

Fukushima Institute for Research, Education and Innovation (F-REI)  
Call for Researchers

Summary	<p>F-REI (hereinafter referred to as “the Institute”) aims to be a world-premiere "center of excellence of creative reconstruction" that will serve as a hope for realizing the future and dream of Fukushima district as well as the other part of Tohoku region. We also expect this institute to lead the Japan's scientific and technological innovation as well as strengthen the industrial capabilities, therefore to contribute to the growth of economy and the human well-being.</p> <p>To this end, the Institute prioritizes recruitment and infrastructure development for research and development activities led by Principal Investigators (PIs). The Institute also plans to step up in stages its industrialization function, such as support for creation of businesses and joint research with companies, as well as its human resource development function for partner graduate schools and the younger generation. <b><u>Regarding the recruitment of research and development personnel, the Institute will move in phases to recruitment through direct employment and cross appointment, shifting from research using outsourcing etc., the approach taken initially, as shown in the attached “F-REI Roadmap (for illustrative purposes).”</u></b></p> <p>The Institute invites applications for unit leaders (PIs) to carry out the following research and development projects in the field of Robotics:</p> <ul style="list-style-type: none"><li>○ Research Policy<ul style="list-style-type: none"><li>We will develop high mobility robots with radiation resistance, water resistance, heat resistance, explosion proof; conduct research on intelligence to realize autonomous control and swarm control; and conduct research on expanding the functions to enhance the sensory functions of living organisms, etc. We will leverage the achievements of these R&amp;Ds to promote the development of high mobility robots that can operate in harsh environments such as decommissioning, disasters, and outer space, the development of high-function drones that achieve high payloads and long flight, the development of autonomous mobile robots, the development of intuitive operation interface for robots and drones, and the development of information systems that enable flexible management and utilization of collected information, etc.</li></ul></li><li>○ Examples of research topics<ul style="list-style-type: none"><li>- R&amp;D to promote the use of robots and drones in harsh environments</li><li>- R&amp;D of drones that achieve long flight, high payload, and carbon neutrality</li><li>- Standardization of performance evaluation methods for marketability and industrialization of field robots, etc.</li><li>- R&amp;D of sensor technologies for robots and drones for disaster prevention and response</li><li>- Improvement of remote control technologies for decommissioning and application to the field</li></ul><p>*Research topics will be assigned based on the candidate’s achievements, aptitude, etc.</p></li><li>○ Priority research areas<ul style="list-style-type: none"><li>[Robotics to contribute to future decommissioning]<ul style="list-style-type: none"><li>High-power electric/hydraulic manipulation hand technology, environment recognition technology, and advanced semi-autonomous manipulation control technology that enables</li></ul></li></ul></li></ul>
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	<p>anyone to operate easily</p> <p>[Disaster response robot]</p> <ul style="list-style-type: none"> <li>- Technologies for collecting wide area information /local information and disaster response support using UAVs, UGVs, UUVs, and USVs in harsh environments</li> <li>- Technologies for establishing an autonomous distributed control system and a user interface (UI) for a group of heterogeneous robots</li> <li>- Technologies for building information systems and UI (User Interface) to integrate and utilize collected information</li> </ul> <p>[Robot for operations in forests]</p> <ul style="list-style-type: none"> <li>- High-power hydraulic manipulation and gripper technology</li> <li>- Environment recognition technology</li> <li>- Advanced semi-autonomous manipulation control technology that enables easy operation</li> <li>- Semi-autonomous control hydraulic manipulation and gripper technology from a remote site</li> <li>- Technology for automatically generating three-dimensional maps of forest trees and work procedures for thinning and clear-cutting operations</li> <li>- Semi-autonomous unmanned work robot technology, etc.</li> </ul> <p>○ About core facilities</p> <p>Research facilities will be constructed. We will consider the unit leader's request in the development of core facilities.</p> <p>○ About the development of research infrastructure</p> <p>We plan to develop research infrastructure for the unit's activities by renting laboratories. We expect that the budget for the procurement of the research equipment etc. to be used by the unit will be approximately 100 million yen.</p> <p>○ Labor expenses</p> <p>A unit will consist of several researchers. We expect that the budget for labor expenses to be used by one unit will be approximately 100 million yen.</p> <p>○ About research expenses</p> <p>We expect that the budget for the research expenses per unit will be approximately 100 million yen per year (including labor expenses for postdoctoral fellows and other personnel with limited contract period).</p> <p>*The structure of units will be determined later.</p>
1. Title of the position	Unit leader (equivalent to professor or associate professor)
2. Number of position	Several
3. Affiliation	Department of Research and Innovation
4. Location	F-REI Headquarters (Namie-town, Futaba-county, Fukushima, Japan) and the locations designated by the Institute
5. Specialty areas	<p>Robot engineering, mechanical engineering, electrical and electronic engineering, computer science, aeronautics and astronautics, and system engineering</p> <p>Intelligent robotics, robotics, intelligent machine systems, mechatronics, instrumentation engineering, control engineering, motion control, aeronautics, guidance, navigation, control, human interface, human-machine interaction, intelligent informatics, information networks, cognitive information processing, database, software, programming languages, embedded operating system (OS), AI technology, reinforcement learning, machine learning, deep learning, machine mechanics, material</p>

	mechanics, mechanical material, mechanical elements, hydraulic engineering, communication engineering, electrical and electronic material engineering, electronic devices, electrical equipment, applied biological function, bioprocess engineering, safety engineering, and disaster prevention engineering
6. Duties	Implementation of research and development, human resource development, and industrialization regarding the areas specified in the summary described above
7. Qualifications	[Requirements] (1) A doctoral degree (2) Outstanding research achievements in the specialty areas described above (3) Ability to communicate in Japanese or English at a level that would cause no inconvenience in the performance of duties
8. Starting date	As soon as possible before or around September 1, 2024 *If the candidate would like to postpone the date of employment, consultation is required.
9. Term of appointment	Either of the following will apply: - For the tenure, the term of the contract will be indefinite following a one-year trial period; - For the tenure track, the term of the contract will be five years, provided that the term may be extended based on consideration of the PI's ability, performance and other circumstances. *In the tenure assessment, not only research results but also social impact and other factors will be considered.
10. Probationary period	We have a one-year trial period for the tenure, while there is no trial period for the tenure track.
11. Working hours and other conditions	(1) Working hours 8:30 to 17:00 (45-minute break from 12:15 to 13:00) *The employee may be ordered to do work outside the stated working hours as necessary (e.g. for human resource development, industrialization, and work related to communicate information about research results). *The employee may work using the flexible working hours system and the discretionary work system.  (2) Days off Saturdays, Sundays, national holidays of Japan, and year-end and new year holidays (from December 29 to January 3 in the following year)  (3) Leave Annual paid leave (granted according to the length of employment) Sick leave Special leave  (4) Residence (for rent) Accommodations are available upon request. The rent has to be paid by employees. A part of the rent will be covered by F-REI.
12. Salary and allowances	(1) Salary Annual salary system will be adapted. provided that if it is difficult to apply this system, salary may be determined by comprehensive consideration of the applicant's ability and experience, as well as the complexity, difficulty, and level of responsibility of the duties.  (2) Allowances Other allowances will be paid in accordance with the rule of F-REI.  F-REI's salary rules for research staff <a href="https://www.f-rei.go.jp/english/information_disclosure/payment_for_researchers.html">https://www.f-rei.go.jp/english/information_disclosure/payment_for_researchers.html</a>
13. Insurance	Enrollment in health Insurance, employee's pension insurance, employment insurance, and industrial accident compensation insurance

14. Submission package and application deadline	<p>The application documents are as follows:</p> <ul style="list-style-type: none"> <li>(1) Curriculum vitae (Form 1)</li> <li>(2) Statement of research and development achievements (Form 2)</li> <li>(3) List of research achievements (Form 3)</li> <li>(4) Activities in academic associations and in civil society (Form 4)</li> <li>(5) Resume regarding your educational activities (Form 5)</li> <li>(6) Research and development and human resource development activities that the applicant would like to implement at the Fukushima Institute for Research, Education and Innovation (F-REI) (Form 6)</li> <li>(7) Persons who can provide a reference about the applicant (Form 7)</li> <li>(8) Up to five major theses in PDF format (with notes on the impact factor and the number of citations described)</li> </ul> <p>*Note that the personal information contained in the application documents is used for the purpose of assessing the applicant in the recruitment process and taking the steps necessary for personnel affairs etc. after the applicant is employed and will not be disclosed to any third party.</p> <p>*The application documents will not be returned to the applicant.</p>
15. Mailing address and contact	<p>Please include the above-listed documents in the prescribed order above. Items No.(1) – No.(7) must be combined into a single PDF file. Please attach the combined PDF file (Items (1) – (7)) and Item(s) No.(8) to an email and send it to the following address with the subject line “[Application - Robotics] Call for Researchers (Unit Leader).”</p> <p>[Contact]  SATO Kan (Mr.)  First R&amp;D Promotion Division, Department of Research and Innovation, Fukushima Institute for Research, Education and Innovation  Phone: 0240-41-9976  E-mail: F-REI_Pletc@f-rei.go.jp</p>
16. Application deadline	<p>Application deadline: 16:00, Tuesday, April 30, 2024 (JST).</p>
17. Selection process	<p>After screening of documents, an interview will be conducted for qualified candidates.</p> <ul style="list-style-type: none"> <li>- Document screening scheduled for early June of 2024</li> <li>- Interview screening scheduled for mid- to late June of 2024</li> </ul> <p>* Only qualified applicants after the document screening will be notified of an interview individually.</p> <p>* You may be requested to give a presentation during interviews.</p> <p>* Interviews may be conducted more than once.</p> <p>* Online interviews are also available, but the final interview will be conducted in person.</p> <p>* Applicants must bear their own travel and accommodation expenses for the interviews. However, F-REI will cover those expenses for the final interview.</p> <p>* The result will be notified by email.</p>
18. Measures to prevent passive smoking	<p>F-REI Headquarters: Smoking is forbidden on the premises.</p> <p>Areas designated by the Institute (excluding F-REI Headquarters): The rules for the facility where the working location is situated apply.</p>
19. Other	<p>Working conditions other than those described above are as stipulated in the work rules for the employees of the Fukushima Institute for Research, Education and Innovation.</p> <p>The working conditions etc. described above are as of the date of the posting of this recruitment information and may be revised.</p> <p>We welcome applications from female researchers.</p>
20. Recruiting organization	<p>Fukushima Institute for Research, Education and Innovation</p>