**Centre for International Relations** 

Anna University, Chennai, INDIA

Prof. R. Baskaran Director

Circular376/CIR/2024



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## **CIRCULAR**

Kyoto University, Japan organizes **Short-Term Academic Research Program** from 30 to 60 days between May 17 to July 19, 2024 for Undergraduate or Postgraduate students. Students will participate in the advanced research at one of the Kyoto University's graduate schools. Students will receive JPY 5,000 per day including weekend/holidays.

Kyoto University will arrange accommodation for all participants for the internship period. Applications last date is **on 29<sup>th</sup> February 2024**. At 05:00 PM (Japan Standard Time). Selected candidates will be announced by Late March 2024. More details available on the next page.

For further details, please contact indiadesk-ku@mail2.adm.kyoto-u.ac.jp

To All Deans of campuses All Directors and HODs (With a request to display on notice board)



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# **KU-STAR** – Kyoto University Short-Term Academic Research Program -

Apply Now and Benefit from Kyoto University Scholarships!



Program Period:	30-60 days between May 17 and July 19, 2024								
Number of Participants:	5-10 students (undergraduate or master's studies)								
Program Overview:	Students will participate in advanced research at one of Kyoto University's graduate schools for a total duration of 30–60 days. Placements will be made based on student interests and available spaces. Each student will be assigned for supervision by a specific faculty member.								
Support:	<ul> <li>Accommodation         Kyoto University will arrange accommodation for all participants for the internship period.     </li> <li>Scholarship         Students will receive JPY 5,000 per day (including weekends/holidays) as detailed below.     </li> </ul>								
	Amount received	When it will be provided							
	150,000 JPY (5,000 JPY × 30 days)	Day 1 of the program							
	5,000 JPY × the number of the remaining days Day 31 of the program								
Application:	Application Guidline and Submission Forms : https://drive.google.com/drive/folders/1PP1QLPLsAdz9tVLi6dUo-J6OuLYcRFtJ?usp=sharing Application closes : 5 p.m. (Japan Standard Time [IST+3.5 hrs.]), February 29, 2024 Applications are only accepted through the online system.								

Don't miss this chance to enhance your academic and cultural knowledge while enjoying the picturesque surroundings of Kyoto. Apply now and take the first step towards an unforgettable summer experience at Kyoto University !

#### For inquiries, please reach out to:

Email: indiadesk-ku@mail2.adm.kyoto-u.ac.jp Feel free to contact us for any assistance or information regarding KU-STAR Program application process.

## Kyoto University Short-Term Academic Research Program (KU-STAR) Application Guidelines

Key Dates	
Application opens	February 9, 2024
<b>Application closes</b>	5 p.m. (Japan Standard Time [IST+3.5 hrs.]), February 29, 2024
Notification of results	Late March 2024
Arrival in Kyoto	By May 16, 2024
Program starts	May 17, 2024 (fixed)
Program ends	By July 19, 2024 (flexible)

#### **Program Overview**

Students will participate in advanced research at one of Kyoto University's graduate schools (see list below) for a total duration of 30–60 days. Placements will be made based on student interests and available spaces. Each student will be assigned for supervision by a specific faculty member. Lab information, including eligibility requirements specific to individual labs, is detailed in the appendix.

#### Kyoto University Graduate Schools

Natural Sciences			cial Sciences	Interdisciplinary		
-	Agriculture	-	Asian and African Area	-	Advanced Integrated	
-	Biostudies		Studies		Studies in Human	
-	Energy Science	-	Economics		Survivability	
-	Engineering	-	Education	-	Human and Environmental	
-	Informatics	-	Government		Studies	
-	Medicine	-	Law	-	Global Environmental	
-	Pharmaceutical Sciences	-	Letters		Studies	
-	Science	-	Management			

In addition to the research positions, students will also take part in a variety of educational activities (details subject to change). All students will engage in research and educational activities for approximately 40 hours per week (8 hours  $\times$  5 days). Below are some examples of the educational activities:

- Seminars and lab visits in which faculty will give presentations on relevant research fields and careers. These activities will expose students to cutting-edge research and broaden their understanding of opportunities in their graduate studies and academic careers.

- A poster session at the end of the program in which the participants will share their program outcomes with a larger audience.

- Program period: 30–60 days commencing on May 17 and finishing no later than July 19, 2024 (All participants commence the internship on May 17. The last day of the internship will be decided through consultations between the successful applicants and Kyoto University's faculty).
- Number of participants: 5–10 students

#### Support

## • Accommodation Kyoto University will arrange accommodation for all participants for the internship period.

• Scholarship

Students will receive JPY 5,000 per day (including weekends/holidays) as detailed below.

Amount received	When it will be provided				
150,000 JPY (5,000 JPY × 30 days)	Day 1 of the program				
$5,000 \text{ JPY} \times \text{the number of the remaining days}$	Day 31 of the program				

- Costs that must be covered by the students themselves
  - (1) Travel costs

Flight tickets and transportation fees between Kyoto University and the airport in Japan are not included. Participants can choose their arrival and departure dates flexibly, provided they are at Kyoto University for the duration of the program.

Note: Kyoto University only provides accommodation for the duration of the program. If participants stay in Kyoto or Japan longer, they arrange their own accommodation.

(2) Visa application fee

A short-term visa is required to enter Japan. Successful applicants are responsible for paying the visa application fee. Kyoto University can assist with the visa application process, but will not cover the cost of obtaining the visa.

(3) Health Insurance/Liability Insurance

All students must arrange their own private health insurance. Kyoto University can assist with enrolling in health insurance, but will not cover the cost of insurance. Additionally, upon arrival, all students must enroll in personal Liability Insurance for students (*Gakubai*) provided by the Kyoto University Co-op.

#### **Eligibility Criteria and Requirements**

- To be eligible for the program, applicants must:
  - Be enrolled in an undergraduate or master's program at a college or university in India. Undergraduate students must have completed at least four semesters before the internship.

- Not be scheduled to graduate before the program begins, and must resume their academic program (undergraduate or master's) for at least one semester or quarter after returning to India after the end of the internship.
- Have a strong academic performance record.
- Meet the requirements of the chosen laboratory, as specified in the list.
- Be interested in pursuing a doctoral program at Kyoto University.
- Participants of the KU-STAR Program must agree to:
  - Apply for the appropriate visa(s) for entry to Japan in a timely fashion.
  - Stay at the accommodation designated and provided by Kyoto University for the duration of the program.
  - Attend the orientation and all required conferences, activities, and cultural events, such as Japanese language classes organized through the Kyoto University internship program office.
  - Undertake advanced research projects for a period of 30–60 days at one of the participating laboratories.
  - Fully participate in the academic activities of the laboratories to which they are assigned, attending any relevant research seminars and workshops.
  - Prepare a poster presentation on their work at the end of the program.
  - Assign any intellectual property that results from their work during the program to their supervisor in the first instance.
  - Provide feedback on the KU-STAR Program.
  - Agree to be photographed by Kyoto University during the program, and grant the university the right to publish the photographs.
  - Contribute to media and public relations-related requests from Kyoto University.
  - Be present at Kyoto University for the full duration of the program. (Given the intensive nature of the program, participants will be unable to engage in other work or study during the program period. Applications from students who do not plan to be present at Kyoto University for the full duration of the program will not be considered.)

## **Application Procedures**

1-1. Online Application

Applications are only accepted through the online system. Once your application is submitted, you cannot change any files or information.

Online application:

https://reg31.smp.ne.jp/regist/is?SMPFORM=nfkf-lilisba851695436592cf0d10d509a097542d3 Documents to submit (all files except ID documents must be submitted in PDF format)

- Statement of Purpose
- The statement must be written in English and should not exceed 1,000 words. The file name should be "Surname\_sop.pdf" (e.g. Smith\_sop.pdf for Jane Smith).
- The statement should include an explanation of why you have chosen a specific laboratory, research group, or professor as your host. You should also describe what you expect to accomplish through your research activities at Kyoto University.
- Clearly detail the background and purpose of your research, including the experimental methods and expected results. Additionally, briefly describe the research plan that you will follow at the host laboratory.
- Provide your future study and career plan, particularly your reasons for pursuing a doctoral degree program at Kyoto University.
- CV

Although there is no specific format, your academic background, awards (if any), and publications (if any) must be included. The file name should be "Surname\_cv.pdf"

- Official academic transcript of your college or university The file name should be "Surname\_academic transcript.pdf"
- ID

A photocopy of the page of your valid passport with your portrait

The file must be submitted in PDF, JPEG, or PNG format, and the name should be "Surname\_passport.pdf/jpg/jpeg/png"

If you are unable to obtain a valid passport by the application deadline, other forms of ID with your full name and date of birth are also acceptable.

## 1-2. Letter of Recommendation

The required letter of recommendation may be submitted at any time before the application deadline (5:00 p.m. Japan Standard Time [IST+3.5 hrs.], February 29, 2024). To request the letter, send the submission form link below to a person who knows you well in a recent academic capacity. The letter should be written in English on departmental letterhead, and it must include the recommender's signature. It must be submitted in PDF format.

Submission form:

https://reg31.smp.ne.jp/regist/is?SMPFORM=nfkf-liljli-23a6f959aa3424ac17a91e19c0db84c2 It is your responsibility to ensure that the recommender has submitted the letter online by the deadline. Letters received after the deadline will be disregarded and your application will not be processed. Please also ensure that you allow the recommender sufficient time to prepare the letter when sending the request.

The recommender will receive a confirmation email once the letter has been successfully submitted.

## Both 1-1 and 1-2 must be submitted by 5 p.m. (Japan Standard Time [IST+3.5 hrs.]) on February 29, 2024

- Screening of Application Documents The application documents will be screened by a committee of Kyoto University faculty members.
- Interview (Final Screening)
   Shortlisted applicants will be requested to attend an online interview with their chosen principal investigators and the screening committee.

Contact

India Desk, Division of Graduate Studies, Kyoto University Email: indiadesk-ku@mail2.adm.kyoto-u.ac.jp

## PLEASE DO NOT CONTACT THE LABS DIRECTLY REGARDING THE INTERNSHIP PROGRAM.

If you have any questions about this list and the internship program, please send inquiry to the program office.

No	Field	Name	Affiliation	Research Topic	Keywords	Who can a	ipply Master	Requirement(degree/knolwedge/skill)
1	Agriculture	Prof. Naoshi Kondo	GS of Agriculture	<ol> <li>Bio-sensing engineering</li> <li>Agricultural process engineering</li> <li>Agricultural machinery</li> </ol>	#Agricultural Robot #Machine Vision #Fisheries		•	Bachelor's degree in Agricultural Engineering Basic knowledge of Foods and Engineering Prior experience of Spectroscopy and Imaging analysis, hopefully
2	<sup>2</sup> Bioengineering	Jr. Associate Prof. Ganesh Pandian Namasivayam	Institute for Integrated Cell- Material Sciences / GS of Engineering	<ol> <li>Epigenetics</li> <li>Nucleic acid therapeutics</li> <li>Stem cell control</li> <li>Personalized medicine</li> </ol>	#Skin Cell Aging #Mitochondria #Chemical Biology	•	●	Bachelor's degree / Master's students Basic knolwedge of biology or chemistry
	Biostudies	Prof. Jun Suzuki	GS of Biostudies	<ol> <li>Lipid scrambling</li> <li>Cellular and tissue renovation</li> <li>Elimination of unwanted cells</li> </ol>	#Unbiased Screening #Establishemnt of Assay System #Diseases Treatment	•	•	Bachelor's degree / Master's students Basic knowledge of biology or chemistry
	Biostudies	Prof. Naoki Watanabe	GS of Biostudies	<ol> <li>Single-molecule imaging</li> <li>Mechanotransduction</li> <li>Drug paradox</li> <li>Multiple disease marker detector</li> </ol>	#Multiplexed Super- Resolution Microscopy #Tissue & Neural Remodeling #Cancer Drugs	•	•	Basic knowledge in biology and biotechnology
	Biostudies	Associate Prof. Shigehiro Yoshimura	GS of Biostudies	<ol> <li>Structure and function of membrane-less organelles</li> <li>Cell-cycle-dependent regulation of liquid-liquid phase separation</li> <li>Molecular mechanism of host- virus interaction</li> <li>Developing live-cell imaging techniques</li> </ol>	#Live-cell Imaging #Cancer #Liquid-liquid Phase Separation	•	•	Basic knowledge of molecular biology, biochemistry, or biophysics
(	5 Chemistry	Prof. Yoshiharu Uchimoto	GS of Human and Environmental Studies	<ol> <li>Electrochemical Energy Storage and Conversion Devices</li> <li>Lithium Ion Batteries and Post Lithium-ion Batteries</li> <li>Proton Exchange Membrane Fuel Cells and Water Electrolysis</li> <li>Advanced Analysis Technology Using Synchrotron Radiation</li> <li>Indian postdoctoral students are in this lab!</li> <li>Dr. Neha Thakur, Dr. Mukesh Kumar, Dr. Dipali Patil</li> </ol>	#Elactrochemistry #Energy Devices and Systems #Advanced Analysis Technologies			Bachalor's degree / Master's students /Doctoral student Basic knolwedge of chemistry or materials science or analytical science
	7 Chemistry	Prof. Yasuhiro Ohki	Institute for Chemical Research / GS of Engineering	<ol> <li>synthetic organometallic / coordination chemistry of transition elements</li> <li>bio-inorganic chemistry of metal- sulfur enzymes</li> <li>catalytic conversion of N2, CO2, and other small molecules</li> </ol>	#Transition Metal Complex #Nitrogen Fixation #Fuel Regeneration from CO2	•	●	Interest in chemical synthesis and basic knowledge of coordination chemistry
5	Civil Engineering	Prof. Kazunori Fujisawa	GS of Agriculture	Geotechnial engineering Dam engineering Applied mechanics	#Soil-water Couped Problems #Inverse Analysis		•	Bachelor's/Master's degree in engineering-related fields Basic knowledge of soil mechanics, hydraulics and computer programming
	Civil Engineering	Prof. Masayuki Fujihara	GS of Agriculture	<ol> <li>Water resouces engineering</li> <li>Rural environmental engineering</li> </ol>	#Computational Fluid Dynamics #Hydraulics #Fishway	•	●	Possibly, basic knowledge of hydraulics and/ or computer programming

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	10	Civil Engineering	Prof. Ryosuke Uzuoka	Disaster Prevention Research Institute/GS of Engineering	Geo-disaster prediction and mitigation	#Landslide #Soil liquefaction #Multiphase computational geomechanics	•	Bachelor's/Master's degree in civil engineering Basic knowledge of geotechnical engineering
	11	Civil Engineering	Prof. Yosuke Higo	GS of Engineering	Computational geomechanics, Geomechanics from Micro to Macro	#Numerical simulation #X-ray micro-CT #Soil-water coupled problems		Bachelor's/Master's degree in any fields Basic knowledge of soil mechanics and continuum mechanics
	12	Energy Science	Associate Prof. Iwao Kawayama	GS of Energy Science	<ol> <li>Design and fabrication of advanced thin film batteries</li> <li>Develop terahertz technology for energy materials and devices</li> </ol>	#Thin Film #Battery #Terahertz	•	Basic knowledge of physics and chemistry, and interest in material and device engineering.
	13	Energy Science	Prof. Kazunobu Nagasaki	Institute of Advanced Energy	<ol> <li>Plasma physics</li> <li>Fusion science</li> <li>Plasma heating and diagnostics</li> </ol>	#Physics #Plasma #Nuclear Fusion	•	Basic knowledge in electromagnetism, and electrical and electric engineering
	14	Energy Science	Prof. Masato Katahira	GS of Energy Science	<ol> <li>Utilization of woody biomass toward energy and value-added materials</li> <li>Disease-related protein and RNA study</li> <li>Elucidation of structure-function correlation of biomolecules</li> </ol>	#Woody Biomass #Diseases #Carbon Neutral		Bachelor's or master's degree
	15	Energy Science	Prof. Takashi Sagawa	GS of Energy Science	<ol> <li>Materials designed of nanosized structures made of organic and inorganic composites</li> <li>Electronic structural analyses of materials and characterization of their optical properties</li> <li>Applications for photovoltaics (solar cells, photocatalysts, and so on), light-emitting devices, and/or others</li> </ol>	#Photochemistry #Solid State Physics #Polymer Science	•	Basic knowledge of materials science, industrial chemistry, and electrical engineering and electronics
	16	Energy Science	Prof. Toshiyuki Nohira	Institute of Advanced Energy	<ol> <li>Electrochemical conversion of CO2</li> <li>Electrochemical synthesis of Si solar cells</li> <li>New batteries for renewable ennergy</li> <li>Water electrolysis for hydrogen production</li> </ol>	#Electrochemistry #Inorganic Chemistry #Molten Salts & Ionic Liquids	•	Basic knowledge in electrochemistry and inorganic chemistry
	17	Engineering	Lecturer Banerjee Amit	GS of Engineering	Fabrication and application of micro / nano-scale machines	#Micro/ Nano Electromechanical Systems (MEMS/NEMS) #Nanoresonators		Enrolled in a Master's program in Physics / Mechanical Engineering/ electrical engineering / Computer Science / Information Technology / Nanoscience / Nanotechnology / Materials Science.
	18	Engineering	Prof. Hitoshi Yoshikawa	GS of Advanced Integrated Studies in Human Survivability	Applied mechanics, Computational mechanics	#Numerical analysis #Wave analysis #Boundary Element Method		Bachelor's/Master's degree in engineering Basic knowledge of numerical analysis
	19	Engineering	Prof. Motofumi Suzuki	GS of Engineering	Nanostructured thin films and their applications	#Oblique (or glancing) Angle Deposition #Surface Enhanced Raman Scattering #Marangoni Force		A foundational understanding of electromagnetism and condensed matter physics. Some introductory familiarity with operating vacuum equipment

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1	<b>IO</b>	Field	Name	Affiliation	Research Topic	Keywords	Who can apply UG Master	Requirement(degree/knolwedge/skill)
	20	Engineering	Prof. Ryoichi Kurose	GS of Engineering	<ol> <li>Momentum/mass/heat transfer and reaction/combustion in turbulent flows</li> <li>Particles/bubbles/droplets motions in turbulent flows</li> <li>Turbulent structure and scalar (heat and mass) transfer across the gas-liquid interface</li> <li>Analysis of complex turbulent flow fields generated by the motion of object</li> </ol>	#Combustion #Turbulence #Multiphase Flows		Bachelor's or master's degree in Mechanical Engineering. Basic knowledge of fluid dynamics and thermodynamics. Strong intention to advance to Ph.D. course.
	21	Engineering	Prof. Shu Seki	GS of Engineering	Electronic/spintronic materials and nanomaterials	#Conductivity #Nano-optoelectronic Materials #Functional Molecules	• •	Math (Undergraduate level) Motivation for experimental physical chemistry
	23	Engineering	Prof. Takeshi Abe	GS of Engineering	Lithium-ion batteries Novel battery systems Carbonaceous materials	#Electrochemistry #Material Chemistry	•	Physical chemistry
	24	Informatics	Prof. Atushi Igarashi	GS of Informatics	Theoretical computer science (and its application to computer programs)	#Program Verification #Type Systems #Mathematical Logic	•	Functional programming, programming language implementation (compilers/interpreters), automata theory
	25	Informatics	Prof. Manabu Kano	GS of Informatics	<ol> <li>Process informatics &amp; control</li> <li>Data-based medical/healthcare service development</li> <li>Development of AI for automatic first-principle model building</li> </ol>	#Process Systems Engineering (PSE) #Medical Engineering #Machine Learning	•	Undergraduate-level mathematics, especially linear algebra and calculus. Programming experience; familiarity with Python or MATLAB is desirable.
	26	Informatics	Prof. Nobuo Yamashita	GS of Informatics	Mathematical Optimization	#Nonlinear Optimization #First Order Methods #Duality	•	Undergraduate-level mathematics, especially linear algebra and calculus. Basic knowledge of mathematical optimization, especially optimality conditions and duality.
	27	Informatics	Prof. Takashi Sato	GS of Informatics				
	28	Informatics	Associate Prof. Yugo Murawaki	GS of Informatics	Computational linguistics & natural language processing	#Large Language Models #Explainability	•	Bachelor's or master's degree in computer science or related fields; programming experience; interest in linguistics, if not expertise, is appreciated
	29	Mathematics	Assciate Prof. Akitoshi Kawamura	Research Institute for Mathematical Sciences / GS of Science	Computation theory Algorithm design Discrete mathematics	#Automata Theory #Experimental Algorithms #Analysis of Algorithms	•	Bachalor's or Master's degree in Mathematics, Computer Science or related fields Basic knowledge of algorithm theory Excellent skills in mathematical reasoning
	30	Mathematics	Associate Prof. David Croydon	Research Institute for Mathematical Sciences / GS of Science	Probability theory	#Random Walks #Random Graphs #Fractals		Bachelor's/Master's degree in mathematics, including courses in probability theory.

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						UG	Master	
31	Mathematics	Prof. Takashi Sakajo	GS of Science	Topological and geometric fluid mechanics Mathematics of turbulence Mathematical modeling of flow phenomena Uncertainty quantification	#Vortex Dynamics #Topological Flow Data Analysis #Singular Formation in Solutions of Fluid Equations		•	Bachelor's or Master's degree in Mathematics (Geometry, Functional Analysis, Probability Theory, Numerical Analysis) Basic knowledge of fluid mechanics Excellent skills in numerical simulation
32	2 Mathematics	Prof. Takuro Mochizuki	Research Institute for Mathematical Sciences / GS of Science	Differential geometry Algebraic geometry Algebraic analysis	#Harmonic Bundles #Twistor D-modules #Higgs Bundles		•	Bachelor's/Master's degree in mathematics,including courses in differential geometry and algebraic geometry
33	3 Science	Prof. Masaharu Motokawa	Kyoto University Museum	<ol> <li>Species diversity of terrestrial vertebrates in Asia</li> <li>Formation history of Japanese islands' animal fauna</li> <li>Variation and variability in morphology of mammals</li> </ol>	#Taxonomy and Phylogeny #Zoogeography #Functional Morphology	•	•	Bachelor's or master's degree in zoology, animal science, biodiversity or related fields Basic knowledge of biodiversity, taxonomy, phylogeny, biogeography, or evolutionary science
34	Science	Associate Prof. Subhajyoti Samaddar	Disaster Prevention Research Institute					
35	5 Science	Prof. Tetsuya Takemi	Disaster Prevention Research Institute	<ol> <li>Severe storms and tropical cyclones</li> <li>Turbulence and dispersion in urban and complex topography</li> <li>Impacts of climate change on extreme weather</li> <li>Numerical modeling of mesoscale and microscale phenomena</li> </ol>	#Meteorology #Atmospheric Environmental Science #Climate Change		•	Bachelor or master's degree in geophysics, geosciences, or related physical sciences. Basic knowledge in meteorology, atmospheric sciences, or environmental fluid dynamics.
36	5 Social Science	Lecturer Bhatte Pallavi Kamlakar	GS of Human and Environmental Studies					

3	7 Social Science	Associate Prof.	GS of Advanced	International relations,	#Japan, US, China,		Bachelor's/Master's degree in any fields
		Takashi Sekiyama	Integrated	Indo-Pacific regional studies,	India		
			Studies in	Global enviromental politics	#Politics & Economics		
			Human Survivability		#Climate Security	•	

You can find introductory movies of some of the laboratories on Meet KU Researchers. Please visit the site!





https://global.k.kyoto-u.ac.jp/