

**Research Center for Fire Safety Science, Tokyo University of Science**  
**Application Guide for Collaborative Research in 2020**

### **1. Objectives**

The Research Center for Fire Safety Science is currently working to promote its research and education programs, and has produced two major outcomes. One is theoretical development pertaining to performance-based fire safety design, and the other is practical development through experimental research utilizing full-scale experimental facilities. Upon these two pillars, the Center will conduct further research and deepen our knowledge of how to control potential fire risks, which are increasing along with the emergence of new spatial configurations in high-rise buildings and underground structures and the use of new materials (e.g., aluminum and plastics). These are inevitable changes brought about by modernization, industrialization, and the increased need of energy conservation.

### **2. Reference research themes**

This year, applications for collaborative research will be accepted in the following categories.

Innovation category covers to development research contributed to reducing fire risks, such as fire resistant technology, fire protection material development, fire extinguishing technology, firefighting activity support, and it can be expected to be put into practical use in recent years.

[General Category, A~F]

- A. Fundamental research on building fire safety
- B. Fundamental research on material combustion science
- C. Fundamental research on fire safety and disaster prevention
- D. Fundamental research on large-scale fire
- E. Research on technology and measures pertaining to fire safety
- F. Research on technological innovation of reducing fire risk

[Emphasis Category, G] (※)

- G. Experimental Research on Building Structural Fire Resistance
- (※) Large-scale experimental challenge to use Structural Fire Resistance Furnace, or Multiple Full-scale Furnace

### 3. Number of adopted

General: several themes  
Innovation: 1 theme

### 4. Period of collaborative research

The research period is between April 2020(date of selection) and 31 March 2021.

### 5. Applicants

Research Leaders should be faculty at domestic and international universities, researchers and directors of centers at other research institutions, or individuals with equivalent research potential who pursue research on fire safety science (preferably researchers holding a degree equivalent to a PhD or higher). Collaborative Researchers may include technicians, graduate students, and others with relevant qualifications. Each Research Leader may submit only one application.

### 6 Expenses

Funds for supplies necessary in order to conduct collaborative research, a round trip to the Center, and each Collaborative Researcher's university accommodation, as well as other expenses, will be covered by the Center within the estimated budget based on the application. As a rough guide, the budget for one application should be

- up to 750,000 yen for General Theme.
- up to 2,000,000 yen for Emphasis Theme

[Covered expense]

Consumables expenses used for experiment at TUS.

Maintenance of experimental equipment, cost of manufacturing test specimen.

Travel expenses to TUS.

Accommodation fee of TUS Guest House.

[Expense not covered]

Expenses for reporting and publication of research results.

Consumables expenses not to be used at TUS.

Travel expenses not to TUS.

## **7 Accommodation**

Researchers involved in the collaborative research program may utilize the accommodation facilities at Tokyo University of Science (3,000 yen/single room). Please submit an application to the organizer at the Research Center.

Note: Accommodation expenses are not covered if researchers make separate arrangements for a hotel or any other form of accommodation.

## **8 Adopted Standards**

The chosen research topics are limited to the scope of research that can be conducted using the facilities at the Research Center for Fire Safety Science. Research topics that cannot be implemented with the available technology will not be approved.

Note that the following points form the basis for accepting or rejecting the application.

- Accuracy of the application form
- Clarity of research content and objectives, relevance of the research plan and methods, appropriateness of the application budget, and expectations and development perspectives for the research achievements
- If another application is filed in parallel for competitive external funding, explain why such external funding is necessary
- Discussion of the achievements in ongoing research topics (including reports about the results)

## **9. Application results**

April 2020

Research Leaders will be notified of the final results by e-mail.

## **10. Application deadline**

Applications must arrive no later than 3 April 2020.

## **11. Application procedure**

Download the Collaborative Research Application from the Center's homepage

(<http://gcoe.tus-fire.com/eng/>). Fill in the necessary information and submit it by e-mail (addresses provided below).

Address and e-mail for application submission:

E-mail: [kasaianzen-ml@tusml.tus.ac.jp](mailto:kasaianzen-ml@tusml.tus.ac.jp)

Center for Fire Safety Science

Tokyo University of Science

2641 Yamazaki, Noda-shi, Chiba 278-8510 Japan

## **12. Notes regarding the application procedure**

- 1) After receiving a notification of approval, researchers must submit a "Consent for Joint Usage/Research".
- 2) Candidates for collaborative research should apply upon obtaining informal consent from their institution of affiliation at the time of application and discussing in advance the research theme, the schedule for using the facilities, the associated expenses, and other relevant points with faculty members at the Center.
- 3) Research on the same topic can be conducted for a maximum of 2 years. However, the relevant application must be submitted by indicating that it is for an "Ongoing Research Topic".

## **13. Publication of the result**

Research Result will be published in the website etc.

An "Outline of Research Achievements (in Japanese and English)" must be submitted at the end of the year, and a "Report on Research Achievements (in Japanese and English)" must be submitted at the end of the research period. When presenting the achievements of collaborative research, please indicate in one sentence that they are the result of collaborative research with 「the Center for Fire Science and Technology, Tokyo University of Science」, and submit a copy to the research office. The English report will be published in the "International Journal for Fire Science and Technology" published by Center for Fire Safety Science, Tokyo University of Science. The official Japanese and English versions of the name of the Center for Fire Science are as follows.

東京理科大学 総合研究院 火災科学研究所	Center for Fire Science and Technology, Research Institute for Science and Technology, Tokyo University of Science
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#### 14. Contact information

Details about collaborative research can be obtained by using the following contact information. We also respond to inquiries from researchers who wish to propose new research topics, as well as to questions about how such research can be developed if, for example, you are not sure how it can be accomplished.

Dr. Ken Matsuyama

Center for Fire Science and Technology, Tokyo University of Science

2641 Yamazaki, Noda-shi, Chiba 278-8510, Japan

Tel.: +81-4-7124-1501 ext. 5032

Fax: +81-4-7123-9873

E-mail: [kmatsu@rs.noda.tus.ac.jp](mailto:kmatsu@rs.noda.tus.ac.jp)

Terms of Use for the Joint Usage/Research Centers of the Research Institute  
for Science and Technology, part of the Organization for Research  
Advancement of the Tokyo University of Science

**Article 1 (Purpose)**

The objective of this Terms of Use is to set forth the rules which should be followed by every person (“Researcher” or “Researchers”) who, with the facilities and equipment of a Joint Usage/Research Center (the “Center”) of the Research Institute for Science and Technology, which is part of the Organization for Research Advancement of the Tokyo University of Science (the “University”), conducts a research project stated in a joint usage/research application that has already been submitted (such project is hereinafter referred to as the “Individual Project”) in a joint usage/research project (the “Joint Usage/Research Project”) conducted by the Center, which is certified by the Ministry of Education, Culture, Sports, Science and Technology as a joint usage/research center, thereby ensuring that the Joint Usage/Research Project operates smoothly and produces satisfactory results.

**Article 2 (Basic Policy)**

1. In line with the purposes of the Joint Usage/Research Project, an Individual Project may only be a project conducted for peaceful purposes.
2. Researchers must safely and properly conduct every test and experiment related to the Individual Project (“Experiment, etc.”) in accordance with all the rules of the Center and other related regulations stipulated by the University. Researchers shall also follow all safety and management instructions which may be given by the University as necessary.
3. If the Researchers of the Individual Project are affiliated with multiple organizations, the representative of the Individual Project shall take the required measures to ensure that all the Researchers observe this Terms of Use.

**Article 3 (Inspection of Facilities and Equipment)**

1. Before starting an Experiment, etc., Researchers shall inspect as required by the University the functions and conditions of the experiment site, etc.; if there is any problem with the functions or conditions thereof, a Researcher shall immediately notify the Center accordingly.
2. When finishing an Experiment, etc., the Researchers shall restore the experiment site, etc. to its original state and have such site, etc. inspected by the Center. If the Center gives the Researchers any instructions regarding restoring the experiment site to its original state or taking any other such action, etc. based on the results of such inspection, the Researchers shall take the required measures in accordance with such instructions.

**Article 4 (Use of Facilities and Equipment)**

1. Researchers may use the Center and its facilities, equipment and articles only within the scope of the Individual Project.
2. Researchers shall follow the instructions of the Center when using the Center and its facilities, equipment and articles for Experiments, etc.

3. Every Researcher who is a graduate student shall take out a personal accident insurance policy equivalent to the Personal Accident Insurance for Students Pursuing Education and Research. If a graduate student conducts an Experiment, etc., a faculty member of his/her organization who is not lower than an associate professor in rank shall observe and supervise the Experiment, etc.

#### **Article 5 (Bringing in of Articles and Chemicals)**

1. Researchers shall follow the relevant procedures established by the University when bringing into the University articles and chemicals used for Experiments, etc. and shall store and manage such articles and chemicals on their own responsibility as instructed by the University. If the Center or any of its staff members suffers any damage or harm attributable to articles or chemicals brought in by a Researcher, the Researcher shall repair the damage on his/her own responsibility and at his/her own expense or shall compensate the Center or staff member for the damage or harm.
2. When finishing all Experiments, etc., Researchers shall, on their own responsibility and at their own expense, collect all the articles and chemicals brought into the University for the Experiments, etc. under the preceding paragraph.

#### **Article 6 (Expenses for Experiments, etc.)**

1. In accordance with relevant procedures established separately, the University shall reimburse Researchers for the expenses of Experiments, etc. conducted by them within the limit of the budget stated in the notice of the results of research proposal screening.
2. If Researchers need to make any improvements to the facilities or equipment of the Center or make any additions to the equipment of the Center for an Experiment, etc., they shall obtain the prior consent of the University.

#### **Article 7 (Report on the Results of Use of the Center)**

1. When finishing all Experiments, etc., Researchers shall put the results of the Experiments, etc. into a report on the summary of research results in the form created by the University and promptly submit the report to the Center. The University shall assess the report submitted as the results of the Joint Usage/Research Project and report the results of the assessment to the Researchers.
2. In addition to the case mentioned in the preceding paragraph, if demanded by the University, Researchers shall give the University a written report on the progress of the Individual Project and the situation after the completion of the Individual Project.
3. The University may report matters reported by Researchers under the preceding two paragraphs to the Ministry of Education, Culture, Sports, Science and Technology if demanded by the Ministry. The Researchers shall not object to the Ministry's making the reported matters public.

#### **Article 8 (Making Public of the Results of Use of the Center)**

1. In principle, the contents of reports on the summary of research results shall be made public by the University and Researchers in accordance with the relevant rules established by the University.

2. When any contents of a report on the summary of research results are made public under the preceding paragraph, the contents shall be identified as the results of the Joint Usage/Research Project in accordance with the relevant rules established by the University.
3. If Researchers have made public any contents of their report on the summary of research results, they shall immediately submit to the Center one (1) copy of the document made public.

#### **Article 9 (Intellectual Property)**

1. If Researchers have made any invention, etc. in the course of the Individual Project or made any profits from the results of the research, they shall promptly notify the University.
2. The handling of such invention, etc. and profits shall be determined through separate consultation between the University and the Researchers.

#### **Article 10 (Accidents)**

1. If any accident or disaster occurs in connection with the Individual Project, the Researchers shall immediately report it to the Center in accordance with the relevant rules established by the University.
2. Researchers shall, on their own responsibility and at their own expense, promptly handle and end all accidents and disasters occurring in connection with the Individual Project, except for accidents and disasters attributable exclusively to the negligence or willful misconduct of the University.

#### **Article 11 (Suspension of Use of the Center)**

If any Researcher has failed to comply with this Terms of Use, submitted any document containing false information to the Center, or interfered with the operation thereof, the University may suspend the use by the Researcher of the Center or take other measures against the Researcher.

#### **Article 12 (Compensation for Damage)**

If any facilities, equipment or articles of the Center suffer any damage or loss attributable to the willful misconduct or negligence of a Researcher, the Researcher shall compensate the Center for the damage or loss.

#### **Article 13 (Confidentiality)**

1. In light of the provisions of Articles 7 and 8, the University and Researchers shall not, without the consent of the other party, divulge to any third party any technical or business information which may be disclosed or acquired from the other party in the course of the Individual Project if the information is marked or identified as confidential.
2. The provisions of the preceding paragraph are not applicable to the following information:
  - (1) Information which is already in the public domain before being disclosed or acquired from either party;



- (2) Information which can be proved by either party to have been already in its possession before being disclosed or acquired from the other party;
- (3) Information which becomes part of the public domain through no fault of either party after being disclosed or acquired from the other party;
- (4) Information which can be proved by either party to have been acquired by the party from a duly authorized third party after being disclosed or acquired from the other party; and
- (5) Information which can be proved by either party to have been created or developed independently by the party without reference to the information.

#### **Article 14 (Changes)**

In light of the fact that the Joint Usage/Research Project is conducted at a joint usage/research center certified by the Ministry of Education, Culture, Sports, Science and Technology, Researchers agree to the following:

- (1) If the Rules on the Certification of Joint Usage/Research Centers or other related rules are revised by the Ministry of Education, Culture, Sports, Science and Technology, the Joint Usage/Research Project, this Terms of Use and the Individual Project may be changed accordingly.
- (2) The Researchers will not make any claim against the University even if they suffer from any loss attributable to the above changes.

#### **Article 15 (Consultation in Good Faith)**

If there arises any matter not contained in this Terms of Use or question about the interpretation of this Terms of Use, the University and Researchers shall endeavor to amicably settle the matter or question through consultation in good faith between the parties.

#### **Article 16 (Language)**

The governing language of this Agreement shall be Japanese. If a translation hereof is made for reference purposes, only the Japanese original shall have the effect of a contract and such translation shall have no effect.

#### **Supplementary Provision 1**

This Terms of Use take effect on January 26, 2016 and become applicable on April 1, 2016.

(Form No. 1)

Date:

## Consent for Joint Usage/Research

Director, Research Center for Fire Safety Science,  
Research Institute for Science and Technology,  
Tokyo University of Science

Address:

Name of Organization:

Head of Organization: (Signature)

I agree that the researchers will responsibly conduct the joint usage/research project approved on   (yy/mm/dd)   in compliance with the Terms of Use for the Joint Usage/Research Centers of the Research Institute for Science and Technology, part of the Organization for Research Advancement of the Tokyo University of Science.

1. Research Representative and Joint Researchers

Name	Organization	Title

2. Research Title

3. Research Period           From \_\_\_\_\_ to \_\_\_\_\_

4. Responsible Person of the Tokyo University of Science

Organization	Title	Name
Tokyo University of Science		