2. Features of the University

**Nagoya University**: Nagoya University is one of the leading national universities located in Nagoya City in Central Japan (Chubu Region). It was established in 1920 first as a medical school and at present has nine schools and five independent graduate schools, accommodating about 16,000 students including about 1,500 international students. In 2008, the University celebrated the awarding of the Nobel Prize to three prominent faculty members in Physics and Chemistry.

**City of Nagoya**: Nagoya is the fourth biggest city in Japan in terms of population (over 2 million) and is one of the largest industrial areas in the country. The Nagoya-Chubu Region has been leading Japan’s major industries such as automobile manufacturing, represented by Toyota Motor Corporation. The region is also known historically for its past experiences of having overcome industrial pollution and for its furtherance of environmental actions in both private and public sectors.

3. Features of the Graduate School

**Challenges in the Philippines**

The country, particularly the capital region of Metro Manila, has been facing inefficient socio-economic activities due to several factors such as heavy traffic and severe environmental problems such as air pollution. Urban areas suffer from diverse environmental issues such as global warming, as well as issues affecting daily life such as waste treatment, water pollution, and sanitation. In order to appropriately respond to further economic growth and emerging environmental challenges, the country’s urgent needs are to nurture advanced human resources who are able to develop and implement policies and measures concerning urban infrastructure.
development and environmental management.

- **Interdisciplinary Research and Education**: The Graduate School of Environmental Studies was established in 2001 as the first interdisciplinary postgraduate school of environmental studies in Japan by integrating from natural sciences to engineering and social sciences. The School has promoted education and research taking “Sustainability” and “Safety and Stability” as its main pillars of vision, which cover a wide range of academic disciplines including engineering, architecture, physical sciences, economics, and politics. This system enables us to provide meaningful solutions for the societal demands concerning an environmentally sustainable future for our earth.

- **Dedicated to Sustainable Development in Developing Countries**: Since its establishment, the School has been dedicated to research and education for sustainable development in developing countries. Not only by receiving students from these countries but also by co-working with local researchers and government officials for research and survey projects, the School has expanded and strengthened its ties with developing countries including Vietnam, Cambodia, and Bangladesh. The projects cover a variety of issues ranging from low carbon cities, strategic climate policies, urban and transport planning, to tsunami and other disaster management.

- **Assistance to International Students**: Nagoya University receives about 1,500 international students from more than 70 countries, over 80% of whom are from Asia. The Education Center for International Students (ECIS) has abundant experience in supporting international students joining Nagoya University. In the Graduate School of Environmental Studies, a foreign faculty member is available as an International Student Advisor to assist students from overseas for both academic and living concerns. Moreover, the staff of the Nagoya University Global Environmental Leaders Program (NUGELP) has abundant study and professional experience overseas, and are available to assist the program participants. The education and daily communication language under the Program is English. With such a support system at the University, JDS fellows are therefore able to start their studies without major difficulties.

### 4. Features of the Program

**Nagoya University Global Environmental Leaders Program (NUGELP)**
[http://www.envleaders.env.nagoya-u.ac.jp](http://www.envleaders.env.nagoya-u.ac.jp)

NUGELP was established in 2008 to develop environmental experts who are able to identify and analyze environmental problems from a global and holistic perspective, and propose practical measures to solve the problems, focusing on Asia and Africa. The Graduate School of Environmental Studies accepts Master’s course students and trains them to be environmental leaders, through close partnership with cooperating departments including the Graduate School of Engineering, the Graduate School of Bioagricultural Sciences, and Graduate School of International Development.

NUGELP provides solution-oriented education based on the following instruction design:

- Students receive comprehensive instructions in English covering the three study areas of Climate Change Mitigation and Adaptation, Water and Waste Management, and Biodiversity Conservation based on various disciplines ranging from civil engineering, transport analysis and planning, water engineering, environmental system analysis and planning, environmental and resource economics to environmental policy studies.
Nagoya University, GS of Environmental Studies

► Through such instructions, they are able to acquire a deeper understanding of the issues, policies and the relevant technological know-how, and the capacity to design policies and institutions.

► As part of the coursework, students have opportunities for practical and research internship at private companies, government bodies or international organizations in the Nagoya-Chubu Region, which has taken a progressive approach to environmental problems.

► The unique international and interactive nature of the program, in which international and Japanese students learn together, allows students to enhance their understanding of issues and improve their international communication skills. Currently, students from China, Indonesia, Myanmar, Vietnam, Thailand, Mexico, Israel, Kenya, Malawi, and the Philippines are studying at NUGELP.

► In addition to the master’s degree, a special certificate will be awarded by NUGELP to students who complete the program. It certifies that the students have acquired comprehensive capacity and skills to take an active role in the field of environment (environmental policy, infrastructure planning, transportation planning etc.) for their home country and the global society.

Special events are also planned for JDS fellows during the two-year degree program. Last year, a workshop was held in the Philippines between NUGELP, various Philippine universities, government agencies and other relevant organizations. A sampling of future events being planned is as follows.

(i) Invitation of guest speakers from the Government of the Philippines and local universities to a symposium organized and held in Nagoya University (details to be decided)
(ii) Invitation of guest lecturers from the Government of the Philippines and local universities to special lectures in Nagoya University (details to be decided)
(iii) Excursion programs which include field trips to model sites in Japan for local, governmental, non-governmental, corporate and community environmental initiatives
(iv) Overseas study tour focusing on one developing country’s environmental issues (Previous countries include Kenya, Vietnam and Bangladesh.)
(v) Overseas leadership training which includes seminars in international agencies and academic institutions involved with environmental programs, such as the UNEP, World Bank, ADB, etc.

5. Necessary Curriculum to Obtain the Master’s Degree

NUGELP offers all its courses in English within a comprehensive and interdisciplinary curriculum. Master’s program students are required to obtain a minimum of 30 credits mainly from the courses listed below as well as to defend their Master’s thesis. Syllabus details for each course are available at the program website.

http://www.envleaders.env.nagoya-u.ac.jp/curriculum/syllabus.html

**Target: Basics as global environmental leaders**

► **Sustainability and Environmental Studies (Lecture, 2 credits) by Victor Muhandiki, etc.**
The objective of the course is to provide students with several definitions, views, interpretations, and analyses on the notion of sustainability. The lectures are to be given by several lecturers on diverse topics such as: Sustainability criterion by cost-benefit analysis with levels of environmental ethics, Integrated lake basin management (ILBM), Global change monitoring by remote sensing, Sustainable urban planning and design, Kosa and desertification, Natural disaster and the society: a case of the 2004 tsunami and its affections to Aceh of Indonesia, Safety production and consumption of chemical products, Sustainable transport system, Toward environmental friendly and sustainable building, Environmentally responsible behaviour and subjective well-being, The image of the sustainable city: the landscape as a perspective for urban design.
Theory of Environmental Resource Management (Lecture, 2 credits) by Shimpei Iwasaki, Masafumi Nagaishi
This course aims to provide both a general orientation to understand what environmental resources are as well as practical insights on how to manage the resources. Topics covered include 1) basic theoretical frameworks on environmental resources, 2) management policies related to the resources at multiple scales and 3) practical case studies for the resource management, so that the students understand both theories and real cases. In addition, note that this course is firmly related to the course titled, ‘Environmental Industry Systems’. This course is a theoretical part, while Environmental Industry Systems is a practical part, although the former may also contain practical cases.

English Communication in Environmental Issues (Lecture, 2 credits) by Victor Muhandiki
English communication ability is a fundamental requirement for engineers and scientists working in the field of environmental problems, since environmental problems are not unique to any one country. In this course students will be assigned specific subjects concerning environmental problems and will be required to study the assigned subjects deeply, and then present and discuss the studied subjects in class in English.


Low Carbon Cities Studies (Lecture, 2 credits) by Hiroki Tanikawa, Toshiaki Ichinose, and Shobhakar Dhakal
To learn policies, plans, technological and institutional measures to realize low carbon cities with a view to integrating climate change mitigation in urban development. To have a concrete idea of planning a low carbon city, actual policy plan for establishing low carbon city will be reviewed in class. Students are supposed to have taken (be taking) a lecture Environmental Systems Analysis and Planning.


Water and Waste Management Policies (Lecture, 2 credits) by Victor Muhandiki
Water pollution and solid waste are some of the major environmental problems facing our society today. For effective management of water and waste, it is essential to have relevant rules, laws and policies, and the institutions to administer them. This course will introduce the challenges of managing the water environment and waste focusing on legal, policy and institutional frameworks.


Introduction to Biodiversity Conservation Policies (Lecture, 2 credits) by Mikihiko Watanabe
The objective of the course is to provide students with a necessary academic background on biological diversity/biodiversity. The background consists of 1) definition and situation of
biodiversity; 2) causes of biodiversity loss; 3) theories for analyses and practical tools; and 4) present institutions, policies and international laws related with biodiversity. Through the course, the students are expected to: a) understand the problems; b) obtain the techniques needed; and c) know capacity building know-how on institutional and policy development. The students are required to obtain both comprehensive and concrete knowledge to achieve a goal to become global environmental leaders.


► Civil Engineering and Policies for Developing Countries I (Lecture, 2 credits) by Kiichiro Hayashi
The objective of this course is to study various issues including sustainable development, environmental management, and international cooperation for better understanding of the fundamental knowledge on civil engineering in developing countries.


► Civil Engineering and Policies for Developing Countries II (Lecture, 2 credits) by Kentaro Nakai
The objectives of this course are (1) to study the fundamental knowledge on planning, design, construction and maintenance of infrastructure in Japan, as well as developing countries; (2) to survey various issues in civil engineering, including the environmental problems and recent development of regional disaster mitigation activities. The lectures are given by several lecturers.

[Course plan] 1. Introduction to disaster risk assessment /2. Water resources and river basin management /3. Coastal zone management /4. Infrastructure development under aid programs /5. Infrastructure projects in developing countries

Target: Technologies, Policies and Measures
► Environmental Industry Systems (Lecture, 2 credits) coordinated by Masafumi Nagaishi and Ryoko Nakano
This course is structured on a unique style of learning. The course consists of: 1) lectures by environmental industries located in Chubu areas; 2) presentations and/or discussions amongst the students, 3) discussions between the students and the industry staff. The industries are from prominent companies mainly in the field of manufacturing. Note that students are strongly recommended to take ‘Theory of Environmental Resources Management’.

► Climate Change Policies (Lecture, 2 credits) by Mikihiko Watanabe
The objective of the course is to provide students with basic facts and knowledge on policy measures on climate change. The topics of Asian and African countries are focused. The course
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has a unique style. Distinguished external lecturers will give lectures, in addition to lectures by the course coordinator. The basic facts that the students should know are contents of the United Nations Framework Convention on Climate Change and the Kyoto Protocol, including topics such as emission trading and CDM. Furthermore, other related matters such as transportation and deforestation should be understood.


► Environmental Systems Analysis and Planning (Lecture, 2 credits) by Hiroki Tanikawa

The course objectives are to understand "environmental systems", i.e., the interaction of human activities and nature, to learn the scientific mechanisms of global environmental problems, such as climate change, to learn the basic principles and methods of analysing environmental systems, e.g., environmental economics, mathematical models, life-cycle assessment, etc, and to learn the principle and methods of environmental management at local, national and global scales.


► Spatial Development and Environment (Lecture, 2 credits) by Yoshitsugu Hayashi

The course objective is to provide scientific and policy findings for systematic understanding on the mechanism of urban and regional spatioal structure and environment and basic ideas for environmental policies such as land use, transport and taxation systems.

Urban environment is defined by human activities and nature in urban space, and defined also by its interaction with urban space as infrastructure. Infrastructure is categorized into hard infrastructure such as social infrastructure and private buildings and soft one such as legal systems which influence urban areas in planning, land use, environment and taxation. With the aim of creating and maintaining sustainable urban environment, this course provides methodologies for systematic understanding on the relationship between infrastructure (hard and soft) and urban space which should fit well different stages of socioeconomic development at the urban and regional scales. The course also provides exercise opportunities to make policy plans for certain urban areas, through which students can learn effective and efficient policies to be applied for sustainable urban spatial development and environment.

► Transportation Systems Analysis (Lecture, 2 credits) by Takayuki Morikawa and Toshiyuki Yamamoto

The course objective is to understand approaches and methods to analyze travel behavior and the demands for various transportation systems.

Water and Waste Engineering (Lecture, 2 credits) by Victor Muhandiki
Water pollution and solid waste are some of the major environmental problems facing our society today. In this class we will learn about various technologies and measures applied in drinking water supply, control of pollution of water bodies, and solid waste management.

Course plan
A. The Hydrologic Cycle and Drinking Water Supply / B. Point and Non-point Source Pollution and Pollution Load Estimation / C. Point and Non-point Source Pollution Control / D. Solid Waste Management

Biological Resource Management Policies (Lecture, 2 credits) lecturer: Shimpei Iwasaki
The objective of the course is to provide the students with: 1) explanation of the contents of biological and genetic resources; 2) definition of access and benefit-sharing of the resources (ABS); 3) description of political situation of ABS; and 4) introduction of cases of resource utilisation. The students are required to understand the meaning of biological and genetic resources and understand the significance of the resources in the context of biodiversity conservation. Especially, political situation on the resources is needed to be understood. The details still need to be defined but should basically follow the same structure as last year. For reference, the course schedule is as follows.

Course plan

Biological Resource Management Projects (Lecture, 2 credits) by Masafumi Nagaishi
There are various difficulties in the implementation of biological resource management projects. This course provides some themes surrounding the biological resource managements projects such as food problems, poverty issues and case studies of the projects. In the course of lectures, the students will discuss the good practices and appropriate solutions for projects. Goals are: 1. to understand the importance and problems of biological resource management and 2. to explain the problems on and lessons learned from the case study projects.

Students are required to prepare presentations of country reports and case studies.

Course plan

Conservation and Ecotoxicology of Soil and Water (Lecture, 2 credits) by Arata Katayama
This course provides for students a multidisciplinary study in relation with pollution of soil and water with toxic chemicals.

Course plan
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► **Advanced Offshore Engineering** (Lecture, 2 credits) by Norimi Mizutani, Tomoaki Nakamura

This course provides basic concepts of the diffracted waves due to offshore structures of which the size is so large that wave deformation cannot be negligible. The course includes the basic diffraction theory for a circular cylinder based on the linear wave theory and the recent advanced numerical simulation technique using nonlinear numerical wave tank. Through the course, participants will acquire the basic concept of the wave-structure interaction and its dynamics.


► **Advanced River Basin Management** (Lecture, 2 credits) by Tetsuro Tsujimoto

A river basin (catchment) is considered as an ensemble of various materials such as water, sediment and bio-elements, and within a river basin, various landscapes are arranged. When the fluxes pass through the landscapes, they change themselves and bring about various ecosystem services on their sites. The flux changes propagate in a river basin and the ecosystem services are accumulated locally on the sites. We have to know the above structure and mechanism of a river basin, and based on such understanding we have to look for a challenging management toward sustainability.


► **Advanced Infrastructure Planning** (Lecture, 2 credits) by Takayuki Morikawa and Toshiyuki Yamamoto

The course objective is to understand the roles of infrastructure by learning its economic characteristics, planning procedure, financing, and evaluation methods.

[Course plan] 1. Introduction / 2. Public economics (Social welfare and Pareto optimum, Consumer behavior and demand curve, Supplier behavior and market equilibrium), Market failure, Externality, Public goods) / 3. Decision making in infrastructure planning / 4. Evaluation and decision making (Cost benefit analysis and public goods, Utility function and social welfare, Multi-criteria analysis and AHP) / 5. Decision making under uncertainty (Expected utility, Game theory and dilemma, Bayesian decision theory and information value)

► **Advanced Traffic Engineering and Management** (Lecture, 2 credits) by Hideki Nakamura

The course objectives are to understand fundamental traffic characteristics, to estimate variables required for highway planning and traffic operation such as highway capacity and delay, and to understand fundamentals of traffic signal control technique and to be able to set traffic signals.

Target: Policy Proposal, Simulation and Assessment

[Please note] JDS fellows are to take supervisor’s seminars other than indicated below.

► Global Environmental Leaders Seminar (Seminar, 2 credits * 4 semesters)

Today we face many environmental problems such as global warming and climate change, water pollution, loss of biodiversity and so on. These problems are being addressed in various ways around the world. In this seminar, students will be required to make an in-depth analysis of selected global environmental issues and case studies and then present and discuss the results.

► Global Research Internship (Research training, 2 credits) NUGELP staff

As part of the Global Environmental Leaders Program, this course aims at providing students research-based internship opportunities at universities, research institutions, companies, governments and non-governmental organizations in Japan and overseas to acquire the ability to conduct practical and applied research. Internship should be conducted based on close communication with Academic Advisor(s). Students are expected to acquire practical research know-how through On the Research Training (ORT). Details of the Internship such as period and terms of implementation should be decided through thorough consultation with Academic Advisor(s) and experts at recipient organizations.

6. Academic Schedule

**YEAR ONE**

**OCTOBER**

► Admission to the Nagoya University Global Environmental Leaders Program (NUGELP)

► Guidance for new students

**OCTOBER-FEBRUARY (Fall Semester) : First Semester**

► Attend lectures, practices and seminars

► Individual instruction by academic advisor(s)

► NUGELP Workshop (in Nagoya): Presentation and discussion by students and academic advisors

**APRIL-AUGUST (Spring Semester) : Second Semester**

► Attend lectures, practices and seminars

► Individual instruction by academic advisor(s)

**SEPTEMBER (Reference) : Global Research Internship**

► Group research project working in a group of international and Japanese students at private companies and local governments.

**YEAR TWO**

**OCTOBER-FEBRUARY (Fall Semester) : Third Semester**

► Attend lectures, practices and seminars

► Individual instruction by academic advisor(s)

► NUGELP Workshop (in home country): Presentation and discussion by students and academic advisors

**MARCH : Interim Reporting and Discussion toward a Master’s Thesis**

► NUGELP Workshop (in Nagoya): Compile and present an interim report at a program workshop

► Discuss with students and academic advisor(s)

**APRIL-AUGUST (Spring Semester) : Fourth Semester**

► Attend lectures, practices and seminars
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- Individual instruction by academic advisor(s)
- Compile a Master’s thesis

**JUNE-JULY:** Submission and defense of the Master’s thesis

**SEPTEMBER:** Completion of the Master’s Program

- Receive a master’s degree (Master of Environmental Studies or Master of Engineering) and program certificate
- Return to home countries to develop one’s career as global environmental leaders
- Global alumni networking supported by Nagoya University
- Continued academic and career development support from Nagoya University

7. Facilities

**Dormitory:** Nagoya University gives priority to international students who come directly from overseas to apply to live at the three Nagoya University Dormitories. These dormitories accept international students twice a year, in April and October. The period of residency is limited to six months.

**Learning environment in research groups:** Students are provided with individual desks, PCs with internet access, and also access to equipment and systems necessary to develop their own research under the supervision of academic advisors.

**Library:** The University holds its library of a total of 2.9 million copies for educational and research use and subscribes to some 14,000 titles of online journal. The University Library System provides a large number of desks and learning rooms for students to enhance their learning performance.

8. List of faculty members capable of guiding JDS fellows

An academic advisor shall be tentatively assigned upon selection. Assignment will be based on the submitted documents, consultation and the interview. Faculty members marked with ✔ are authorized to supervise JDS fellows.

<table>
<thead>
<tr>
<th>Name</th>
<th>Area of Specialization</th>
<th>Research Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ Victor Muhandiki, Prof.</td>
<td>Water Engineering</td>
<td>Water and Waste Management</td>
</tr>
<tr>
<td>✔ Yoshitsugu Hayashi, Prof.</td>
<td>Transport and Environmental Planning</td>
<td>Sustainable Transport and Spatial Development, Land use and Transport Planning, Environmental Planning</td>
</tr>
<tr>
<td>Ryoko Nakano, Assistant Prof.</td>
<td>Energy Security Enhancement</td>
<td>Energy Efficiency and Energy Security, Environmental Policies in Developing Countries</td>
</tr>
<tr>
<td>Mikihiko Watanabe, Prof.</td>
<td>Environmental and Resource Economics</td>
<td>Biodiversity Conservation Policies</td>
</tr>
<tr>
<td>Masafumi Nagaishi, Prof.</td>
<td>International Development</td>
<td>Methods of Project Finding, Planning, Designing and Project Management in the field of Environment, Water Resource and Disaster Prevention</td>
</tr>
<tr>
<td>Lecturer</td>
<td>Department</td>
<td>Research Areas</td>
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</tr>
<tr>
<td>Yasuhiro Mori, Prof.</td>
<td>Structural Engineering</td>
<td>Structural Reliability, Probability-based Risk Analysis, Earthquake Engineering, Seminar on Space and Environmental Planning</td>
</tr>
<tr>
<td>Takayuki Morikawa, Prof.</td>
<td>Transportation Systems Analysis</td>
<td>Environmentally Sustainable Transportation, Intelligent Transportation Systems</td>
</tr>
<tr>
<td>Satoru Iizuka, Associate Prof.</td>
<td>Environmental Fluid Engineering</td>
<td>Indoor Thermal Environment, Wind and Thermal Environment in Urban Area, Computational Fluid Dynamics</td>
</tr>
<tr>
<td>Hiroaki Shirakawa, Associate Prof.</td>
<td>Environmental and Resource Economics</td>
<td>Energy and Resource Demand and Supply in Asian Countries, Assessment of Regional Interdependencies of Environment and Economy, Efficiency Assessment of Urban Environmental Management Economic Valuation of Environmental Policy</td>
</tr>
<tr>
<td>Hiroshi Tagawa, Associate Prof.</td>
<td>Building Engineering</td>
<td>Beam-to-Column connections of Steel Building Frames, Seismic Design of Steel Structures, Seismic Retrofit of Structures</td>
</tr>
<tr>
<td>Hiroki Tanikawa, Prof.</td>
<td>Engineering of Environmental Systems</td>
<td>Metabolism of material and energy in cities, and the design of low carbon cities</td>
</tr>
<tr>
<td>Arata Katayama, Prof.</td>
<td>Microbial Ecological Engineering</td>
<td>Microbial remediation of soil and groundwater contaminated with polychlorinated aromatic compounds</td>
</tr>
<tr>
<td>Takashi Tashiro, Associate Prof.</td>
<td>Fluvial Hydraulics</td>
<td>Habitat landscapes in river and watershed areas, Effect of dam on the community in downstream reach, Modeling of ecological functions in tidal river</td>
</tr>
<tr>
<td>Yoshito Ito, Prof.</td>
<td>Structural Engineering</td>
<td>Seismic and Impact Design of Civil Structures</td>
</tr>
<tr>
<td>Kazuo Tateishi, Prof.</td>
<td>Structural Engineering</td>
<td>Fatigue and fracture of steel bridges, Fatigue of steel-concrete composite slab</td>
</tr>
<tr>
<td>Tetsuro Tsujimoto, Prof.</td>
<td>Fluvial Hydraulics</td>
<td>Mechanics of sediment transport, Flow with vegetation and related fluvial processes, Habitat hydraulics</td>
</tr>
<tr>
<td>Masaki Nakano, Prof.</td>
<td>Geotechnical Engineering</td>
<td>Mechanical behavior of new geomaterial made from surplus soil and industrial by-product</td>
</tr>
<tr>
<td>Hikaru Nakamura, Prof.</td>
<td>Concrete Mechanics</td>
<td>Durability mechanics of concrete, Seismic design of concrete structures</td>
</tr>
<tr>
<td>Hideki Nakamura, Prof.</td>
<td>Transportation Engineering</td>
<td>Performance-oriented highway planning and design methodology, Evaluation of junction design and traffic signal control</td>
</tr>
<tr>
<td>Toshihiro Noda, Prof.</td>
<td>Geotechnical Engineering</td>
<td>Soil-water coupled dynamic/static finite deformation analysis, Interactive behavior of soil-structure system</td>
</tr>
<tr>
<td>Norimi Mizutani, Prof.</td>
<td>Coastal and Ocean Engineering</td>
<td>Tsunami disasters and their countermeasures Study on dynamic interaction among wave, structure and foundation</td>
</tr>
<tr>
<td>Name</td>
<td>Position</td>
<td>Department</td>
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</tr>
<tr>
<td>Koji Kawasaki, Associate Prof.</td>
<td>Coastal Engineering</td>
<td>Solid-gas-liquid multiphase flow model, Wave deformation around coastal structures and coastal disaster prevention</td>
</tr>
<tr>
<td>Minoru Kunieda, Associate Prof.</td>
<td>Material Engineering</td>
<td>Development of High Performance Fiber Reinforced Cement Composites, Evaluation of Performance on Repair Materials</td>
</tr>
<tr>
<td>Yuji Toda, Associate Prof.</td>
<td>Hydraulics</td>
<td>Fluid flow-biological-chemical interaction, Primary production of periphyton</td>
</tr>
<tr>
<td>Toshiyuki Yamamoto, Prof.</td>
<td>Transportation Planning</td>
<td>Travel behavior analysis, Environmentally sustainable transport, Intelligent transport system</td>
</tr>
<tr>
<td>Kiichiro Hayashi, Prof.</td>
<td>International environmental cooperation</td>
<td>Environmental impact assessment and biodiversity assessment, Environmental policy development</td>
</tr>
<tr>
<td>Tomio Miwa, Associate Prof.</td>
<td>Transportation Planning</td>
<td>Transport management using ITS, Analysis on traffic network utilizing probe-vehicle system, Understanding and modeling driver's route choice behavior</td>
</tr>
<tr>
<td>Yasuo Kitane, Associate Prof.</td>
<td>Structural Engineering</td>
<td>Structural Applications of fiber-reinforced polymer composites, Repair strategy of corrosion-damaged steel structures, Long-term performance of bridge rubber bearings</td>
</tr>
<tr>
<td>Kentaro Nakai, Associate Prof.</td>
<td>Geotechnical Engineering</td>
<td>Description and Interpretation of Cyclic Behavior of Sand, Interpretation of the Difference between Sand and Clay, Dynamic Analysis of Structured Soil</td>
</tr>
<tr>
<td>Takeshi Hanji, Associate Prof.</td>
<td>Steel Structures, Bridge Engineering</td>
<td>Fracture and Fatigue in Steel Structures, Seismic Assessment and Rehabilitation of Steel Bridges, Applications of Image Technique to Infrastructures</td>
</tr>
<tr>
<td>Shotaro Yamada, Associate Prof.</td>
<td>Geotechnical Engineering</td>
<td>Progressive failure of soil accompanied with strain localization, Liquefaction and reliquefaction phenomena of sandy soil, Mechanical behavior of crushable soil</td>
</tr>
<tr>
<td>Kwang-Ho Lee, Associate Prof.</td>
<td>Coastal Engineering</td>
<td>Wave-Current Interactions, Effect of Groundwater on Topographic Changes in a Gravel Beach, Modeling of Wave Fields around Coastal Areas</td>
</tr>
<tr>
<td>Toshiaki Ichinose, Affiliate Prof.</td>
<td>Geography</td>
<td>Thermal Environment in Urban Areas, Heat Island Management (*National Institute for Environmental Studies, Japan)</td>
</tr>
<tr>
<td>Masaya Hinokio, Associate Prof.</td>
<td>Soil Mechanics, Geotechnics</td>
<td>Maintenance of Geo-Structure Deformation and Strength of Soil, Constitutive Model of Soil</td>
</tr>
<tr>
<td>Tomoaki Nakamura, Associate Prof.</td>
<td>Coastal Engineering</td>
<td>Stability of Coastal Structure and their Foundations in Fluid-Structure-Seabed-Sediment Interaction Fields</td>
</tr>
</tbody>
</table>

### 9. Message for Applicants

**Nagoya University Center for Global Environmental Leaders**: In order to promote the development of environmental specialists who will lead environmental policy and measures in the coming decades, Nagoya University established the Nagoya University Center for Global Environmental Leaders, directed by the Vice President of the University. The university-wide center supports capacity development, global alumni networking and continued assistance to
alumni as well as the regular operation of NUGELP, in close collaboration with the cooperation graduate schools and the Education Center for International Students.

**Education Center for International Students (ECIS):** ECIS provides various assistance to students from overseas including academic and daily life support, courses of Japanese and other languages and cultural understanding, and cultural exchange programs with local communities.

**JDS programs in Nagoya University:** Nagoya University has been a host university of JDS fellows at the Graduate School of Law and the Graduate School of Medicine. The University therefore has abundant experience and know-how in operating the program and also to assist JDS fellows. Also thanks to other programs by JICA such as the long-term training program, many experts from developing countries are studying at Nagoya University including NUGELP.