

## G30 自動車工学プログラム/Automotive Engineering Program

## 卒業研究配属および卒研テーマ/List of Laboratories available at the 4th year with the research project samples

学科名: 機械・航空宇宙工学科/Department of Mechanical and Aerospace Engineering

研究グループ名(英語)/Group	卒研テーマ(英語)/Research project	研究室URL/Laboratory URL	指導教員/Supervisor	連絡先/Contact person	Mail address
Material Characterization & Mechanics	Effect of high-density electric current on the material strength of TiAl alloy	<a href="http://www.mech.nagoya-u.ac.jp/ju/index_E.html">http://www.mech.nagoya-u.ac.jp/ju/index_E.html</a>	Yang Ju	Yang Ju	ju@mech.nagoya-u.ac.jp
Manufacturing Engineering	High-Precision/High-Efficiency Machining and Machine Tool	<a href="http://www.mech.nagoya-u.ac.jp/upr/English/index.html">http://www.mech.nagoya-u.ac.jp/upr/English/index.html</a>	Eiji Shamoto	Eiji Shamoto	shamoto@mech.nagoya-u.ac.jp
Manufacturing Process	Ultra low friction and high wear resistance coatings for advanced automobiles	<a href="http://ume.mech.nagoya-u.ac.jp/">http://ume.mech.nagoya-u.ac.jp/</a>	Noritsugu Umehara	Noritsugu Umehara	ume@mech.nagoya-u.ac.jp
Energy and Environmental Engineering	Development of efficient biomass gasification technology in packed bed gasifier	<a href="http://www.mech.nagoya-u.ac.jp/naruse/">http://www.mech.nagoya-u.ac.jp/naruse/</a>	Ichiro Naruse Ryo Yoshiie Yasuaki Ueki	Ichiro Naruse Ryo Yoshiie Yasuaki Ueki	naruse@imass.nagoya-u.ac.jp ryo.yoshiie@mae.nagoya-u.ac.jp ueki@imass.nagoya-u.ac.jp
Statistical Fluid Engineering	On the intelligent active control of mixing and diffusion process in an axisymmetric air jet flow	<a href="http://www.mech.nagoya-u.ac.jp/sfe/">http://www.mech.nagoya-u.ac.jp/sfe/</a>	Yasumasa Ito	Yasumasa Ito	yito@nagoya-u.jp
Thermal Control Engineering	Advanced thermal management technology for next-generation automobiles	<a href="http://www.eess.mech.nagoya-u.ac.jp/index.html">http://www.eess.mech.nagoya-u.ac.jp/index.html</a>	Hosei Nagano Kazuhiro Yamamoto	Hosei Nagano Kazuhiro Yamamoto	nagano@mech.nagoya-u.ac.jp kazuhiro@mech.nagoya-u.ac.jp
Biomechanics	Study on the Response of Cells and Tissues to Mechanical Environment	<a href="http://bio.mech.nagoya-u.ac.jp/">http://bio.mech.nagoya-u.ac.jp/</a>	Takeo Matsumoto	Takeo Matsumoto	takeo@mech.nagoya-u.ac.jp
Safety Intelligence	Investigation into Cognitive Characteristics in The Use of Personalcare Robots	<a href="http://www.mech.nagoya-u.ac.jp/asi/en/research/">http://www.mech.nagoya-u.ac.jp/asi/en/research/</a>			
Vehicle Safety Engineering	Optimization of crash pulse for reduction of injury risk to vehicle occupants	<a href="http://www.mech.nagoya-u.ac.jp/en/laboratories/human.html">http://www.mech.nagoya-u.ac.jp/en/laboratories/human.html</a>	Koji Mizuno	Koji Mizuno	kmizuno@mech.nagoya-u.ac.jp
Intelligent Robotics	Robot Technologies for Human Assistance	<a href="http://www.mein.nagoya-u.ac.jp/index.html">http://www.mein.nagoya-u.ac.jp/index.html</a>	Yasuhisa Hasegawa	Yasuhisa Hasegawa	hasegawa@mein.nagoya-u.ac.jp
Biorobotics and Biomedical Engineering	MEMS Sensor for Detection of Biological Signals of Driver	<a href="http://www.biorobotics.mech.nagoya-u.ac.jp/index_e.html">http://www.biorobotics.mech.nagoya-u.ac.jp/index_e.html</a>	Hisataka Maruyama	Hisataka Maruyama	hisataka.maruyama@mae.nagoya-u.ac.jp
MEMS and Micromachining	Micromachining of thin film metallic glasses and those application for MEMS sensors	<a href="http://mnp.mech.nagoya-u.ac.jp/">http://mnp.mech.nagoya-u.ac.jp/</a>	Seiichi Hata	Seiichi Hata	hata@mech.nagoya-u.ac.jp
Micro Thermal-Fluids Engineering	Analysis on molecular behavior in high Knudsen number flows	<a href="http://www.mech.nagoya-u.ac.jp/mtfe/index_e.htm">http://www.mech.nagoya-u.ac.jp/mtfe/index_e.htm</a>	Hiroki Yamaguchi	Hiroki Yamaguchi	hiroki@nagoya-u.jp
Computational Mechanics	Shape Optimization Analyses of Vehicle Interior Sound Fields	<a href="http://www.matsumoto.nuem.nagoya-u.ac.jp/">http://www.matsumoto.nuem.nagoya-u.ac.jp/</a>	Toshiro Matsumoto	Toshiro Matsumoto	t.matsumoto@nuem.nagoya-u.ac.jp
Mechanical System Dynamics	Modeling and Parameter Estimation of Inlet and Outlet Boundary of Fluid-Structure Coupled Turbo Machinery Using Machine learning approach	<a href="http://www.nuem.nagoya-u.ac.jp/inouelab/">http://www.nuem.nagoya-u.ac.jp/inouelab/</a>	Tsuyoshi Inoue	Tsuyoshi Inoue	inoue@nuem.nagoya-u.ac.jp
Sensing Engineering	Micro/Nano sensing for MEMS, advanced machines, and bio-applications	<a href="http://ayame.fukuzawa.nuem.nagoya-u.ac.jp/pg43.html">http://ayame.fukuzawa.nuem.nagoya-u.ac.jp/pg43.html</a>	Kenji Fukuzawa	Kenji Fukuzawa	fukuzawa@nuem.nagoya-u.ac.jp
Dynamical Systems Control	Mathematical Theory for Control Systems	<a href="http://www.ctrl.mae.nagoya-u.ac.jp/">http://www.ctrl.mae.nagoya-u.ac.jp/</a>	Toru Asai	Toru Asai	asai@nuem.nagoya-u.ac.jp
Biomechanical Control	Machine Learning and Data Science	<a href="https://www.mlds.mae.nagoya-u.ac.jp/index.en.html">https://www.mlds.mae.nagoya-u.ac.jp/index.en.html</a>	Ichiro Takeuchi	Ichiro Takeuchi	ichiro.takeuchi@mae.nagoya-u.ac.jp
	Multimode multi-user equilibrium assignment for efficient and low emission traffic flow	<a href="http://www.uno.nuem.nagoya-u.ac.jp/index_en.html">http://www.uno.nuem.nagoya-u.ac.jp/index_en.html</a>	Kouichi Taji	Kouichi Taji	taji@nuem.nagoya-u.ac.jp
Mobility System	Personalized assistance system design for future vehicle	<a href="http://www.suzlab.nuem.nagoya-u.ac.jp/index_e.html">http://www.suzlab.nuem.nagoya-u.ac.jp/index_e.html</a>	Tatsuya Suzuki	Tatsuya Suzuki	t_suzuki@nuem.nagoya-u.ac.jp
	Synthesis and control of automated vehicle				
Structural Mechanics	Characterization and Optimum Design of Advanced Composite Materials	<a href="http://str.nuae.nagoya-u.ac.jp/index.html">http://str.nuae.nagoya-u.ac.jp/index.html</a>	Masahiro Arai	Masahiro Arai	arai@nuae.nagoya-u.ac.jp
Shock Wave and Space Propulsion Laboratory	Boundary layer interaction in high-speed flows	<a href="http://akagi.nuae.nagoya-u.ac.jp/">http://akagi.nuae.nagoya-u.ac.jp/</a>	Akihiro Sasoh	Akihiro Sasoh	akihiro.sasoh@mae.nagoya-u.ac.jp
Solid Mechanics	Stress and deformation analysis of soft materials	<a href="http://www.mech.nagoya-u.ac.jp/mml/">http://www.mech.nagoya-u.ac.jp/mml/</a>	Dai Okumura	Dai Okumura	dai.okumura@mae.nagoya-u.ac.jp
Aerospace Vehicle Dynamics	Multicopter system Attitude and orbit control for small satellites	<a href="http://nanosat.nuae.nagoya-u.ac.jp/index_en.html">http://nanosat.nuae.nagoya-u.ac.jp/index_en.html</a>	Shigeru Sunada Takaya Inamori	Shigeru Sunada Takaya Inamori	shigeru.sunada@mae.nagoya-u.ac.jp inamori@nuae.nagoya-u.ac.jp
Advanced Composites Materials	A study on mechanical and thermal properties of advanced composite materials and their applications	<a href="http://advcomps.nuae.nagoya-u.ac.jp/">http://advcomps.nuae.nagoya-u.ac.jp/</a>	Atsuhiko Yamanaka	Atsuhiko Yamanaka	yamanaka@ncc.engg.nagoya-u.ac.jp
Control Systems Engineering	Advanced control problems related to aircraft and spacecraft	<a href="http://jupiter.nuae.nagoya-u.ac.jp">http://jupiter.nuae.nagoya-u.ac.jp</a>	Susumu Hara	Susumu Hara	haras@nuae.nagoya-u.ac.jp
Propulsion and Energy Systems Engineering	Detonation and Its Application to Aerospace Propulsion System	<a href="http://www.prop.nuae.nagoya-u.ac.jp/">http://www.prop.nuae.nagoya-u.ac.jp/</a>	Jiro Kasahara	Jiro Kasahara	kasahara@nuae.nagoya-u.ac.jp
Fluid Dynamics	Numerical simulation and experiments on turbulent flows	<a href="https://www.fdl.mae.nagoya-u.ac.jp/">https://www.fdl.mae.nagoya-u.ac.jp/</a>	Koji Nagata	Koji Nagata	nagata@nagoya-u.jp

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学科名：電気電子情報工学科／Department of Electrical Engineering, Electronics, and Information Engineering

研究グループ名(英語)／Group	卒研テーマ(英語)／Research project	研究室URL／Laboratory URL	指導教員／Supervisor	連絡先／Contact person	Mail address
Electric Energy Storage Engineering	Interfacial phenomena on rechargeable batteries	<a href="http://www.nuee.nagoya-u.ac.jp/labs/fukutsuka-lab/index.html">http://www.nuee.nagoya-u.ac.jp/labs/fukutsuka-lab/index.html</a>	Tomokazu FUKUTSUKA	Tomokazu FUKUTSUKA	fukutsuka@nuee.nagoya-u.ac.jp
Electric Power Apparatus and Energy Transmission Engineering (S)	High-withstand-voltage solid dielectrics for power generation apparatus, transportation and mobility.	<a href="https://sites.google.com/view/2022kurimotolab">https://sites.google.com/view/2022kurimotolab</a>	Muneaki KURIMOTO	Muneaki KURIMOTO	kurimoto@nuee.nagoya-u.ac.jp
Energy Systems Engineering	Integration of EV/PHEV into Electric Power System	<a href="http://www.nuee.nagoya-u.ac.jp/labs/katolab/">http://www.nuee.nagoya-u.ac.jp/labs/katolab/</a>	Takeyoshi KATO	Takeyoshi KATO	tkato@nuee.nagoya-u.ac.jp
Power Electronics Group	1. Power Conversion Systems using GaN/SiC Power Semiconductor Devices for Automotive Application 2. Modeling of Power Conversion Systems for Automotive Application and Aircraft Application	<a href="http://pelab.imass.nagoya-u.ac.jp/">http://pelab.imass.nagoya-u.ac.jp/</a>	Masayoshi YAMAMOTO	Masayoshi YAMAMOTO	m.yamamoto@imass.nagoya-u.ac.jp
Advanced Energy Science, Plasma Energy Group	Metallic nanostructure formation by plasma irradiation for photocatalysis application	<a href="http://www.nuee.nagoya-u.ac.jp/labs/plaene/">http://www.nuee.nagoya-u.ac.jp/labs/plaene/</a>	Noriyasu OHNO	Noriyasu OHNO	ohno@ees.nagoya-u.ac.jp
Space Electromagnetic Environment (Space Observation)	Studies on electromagnetic environment of geospace around the Earth using radars, GPS receivers, optical interferometers, and satellites.	<a href="https://www.isee.nagoya-u.ac.jp/dimr/index_e.html">https://www.isee.nagoya-u.ac.jp/dimr/index_e.html</a>	Kazuo SHIOKAWA	Kazuo SHIOKAWA	shiohawa@nagoya-u.jp
Space Information Engineering (Data analysis and Computer Simulation on Sun and Space Environment)	1. Studies on plasma environment of Sun, Solar wind and Geospace by using data analyses on the satellite/ground-based observations based on information science techniques and numerical experiments based on high-performance computing techniques. 2. Studies for the prediction of solar activities and space environment (space weather) by using the state-of-art artificial intelligence (AI) / data assimilation / machine learning techniques.	<a href="https://is.isee.nagoya-u.ac.jp/en/">https://is.isee.nagoya-u.ac.jp/en/</a>	Yoshizumi MIYOSHI	Yoshizumi MIYOSHI	miyoshi@isee.nagoya-u.ac.jp
Plasma Electronics	Surface Wettability Control by Plasma Treatment	<a href="http://www.nuee.nagoya-u.ac.jp/labs/toyodalab/E/index.html">http://www.nuee.nagoya-u.ac.jp/labs/toyodalab/E/index.html</a>	Hiroto TOYODA	Hiroto TOYODA	toyoda@nuee.nagoya-u.ac.jp
Materials and Device Processing Research Group, Nano Process Laboratory	Novel fuel cell device based on nanocomposite materials and plasma nano-processing	<a href="https://horilab.nuee.nagoya-u.ac.jp/en/home.html">https://horilab.nuee.nagoya-u.ac.jp/en/home.html</a>	Masaru HORI Hiroki KONDO	Masaru HORI Hiroki KONDO	hori@nuee.nagoya-u.ac.jp hkondo@nagoya-u.jp
	High-performance GaN power devices developed by advanced plasama technologies				
	Surface functionalization technology for car engineering by advanced plasma treatments				
Semiconductor Engineering and Integration Science	Material Characterization and Processing for Advanced Semiconductor Devices	<a href="http://www.nuee.nagoya-u.ac.jp/labs/miyazakilab/">http://www.nuee.nagoya-u.ac.jp/labs/miyazakilab/</a>	Seiichi MIYAZAKI	Seiichi MIYAZAKI	miyazaki@nuee.nagoya-u.ac.jp
Advanced Devices	Materials Characterization for Advanced Semiconductor Power Devices	<a href="http://sudalab.skr.jp/">http://sudalab.skr.jp/</a>	Jun SUDA	Jun Suda	suda@nuee.nagoya-u.ac.jp
Quantum Opto-Electronics	Ultrashort pulse fiber lasers for advanced metrology and biomedical imaging	<a href="http://www.nuee.nagoya-u.ac.jp/labs/optelab/en/index_en.html">http://www.nuee.nagoya-u.ac.jp/labs/optelab/en/index_en.html</a>	Norihiko NISHIZAWA	Norihiko NISHIZAWA	nishizawa@nuee.nagoya-u.ac.jp
Quantum Integration Devices Group	Quantum-Based Superconductor Circuits	<a href="http://www.super.nuqe.nagoya-u.ac.jp/en/index.html">http://www.super.nuqe.nagoya-u.ac.jp/en/index.html</a>	Akira FUJIMAKI	Akira FUJIMAKI	fujimaki@nuee.nagoya-u.ac.jp
Nano information devices	Crystal growth of nitride-based micro LEDs displays, LDs, power devices, and high frequency devices	<a href="http://www.semicond.nuee.nagoya-u.ac.jp/english/index.html">http://www.semicond.nuee.nagoya-u.ac.jp/english/index.html</a>	Hiroshi AMANO	Hiroshi AMANO	amano@nuee.nagoya-u.ac.jp
Nano-spin Devices Group	Development of High Performance Magnetic Sensors	<a href="http://www.nuee.nagoya-u.ac.jp/labs/kato-lab/index_e.html">http://www.nuee.nagoya-u.ac.jp/labs/kato-lab/index_e.html</a>	Takeshi KATO	Takeshi KATO	takeshi@nuee.nagoya-u.ac.jp
Nano-electron devices	Carbon nanotube-based electron devices	<a href="https://nanoflex.jp/public-j/">https://nanoflex.jp/public-j/</a>	Yutaka OHNO	Yutaka OHNO	yohno@nagoya-u.jp
International Research Section	Innovative III-Nitride material research	<a href="http://mp.imass.nagoya-u.ac.jp/">http://mp.imass.nagoya-u.ac.jp/</a>	Markus PRISTOVSEK	Markus PRISTOVSEK	pristovsek@imass.nagoya-u.ac.jp
Visual Information Group	Image and Video Processing	<a href="http://www.fujii.nuee.nagoya-u.ac.jp/index-e.html">http://www.fujii.nuee.nagoya-u.ac.jp/index-e.html</a>	Toshiaki FUJII	Toshiaki FUJII	fujii@nuee.nagoya-u.ac.jp
Information Networks Group	Next-generation optical network architecture / Machine-learning-based optical transmission technologies	<a href="http://www.nuee.nagoya-u.ac.jp/labs/satolab/en/index.html">http://www.nuee.nagoya-u.ac.jp/labs/satolab/en/index.html</a>	Hiroshi HASEGAWA	Hiroshi HASEGAWA	hasegawa@nuee.nagoya-u.ac.jp
Advanced Information Environment Group	Big data analysis for Location based Information Systems	<a href="http://www.ucl.nuee.nagoya-u.ac.jp/">http://www.ucl.nuee.nagoya-u.ac.jp/</a>	Nobuo KAWAGUCHI	Takuro YONEZAWA	takuro@nagoya-u.jp
Information Engineering Group	Design and analysis of cryptographic primitives	<a href="http://www.nuee.nagoya-u.ac.jp/labs/tiwata/index.html">http://www.nuee.nagoya-u.ac.jp/labs/tiwata/index.html</a>	Tetsu IWATA	Tetsu IWATA	iwata@cse.nagoya-u.ac.jp
Wireless Systems	Theories and Applications of Wireless Communication Systems	<a href="http://www.katayama.nuee.nagoya-u.ac.jp/index-e.php">http://www.katayama.nuee.nagoya-u.ac.jp/index-e.php</a>	Hiraku OKADA	Hiraku OKADA	okada@nuee.nagoya-u.ac.jp
Communication Theory	Visible Light Communication	<a href="https://yamazato.nuee.nagoya-u.ac.jp/en/">https://yamazato.nuee.nagoya-u.ac.jp/en/</a>	Takaya YAMAZATO	Takaya YAMAZATO	yamazato@nagoya-u.jp
Intelligent Systems	Human-Agent Interaction	<a href="http://ssl.nuee.nagoya-u.ac.jp">http://ssl.nuee.nagoya-u.ac.jp</a>	Satoshi SATO Kohei OGAWA	Kohei OGAWA	k-ogawa@nuee.nagoya-u.ac.jp
Infomation Systems (Control Systems) Group	Advanced system control of Viechle and Robot	<a href="http://doki-n.nuee.nagoya-u.ac.jp/">http://doki-n.nuee.nagoya-u.ac.jp/</a>	Shinji DOKI	Shinji DOKI	doki@nagoya-u.jp
Acoustic Speech and Behavior Signal Processing Group	Modeling of traffic/vehicle and driver behaviors	<a href="http://takedalab.g.sp.m.is.nagoya-u.ac.jp/">http://takedalab.g.sp.m.is.nagoya-u.ac.jp/</a>	Kazuya TAKEDA	Kazuya TAKEDA	takeda@is.nagoya-u.ac.jp
	In-vehicle speech and acoustic systems				
	In-vehicle human-computer interaction systems				