Call for 2024 Postdoctoral Fellow (ERI Project Researcher) at Earthquake Research Institute, The University of Tokyo

1. Title and Numbers: Project Researcher, one or two positions
2. Research Themes to be Recruited: See the table at the end of this document.
3. Qualification Requirements: A Ph.D. is required by the start of employment.
4. Terms of Employment:
   Starting date: The date of the earliest convenience thereafter
   The first contract will be ended on March 31, 2025, and will be renewable annually up to March 31, 2026.
5. Renewal of Contract:
   The contract may be renewed only once. If renewed, it shall be on an annual basis. Annual renewal will be determined based on the budget situation, the progress of the assigned duties, the amount of work at the end of the contract period, attitude, overall work performance, health condition, and other factors. If renewed, the final date of the employment is March 31, 2026.
6. Probation Period:
   6 months from the date of employment
7. Place of Work:
   Earthquake Research Institute, The University of Tokyo, (1-1-1 Yayoi, Bunkyo-ku, Tokyo, Japan)
8. Working Hours:
   A discretionary work system for professional work applies, and working hours will be deemed as 7 hours and 45 minutes per day.
9. Days off:
   Saturdays, Sundays, Holidays, and the year-end and New Year holidays (December 29 to January 3)
10. Leave:
    Annual Paid Leave, Special Leave, etc.
11. Salary and Benefits:
    Annual Salary System will be applied, and monthly salary will be around JPY 430,000, including performance/achievement allowance. Commuting Allowance (up to JPY 55,000 per month) if the payment conditions are satisfied.
12. Insurance:
    The successful applicants will be automatically enrolled in the insurance from the Mutual Aid Association of MEXT (Ministry of Education, Culture, Sports, Science, and Technology) and Employment Insurance.
13. Selection Process:
    Selection will be based on application materials. Interviews may be conducted if necessary.
14. Application documents
   (1) CV (Please download and use the University of Tokyo Standard Resume Format. [https://www.u-tokyo.ac.jp/en/about/jobs.html])
   (2) list of publications (classify as refereed or unrefereed.)
   (3) reprints of three selected publications
   (4) summary of the past research activities (400-700 words)
   (5) research plan (400-700 words), including a research theme name (listed in Table 1) for which you are applying.
   *Applicants must discuss their research plan with the project director (listed in Table 1) before application.
** Applicants who are enrolled at ERI (graduate students, etc.) at the time of application should also include the need for research activities at ERI. 

(6) names and contact information of two people who can provide reference letters

15. Application Deadline: November 20, 2023, 17:00 (JST).

16. Submission process:

(1) Send an email with the subject line "Application for ERI Research Fellow" to the Personnel Affairs Section in General Affairs Team of ERI (jinji@eri.u-tokyo.ac.jp).

(2) Then, the person in charge will contact you with a URL folder where you can send your application documents.

(3) Upload your complete application package to the folder by the application deadline.

17. Name of Recruiter: The University of Tokyo

18. Contact for inquiries: Assoc. Prof. YASUDA Atsushi, Div. Earth & Planetary Materials Science, yasuda@eri.u-tokyo.ac.jp

19. Status of measures to prevent second hand smoke:

- No smoking on campus except for designated smoking area outdoors

20. Others:

- Personal information received through this application process will not be used for other purposes.

- The University of Tokyo is committed to gender equality and encourages applications from all qualified candidates regardless of gender.

- If you are personally in contract with foreign governmental bodies, corporations or universities, or you are in receipt of a large benefit (financial or any other form) from foreign governmental bodies during the period of your employment, the provisions of the Foreign Exchange and Foreign Trade Act (FEFTA) may prohibit or restrict the sharing of technology that are designated as controlled technology possibly making it difficult for you to fulfill your duties as an academic or administrative staff of the university as a result. Therefore, in such cases it is necessary to keep such contracts/benefits within the scope where it does not hinder the sharing of technologies necessary for your duties by the university.

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Table: Research Themes

*Please select the research theme you are applying for from the list below.

<table>
<thead>
<tr>
<th>No.</th>
<th>Research theme</th>
<th>Work description</th>
<th>Project Director (e-mail)</th>
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<tbody>
<tr>
<td>1</td>
<td>Mineral and rock physics</td>
<td>Experimental studies on high temperature mechanical properties of crustal and mantle minerals</td>
<td>Takehiko Hiraga (<a href="mailto:hiraga@eri.u-tokyo.ac.jp">hiraga@eri.u-tokyo.ac.jp</a>)</td>
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<td>2</td>
<td>Modeling of volcanic phenomena</td>
<td>We are looking for a researcher to model volcanic phenomena such as magma generation, bubble and crystal growth, and ejection of volcanic clouds and lava using analytical or numerical methods. If adopted, the researcher is required to take on the challenge of developing new models and numerical methods. An environment of a super-computing system for large-scale simulations will be provided.</td>
<td>Yuijiro Suzuki (<a href="mailto:yuijiro@eri.u-tokyo.ac.jp">yuijiro@eri.u-tokyo.ac.jp</a>)</td>
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<tr>
<td></td>
<td>Research Area</td>
<td>Details</td>
<td>Contact Information</td>
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| 3 | Geophysical research using elementary particles                               | We are looking for researchers who can contribute to the promotion of geophysical research using elementary particles (one of the research topics below).  
1. Structural exploration by muography (volcanoes or faults)  
2. Exploring the structure of the deep earth using neutrinos  
3. Shallow structure exploration using electrons, positrons, and gamma rays contained in cosmic rays | Hiroyuki K.M. Tanaka  
(ht@eri.u-tokyo.ac.jp)                                                                 |
| 4 | Tsunami studies                                                               | In addition to conventional tsunami studies originated from earthquakes, volcanic eruptions, and landslide, we aim at new tsunami research, such as, but not limited to, tsunami generation mechanism by atmospheric waves, detection and quantification of tsunamis in satellite SAR imagery, or ocean current measurements by tsunami interferometry. | Shingo Watada  
(watada@eri.u-tokyo.ac.jp)                                                                 |
| 5 | Evaluation of Historical Seismicity Using Historical Materials                | ERI and Collaborative Research Organization for Historical Materials on Earthquakes and Volcanoes has been correcting historical records in Japan and constructing databases on historical earthquakes and seismicity. Successful applicants will work on correction of historical materials and analyses on historical seismicity. | Yasuyuki Kano  
(ykano@eri.u-tokyo.ac.jp)                                                                 |
| 6 | Comprehensive understanding of connection between slow and fast earthquakes   | As the universality of slow earthquake phenomena becomes clearer, attention is being focused on their relationship with regular earthquakes, including megathrust ruptures. Therefore, by making full use of data-driven analysis methods and new statistical methods that are optimal for seismic and geodetic data, we will bridge the gap between slow and fast earthquakes over broad time scales and various spatial scales, and investigate fault slip patterns. We are recruiting researchers who will contribute to elucidating diversity and geophysical properties of fault slip. | Aitaro Kato  
(akato@eri.u-tokyo.ac.jp)                                                                 |
| 7 | Experimental Physical Volcanology                                            | Laboratory experiments are effective tools to build and improve models of observed phenomena related to elementary processes of volcanic eruptions. Here, we call for researchers to develop new models explaining observation data through laboratory experiments. We assume a physics-based approach but also welcome researchers in geology and petrology who wish to build eruption dynamics models from erupted material data. | Mie Ichihara  
(ichihara@eri.u-tokyo.ac.jp)                                                                 |
| 8 | Volcanology from space geodetic data | Satellite geodetic measurements from GNSS and SAR measure the deformation of the Earth's surface caused by volcanic activity. With the development of recent observations, a wealth of data has been accumulated. We look for those who can bring new perspectives to volcano deformation studies with such dataset. We also welcome applications by those who are interested in the dynamics of volcanic eruptions from unexpected usage of space geodetic techniques, such as ionospheric disturbances or decays of GNSS signals. | Yosuke Aoki (yaoki@eri.u-tokyo.ac.jp) |
| 9 | Dynamics of the Earth's interior based on machine learning of geoscience data | Various fields of geoscience (including geology and petrology, geochemistry, geophysics) are accumulating vast amounts of high-precision, high-dimensional data. Extraction and interpretation of information from these data will bring new perspectives to geoscience. We are looking for researchers, regardless of their original research field, who are willing to extract information hidden in the data using machine learning methods and promote researches on the structure and dynamics of the Earth's interior. | Hikaru Iwamori (hiwamori@eri.u-tokyo.ac.jp) |
| 10 | Investigating fault slip by analyzing crustal deformation data of multiple GNSS networks | A successful candidate will model faulting processes in subduction zones and crustal fault zones by analyzing GNSS data observed at multiple networks in Japan including those operated by the Geospatial Information Authority of Japan and SoftBank/ALES. Then, he/she/they will discuss the mechanical characteristics of faults and/or regional tectonics based on the modeled faulting processes. Target fault slip modes cover a wide range of phenomena, from seismic to aseismic slip, during the earthquake cycle. | Yuji Itoh (yitoh@eri.u-tokyo.ac.jp) |
| 11 | Study on excitation mechanism of long-period seismic waves excited by non-seismic events | With the rapid increase in seismic waveform data in recent years, many non-seismic events have been reported to excite long-period seismic waves, but the excitation mechanism is still unclear. In this research project, we aim to elucidate how seismic waves are excited based on theory and data analysis, with particular attention to ocean gravity waves and submarine volcanic eruptions. | Kiwamu Nishida (knishida@eri.u-tokyo.ac.jp) |