

## **Guidelines for GIMRT program of Collaborative Research at High Field Laboratory for Superconducting Materials**

### 1. Objectives

- (1) Variety of collaborative researches to use steady high magnetic field magnets and dedicated instruments installed in the High Field Laboratory for Superconducting Materials (HFLSM) at Institute for Materials Research. It includes material development, pure and applied condensed matter physics and materials sciences which are conducted under strong magnetic fields.
- (2) HFLSM determine following subjects as priority research subjects at HFLSM at this call aiming at the enhancement of the activities in these areas. They are (A) Research on transport phenomena in strongly correlated systems and semiconductors, (B) Research on condensed matter using strong magnetic field NMR, (C) Research on environment / energy-saving materials development using magnetic fields, and (D) Development and evaluation of novel substances by electron spin resonance and optical spectroscopy. HFLSM.

### 2. Review Process and Selection

- (1) Each proposal is reviewed by three referees, and decision is made by the corresponding proposal committee based on the review results. The review of the continuing proposals includes the registration status of the research results on the previously accepted proposal. For new proposal, please be sure to include related research activities in the "Previous Research Results" column. Applicants will be notified of the review results around the end of March 2019 for December call.
- (2) Proposals are evaluated based on the following criteria: (A) importance of research, (B) clarity and possible achievement of proposal, (C) necessity and matching with HFLSM facility/equipment and suitability of experiment plan.
- (3) In a proposal using hybrid magnets and/or the cryogen-free 25 Tesla superconducting magnet, we ask user to write two additional points to justify the use of these high performance magnets. They are (A) necessity, expected outcomes and impact and (B) plan, preparation status and feasibility. For cryogen-free 25 Tesla superconducting magnets, we allocate priority for proposals with high review scoring. The priority is also set for priority research subjects. For the machine time of the hybrid magnet, HFLSM will ask a preliminary magnet time survey every six months to maximize operation efficiency.
- (3) For FY2019, HFLSM is willing to support two visits for each proposal as long as the financial resource is available as standard. Top 10-20 % proposal can ask additional travel support based on the discussion at the proposal committee. For proposals with a low review score, support may be reduced. However, application for magnet time is not reduced. Support is possible for the persons meeting the qualification category of 4. (1)

### 3. Regular and Urgent Proposal Calls

- (1) For domestic user, we strongly recommend to apply at December round to ensure the travel support. Urgent research proposal can be accepted for other calls in March, June and

September, however, availability and support may be limited.

- (2) International applications can apply for one of four calls in each year. The acceptance rate depends on the number of applications and the availability.
- (3) An urgent proposal will be accepted only very limited case given that we open four calls every year. Hence, an extremely high evaluation score and the necessity is required.

#### 4. Applicant qualifications

- (1) Full-time researchers of universities, junior colleges, technical colleges, incorporated administrative agencies, research institutes of national research and development corporations, public corporations, or public contract research organizations, or persons recognized by the Center's Director to have the equivalent research ability may apply. Technical staff, graduate students, and undergraduates (for technical colleges, major college students and academic advisors shall be specified) can be included as collaborators. Overseas researches holding the equivalent status as above can also apply.
- (2) Full-time researchers of private research institutes
- (3) Faculty staff and researchers belonging to the Institute for Materials Research or doctoral course students instructed by faculty staff belonging to the Institute
- (4) Those who have been approved by the Center's Director can be sharing members.

#### 5. Application procedure

- (1) Electronic application is available at GIMRT user system.  
<https://imr-kyodo.imr.tohoku.ac.jp/?lang=en>
- (2) An applicant not belonging to the Institute should consult with a faculty member and choose a local contact. For reference, information about personnel, experience and experimental methods are posted on the HFLSM's website.
- (3) Application deadlines
  1. Proposal: 20 December 2018 (Thursday)
  2. Collaborative Research Agreement. Three weeks before your visit. It is requested only for accepted proposal.  
Submit the Agreement signed by the head of visitor's home institution by postal mail or by e-mail. (For IMR members, it is not requested)
- (4) Applications in English are acceptable.

#### 6. Contact address

GIMRT-office, Research Cooperation Division, General Affairs Section, Institute for Materials Research, Tohoku University

2-1-1 Katahira, Aoba-ku, Sendai, Miyagi 980-8577, Japan

Phone +81-22-215-2183

FAX +81-22-215-2184

Email [gimrt-office@imr.tohoku.ac.jp](mailto:gimrt-office@imr.tohoku.ac.jp)

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## 7. Report

The proposal representative of the accepted proposal shall register the “Research Report” and the output results such as publications via GIMRT user system. Information regarding deadlines of the report and methods will be provided separately. Every result that is obtained in the collaborative research, even partly, shall be included in the results. We request users to publish research results within 3 years. Papers may be published after the research period and thus please be sure to register at the GIMRT user system even after submitting the research report for each fiscal year.

## 8. Acknowledgement

In publications and in other matters to open the results for public, include the following sentence. For paper publication, upload a reprint on the GIMRT user system.

This work was performed at the High Field Laboratory for Superconducting Materials, Institute for Materials Research, Tohoku University (Proposal No \*\*H\*\*\*)

## 9. Handling of intellectual property rights

Intellectual property rights generated as a result of research shall conform to the Tohoku University Joint Research Regulations.

## 10. Accommodations

Visitors may use the accommodation facility of the Institute (three single rooms, two twin rooms; total capacity of seven). To apply, contact your local contact or GIMRT user office. For details of the accommodation facility, see the “Collaborative Research Guidance”.

## 11. Miscellaneous

- (1) Proposal that were conducted in previous year and will continue under the same titles should apply as “Continued.” All other applications should apply as “New.” If you continue with the same research proposal, the maximum research period is three years from the initial one.
- (2) When graduate students and undergraduate students (major students for technical colleges) use the laboratory in IMR, they must have Personal Accident Insurance for Students Pursuing Education and Research or equivalent one. All other users also must hold a proper insurance. IMR will not provide any insurance for users.
- (3) User magnet time is not automatically assigned to accepted proposals and thus user must apply magnet time. Since the application method and the deadline depend on the equipment, pay attention to the Center’s website and notices by e-mails. Currently, we have magnet time call every two months.
- (4) When conducting experiments at late night or on holidays, for safety reasons, more than one person must be present, and one must be a skilled staff level researcher. For this reason, please consult with local contact about the team members and the experimental plan.

Collaborative Research Agreement

National University Corporation Tohoku University  
To Director of Institute for Materials Research

Proposal Number:

Proposal Title:

Name	Job Title	Home Organization

We acknowledge that the above persons will become collaborators.

Day Month Year

Director of home institution  
Affiliation/Title/Name

Personal Seal or Signature

I acknowledge that the undergraduate (major student for technical colleges) among the  
aforementioned persons will become collaborators.

Supervisor:

Personal Seal or Signature

Notes

1. "Director of Research Institution" is the head of the home institution: such as president, dean, director of the department, head of center, or person in the equivalent position who has the responsibility for this agreement.
2. If an undergraduate (major student of a technology college) is included as a collaborator, the supervisor must acknowledge the student.