

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 |
| High-temperature energy conversion engineering | Development of efficient biomass gasification technology in packed bed gasifier | http://www.mech.nagoya-u.ac.jp/en/laboratories/temperature.html | Ichiro Naruse Ryo Yoshiie | Ichiro Naruse Ryo Yoshiie | naruse@esi.nagoya-u.ac.jp ryoshiie@mech.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/en/eindex.html | Yasuhiko Sakai | Yasuhiko Sakai | ysakai@mech.nagoya-u.ac.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 |
| Micro-Nano Control Engineering Bio-Robotics | Robot Technologies for Human Enhancement and Support | 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 Fluid Engineering | Analysis on molecular behavior in high Knudsen number flows | http://www.mech.nagoya-u.ac.jp/mtfe/index_e.htm | Tomohide Niimi Hiroki Yamaguchi | Tomohide Niimi Hiroki Yamaguchi | niimi@mech.nagoya-u.ac.jp 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 |
| Mechatronics-Dynamics Group | Parameter Estimation of Mechatronics System/Human body-mechanical System | 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 |
| | Synthesis and control of automated vehicle | | | | |
| Aerospace Vehicle Dynamics 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 |

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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/toyodolab/index_t_e.html | Hirohaka TOYODA | Hirohaka 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 plasama 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/ | Hiroshi AMANO | Hiroshi AMANO | amano@nuee.nagoya-u.ac.jp |
| Intelligent Devices | CMOS VLSI Design for Biomedical Application | http://www.nuee.nagoya-u.ac.jp/labs/nakazatolab/ | Kazuo NAKAZATO | Kiichi NIITSU | niitsu@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/optelelab/ | 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/ | 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 | yohno@nagoya-u.jp |
| Visual Information Group | Image and Video Processing | http://www.fujii.nuee.nagoya-u.ac.jp/ | Toshiaki FUJII | Toshiaki FUJII | fujii@nuee.nagoya-u.ac.jp |
| Infomatoin Systems (Control Systems) Group | Advanced system control of Viechle and Robot | http://www.nuee.nagoya-u.ac.jp/labs/doki/ | 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 | sato@nuee.nagoya-u.ac.jp |
| Intelligent Systems | Artificial Intelligence and Natural Langauge 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 | | | | |
| Communication Systems | Wireless Communications for Transportation Systems | http://www.katayama.nuee.nagoya-u.ac.jp/ | Masaaki KATAYAMA | Hiraku OKADA | okada@nuee.nagoya-u.ac.jp |

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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：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 exhaust 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 |
|--|---|---|-----------------------------|--------------------|------------------------------|
| Chemical Reaction Engineering Group | Studies on exhaust emission control catalytic system | http://www.nuce.nagoya-u.ac.jp/L3/ | Tomohiko TAGAWA | 3388 | tagawa@nuce.nagoya-u.ac.jp |
| Multiscale Powder Technology Group | Development of extreme low frictional system using Boron carbide based composite ceramics | http://www.nuce.nagoya-u.ac.jp/L17/index.html | Hideki Kita (Prof. Dr.Eng.) | Hideki Kita | hkita@nuce.nagoya-u.ac.jp |
| Material Hybridization Engineering Group | Processing of porous aluminum for crash energy absorption | http://www.numse.nagoya-u.ac.jp/P6/kobashi/ | Makoto Kobashi | Makoto Kobashi | kobashi@numse.nagoya-u.ac.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 characterization | | 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 | プローブカーデータを用いたエコドライブの分析 | http://www.trans.civil.nagoya-u.ac.jp/english/index.html | 森川高行 | 森川高行 | morikawa@nagoya-u.jp |
| Morikawa, Yamamoto & Miwa Laboratory | Analysis on eco-driving behavior using private probe vehicle data | | Takayuki Morikawa | Takayuki Morikawa | |
| 森川・山本・三輪研究室 | 自動運転車によるカーシェアリングの分析 | http://www.trans.civil.nagoya-u.ac.jp/english/index.html | 山本俊行 | 山本俊行 | yamamoto@civil.nagoya-u.ac.jp |
| Morikawa, Yamamoto & Miwa Laboratory | Analysis on car sharing system with automated vehicles | | Toshiyuki Yamamoto | Toshiyuki Yamamoto | |
| 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 systems | 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 | |