

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	http://www.mech.nagoya-u.ac.jp/ju/index_E.html	Yang Ju	Yang Ju	ju@mech.nagoya-u.ac.jp
Ultraprecision Engineering	High-Precision/High-Efficiency Machining and Machine Tool	http://www.mech.nagoya-u.ac.jp/upr/English/index.html	Eiji Shamoto	Eiji Shamoto	shamoto@mech.nagoya-u.ac.jp
Manufacturing Process	Ultra low friction and high wear resistance coatings for advanced automobiles	http://huga.ume.mech.nagoya-u.ac.jp/umelab-english/index_con.html	Noritsugu Umehara	Noritsugu Umehara	ume@mech.nagoya-u.ac.jp
Energy and Environmental Engineering	Development of efficient biomass gasification technology in packed bed gasifier	http://www.mech.nagoya-u.ac.jp/naruse/	Ichiro Naruse Ryo Yoshiie	Ichiro Naruse Ryo Yoshiie	naruse@imass.nagoya-u.ac.jp ryo.yoshiie@mae.nagoya-u.ac.jp
Statistical Fluid Engineering	On the intelligent active control of mixing and diffusion process in an axisymmetric air jet flow	http://www.mech.nagoya-u.ac.jp/sfe/	Yasuhiko Sakai Yasumasa Ito	Yasuhiko Sakai Yasumasa Ito	ysakai@mech.nagoya-u.ac.jp yito@nagoya-u.jp
Heat Transfer & Combustion Engineering	Advanced thermal management technology for effective heat-energy utilization	http://www.eess.mech.nagoya-u.ac.jp/index.html	Hosei Nagano	Hosei Nagano	nagano@mech.nagoya-u.ac.jp
Biomechanics	Evaluation of Mental Stress by Mechanical Response of Arteries	http://bio.mech.nagoya-u.ac.jp/	Takeo Matsumoto	Takeo Matsumoto	takeo@mech.nagoya-u.ac.jp
Safety Intelligence	Investigation into Cognitive Characteristics in The Use of Personalcare Robots	http://www.mech.nagoya-u.ac.jp/asi/en/research/	Yoji Yamada	Yoji Yamada	yamada-yoji@mech.nagoya-u.ac.jp
Human System Engineering	Optimization of crash pulse for reduction of injury risk to vehicle occupants	http://www.mech.nagoya-u.ac.jp/en/laboratories/human.html	Koji Mizuno Daisuke Ito	Koji Mizuno	kmizuno@mech.nagoya-u.ac.jp
Intelligent Robotics	Robot Technologies for Human Assistance	http://www.mein.nagoya-u.ac.jp/index.html	Yasuhisa Hasegawa	Yasuhisa Hasegawa	hasegawa@mein.nagoya-u.ac.jp
Biorobotics and Biomedical Engineering	MEMS Sensor for Detection of Biological Signals of Driver	http://www.biorobotics.mech.nagoya-u.ac.jp/index_e.html	Fumihito Arai	Fumihito Arai	arai@mech.nagoya-u.ac.jp
MEMS and Micromachining	Combinatorial search for novel magnetostrictive alloy and its application to micro torque sensor for mobile body	http://mnp.mech.nagoya-u.ac.jp/	Seiichi Hata	Seiichi Hata	hata@mech.nagoya-u.ac.jp
Micro Thermal-Fluids Engineering	Analysis on molecular behavior in high Knudsen number flows	http://www.mech.nagoya-u.ac.jp/mtfe/index_e.htm	Hiroki Yamaguchi	Hiroki Yamaguchi	hiroki@nagoya-u.jp
Computational Mechatronics	Shape Optimization Analyses of Vehicle Interior Sound Fields	http://www.matsumoto.nuem.nagoya-u.ac.jp/	Toshiro Matsumoto	Toshiro Matsumoto	t.matsumoto@nuem.nagoya-u.ac.jp
Mechanical Dynamics Group	Modeling and Parameter Estimation of Inlet and Outlet Boundary of Fluid-Structure Coupled Turbo Machinery Using Machine learning	http://www.nuem.nagoya-u.ac.jp/inouelab/	Tsuyoshi Inoue	Tsuyoshi Inoue	inoue@nuem.nagoya-u.ac.jp
Intelligent Sensing Group	Micro/nano Measurement for Clarifying Boundary Lubrication Phenomena	http://www.mitsuya.nuem.nagoya-u.ac.jp/	Kenji Fukuzawa	Kenji Fukuzawa	fukuzawa@nuem.nagoya-u.ac.jp
Mathematical System Control Group	Fault Tolerant Control for Electric Vehicles via Steer-by-Wire and In-Wheel Motors	http://www.haya.nuem.nagoya-u.ac.jp/index.html	Toru Asai	Toru Asai	asai@nuem.nagoya-u.ac.jp
Biomechanical Control Group	Multimode multi-user equilibrium assignment for efficient and low emission traffic flow	http://www.uno.nuem.nagoya-u.ac.jp/index_en.html	Kouichi Taji	Kouichi Taji	taji@nuem.nagoya-u.ac.jp
Mobility System	Personalized assistance system design for future vehicle	http://www.suzlab.nuem.nagoya-u.ac.jp/index_e.html	Tatsuya Suzuki	Tatsuya Suzuki	t_suzuki@nuem.nagoya-u.ac.jp
Structure Mechanics Research Group	Synthesis and control of automated vehicle				
Structure Mechanics Research Group	Characterization and Optimum Design of Advanced Composite Materials	http://str.nuae.nagoya-u.ac.jp/index.html	Masahiro Arai	Masahiro Arai	arai@nuae.nagoya-u.ac.jp
Shock Wave and Space Propulsion Laboratory	Boundary layer interaction in high-speed flows	http://akagi.nuae.nagoya-u.ac.jp/	Akihiro Sasoh	Akihiro Sasoh	sasoh@nuae.nagoya-u.ac.jp
Solid Mechanics Research Laboratory	Interaction between mechanical and swelling behaviors of elastomers	http://www.mech.nagoya-u.ac.jp/mml/	Dai Okumura	Dai Okumura	dai.okumura@mae.nagoya-u.ac.jp
Aerospace Vehicle Dynamics Research Group	Multirotor system Attitude and orbit control for small satellites	http://nanosat.nuae.nagoya-u.ac.jp/index_en.html	Shigeru Sunada Takaya Inamori	Shigeru Sunada Takaya Inamori	shigeru.sunada@mae.nagoya-u.ac.jp inamori@nuae.nagoya-u.ac.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
Advanced Energy Science, Plasma Energy Group	Metallic nanostructure formation by plasma irradiation for photocatalysis application	http://www.ees.nagoya-u.ac.jp/~web_dai5/	Noriyasu OHNO Shin KAJITA	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.	http://stdb2.stelab.nagoya-u.ac.jp/index_e.html	Kazuo SHIOKAWA	Kazuo SHIOKAWA	shiohawa@nagoya-u.jp
Energy Systems Engineering	Integration of EV/PHEV into Electric Power System	http://www.nuee.nagoya-u.ac.jp/labs/katolab/	Takeyoshi KATO	Takeyoshi KATO	tkato@nuee.nagoya-u.ac.jp
Plasma Electronics	Surface Wettability Control by Plasma Treatment	http://www.nuee.nagoya-u.ac.jp/labs/toyodalab/E/index.html	HirotaKa TOYODA	HirotaKa 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	http://horilab.nuee.nagoya-u.ac.jp/index.php?id=336	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 plasma technologies				
	Surface functionalization technology for car engineering by advanced plasma treatments				
Nano information devices	Nitride-based LEDs, LDs, Power devices, Solar cells	http://www.semicond.nuee.nagoya-u.ac.jp/english/index.html	Hiroshi AMANO	Hiroshi AMANO	amano@nuee.nagoya-u.ac.jp
Quantum Opto-Electronics	Novel ultrashort pulse fiber lasers and their application for optical imaging	http://www.nuee.nagoya-u.ac.jp/labs/optelab/en/index_en.html	Norihiko NISHIZAWA	Norihiko NISHIZAWA	nishizawa@nuee.nagoya-u.ac.jp
Quantum Integration Devices Group	Energy-Efficient Cryogenic Devices and Circuits	http://www.super.nuqe.nagoya-u.ac.jp/en/index.html	Akira FUJIMAKI	Akira FUJIMAKI	fujimaki@nuee.nagoya-u.ac.jp
Semiconductor Engineering and Integration Science	Material Characterization and Processing for Advanced Semiconductor Devices	http://www.nuee.nagoya-u.ac.jp/labs/miyazakilab/	Seiichi MIYAZAKI	Seiichi MIYAZAKI	miyazaki@nuee.nagoya-u.ac.jp
Nano-spin Devices Group	Development of High Performance Magnetic Sensors Using Magnetoresistance Effect	http://www.nuee.nagoya-u.ac.jp/labs/iwatalab/index_e.html	Satoshi IWATA	Satoshi IWATA	iwata@nuee.nagoya-u.ac.jp
Nano-electron devices	Carbon nanotube-based electron devices	http://qed63.qd.nuqe.nagoya-u.ac.jp/public/	Yutaka OHNO	Yutaka OHNO	yohn@nagoya-u.jp
Visual Information Group	Image and Video Processing	http://www.fujii.nuee.nagoya-u.ac.jp/index-e.html	Toshiaki FUJII	Toshiaki FUJII	fujii@nuee.nagoya-u.ac.jp
Infomatoin Systems (Control Systems) Group	Advanced system control of Viechle and Robot	http://doki-n.nuee.nagoya-u.ac.jp/	Shinji DOKI	Shinji DOKI	doki@nagoya-u.jp
Information Networks Group	Network traffic engineering to create power efficient networks	http://www.nuee.nagoya-u.ac.jp/labs/satolab/en/index.html	Ken-ichi SATO	Ken-ichi SATO Hiroshi Hasegawa	sato@nuee.nagoya-u.ac.jp
Intelligent Systems	Artificial Intelligence and Natural Language Processing	http://sslalab.nuee.nagoya-u.ac.jp	Satoshi SATO Takuya MATSUZAKI	Satoshi SATO	ssato@nuee.nagoya-u.ac.jp
Information Systems Group Intelligent Control Laboratory	1. Brain Computer Interface for Aged People 2. Design Optimization using Evolutionary Computation	http://www.cmplx.cse.nagoya-u.ac.jp/Research_English.php	Takeshi FURUHASHI Tomohiro YOSHIKAWA	Takeshi FURUHASHI	furuhashi@cse.nagoya-u.ac.jp
Advanced Information Environment Group	Big data analysis for Location based Information Systems	http://www.ucl.nuee.nagoya-u.ac.jp/	Nobuo KAWAGUCHI	Kei HIROI	k.hiroi@ucl.nuee.nagoya-u.ac.jp
Information Engineering Group	Design and analysis of cryptographic primitives	http://www.nuee.nagoya-u.ac.jp/labs/tiwata/index.html	Tetsu IWATA	Tetsu IWATA	iwata@cse.nagoya-u.ac.jp
Acoustic Speech and Behavior Signal Processing Group	In-vehicle speech and acoustic systems	http://takedalab.g.sp.m.is.nagoya-u.ac.jp/	Kazuya TAKEDA	Kazuya TAKEDA	takeda@is.nagoya-u.ac.jp
	Modeling of traffic/vehicle and driver behaviors				
	Data mining for Field Operational Tests				
Wireless Systems	Theories and Applications of Wireless Communication Systems	http://www.katayama.nuee.nagoya-u.ac.jp/index-e.php	Masaaki KATAYAMA	Hiraku OKADA	okada@nuee.nagoya-u.ac.jp
Space Electromagnetic Environment (Data analysis and Computer Simulation)	Studies on plasma environment of Sun, Solar wind and Geospace by using data analyses on the satellite/ground-based observations based on information science technologies and numerical experiments based on high-performance computing technologies.	https://is.isee.nagoya-u.ac.jp/en/	Yoshizumi MIYOSHI	Yoshizumi MIYOSHI	miyoshi@isee.nagoya-u.ac.jp
Advanced Devices	Materials Characterization for Advanced Semiconductor Power Devices	http://www.nuee.nagoya-u.ac.jp/labs/sudalab/	Jun SUDA	Jun Suda	suda@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	https://sites.google.com/site/nagoyapelab/	Masayoshi YAMAMOTO	Masayoshi YAMAMOTO	m.yamamoto@imass.nagoya-u.ac.jp
Intelligent Devices	CMOS LSI design in healthcare IoTs for driver monitoring application	http://id-lab.jp/ http://niitsulab.info	Kiichi NIITSU	Kiichi NIITSU	niitsu@nuee.nagoya-u.ac.jp
	CMOS Driver LSI design in GaN-based wireless power delivery for EV application				
	AI chip design for edge-intelligent autonomous driving application				

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学科名: 化学生命工学科／Department of Chemistry and Biotechnology

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
Chemistry of Inorganic Reactions	Fuel and Automobile Catalysts for Environmental Friendly Cars	http://www.apchem.nagoya-u.ac.jp/mde6-e.html	Atsushi Satsuma	Atsushi Satsuma	satsuma@apchem.nagoya-u.ac.jp

学科名: 物理工学科／Department of Physical Science and 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
High Pressure Materials Science Group	High pressure syntheses of hydrogen storage materials for green vehicles	http://www.numse.nagoya-u.ac.jp/hasegawa/	Masashi Hasegawa	Masashi Hasegawa	hasegawam@cc.nagoya-u.ac.jp
Nano-materials properties analysis by electron spectroscopic method	Nano-scale analysis of vehicular exhaustive gas purification catalyst/high-power new secondary batteries/other materials related to automotive applications	http://emu.nucl.nagoya-u.ac.jp/indexJ.html	Shunsuke Muto	Shunsuke Muto	s-mutoh@nucl.nagoya-u.ac.jp

学科名: マテリアル工学科／Department of Materials Science and 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
Multi-Materials Processing research group	Compressive deformation behavior of lattice structured aluminum printed by 3D printing technology	http://www.numse.nagoya-u.ac.jp/P6/kobashi/	Makoto Kobashi, Naoki Takata, Asuka Suzuki	Makoto Kobashi	kobashi.makoto@material.nagoya-u.ac.jp
Process Information Engineering	Bayesian data analysis using sequential Monte Carlo approach	http://www.nuce.nagoya-u.ac.jp/L7/	Yoshiaki Kawajiri	Yoshiaki Kawajiri	kawajiri@nagoya-u.jp

学科名: エネルギー理工学科／Department of Energy Science and 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
Thermal Energy System and Fluid Engineering Laboratory	Visualization of heat transfer process in heat pipe and its effective control.	http://www.ees.nagoya-u.ac.jp/~web_dai2/index.htm	Yoshiyuki Tsuji	Yoshiyuki Tsuji	y-tsuji@nucl.nagoya-u.ac.jp
八木研究室(環境システム・リサイクル科学)	Fabrication of metal-nanoparticle catalyst and its chracterization		八木伸也, 吉田朋子	6828	s-yagi@nucl.nagoya-u.ac.jp
八木研究室(環境システム・リサイクル科学)	Development of advanced hydrogen storage materials		八木伸也	6828	

学科名: 環境土木・建築学科／Department of Civil Engineering and Architecture

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
中村英樹研究室	交差点における安全性に関する研究 Study on traffic safety at intersections	http://www.genv.nagoya-u.ac.jp/ge1/nakamura/index-en.html	中村英樹	中村英樹	nakamura@genv.nagoya-u.ac.jp
Nakamura Lab.(INTERCHANGE)	高速道路の交通流特性に関する研究 Analysis on traffic flow characteristics on motorways		Hideki Nakamura	Hideki Nakamura	
森川・山本・三輪研究室 Morikawa, Yamamoto & Miwa Laboratory	交通需要分析 Travel demand analysis	http://www.trans.civil.nagoya-u.ac.jp/english/index.html	森川高行 Takayuki Morikawa	森川高行 Takayuki Morikawa	morikawa@nagoya-u.jp
森川・山本・三輪研究室 Morikawa, Yamamoto & Miwa Laboratory	自動運転車によるカーシェアリングの分析 Analysis on car sharing system with automated vehicles	http://www.trans.civil.nagoya-u.ac.jp/english/index.html	山本俊行 Toshiyuki Yamamoto	山本俊行 Toshiyuki Yamamoto	yamamoto@civil.nagoya-u.ac.jp
加藤研究室	交通システムの環境負荷のライフサイクル評価 Life cycle assessment with environmental load from transport sytems	http://orient.genv.nagoya-u.ac.jp/kato/ekato.htm	加藤博和	加藤博和	kato@genv.nagoya-u.ac.jp
Kato Laboratory	アジア途上国における低炭素交通システムの実現方策検討 Seeking countermeasures for realizing low-carbon transport systems in Asian developing countries		Hirokazu Kato	Hirokazu Kato	