

Earth and Environmental Sciences Graduate Program (M, D)

Research Group	Supervisor	Research Themes
		E-mail address
Department of Earth and Planetary Sciences		
Earth Environmental Systems	高野 雅夫 教授 Prof. Masao Takano	Designing a sustainable Earth and social system based on the development of small-scale renewable energy technologies, for example, using micro- hydro power, geothermal energy, or woody biomass energy, and application of these technologies to revitalize mountainous areas
		masao * nagoya-u.jp
	平野 恭弘 准教授 Assoc. Prof. Yasuhiro Hirano	Eco-physiological study of forest belowground ecosystem (tree roots and forest soil), particularly to clarify the effects of soil acidification and global warming, and the contribution of tree roots to the carbon cycle
		yhirano * nagoya-u.jp
	宮坂 隆文 講師 Lecturer Takafumi Miyasaka	Complex interactions between human and environmental systems, particularly in the context of desertification and protected area management, addressed by interdisciplinary approaches combining social and ecological field surveys, geospatial techniques, and computer simulations.
		miyataka * nagoya-u.jp
Geology and Geobiology	竹内 誠 教授 Prof. Makoto Takeuchi	Research in the fields of sedimentology, sedimentary petrology, and structural geology to reconstruct the geological history of East Asia, particularly the study of the tectonic evolution of East Asia based on provenance analyses of clastic sedimentary rocks
		takeuchi * eps.nagoya-u.ac.jp
	道林 克禎 教授 Prof. Katsuyoshi Michibayashi	<ul style="list-style-type: none"> · Structural evolution of crustal and mantle rocks · Structure and petrological properties of peridotite and seismic wave anisotropy · Rheological properties and microstructure of rocks in a ductile field · Mid-ocean ridges, trenches and subduction zones – sea- and land-based approaches
		michibayashi * nagoya-u.jp
	瀨瀬 佑衣 講師 Lecturer Yui Kouketsu	<ul style="list-style-type: none"> · Development of the analysis methods for rocks using Raman and IR spectroscopy · Research on the formation conditions of metamorphic and metasomatic rocks
		kouketsu.yui*nagoya-u.jp
	高橋 聡 准教授 Assoc. Prof. Satoshi Takahashi	Mass extinction events and their recovery process in the geologic past Biostratigraphy based on micro-fossils such as conodont and radiolarians Geochemical approaches to reconstructing the paleoenvironmental records
		stakahashi * eps.nagoya-u.ac.jp

	ハンブレマーク 准教授 Assoc. Prof. Marc Humblet	Study of modern and fossil coral reef ecosystems; in particular, research on the responses of reef and reef communities to environmental and sea-level changes during the Quaternary mhumblet * eps.nagoya-u.ac.jp
	林 誠司 講師 Lecturer Seiji Hayashi	Evolution and diversity of mollusks based on morphological and molecular phylogenetic analyses seijih * nagoya-u.jp
Geochemistry and Cosmochemistry	日高 洋 教授 Prof. Hiroshi Hidaka	<ul style="list-style-type: none"> Evolution of the primitive solar system based on isotopic analyses of planetary materials Isotopic study of the interaction between planetary materials and cosmic rays Development of new methods for detecting natural nuclear reactions based on isotopic chemistry hidaka * eps.nagoya-u.ac.jp
	三村 耕一 准教授 Assoc. Prof. Koichi Mimura	<ul style="list-style-type: none"> Stability of organic molecules at high temperature and high pressure Experimental study of the behavior of volatiles and their isotopic composition during planetary formation Origin and evolution of life on the early Earth mimura * eps.nagoya-u.ac.jp
	平原 靖大 准教授 Assoc. Prof. Yasuhiro Hirahara	Infrared spectroscopic analysis of interstellar molecules and planetary atmospheres, development of new astronomical observation devices, and laboratory study of short-lived molecular species important in cosmological chemistry yasu * nagoya-u.jp
	浅原 良浩 准教授 Assoc. Prof. Yoshihiro Asahara	Isotope geochemistry of metallic elements and applications in Earth Science <ul style="list-style-type: none"> Reconstructions of ocean paleocirculation based on geochemical analyses of marine sediments Paleoenvironmental reconstructions based on geochemical analyses of sedimentary rocks Dating and petrogenetic analyses of igneous rocks and ore deposits asahara * eps.nagoya-u.ac.jp
Earth and Planetary Physics	渡邊 誠一郎 教授 Prof. Sei-ichiro Watanabe	Study of the formation of planetary systems, the early evolution of Earth, the origin of life, and application of numerical simulations to investigate the formation and evolution of our solar system, as well as extrasolar planetary systems. seicoro * eps.nagoya-u.ac.jp
	熊谷 博之 教授 Prof. Hiroyuki Kumagai	<ul style="list-style-type: none"> Volcano seismicity and mechanisms of volcanic eruptions Large earthquakes along subduction zones in Asia and Pacific regions Volcano and earthquake monitoring using seismological methods kumagai * eps.nagoya-u.ac.jp

	城野 信一 准教授 Assoc. Prof. Sin-iti Sirono	<ul style="list-style-type: none"> · Numerical simulations of the evolution of matter during planetary formation · Theoretical study of the evolution of small system solar bodies, such as asteroids and comet nuclei
		sirono * eps.nagoya-u.ac.jp
	並木 敦子 准教授 Assoc. Prof. Atsuko Namiki	Physical volcanology, geodynamics, dynamics of geological fluid, rheology of complex fluids. I mainly use experimental approaches and sometimes combine them with field observations and theoretical approaches
		namiki*eps.nagoya-u.ac.jp
Earth and Planetary Dynamics	山岡 耕春 教授 Prof. Koshun Yamaoka	<ul style="list-style-type: none"> · Study of the origin of earthquakes and volcanic activity monitoring · Statistical analysis of crustal deformation and seismic activity
		kyamaoka * seis.nagoya-u.ac.jp
	鷺谷 威 教授 Prof. Takeshi Sagiya	<ul style="list-style-type: none"> · Theoretical and observational study of crustal deformation processes · Research on earthquake occurrence cycles and fault slip behavior · Study of seismicity, volcanism and tectonics in the Japanese Archipelago based on crustal deformation · Crustal activity prediction based on numerical simulations and analyses of observational data
		sagiya * nagoya-u.jp
	渡辺 俊樹 教授 Prof. Toshiki Watanabe	<ul style="list-style-type: none"> · Visualization and monitoring of underground structures and physical properties using geophysical exploration methods · Study of earthquakes and volcanoes using seismic wave field analysis · Application of geophysical exploration to energy, environmental and disaster mitigation studies
		watanabe * seis.nagoya-u.ac.jp
	田所 敬一 准教授 Assoc. Prof. Keiichi Tadokoro	<ul style="list-style-type: none"> · Development of ocean bottom crustal movement observation systems · Study of the structure and evolution of fault fracture zones based on seismological data · Study of crustal heterogeneity based on seismic wave analysis
		tad * seis.nagoya-u.ac.jp
	山中 佳子 准教授 Assoc. Prof. Yoshiko Yamanaka	<ul style="list-style-type: none"> · Research on earthquake occurrence mechanism (hypocenter, asperity map, tectonics) · Study of volcanic phenomena based on seismic wave analysis
		sanchu * seis.nagoya-u.ac.jp
	橋本 千尋 准教授 Assoc. Prof. Chihiro Hashimoto	Theoretical study of crustal activities due to tectonic plate interactions, particularly themes related to physics of earthquake generation cycles and tectonic activities in plate boundary zones, numerical simulations of crustal activities in the Japanese Archipelago
		hashi * seis.nagoya-u.ac.jp
	伊藤 武男 准教授	<ul style="list-style-type: none"> · Research on crustal activity based on numerical simulations · Study of the ionosphere, Earth and ocean tides based on GNSS observations

	Assoc. Prof. Takeo Ito	<ul style="list-style-type: none"> Theoretical and observational study of earthquake occurrence cycles based on crustal deformation data
		takeo_ito * nagoya-u.jp
	寺川 寿子 准教授 Assoc. Prof. Toshiko Terakawa	<ul style="list-style-type: none"> Research on earthquake physics Theoretical study of tectonic loading process caused by plate motion Tectonic stress field in the crust Roles of pore fluid pressures in earthquake generation Interaction between volcanic activity and seismicity
		terakawa * seis.nagoya-u.ac.jp
	前田 裕太 講師 Lecturer Yuta Madea	<ul style="list-style-type: none"> Research on volcano seismology Waveform analyses of Mt. Ontake region ACROSS analyses at Sakurajima
		maeda * seis.nagoya-u.ac.jp
Chronology and Natural History	吉田 英一 教授 Prof. Hidekazu Yoshida	<ul style="list-style-type: none"> Research on the circulation/migration of material in the Earth's crust and related rock weathering, particularly dissolution and precipitation processes linked to interactions between rock minerals and groundwater, the formation of secondary minerals, and environmental and applied geology related to material migration in rock formations and fault zones
		dora * num.nagoya-u.ac.jp
	北川 浩之 教授 Prof. Hiroyuki Kitagawa	<ul style="list-style-type: none"> Analyses of cosmogenic nuclides (e.g., ^{10}Be, ^{14}C, ^{26}Al, ^{36}Cl) for age determination of geological and archeological samples, and for gaining insight into geological processes and environmental changes, with a particular focus on lake sediments and archeological sites in Asia
		hiroyuki.kitagawa * nagoya-u.jp
	南 雅代 教授 Prof. Masayo Minami	<ul style="list-style-type: none"> ^{14}C application studies: ^{14}C dating of human bones and charred materials excavated from archeological sites, development of new methods for high-accuracy ^{14}C measurements Other isotopic studies: nationwide Sr isotopic ratio mapping, paleodietary analyses based on C, N and Sr isotopic ratios in bones
		minami * nendai.nagoya-u.ac.jp
	加藤 文典 准教授 Assoc. Prof. Takenori Kato	<ul style="list-style-type: none"> CHIME dating and its applications Electron and X-ray spectroscopic analysis of rock minerals
		kato * nendai.nagoya-u.ac.jp
	東田 和弘 准教授 Assoc. Prof. Kazuhiro Tsukada	<ul style="list-style-type: none"> Field-based investigation of the paleogeographic evolution of Gondwana and the formation of the Eurasian continent with geological field surveys conducted in Mongolia, Russia, Antarctica, and Japan.
		tsukada * num.nagoya-u.ac.jp
	西田 佐知子 准教授 Assoc. Prof. Sachiko Nishida	<ul style="list-style-type: none"> Taxonomy and ecology of plants, particularly ecological study of closely related plants, interactions of plant organs and animals, and taxonomic study of tropical Lauraceae
		nishida * num.nagoya-u.ac.jp

	門脇 誠二 教授 Prof. Seiji Kadowaki	Archeological study of human evolution and the origin of agriculture based on field surveys of archeological sites, mainly in West Asia, analyses of the morphology of artifacts, such as stone tools, and of production techniques, as well as DNA analysis of animal bones kadowaki * num.nagoya-u.ac.jp
	藤原 慎一 講師 Lecturer Shinichi Fujiwara	Research on the relationships between musculoskeletal morphologies of living animals and their locomotor abilities, and application in paleontology for the paleoecological study of extinct animals sifjwr * num.nagoya-u.ac.jp

Department of Hydrospheric and Atmospheric Sciences		
Global Environmental Variation	篠田 雅人 教授 Prof. Masato Shinoda	Areas of expertise: climatology, drought science, arid land research. Research themes: interactions between climate and terrestrial ecosystems through water, carbon cycle, and energy; field experiment on drought in Eurasian grasslands; development of early warning systems for dryland disasters; yellow dust events and desertification; long-distance migration of wildlife and climate change, changes in vegetation cover and snow cover; scientific verification of nomadic knowledge (why has nomadism persisted for thousands of years?) . shinoda.masato.f7 * f.mail.nagoya-u.ac.jp
	中塚 武 教授 Prof. Takeshi Nakatsuka	Major Research Topics: paleoclimatology and dendrochronology. Reconstruction of multi-millennial and centennial climate variations using tree-ring oxygen and hydrogen isotopic ratios. Investigation of mechanisms of pre-industrial climate variations and climate-society relationships in the historical and archaeological viewpoints. nakatsuka.takeshi.m0 * f.mail.nagoya-u.ac.jp
Global Geochemistry	長田 和雄 教授 Prof. Kazuo Osada	Major Research Topics: atmospheric aerosol particles and relating gaseous species, wet and dry deposition, Asian dusts, transformation of particles, based on laboratory experiments, data analysis and observation at remote, rural, and urban sites. Developing new methods to measure gases and particles in the atmosphere. kosada * nagoya-u.jp
Climate Science	藤田 耕史 教授 Prof. Koji Fujita	Study of glacier fluctuations in mountainous regions of Asia, such as Himalaya and Tibet, based on observations of present-day conditions, numerical models of glacier dynamics, and analyses of ice cores. cozy * nagoya-u.jp
	須藤 健悟 教授 Prof. Kengo Sudo	<ul style="list-style-type: none"> ・ Development of atmospheric chemistry-aerosol coupled climate model and Earth-System model (incl. ecosystem and carbon/nitrogen cycles) ・ Study on stratospheric ozone change and its interaction with climate ・ Study on global tropospheric chemistry and aerosols: interannual variability and long-term trend, focusing on interactions with climate and terrestrial ecosystem (incl. future projection)

		<ul style="list-style-type: none"> · Evaluation of hemispheric-global-scale air pollution and its impacts on climate, health, and agriculture. · Development of emission reduction strategy for SLCPs (short lived climate pollutants like black carbon, ozone, and CH₄) toward mitigating climate change and health problem.
		kengo * nagoya-u.jp
	植村 立 准教授 Assoc. Prof. Ryu Uemura	<p>Past climate and environmental changes by using isotope geochemistry. The target time period ranges from modern to Quaternary.</p> <ul style="list-style-type: none"> · Stable isotope analyses of polar ice cores for temperature reconstruction. · Isotope analyses of speleothems (and its fluid inclusions) to estimate past temperature and hydroclimate changes. · Developments of methods and present-day observations to understand the climatic proxy data.
		ryu.umeura * nagoya-u.jp
	松井 仁志 准教授 Assoc. Prof. Hitoshi Matsui	<p>Global and regional modeling of atmospheric aerosols and their impacts on the Earth's climate change and environment.</p> <ul style="list-style-type: none"> · Development of a climate-aerosol model. · Interactions between aerosols and radiation, cloud/ precipitation, cryosphere, and ocean/land biogeochemistry in the past, present, and future climate. · Aerosol processes and transport on global and regional scales. · Air pollution, air quality, and aerosol impacts on human health.
		matsui * nagoya-u.jp
Global Water Cycle Atmospheric Chemistry	持田 陸宏 教授 Prof. Michihiro Mochida	<p>Research on the properties, behavior, and roles of atmospheric aerosols, which relate to the Earth's hydrological cycles through their role as cloud condensation nuclei. Outcome is expected to contribute to the understanding of the influence of aerosols on air quality and climate as well as hydrological cycles. Approach: field observations and laboratory experiments based on chemistry, with a focus on the relationship between the properties and composition of aerosols, and their formation and aging.</p>
		mochida.michihiro.u7 * f.mail.nagoya-u.ac.jp
Global Water Cycle Oceanography	石坂 丞二 教授 Prof. Joji Ishizaka	<p>Research on the dynamics of phytoplankton, the primary producers of the oceans, using satellite data and ship observations. Phytoplankton plays an important role in material circulation and biological production and is an indicator of environmental and climate change caused by human activities. Research is conducted on various spatial scales and in various marine environments, such as inner bay areas, the East China Sea, the Japan Sea, and the open ocean.</p>
		Jishizaka * nagoya-u.jp

Note: to send an email, please change * (asterisk) to @