

Themes of Individual Research Training (JYPE) 2019-2020

Faculty/School	Department	Research Theme	Academic Advisor
01. Faculty of Science	01. Mathematics	Hilbert Transform and Singular Integral Operator	Prof. OGAWA Takayoshi
01. Faculty of Science	02. Physics	Detector Development for the Omega Meson Form Factor	Prof. OHNISHI Hiroaki
01. Faculty of Science	02. Physics	experimental high energy physics (accelerator)	Prof. YAMAMOTO Hitoshi
01. Faculty of Science	07. Biology	Developmental analysis of ALOG gene in Marchantia polymorpha	Prof. KYOZUKA Junko
02. School of Engineering	01. Mechanical and Aerospace Engineering	Development of Image Processing Algorithm Estimating Average Grain Size by Border Recognition	Assoc. Prof. AOYAGI Yoshiteru
02. School of Engineering	01. Mechanical and Aerospace Engineering	Automation of Geothermal Reservoir Modelling by Machine Learning	Prof. HASHIDA Toshiyuki
02. School of Engineering	01. Mechanical and Aerospace Engineering	Data Protection Analysis of Healthcare Robots	Prof. HIRATA Yasuhisa
02. School of Engineering	01. Mechanical and Aerospace Engineering	Study on Precursor Film Dynamics in Vicinity of Liquid/Gas/Solid Interface by Phase Shifting Ellipsometer	Prof. KOMIYA Atsuki
02. School of Engineering	01. Mechanical and Aerospace Engineering	Semi-active vibration suppression with piezoelectric transducer for space structures	Prof. MAKIHARA Kanjuro
02. School of Engineering	01. Mechanical and Aerospace Engineering	Stress Corrosion Cracking of Stainless Steel	Prof. MIURA Hideo
02. School of Engineering	01. Mechanical and Aerospace Engineering	6-degrees-of-freedom of an aircraft in Matlab	Prof. OBAYASHI Shigeru
02. School of Engineering	01. Mechanical and Aerospace Engineering	Erosion corrosion on carbon steel for nuclear decommissioning program	Prof. WATANABE Yutaka
02. School of Engineering	01. Mechanical and Aerospace Engineering	Trajectory Design to the Moon and Stability Analysis of Lunar Orbits for Microsatellites	Prof. YOSHIDA Kazuya

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02. School of Engineering	02. Electrical Information and Physics Engineering	Spatio-Temporal Spiking Neuro-Dynamics Observed from a Liquid State Machine with Izhikevich Neuron	Prof. HORIO Yoshihiko
02. School of Engineering	02. Electrical Information and Physics Engineering	Non-Parallel Voice Conversion using Spectrogram CycleGAN	Prof. ITO Akinori
02. School of Engineering	02. Electrical Information and Physics Engineering	Optimal Offloading Framework for High Performance Edge Cloud Computing	Prof. KATO Nei
02. School of Engineering	02. Electrical Information and Physics Engineering	Smart Traffic Control via Image Processing	Prof. OMACHI Shinichiro
02. School of Engineering	02. Electrical Information and Physics Engineering	Optical to MMW/Sub-THz Frequency Down-Conversion by UTC-PD-Integrated HEMT	Prof. OTSUJI Taiichi
02. School of Engineering	02. Electrical Information and Physics Engineering	Predicting human evaluations of lunch box images with CNNs	Prof. SHIOIRI Satoshi
02. School of Engineering	02. Electrical Information and Physics Engineering	Interaction between illusion and brain activity	Prof. SHIOIRI Satoshi
02. School of Engineering	02. Electrical Information and Physics Engineering	Magnetic Recording	Prof. TANAKA Yoichiro
02. School of Engineering	03. Applied Chemistry Chemical Engineering and Biomolecular Engineering	Phase Transition and Ferroelectricity of Hydrogen-Bonding Molecular Assembly Based on Azobenzene Derivative	Prof. AKUTAGAWA Tomoyuki
02. School of Engineering	03. Applied Chemistry Chemical Engineering and Biomolecular Engineering	BaTiO ₃ /PVDF nanocomposite films: the effect of nanoparticle sizes	Prof. NAGAO Daisuke
02. School of Engineering	04. Material Science and Engineering	Utilization of Biomass in the Iron Making Industry	Prof. KASAI Eiki
02. School of Engineering	04. Material Science and Engineering	Effect of Mn and Bi Substitution on Electrical Transport Properties of Zintl Compound Mg ₃ Sb ₂	Prof. MIYAZAKI Yuzuru
02. School of Engineering	04. Material Science and Engineering	Effect of Temperature on Pit Initiation at MnS Inclusions in Type 304 Stainless Steel: In Situ Observation on Change in Pit Morphology	Prof. MUTO Izumi

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02. School of Engineering	04. Material Science and Engineering	Spin orbit torque in electrically-conductive PdCoO ₂	Prof. NITTA Junsaku
02. School of Engineering	04. Material Science and Engineering	Degradation Analysis of Thermal Barrier Coatings	Prof. OGAWA Kazuhiro
02. School of Engineering	04. Material Science and Engineering	Enhancement of Superelasticity in Mg-Sc shape-memory alloy	Prof. SUTOU Yuji
02. School of Engineering	04. Material Science and Engineering	Scanning Transmission Electron Microscopic Observation of Pt and SnO ₂ interfaces	Prof. WADAYAMA Toshimasa
02. School of Engineering	05. Civil Engineering and Architecture	Performance of Reinforced Concrete Walls with Opening	Prof. MAEDA Masaki
03. Faculty of Agriculture	01. Applied Bio-Sciences	Entero-Mammary Immunology	Assoc. Prof. NOCHI Tomonori
03. Faculty of Agriculture	01. Applied Bio-Sciences	Differences in white and dark muscles of wild and farmed fish	Prof. OCHIAI Yoshihiro