Open Faculty Positions for Female Only, Graduate School of Engineering, University of Hyogo

1. Open positions: total 5 female members in Professors, Associate Professors, Assistant Professors, or Research Associates

(The university is voluntarily committed to promote diversity, and make efforts to take in diverse groups. In accordance with the special provisions of the Equal Employment Opportunity Law, we will open these positions for female only in order to proactively improve the current situation where female faculty members are considerably few.)

- 2. Department: Graduate School of Engineering
- 3. Research and teaching area:

Electrical Engineering (Associate Professor)

Generation, transmission, utilization, and storage of electrical energy, and other related fields (electric circuits, electric machinery, electrical physics, electromagnetics, renewable energy, biomedical engineering, electrical materials, and measurement)

| Subjects: | [Doctor course] | Advanced Seminar on Electrical Engineering,                       |
|-----------|-----------------|---|
|           |                 | Advanced Researches on Electric Power                             |
|           | [Master course] | Advanced Seminar on Electrical Materials and Engineering,         |
|           |                 | Advanced Experiment on Electrical Materials and                   |
|           |                 | Engineering, and other related subjects                           |
|           | [Undergraduate  | Basic subjects on electrical engineering such as electric circuit |
|           | course]         | and data science, Specialized subjects on electrical              |
|           |                 | engineering, Experiments of Electrical Engineering, and other     |
|           |                 | related subjects  |

Systems and Control Engineering (Associate Professor)

Cyber-physical technologies, analysis, design, and control of dynamical systems, data-driven approaches, optimization, machine learning, and other related fields

| Subjects:     | [Doctor course]     | Advanced Seminar on Electrical Engineering,                     |
|---------------|---------------------|---|
|               |                     | Advanced Researches on Electric Power                           |
|               | [Master course]     | Advanced Seminar on Electrical Materials and Engineering,       |
|               |                     | Advanced Experiment on Electrical Materials and                 |
|               |                     | Engineering, and other related subjects                         |
|               | [Undergraduate      | Basic subjects on electrical and electronic engineering such as |
|               | course]             | electric circuit and data science, Specialized subjects on      |
|               |                     | electrical and electronic engineering, Experiments of           |
|               |                     | Electrical Engineering, and other related subjects              |
| Intelligent l | nformation Engineer | ing (Assistant Professor or Research Associate)                 |

Intelligent Information Engineering (Assistant Professor of Research Associate) Intelligent Information Engineering is a technology that greatly advances the "fusion of cyberspace and physical space," which is essential in digital transformation (DX), that is, incorporating real-world events into virtual space and organizing and analyzing them with computers. Therefore, it emphasizes research topics in a wide range of fields, such as AI, human interfaces, intelligent robotics, design engineering and computer vision, which are all oriented towards the real world.

Subjects:[Master course]Advanced Experiment on Electronics and Computer Science<br/>and other subjects related to Communication and Informatics<br/>Experiments of Computer Science, Seminar of Computer<br/>Programming, and other subjects related to Communication<br/>and Informatics

## Fluid engineering (Professor)

Department of Mechanical Engineering is seeking a candidate who can take on the challenge of new possibilities as a research leader in the field of fluid engineering related as many industrial fields such as computational science, medicine, environment, and biotechnology, and who is as an educator in fluid engineering as a core discipline of mechanical engineering.

| Subjects: | [Doctor course] | Study on Mechanical Engineering                      |
|-----------|-----------------|--|
|           | [Master course] | Advanced Seminar on Mechanical Engineering,          |
|           |                 | Mechanical Engineering related subject               |
|           | [Undergraduate  | Mechanics, Fluid Mechanics, Machine Shop Practice,   |
|           | course]         | Mechanical Design and Drawing, Exercises of Creative |
|           |                 | Design, Seminar on Mechanical Engineering            |

<u>Mechanical engineering related on material science</u> (Assistant Professor or Research Associate) The development of materials is essential for the development of mechanical engineering, and mechanical materials have traditionally played this important role. To extend this research area, the Department of Mechanical Engineering is seeking to appoint a suitable candidate with extensive cross-disciplinary knowledge including resin materials and biomaterials. Materials include not only steel materials, but also all other materials. Simulation is also included in this field as a research approach.

| Subjects: | [Master course] | Advanced Seminar on Mechanical Engineering           |
|-----------|-----------------|--|
|           | [Undergraduate  | Related courses such as Mechanical Engineering       |
|           | course]         | experiments, Related courses such as Creative Design |
|           |                 | Exercises, Graduation Research                       |

## Metal Material Science (Professor)

The main subject is structural materials, especially steel materials. Research and teaching on manufacturing technology, processing technology, and characterization technology for the creation of new materials.

| Subjects: | [Doctor course] | Seminar on Microstructure-Design of Materials,<br>Advanced Studies on Mechanical Properties of Materials |
|-----------|-----------------|--|
|           |                 | 1  |
|           | [Master course] | Theory of Crystal Dislocations   |
|           | [Undergraduate  | Mechanical Properties and structure of Materials,  |
|           | course]         | Introduction of Materials Science and Engineering,   |
|           |                 | Introduction to Mechanical Engineering and Materials,  |
|           |                 | Graduation Research  |

Chemistry of inorganic materials (Associate Professor)

Realization of a sustainable society based on sustainable energy is one of the most important issues in modern society, and we need to work on the development or improvement of new inorganic materials for that purpose. We are now recruiting an associate professor who can promote the field of inorganic materials chemistry.

| Subjects: | [Doctor course]        | Advanced seminar of applied chemistry   |
|-----------|------------------------|---|
|           | [Master course]        | Advanced exercise for applied chemistry, Chemistry related to                                 |
|           |                        | inorganic materials   |
|           | [Undergraduate course] | Inorganic chemistry, Electrochemistry, Exercise for chemical experiments, Graduation research |

## Reaction and energy engineering (Professor)

A professor will be hired, who will involve in education and research in the field of reaction and energy engineering for leading green transformation (GX) and achieving SDGs with through knowledge of whole aspect of thermochemistry, and with hope to challenge elucidation of rate process in energy-related materials and their production processes regarding hydrogen production,  $CO_2$  capture and storage, utilization of waste heat.

| -         | -               | -   |
|-----------|-----------------|---|
| Subjects: | [Doctor course] | Seminar on Materials Production                         |
|           | [Master course] | Thermochemistry, Seminar for Material and Energy        |
|           | [Undergraduate  | Physical Chemistry, Chemical Thermodynamics, Experiment |
|           | course]         | on Chemical Engineering, English Comprehension for      |
|           |                 | Materials Science and Chemistry, Graduation research    |

## 4. Qualification:

- (a) Female candidates only
- (b) Ph. D to be taken by arriving date in case of application for professor, associate professor, and assistant professor, Master's degree to be taken by arriving date in case of application for research associate
- (c) Japanese language communication skills are required for teaching, instructional and other duties.
- (d) English language communication skills are required for giving lectures.
- 5. Employment status

Professor and associate professor: Full-time (tenured)

<u>Assistant professor</u>: Full-time (Non-tenured), fixed-term (5 years, Reappointment once is possible). Internal selection is available for assistant professors to be promoted to senior lecturers (tenured). Note that brilliant achievements and/or outstanding publications are then required to the applicants. <u>Research associate</u>: Full-time (Non-tenured), fixed-term (5 years, Reappointment once is possible). Internal selection is available for research associates to be promoted to assistant professors (Non-tenured). The research associates must obtain a Ph.D. to be eligible for internal selection.

- 6. Arriving date: April 1, 2024
- 7. Application forms:
  - (a) Cover letter including "research area" and "position" for which you apply.
  - (b) Curriculum vitae (Form 1)
  - (c) List of publications (book, original articles) and reprints of main publications (professor and associate professor: within 5, assistant professor and research associate: within 3) (Form 2)
  - (d) Educations and activities (Form 3)
  - (e) Summary of research (Form 4) (professor and associate professor: 800 words, assistant professor and research associate: 400 words)
  - (f) Plan of research and teaching (Form 5) (professor and associate professor: 800 words, assistant professor and research associate: 400 words)
  - (g) Recommendatory letter from the dean or a person who can be asked about the applicant (including the name and contact information). For electronic submission via JREC-IN Portal or e-mail, the applicant or recommender should send the recommendatory letter by registered mail or e-mail to the addresses below.

Mailing address: Hironori Fujisawa, Dean of Graduate School of Engineering, in care of the Section of General Affairs, University of Hyogo, 2167 Shosha, Himeji, Hyogo 671-2280, JAPAN.

E-mail address: koubo\_eng@eng.u-hyogo.ac.jp

- 8. Application deadline: June 30, 2023 (JST, deadline for receipt)
- 9. Review: Reviewing application forms and interview (including lecture demonstration for professor and associate professor)
- 10. Submission:
  - (a) Application via JREC-IN Portal

You can apply through JREC-IN Portal. Details can be found at JREC-IN Portal, https://jrecin.jst.go.jp/seek/SeekTop?ln=1

(b) Application via e-mail

Send application materials to the e-mail address below. When the documents are too large to send by e-mail, it is recommended to submit via secure file transfer service.

E-mail: koubo\_eng@eng.u-hyogo.ac.jp

The subject should be "Application forms for *Research area and position*", ex. "Application forms for Electrical Engineering, Professor".

- 11. Inquiry e-mail address: Hironori Fujisawa
  Dean of Graduate School of Engineering
  Tel: +81-79-267-4802 E-mail: koubo\_eng@eng.u-hyogo.ac.jp
- 12. Note: The department to which the employee belongs may be changed due to future organizational restructuring.