal input and output interfaces	- High motivation to do basic research on Human Computer Interaction (HCI) - Programming skill (Java, C and so on) - Ability of mathematics	Available

Computer Aided Verification	Associate Prof.TAKATA Yoshiaki	A formal language-based model of multi-threaded recursive programs and its verification	- High motivation to conduct basic research on formal approach to software systems - Sufficient understanding of formal language theory and automata theory - Capable of collecting, analyzing & report for English research publications - Programming skills	Available
Wireless Communication Systems, Spread Spectrum	Assoc. Prof. HAMAMURA Masanori	Signal Design and Network Architecture for Wireless Communications	- Communication systems and information theory - Signal processing - Programming skill (MATLAB, C)	Available
Parallel Programming, Algorithm Derivation, Functional Programming	Assoc. Prof. MATSUZAKI Kiminori	Theory and Implementation for Practical Structured Parallel Programming	- Good experience of programming (C, C++, Java, etc.) - Basic knowledge on parallel programming (OpenMP, MPI)	Available
Parallel and Distributed Computing Cluster Computing, especially its Interconnection Network Embedded System FPGA and Hardware Design Methodology	Assoc. Prof. YAMAGIWA Shinichi	Development of Programming Environment and Applications for High Performance Stream-based Computing on Graphics Processing Units	- Programming techniques in C, C# and CUDA C - Fundamental knowledge of Computer Architecture - Parallel Programming Skill (MPI) - Basic administration knowledge on Unix and Windows	Available
		Software Optimization Techniques and Efficient Peripheral Hardware Design Methods for Embedded Systems		Available
Psychophysics (Vision Research) and e-Learning Systems	Assistant Prof. MENDORI Takahiko	Development of an intuitive e-Learning system to support face-to-face instruction	- Willing to conduct basic qualitative data collection on user - Ability to communicate effectively in English - Capable of collecting, analyzing & report for English research publications - Programming experience in PHP, Java, Action Script, XML & SQL	Available

Infrastructure Systems Engineering

		Shear stress-slip model of steel-to-concrete stud connectors for the design of steel-concrete composite structures		Available
Concrete Engineering	Prof. SHIMA Hiroshi	Simulation method for chloride induced deterioration of reinforced concrete structures	- Ability to execute an experiment - Fundamental knowledge on concrete	Available
		Post-peak Dynamic Response Analysis of Force-Deflection Relationship of Reinforced Concrete Frames under Large Scale Seismic		Available

		Forces		
		Freeing of Hook Details by Performance Evaluation of Anchoring Bar in Reinforced Concrete Design		Available
Concrete Engineering	Associate Prof. OUCHI Masahiro	Design, Manufacturing and Construction of Self-Compacting Concrete	- Fundamental of concrete engineering	Available

Frontier Engineering

Infrastructure Management	Prof. WATANABE Tsunemi	Multi-party Risk and Uncertainty Management Process (MRUMP) for Local Environmental Management	- Strong motivation to do basic research on human being and society - High communication skill - Environmental Systems Engineering - Project Management	Available from October 2011
Laser Diode, Optical communication	Prof. NONAKA Koji	High Resolution Distributed Fiber - Optic Sensor Based On Optical Pulse Correlation Measurement	- Optics or Opto-Electronics Experience (Alternative : Analog Circuit Design or Mechanics Control Skill - Physics or Mathematics Background	Available
		Multi-wavelength high performance optical pulse generator		Available
		Deep UV Generation Using BBO Optic Crystal		Available
		Optical Micro-cell System for Ubiquitous High-speed Datacom-Access		Available

→**Undergoing SSP Project**
→**Thesis of Graduated SSP Students**

NOTE:
(1) This research project list is only applicable to SSP, not to Ordinary Program.
(2) Information on the list such as the number of students to be admitted are subject to change without notice.