

## Field of Education-Research, Supervisor and Research Theme in Later Stage of Doctoral Program

### ① Department of Mechanical and Aerospace Engineering

Course	Field of Education-Research		Supervisor Place to Contact	Research Theme
Mechanical Engineering	Materials and Mechanics	Solid Mechanics	◎ OBATA, Yoshihiro 0857-31-5188 y-obata@mech.tottori-u.ac.jp IWASA, Takashi 0857-31-5720 iwasa@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on thermal stresses and related topics</li> <li>• Study on tactile warmth between human body and materials</li> <li>• Study on thermo property of woody materials</li> <li>• Study on mechanical characteristic of flexible space structures</li> <li>• Study on analysis method for membrane structures</li> </ul>
		Materials Science and Engineering	◎ CHEN, Zhongchun 0857-31-5707 chen@mech.tottori-u.ac.jp ONDA, Tetsuhiko 0857-31-6786 onda@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Fabrication and characterization of thermoelectric materials</li> <li>• In-situ synthesis and multiple toughening of ceramic-matrix composites</li> <li>• Fabrication of aluminum-matrix composites with high performance</li> <li>• Development of influenza antiviral ceramic materials</li> <li>• Surface modification of die steels by electron beam irradiation</li> <li>• Martensitic transformation of zirconia and its application to transformation toughening of engineering ceramics</li> </ul>
	Design and Manufacturing	Reliability and Design Engineering	◎ ONO, Yuichi 0857-31-5193 ono@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on fatigue damage evaluation of metals</li> <li>• Study on experimental stress analysis</li> <li>• Study on improving strength of gear</li> </ul>
		Precision and Production Engineering	◎ SATO, Masahiko 0857-31-5195 sato@mech.tottori-u.ac.jp MATSUNO, Takashi 0857-31-5196 matsu@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• High precision and high efficient machining of difficult-to-cut materials</li> <li>• Monitoring and control of machining processes</li> <li>• Numerical analysis of sheared-surface properties</li> <li>• Ductile fracture of metals</li> </ul>
	Robotics and Mechatronics	Mechanical Dynamics and Mechatronics	◎ KOIDE, Takao 0857-31-5763 koide@mech.tottori-u.ac.jp TAMURA, Atsutaka 0857-31-6793 a-tamura@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on vibration and noise of machines</li> <li>• Development of abnormality detection method of machines</li> <li>• Development of high performance gears</li> <li>• Study on injury biomechanics</li> <li>• Human body modeling and mechanical characterization of biological materials</li> </ul>
		Control and Robotics	◎ NISHIDA, Shin-Ichiro 0857-31-5198 nishida@mech.tottori-u.ac.jp SAKURAMA, Kazunori 0857-31-5323 sakurama@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Robots for hazardous environment</li> <li>• Robots for inspection, diagnostic and healthcare</li> <li>• Development of advanced air-vehicle</li> <li>• Distributed control of power network</li> <li>• Formation control of multiple robots</li> </ul>

◎ shows guidance teachers (in the later stage of doctor course) to be selected in filling the entrance application form.

Course	Field of Education-Research		Supervisor Place to Contact	Research Theme
Mechanical Engineering	Thermo-Fluid Dynamics	Thermal Energy Engineering	◎ SAKAI, Takeharu 0857-31-5202 tsakai@mech.tottori-u.ac.jp ODA, Tetsuya 0857-31-5206 odate@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Development of thermal protection system for space vehicles</li> <li>• Ablation, radiation, and surface thermochemistry</li> <li>• Laser processing of composite materials</li> <li>• Research on liquid fuel atomization and spray combustion</li> <li>• Developments of spray measurement technique</li> <li>• Engine combustion analysis and emission reduction</li> </ul>
		Fluid Engineering	◎ KAWAZOE, Hiromitsu 0857-31-5205 kawazoe@mech.tottori-u.ac.jp MATSUNO, Takashi 0857-31-5204 matsuno@mech.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Aerodynamic analysis of a delta wing and a flight vehicle in unsteady motion and an object in flow field</li> <li>• Research on supersonic/hypersonic flow by experiments with a shock/arc plasma tunnels</li> <li>• Study on material surface change by surface wave plasma</li> <li>• Active flow control using plasma actuators</li> <li>• Research of flow field by numerical simulations</li> </ul>
Applied Mathematics and Physics	Physical Mechanics	Nonlinear Dynamics/ Continuum Mechanics	◎ FUJIMURA, Kaoru 0857-31-5322 kaoru@damp.tottori-u.ac.jp FURUKAWA, Masaru 0857-31-5731 furukawa@damp.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Nonlinear phenomena-modeling and weakly nonlinear analysis</li> <li>• Stability, bifurcation, and pattern formation in fluid motions</li> <li>• Wave phenomena in magnetized plasmas</li> <li>• Theory of singular perturbation</li> </ul>
		Computational Material Science/ Computational Physics and Engineering	◎ ISHII, Akira 0857-31-5629 ishii@damp.tottori-u.ac.jp ◎ HOSHI, Takeo 0857-31-5630 hoshi@damp.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Atomic and electronic structure catalysis for coupling reactions</li> <li>• Mathematical model for socio dynamics</li> <li>• Ultra-large-scale electronic structure theory and nano-structure process</li> <li>• Algorithm design for large-freedom physical simulations (ex. krylova subspace theory, parallel computation, optimality-guaranteed algorithms)</li> </ul>
		Electronic structure calculation	◎ KOTANI, Takao 0857-31-6741 tkotani@damp.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Methodological development of the first-principles electronic-structure calculations, especially, to include electronic correlations.</li> <li>• Reliable prediction of the fundamental physical properties for materials such as transition-metal compounds.</li> <li>• First principles study on atomic structure of materials.</li> <li>• In particular, surface structures and phase transition of structures.</li> </ul>

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Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Applied Mathematics and Physics	Physical Engineering	Nano Dynamics and Tribology/ Molecular Fluid Dynamics MATSUOKA, Hiroshige 0857-31-5759 hiro@damp.tottori-u.ac.jp DOI, Toshiyuki 0857-31-6766 doi@damp.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research on molecular gas/liquid-film lubrication</li> <li>• Research on computational tribology</li> <li>• Research on dynamics of information storage systems</li> <li>• Research on molecular interactions and surface interactions</li> <li>• Ultra-high accuracy measurements of tribological phenomena</li> <li>• Research on rarefied gas flows</li> </ul>
		Bio and Fluid Mechanics/ Thermal and Energy System ◎ GOTO, Tomonobu 0857-31-5199 goto@damp.tottori-u.ac.jp NAKAI, Tonau 0857-31-5499 nakai@damp.tottori-u.ac.jp HARA, Yutaka 0857-31-6758 hara@damp.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Micro-flow analysis, observation and numerical simulation</li> <li>• Collective and cellular level behavior of micro-organisms</li> <li>• Aeroacoustics, sound generation mechanism and noise reduction</li> <li>• Research and development of advanced technology of wind turbine</li> <li>• Computational fluid dynamics of wind turbines</li> </ul>

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② Department of Information and Electronics

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Information and Knowledge Engineering	Intelligent Control	◎ KITAMURA, Akira 0857-31-5211 kitamura@eecs.tottori-u.ac.jp TAKEMORI, Fumiaki 0857-31-5212 take@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Advanced control of large scale process</li> <li>Optimum scheduling of manufacturing process</li> <li>Intelligent manufacturing by semantic Web</li> <li>Data oriented modeling and learning</li> <li>Control design of human power assist system</li> <li>Intelligent control for mobile robot</li> </ul>
		◎ YOKOTA, Takayoshi 0857-31-5214 yokota@eecs.tottori-u.ac.jp ARII, Shiro 0857-31-5215 arii@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Geographical information processing</li> <li>Optimization of transport systems</li> <li>Modeling and control of moving objects</li> <li>Stereo robot vision</li> <li>Optimum trajectory for flexible manipulator</li> <li>Integrated design of mechanism and control system for flexible multi-body system</li> </ul>
	Computer Science and Technology	◎ SUGAHARA, Kazunori 0857-31-5218 sugahara@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Embedded systems</li> <li>Computer networks</li> <li>Social information systems</li> </ul>
		◎ KAWAMURA, Takao 0857-31-5217 kawamura@eecs.tottori-u.ac.jp TAKAHASHI, Kenichi 0857-31-5811 takahashi@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Distributed systems</li> <li>Social information systems</li> <li>Agent system</li> <li>Network and information security</li> </ul>
		◎ MURATA, Masaki 0857-31-5548 murata@eecs.tottori-u.ac.jp MURAKAMI, Jinichi 0857-31-6788 murakami@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Natural language processing</li> <li>Information retrieval, information extraction</li> <li>Machine translation</li> <li>Machine learning</li> </ul>
	Knowledge Engineering	◎ YOSHIMURA, Kazuyuki 0857-31-5223 kazuyuki@eecs.tottori-u.ac.jp SHIMIZU, Tadaaki 0857-31-5224 tadaaki@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Nonlinear science</li> <li>Information processing using nonlinear dynamics</li> <li>Digital speech signal processing</li> <li>Signal processing using neural networks</li> </ul>
		◎ KIMURA, Shuhei 0857-31-5227 kimura@eecs.tottori-u.ac.jp TOKUHISA, Masato 0857-31-5805 tokuhisa@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Evolutionary computation</li> <li>Bioinformatics</li> <li>Semantic and emotion analysis in natural language processing</li> <li>Information technology applications in tourism</li> </ul>
		◎ IWAI, Yoshio 0857-31-5624 iwai@eecs.tottori-u.ac.jp NISHIYAMA Masashi 0857-31-6083 nishiyama@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Computational interaction</li> <li>Pattern recognition</li> <li>Human media processing</li> <li>Augmented reality</li> </ul>

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Electrical and Electronic Engineering	Information and Control Engineering	◎ NAKAGAWA, Tadao 0857-31-5745 nakagawa@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Wireless communications and optical wireless communications for wearable devices</li> <li>• Physical layer signal processing for wireless communications</li> <li>• Radio frequency circuit design</li> </ul>
		◎ ITOH, Yoshio 0857-31-5698 itoh@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Adaptive signal processing</li> <li>• Digital signal processing</li> <li>• Digital communication system</li> </ul>
		SASAOKA, Naoto 0857-31-5234 sasaoka@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Speech enhancement</li> <li>• Digital wireless communication system</li> <li>• Active noise control</li> </ul>
		◎ KONDO, Katsuya 0857-31-5699 kondo@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Computer vision</li> <li>• Bioimage analysis and medical engineering</li> <li>• Development of smart measurement control system</li> </ul>
		MISHIBA, Kazu 0857-31-5756 mishiba@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Image processing</li> <li>• Computational photography</li> <li>• Graph signal processing</li> </ul>
	Electrical and Electronic Systems Engineering	ISHIDA, Masaru 0857-31-5491 ishida@tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Synthesis of active filter</li> <li>• Synthesis of immittance function</li> <li>• Microwave circuit design</li> </ul>
		◎ KISHIDA, Satoru 0857-31-6701 kishida@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Oxide electronics including high-T<sub>c</sub> superconductors</li> <li>• Surface and interface analysis for fabrication of devices</li> <li>• Development of neural networks for analysis of biological information</li> </ul>
		◎ OHKI, Makoto 0857-31-5688 mohki@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Evolutionary algorithm for multi-objective symbolic optimization problems</li> <li>• Real-world applications of evolutionary optimizing algorithm</li> <li>• Self-Organizing Map applied for large-scale multi-dimensional data</li> </ul>
		◎ NAKANISHI, Isao 0857-31-5132 nakanishi@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Digital signal processing</li> <li>• Speech signal processing</li> <li>• Biometrics authentication system</li> </ul>
		◎ NISHIMURA, Ryo 0857-31-5237 ryo@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Application of renewable energy technology, such as desalination of brackish water, for arid-land development</li> <li>• Application of electrostatics and high voltage technology</li> </ul>
	Electronic Materials and Device Engineering	◎ ICHINO, Kunio 0857-31-5240 ichino@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on wide bandgap semiconductors for optical/power devices</li> <li>• Study on high-efficiency solar cells</li> <li>• Study on high-efficiency ultraviolet/visible light-emitting devices</li> </ul>

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Electrical and Electronic Engineering	Electronic Materials and Device Engineering	ABE, Tomoki 0857-31-5233 abe@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on crystal growth of wide bandgap semiconductors for optical devices</li> <li>• Development of blue-ultraviolet optical detectors</li> <li>• Development of blue-ultraviolet optical modulators</li> <li>• Study on high efficient ultraviolet light emitting devices</li> </ul>
		◎ OHMI, Koutoku 0857-31-6700 ohmi@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research on electroluminescent displays</li> <li>• Development of wavelength conversion phosphor film for plant growth</li> <li>• Development of wavelength conversion phosphor film for solar panel</li> <li>• Research on phosphors for white LED applications</li> </ul>
		◎ KINOSHITA, Kentaro 0857-31-5244 kinoshita@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research on functional oxides (especially for memory devices)</li> <li>• Research on miniaturization technique for circuits and electronic devices</li> <li>• Design of materials and device structures using first-principle analysis</li> </ul>
		◎ LEE, Sang-Seok 0857-31-5961 sslee@eecs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• MEMS devices for bio/chemical/medical applications</li> <li>• Micro/nano technologies for aerospace applications</li> <li>• Design and application of metamaterials</li> <li>• RFMEMS and power MEMS devices</li> </ul>

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③ Department of Chemistry and Biotechnology

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Applied Chemistry	Green Catalysis Chemistry	◎ KATADA, Naonobu 0857-31-5684 katada@chem.tottori-u.ac.jp TSUJI, Etsushi 0857-31-5257 e-tsuji@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Principles and application of zeolites and solid acid catalysis</li> <li>Conversion of heavy oil components, methane and biomass into useful materials</li> <li>Synthesis of structured functional materials</li> <li>Creation of photocatalysts for use of natural energy</li> </ul>
	Main Group Element Chemistry	◎ NANJO, Masato 0857-31-5516 nanjo@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Synthesis of ionic liquids consisting of heavy group 14-elements and application to electrochemical devices</li> <li>Design and synthesis of functional organosilicon and organogermanium compounds, and development of electronic materials</li> </ul>
	Applied Electrochemistry	◎ SAKAGUCHI, Hiroki 0857-31-5265 sakaguch@chem.tottori-u.ac.jp USUI, Hiroyuki 0857-31-5634 usui@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Synthesis of lithium or sodium storage intermetallic compounds and their properties as anode materials in lithium batteries</li> <li>Development of all solid-state secondary batteries</li> <li>Design, preparation and characterization of new type of high density hydrogen storage materials</li> <li>Development of energy storage materials based on photovoltaics</li> </ul>
	Molecular Self-assembly	◎ MATSUURA, Kazunori 0857-31-5262 ma2ra-k@chem.tottori-u.ac.jp HAN, Mina 0857-31-5331 hanmin@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Creation and application of artificial virus structures</li> <li>Construction of nanostructures by self-organization of biomolecules</li> <li>Creation of artificial bio-systems</li> <li>Creation of light-responsive nano/microstructures</li> <li>Design and creation of smart fluorescent materials</li> </ul>
	Design of Functional Molecules	◎ KOBAYASHI, Kazuhiro 0857-31-5263 kkoba@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Synthesis of heterocyclic compounds</li> <li>Synthesis of biologically active compounds</li> </ul>
	Organic Material Chemistry	◎ SAIMOTO, Hiroyuki 0857-31-5693 saimoto@chem.tottori-u.ac.jp IFUKU, Shinsuke 0857-31-5592 sifuku@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Synthesis and reaction of polyols</li> <li>Synthesis and utilization of chiral compounds</li> <li>Efficient utilization of untapped resources</li> <li>Development of bionanofiber materials</li> <li>Preparation of functional materials from biomacromolecules</li> </ul>
	Synthetic Organic Chemistry	◎ ITOH, Toshiyuki 0857-31-5259 titoh@chem.tottori-u.ac.jp NOKAMI, Toshiki 0857-31-5179 tnokami@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Development of enzymatic reaction in an ionic liquid solvent system</li> <li>Development of iron salts-catalyzed reaction</li> <li>Synthesis of partly fluorinated analogues of biologically active molecules</li> <li>Chemical glycosylation for oligosaccharide synthesis</li> <li>Organic materials for energy storage devices.</li> <li>Creation and application of functional ionic liquids</li> <li>Development of polar ionic liquids for energy-efficient biorefinery</li> </ul>

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Applied Chemistry	Inorganic Materials Chemistry	◎ MASUI, Toshiyuki 0857-31-5264 masui@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Synthesis and application of environment-friendly color materials</li> <li>• Design of new phosphors based on rare earth compounds</li> <li>• Development of inorganic sunscreens</li> </ul>
	Biomimetic Chemistry and Related Disciplines	◎ TAMURA, Jun-ichi 0857-31-5108 jtamura@rs.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Synthesis of bioactive oligosaccharides</li> <li>• Isolation and characterization of bioactive glycans from natural sources</li> </ul>
		MORIMOTO, Minoru 0857-31-5990 morimoto@chem.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Utilization of biopolymers</li> <li>• Analysis of bio-related compounds</li> </ul>
Biotechnology	Applied Technology of Biological Resources	◎ OHSHIRO, Takashi 0857-31-5269 ohshiro@bio.tottori-u.ac.jp SUZUKI, Hirokazu 0857-31-5907 hirokazusuzuki@bio.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Discovery and application of novel functions of microorganisms and marine algae</li> <li>• Application and development of the functions of microorganisms and marine algae to the practical production of useful substances and the solutions of environmental problems</li> <li>• Fundamental studies: enzymology, molecular genetics, and protein engineering of enzymes involved in the metabolisms of physiologically active substances and new generation carbon sources in microorganisms and marine algae</li> <li>• Enzyme evolution technology with high mutafacient thermophile</li> </ul>
	Biocatalyst Engineering	OKAMOTO, Kenji 0857-31-5276 okamoto@bio.tottori-u.ac.jp HARADA, Hisashi 0857-31-5946 harada@bio.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Isolation and production of bioactive compounds from basidiomycetes</li> <li>• Determining the mechanism of action of bioactive compounds from basidiomycetes</li> <li>• Production of lignocellulose-degrading enzymes, ethanol and xylitol by basidiomycetes</li> <li>• Pathway engineering for the production of functional isoprenoids</li> <li>• Functional characterization of isoprenoid biosynthesis genes in higher plants and microalgae</li> <li>• Production of useful materials by microalgae</li> </ul>
	Protein Engineering	◎ KAWATA, Yasushi 0857-31-5271 kawata@bio.tottori-u.ac.jp MIZOBATA, Tomohiro 0857-31-5691 mizobata@bio.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Structure and function of enzyme and protein</li> <li>• Protein folding</li> <li>• Protein stability and conformational change</li> <li>• Molecular chaperone and protein fibrillogenesis (aggregation)</li> </ul>
	Bioorganic Chemistry	◎ KISE, Naoki 0857-31-5636 kise@bio.tottori-u.ac.jp SAKURAI, Toshihiko 0857-31-5633 sakurai@bio.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Enantioselective synthesis of physiologically active compounds</li> <li>• Stereo selective synthesis using electron transfer reaction</li> <li>• Organic synthesis of functional biomacromolecules</li> <li>• Design and characterization of supramolecular biomaterials</li> </ul>
	Biophysical Chemistry	◎ NAGANO, Shingo 0857-31-5273 snagano@bio.tottori-u.ac.jp HINO, Tomoya 0857-31-5744 t_hino@bio.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Structural biology of natural products biosynthesis</li> <li>• Molecular basis of nitrogen metabolism by anammox bacteria</li> </ul>
			<ul style="list-style-type: none"> <li>• Structural biology of thermal sensation</li> <li>• Structural biology of membrane proteins</li> </ul>

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④ Department of Management of Social Systems and Civil Engineering

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Civil Engineering	Structural and Concrete Engineering	◎ TANIGUCHI, Tomoyo 0857-31-5287 t_tomoyo@cv.tottori-u.ac.jp ONO, Yusuke 0857-31-5286 ysk@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Structural design of infra-, mechanical and offshore structures</li> <li>• Earthquake-resistant performance of infra-, mechanical and building structures</li> <li>• Maintenance of infra-, mechanical and offshore structures</li> <li>• Earthquake response analysis of civil structures</li> <li>• Simulation of earthquake disasters</li> </ul>
		◎ KURODA, Tamotsu 0857-31-5523 tkuroda@cv.tottori-u.ac.jp YOSHINO, Akira 0857-31-5280 ayoshino@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Self-compacting, high strength and multi-functional concrete</li> <li>• Application of industrial waste products to concrete</li> <li>• Durability assessment of concrete and concrete structures</li> <li>• Repair and strengthening for concrete and concrete structures</li> <li>• Prediction of deterioration and maintenance for concrete structures</li> </ul>
	Geotechnical and Rock Engineering	NAKAMURA, Koichi 0857-31-5986 nakamura@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Constitutive properties of saturated and unsaturated soils</li> <li>• Prevention and reduction of ground disasters</li> <li>• Dynamic properties of soils</li> <li>• Slope disaster mitigation and monitoring</li> </ul>
		◎ NISHIMURA, Tsuyoshi 0857-31-6093 tnishi@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Mechanics and numerical modeling of discontinuous rock mass</li> <li>• Tunnel support/reinforcement mechanics based on the NATM concept</li> <li>• Rock slope stability and landslide hazard protection</li> <li>• Elastic property of rock</li> </ul>
	Hydraulic and Coastal Engineering	◎ HINOKIDANI, Osamu 0857-31-5283 hinokida@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• River and lake hydraulics</li> <li>• River and lake engineering</li> <li>• River disaster and monitoring</li> </ul>
		◎ KUROIWA, Masamitsu 0857-31-5299 kuroiwa@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Numerical model of waves and nearshore currents</li> <li>• Coastal sediments and Prediction of coastal geomorphological change</li> <li>• Maintenance of river-mouth, port and harbor</li> <li>• Coastal disaster and monitoring</li> </ul>
	Geospherical Environmental and Architectural Engineering	◎ KAGAWA, Takao 0857-31-5641 kagawa@cv.tottori-u.ac.jp SHIOZAKI, Ichiro 0857-31-5642 shiozaki@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Strong ground motion estimation</li> <li>• Effects of fault rupture process and surface geology on earthquake ground motion</li> <li>• Seismological and EM (electromagnetic) study on structure and dynamics of crust and upper mantle</li> <li>• EM Applications on seismology and volcanology</li> </ul>
		ASAI, Hideko 0857-31-5746 asai@cv.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Architectural planning</li> <li>• Architectural environment</li> </ul>

◎ shows guidance teachers (in the later stage of doctor course) to be selected in filling the entrance application form.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Social Management Engineering	Management Systems	KOYANAGI, Junji 0857-31-5307 junji@sse.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Quantitative quality evaluation for service-oriented systems</li> <li>• Applied probability</li> <li>• Reliability and maintenance theory</li> <li>• Queuing system</li> </ul>
	Information Systems	◎ YAMADA, Shigeru 0857-31-5303 yamada@sse.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Software quality/ reliability assessment modeling and its evaluation</li> <li>• Development of practical software management tools</li> <li>• Development and application of project management methodologies</li> <li>• Availability and safety assessment methodologies for hardware/ software systems</li> <li>• New methods for statistical quality control and their application in TQM (total quality management)</li> </ul>
	Regional Systems Planning	◎ FUKUYAMA, Kei 0857-31-5312 fukuyama@sse.tottori-u.ac.jp KUWANO, Masashi 0857-31-5313 kuwano@sse.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Institutional design and analyses of regional socio-economic systems</li> <li>• Economic analyses of urban systems</li> <li>• Public policy evaluation</li> <li>• Activity – travel behavior analysis</li> <li>• Infrastructure planning and management, transportation engineering, and urban planning</li> <li>• Local disaster prevention planning</li> <li>• Participatory risk communication</li> </ul>
		◎ TANIMOTO, Keishi 0857-31-5310 tanimoto@sse.tottori-u.ac.jp TSUCHIYA, Satoshi 0857-31-5760 tsuchiya@sse.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Methodologies for sustainable society planning</li> <li>• Planning theory of local transport system</li> <li>• Design and analysis of daily support services</li> <li>• Disaster risk assessment and management for transportation system</li> </ul>
	Disaster Prevention Planning	◎ MATSUMI, Yoshiharu 0857-31-5316 matsumi@sse.tottori-u.ac.jp OTA, Takao 0857-31-5309 ohta@sse.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Soft- disaster prevention based on evacuation simulation</li> <li>• Ocean-air coupled modeling</li> <li>• Performance evaluation of coastal structures under damage progression</li> <li>• Maintenance management model for infrastructure</li> </ul>
	Environmental Planning	◎ HOSHIKAWA, Yoshiko 0857-31-5317 hoshikawa@sse.tottori-u.ac.jp MASUDA, Takanori 0857-31-5318 masuda@sse.tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Risk assessment of environmental chemicals</li> <li>• Application of microorganisms for establishing recycling-based society</li> <li>• Maintenance and management of water and waste water system</li> <li>• Water quality control and management</li> <li>• Current issues in global environmental protection</li> </ul>

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