

**Department of Science and Technology  
International Cooperation Division  
DMREF: DST-NSF Joint call for proposals**

**GET READY – BE PREPARED**

**APPLICATION SUBMISSION WINDOW DATE(S) –**

**21<sup>ST</sup> JANUARY, 2025 – FEBRUARY 4<sup>TH</sup>, 2025**

**(DUE BY 5 P.M. IST ON FEBRUARY 4<sup>TH</sup>, 2025)**

**Designing Materials to Revolutionize and Engineer our Future (DMREF)**

**Guidelines for Submitting Collaborative Proposals under the Department of Science and Technology (DST) of Government of India and U.S. National Science Foundation (NSF) Collaborative Research Opportunities**

Department of Science & Technology (DST), Government of India and National Science Foundation (NSF) of U.S have signed an Implementation Agreement (IA) on research Cooperation. Recognizing the potential for international collaboration to accelerate materials research and education objectives, DST has partnered with U.S. National Science Foundation (NSF) in a program titled **DMREF (Designing Materials to Revolutionize and Engineer our Future)**.

Applications are invited from all those who are interested in doing high-end research in the area of Material Science through **U.S. NSF 25-508 program**.

DMREF seeks to foster the design, discovery, and development of materials to accelerate their path to deployment by harnessing the power of data and computational tools in concert with experiment and theory. DMREF emphasizes a deep integration of experiments, computation, and theory; the use of accessible digital data across the materials development continuum; and strengthening connections among theorists, computational scientists, data scientists, mathematicians, statisticians, and experimentalists as well as those from academia, industry, and government. DMREF is committed to the education and training of a next-generation materials research and development (R&D) workforce; well-equipped for successful careers as educators and innovators; and able to take full advantage of the materials development continuum and innovation infrastructures that NSF is creating through partnership with other federal and international agencies.

DMREF will support activities that significantly accelerate the materials discovery-to-use timeline by building the fundamental knowledge base needed to advance the design, development, or manufacturability of materials with desirable properties or functionality.

NSF intends to make awards to the U.S. investigators participating in the recommended collaborative proposals, and DST intends to make awards to the Indian investigators participating in the recommended collaborative proposals.

### **Potential Areas of Research**

The DMREF: DST-NSF Joint call for proposals is open to all materials research topics.

### **Eligibility for Indian Applicants**

- The Principal Investigator (PI) and other investigators in India should be scientists/ faculty members working in regular capacity in Universities/ Deemed Universities/ Academic Institutes and National Research & Development Laboratories/ Institutes as well as working in private non-profit institutions that carry R&D activities. The Indian Principal Investigator (PI) should not be retiring or leaving the parent institute during the proposed duration of the project.
- Number of proposal submission for Indian investigators as PI in DMREF program is limited to one per call while they can involve as Co-PIs in maximum of two proposals.
- The Indian scientists who are in any way involved in the implementation of two or more projects that were previously supported by the DST (International Group) and that are not expected to be completed by 31 December 2025 are also not eligible to be a member of the research team. This limitation does not apply to projects supported by other divisions or groups within DST.

### **Guidelines**

- (i) DST and NSF will allow investigators from both countries to collaborate to write a single proposal that will undergo a single review process at NSF, the Coordinating Agency.
- (ii) Proposals must represent an integrated collaborative effort between the India and US investigators. Proposals are expected to adhere to the research areas, funding limits, and grant durations for the participating NSF program and for the DST program from which funding is sought. Investigators are advised that all documents submitted to DST or NSF may be shared with the other agency in order to implement the two-way agency activities.
- (iii) The proposal should describe the full proposed research program, including the total Indian and U.S. resources that will be part of the project. NSF investigators should indicate only the NSF expenses in the NSF budget. DST investigators should indicate only the DST research expenses on the DST budget form. The DST budget and budget justification must be included in the NSF proposal as a Supplementary Document. The Budget section of the

DST proposal should clearly indicate the DST budget with full justification. Proposals that request duplicative funding may be returned without review.

- (iv) Indian and US Investigators should submit identical Summary, Description and References in their proposals, using the respective forms prescribed by DST and NSF. Applications submitted by one side only; not on prescribed format and received after due date will not be accepted. Indian/US Investigators should, therefore, ensure that their counterpart submits an application with identical components as described above, on prescribed format as per guidelines of nodal agencies by due date.
- (v) **Title of the project submitted on both systems should be identical.**
- (vi) All proposals should be supported with brief bio-data of entire project team members indicating their affiliation, date of birth, highlights of academic and research activities / awards. For US investigators, date of birth is not required and their bio-sketches may be as per NSF guidelines.
- (vii) Through this partnership, India researchers may receive funding from DST and U.S. researchers may receive funding from NSF respectively.
- (viii) Selected Projects of Indian PIs will be supported up-to 20 million Indian rupees by DST for duration upto four years. The DST funding period is upto four years.
- (ix) The support to Indian PIs are primarily for exchange visits, manpower, consumables, contingency and equipment. It may be noted that both sides may not get equal grant (USD to INR). Budget requirement would be assessed as per current norms of human resources or international visit rate. Travel entitlement will be by economy class.
- (x) The proposals will be reviewed by experts contacted by NSF, the Coordinating Agency, in competition with other proposals received for the same funding round of the program to which the proposal is submitted, using NSF's merit review process. DST will check that the Indian investigator has an active and appropriate role and confirm their eligibility at the onset of the process.
- (xi) The Data Management Plan must include mechanisms for sharing and archiving data including, experimental data, results, and software developed and their associated privacy and security aspects.
- (xii) For projects involving human subjects/participants or vertebrate animals, investigators should follow both DST and NSF policies, submitting documentation to each as appropriate.
- (xiii) Only the PIs of the selected projects will be notified by e-mail of the outcomes of the selection process.

## How to apply

The Indian researchers can download the proposal formats from websites [www.dst.gov.in](http://www.dst.gov.in) / <https://onlinedst.gov.in/> and should submit complete application form and all relevant information through e-PMS portal of the DST. Proposals must be submitted to DST through the e-application system provided at <https://onlinedst.gov.in/> during the submission window **21<sup>ST</sup> JANUARY, 2025 – 4<sup>th</sup> FEBRUARY, 2025** through proper channel. It should be ensured that application with identical title has been submitted by his / her US counterpart to NSF by due date. Proposal not submitted through either ePMS portal by due date will not be considered at all. **Applications MUST be submitted strictly as per format (Annexure-I)**. No request stating reasons like technical glitch / server slow / internet connectivity or any other kind of reason/request will be entertained in this regard.

## Instructions for uploading proposal to DST on e-PMS

- Log on to [www.onlinedst.gov.in](http://www.onlinedst.gov.in) to access the home page of the “DST e-PMS Portal” and register. After registration, log in and submit the joint project proposal in prescribed Format.
- Before filling up the form Indian applicants are advised to carefully go through the Relevant Advertisement published at the DST Website ([www.dst.gov.in](http://www.dst.gov.in)) and also available under Proposal Formats in the e-PMS Portal after logging in the portal site. **This is a pre call launch announcement to make aware all the researchers about the upcoming DMREF: DST-NSF Joint call for proposals. Researchers would be having more than 2 months time to prepare the Joint collaborative proposal with U.S. researchers and be ready to submit it during the submission window (<https://onlinedst.gov.in/>) which will actually open from 21<sup>st</sup> January, 2025 – 4<sup>th</sup> February, 2025**
- To save time and avoid data loss, please download the appropriate proposal format and fill all the information required as per the format as a Word and PDF file and then keep it ready for upload during submission of mandatory documents.
- Click on “Submit proposals” link which would take to a page seeking multiple information starting with – General information, Principal investigator etc.
- After filling all above particulars, there is provision to preview your details before final submission of application form on clicking on “Preview” button. Preview page will display all facts/particulars that have mentioned on entry time. If the applicant is sure with filled details, then click on “Submit” button to finally push data into server.

- Applicants are advised to carefully fill in and verify the details required for the online application themselves, as no change will be possible/ entertained after clicking the FINAL SUBMIT BUTTON.

**Documents Required (all mandatory) for Indian Investigators (PDF only)**

- Complete Project Proposal (Annexure I)
- Certificate from Investigator(s) (Annexure II)
- Endorsement from the Head of Organization (on letter head) (Annexure III)
- Conflict of Interest (Annexure IV)
- Biodata of entire project team members (Max: 3 pages per Investigator) including date of superannuation / tenure completion, their affiliation, date of birth, field of specialization, highlights of academic and research activities / awards, significant accomplishment etc., in a single pdf file.

**Contact Details**

For India DST	For US NSF
<p><b>Dr Mahak Garg</b>            Scientist 'C'            International Cooperation Division            Department of Science and Technology            Technology Bhawan, New Mehrauli            Road, New Delhi – 110016            Email: <a href="mailto:mahak.garg@gov.in">mahak.garg@gov.in</a></p> <p>DST Website: <a href="http://www.dst.gov.in">www.dst.gov.in</a></p> <p>DST Submission System:  <a href="https://onlinedst.gov.in/Login.aspx">https://onlinedst.gov.in/Login.aspx</a></p>	<p><b>John Schlueter</b>, Team Lead,            MPS/DMR,            telephone: (703) 292-7766,            email: <a href="mailto:jschluet@nsf.gov">jschluet@nsf.gov</a></p>

**DST - NSF Joint Call for Proposals**

- 1 Title of the project:
  
- 2 Indian PI & Co-PI details  
(should include name, designation, email id, date of birth, date of retirement, mobile number & institutional details)
  
- 3 US PI & Co-PI details  
(should include name, designation, email id & institutional details)

4 **Technical Details**

- Duration :
  
- Total Cost (INR) :
  
- Scheme :
  
- Broad Area :
  
- Sub-Area :
  
- Summary :
  
- Keywords defining the scope of the proposal :
  
- Theme of proposed work :

**Synopsis**

- 5 Aims/Objectives : *Key objectives in bulleted form*
  
- 6 Deliverables :

- 7 Target in terms of new technology development vis-a-vis existing global Technological Benchmark :
- 8 Potential Application areas / Market uptake / Business Development :
- 9 Role and Responsibilities of each USA partnering institution /Complimentary of the work :
- 10 Value addition/ gain from collaboration **in terms of technology and expertise expected from USA partners :**
- 11 Methodology/Relevance in the context of state of the art to be highlighted :
- 12 Outcome :
- 13 How are your ideas executed today and the limits of current practice ?
- 14 Novelty of proposed approach and why will it be successful :
- 15 What impact will it make to the scientific community or society ?
- 16 What are suggested midterm and long-term success indicators ?

#### **Other technical details**

- 17 Review of status of R & D in the subject :
- 18 Work plan :
- 19 Methodology :
- 20 Expertise available with the investigators executing the project :
- 21 Necessity and the significance of the proposed research exchange with US :

22 Key publications published by the investigators pertaining to the theme of the proposal during last 5 years :

23 Proposed methodology for joint utilization of results :  
(Joint Publications, transfer of results to industry, setting up of joint ventures etc.)

24 Planned Targets :

Time frame	Target	Indian responsibilities	US responsibilities
(a)	(b)	(c)	(d)
1 <sup>st</sup> six months			
2 <sup>nd</sup> six months			
3 <sup>rd</sup> six months			
4 <sup>th</sup> six months			
5 <sup>th</sup> six months			
6 <sup>th</sup> six months			
7 <sup>th</sup> six months			
8 <sup>th</sup> six months			

25 Ongoing / completed projects with the Indian principal Investigator (last 5 years)

National Projects:

S. No.	Project Title	Sponsoring Agency	Budget	Status
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International Projects:

S. No.	Project Title	Name of the Collaborating Scientist & Institute	Sponsoring Agency	Budget	Status
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26 Exchange visit which may be required to meet targets :

	INDIA TO US		US TO INDIA	
	Number of persons x visits	Duration for each person's visit	Number of persons x visits	Duration for each person's visit
1 <sup>st</sup> Year				
2 <sup>nd</sup> Year				
3 <sup>rd</sup> Year				
4 <sup>th</sup> Year				

27 Budget Requirements (institutes-wise, if more than one institute require funds)

Funding requested from DST. Detailed justification should be submitted for each item.

Project costs (in INR):	Year 1	Year 2	Year 3	Year 4	TOTAL
A. Minor Equipment/ Spares - Accessories					
B. General:					
1. Manpower costs					
2. Consumables					
3. Travel					
4. Contingencies					
5. Other Costs					
6. Overheads					
Total budget requested from DST					

28 List of facilities being extended by parent institution(s) for the project implementation.

Equipment available with the Institute/ Group/ Department/ Other Institutes for the project:

Equipment available with	Generic Name of Equipment	Model, Make & year of purchase	Remarks including accessories available and current usage of equipment
PI & his group			
PI's Department			
Other Inst In the region			

29 OTHER SOURCES OF SUPPORT

i. Is this research currently being supported by other sources?

YES	NO
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If yes, please indicate the sources, amounts and periods of support.

Indian side:

US side:

ii. Has this project been submitted to other agencies for financial support?

YES	NO
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If yes, please indicate which agencies, and when.

Indian side:

US side:

(Signature of Project Investigator)

**CERTIFICATE FROM THE INVESTIGATOR**

PROJECT TITLE: \_\_\_\_\_

- 
1. We agree to abide by the terms and conditions of the DST grant.
  2. We did not submit this or a similar project proposal elsewhere for financial support.
  3. We have explored and ensured that equipment and basic facilities will actually be available as and when required for the purpose of the project. We shall not request financial support under this project, for procurement of these items.
  4. We undertake that spare time on permanent equipment will be made available to other users.
  5. We have enclosed the following materials:

ITEMS	NUMBER OF COPIES
(a) Endorsement from the Head of the Institution (on letter head)	One
(b) Certificate from Investigator	One
(c) Certificate from Investigator regarding conflict of interest	One
(d) Name and address of experts/institution interested in the subject/ outcome of the project	One
(e) Copies of the proposals	One hard Copy

Date : .....

Name & Signature of  
Principal InvestigatorName & Signature Of  
Co-Investigator(s)

**ENDORSEMENT FROM THE HEAD OF INSTITUTION  
(TO BE GIVEN ON LETTER HEAD)**

PROJECT TITLE: \_\_\_\_\_

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1. Certified that the Institute welcomes participation of Dr./Shri/Smt./Km. \_\_\_\_\_ as the Principal Investigator and Dr./Shri/Smt./Km. \_\_\_\_\_ as the Co-Investigator for the project and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility for the fruitful completion of the project (after obtaining consent in advance from DST).
2. Certified that the equipment, other basic facilities and such other administrative facilities as per terms and conditions of the grant, will be extended to investigator (s) throughout the duration of the project.
3. Institute assures financial and other managerial responsibilities of the project.
4. Certified that the organization has never been blacklisted by any department of the State Government or Central Government.

Name and Signature of Head of Institution

Date: .....

Place:.....

REMARKS: In regard to research proposals emanating from scientific institutions/laboratories under various scientific departments the Head of the institution is required to provide a justification indicating clearly whether the research proposals falls in line with the normal research activities of the institution or not and if not, the scientific reasons which merit its consideration by DST.

**DEPARTMENT OF SCIENCE AND TECHNOLOGY****POLICY ON CONFLICT OF INTEREST****FOR REVIEWER & COMMITTEE MEMBER or APPLICANT or DST OFFICER ASSOCIATED/ DEALING WITH THE SCHEME/  
PROGRAM OF DST**

Issues of Conflicts of Interest and ethics in scientific research and research management have assumed greater prominence, given the larger share of Government funding in the country's R & D scenario. The following policy pertaining to general aspects of Conflicts of Interest and code of ethics, are objective measures that is intended to protect the integrity of the decision making processes and minimize biasness. The policy aims to sustain transparency, increase accountability in funding mechanisms and provide assurance to the general public that processes followed in award of grants are fair and non-discriminatory. The Policy aims to avoid all forms of bias by following a system that is fair, transparent and free from all influence/ unprejudiced dealings, prior to, during and subsequent to the currency of the programme to be entered into with a view to enable public to abstain from bribing or any corrupt practice in order to secure the award by providing assurance to them that their competitors will also refrain from bribing and other corrupt practice and the decision makers will commit to prevent corruption, in any form, by their officials by following transparent procedures. This will also ensure a global acceptance of the decision making process adopted by DST.

**Definition of Conflict of Interest:**

Conflict of Interest means "any interest which could significantly prejudice an individual's objectivity in the decision making process, thereby creating an unfair competitive advantage for the individual or to the organization which he/she represents". The Conflict of Interest also encompasses situations where an individual, in contravention to the accepted norms and ethics, could exploit his/her obligatory duties for personal benefits.

**1. Coverage of the Policy:**

- a) The provisions of the policy shall be followed by persons applying for and receiving funding from DST, Reviewers of the proposal and Members of Expert Committees and Programme Advisory Committees. The provisions of the policy will also be applicable on all individuals including Officers of DST connected directly or indirectly or through intermediaries and Committees involved in evaluation of proposals and subsequent decision making process.
- b) This policy aims to minimize aspects that may constitute actual Conflict of Interests, apparent Conflict of Interests and potential Conflict of Interests in the funding mechanisms that are presently being operated by DST. The policy also aims to cover, although not limited to, Conflict of interests that are Financial (gains from the outcomes of the proposal or award), Personal (association of relative / Family members) and Institutional (Colleagues, Collaborators, Employer, persons associated in a professional career of an individual such as Ph.D. supervisor etc.)

**2. Specifications as to what constitutes Conflict of Interest.**

Any of the following specifications (non-exhaustive list) imply Conflict of Interest if,

- (i) Due to any reason by which the Reviewer/Committee Member cannot deliver fair and objective assessment of the proposal.
- (ii) The applicant is a directly relative# or family member (including but not limited to spouse, child, sibling, parent) or personal friend of the individual involved in the decision making process or alternatively, if any relative of an Officer directly involved in any decision making process / has influenced interest/ stake in the applicant's form etc..
- (iii) The applicant for the grant/award is an employee or employer of an individual involved in the process as a Reviewer or Committee Member; or if the applicant to the grant/award has had an employer-employee relationship in the past three years with that individual.
- (iv) The applicant to the grant/award belongs to the same Department as that of the Reviewer/Committee Member.
- (v) The Reviewer/Committee Member is a Head of an Organization from where the applicant is employed.
- (vi) The Reviewer /Committee Member is or was, associated in the professional career of the applicant (such as Ph.D. supervisor, Mentor, present Collaborator etc.)
- (vii) The Reviewer/Committee Member is involved in the preparation of the research proposal submitted by the applicant.

- (viii) The applicant has joint research publications with the Reviewer/Committee Member in the last three years.
- (ix) The applicant/Reviewer/Committee Member, in contravention to the accepted norms and ethics followed in scientific research has a direct/indirect financial interest in the outcomes of the proposal.
- (x) The Reviewer/Committee Member stands to gain personally should the submitted proposal be accepted or rejected.

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# The Term "Relative" for this purpose would be referred in section 6 of Companies Act , 1956.

### 3. **Regulation:**

The DST shall strive to avoid conflict of interest in its funding mechanisms to the maximum extent possible. Self-regulatory mode is however recommended for stake holders involved in scientific research and research management, on issues pertaining to Conflict of Interest and scientific ethics. Any disclosure pertaining to the same must be made voluntarily by the applicant/Reviewer/Committee Member.

### 4. **Confidentiality:**

The Reviewers and the Members of the Committee shall safeguard the confidentiality of all discussions and decisions taken during the process and shall refrain from discussing the same with any applicant or a third party, unless the Committee recommends otherwise and records for doing so.

### 5. **Code of Conduct**

#### **5.1 To be followed by Reviewers/Committee Members:**

- (a) All reviewers shall submit a conflict of interest statement, declaring the presence or absence of any form of conflict of interest.
- (b) The reviewers shall refrain from evaluating the proposals if the conflict of interest is established or if it is apparent.
- (c) All discussions and decisions pertaining to conflict of interest shall be recorded in the minutes of the meeting.
- (d) The Chairman of the Committee shall decide on all aspects pertaining to conflict of interests.
- (e) The Chairman of the Committee shall request that all members disclose if they have any conflict of interest in the items of the agenda scheduled for discussion.
- (f) The Committee Members shall refrain from participating in the decision making process and leave the room with respect to the specific item where the conflict of interest is established or is apparent.
- (g) If the Chairman himself/herself has conflict of interest, the Committee may choose a Chairman from among the remaining members, and the decision shall be made in consultation with Member Secretary of the Committee.
- (h) It is expected that a Committee member including the Chair-person will not seek funding from a Committee in which he/she is a member. If any member applies for grant, such proposals will be evaluated separately outside the Committee in which he/she is a member.

#### **5.2 To be followed by the Applicant to the Grant/Award:**

- (a) The applicant must refrain from suggesting referees with potential Conflict of Interest that may arise due to the factors mentioned in the specifications described above in Point No. 2.
- (b) The applicant may mention the names of individuals to whom the submitted proposal should not be sent for refereeing, clearly indicating the reasons for the same.

#### **5.3 To be followed by the Officers dealing with Programs in DST:**

While it is mandatory for the program officers to maintain confidentiality as detailed in point no. 6 above, they should declare, in advance, if they are dealing with grant applications of a relative or family member (including but not limited to spouse, child, sibling, parent) or thesis/ post-doctoral mentor or stands to benefit financially if the applicant proposal is funded. In such cases, DST will allot the grant applications to the other program officer.

### 6. **Sanction for violation**

#### **3.1 For a) Reviewers / Committee Members and b) Applicant**

Any breach of the code of conduct will invite action as decided by the Committee.

3.2 **For Officers dealing with Program in DST**

Any breach of the code of conduct will invite action under present provision of CCS (conduct Rules), 1964.

7. **Final Appellate authority:**

Secretary, DST shall be the appellate authority in issues pertaining to conflict of interest and issues concerning the decision making process. The decision of Secretary, DST in these issues shall be final and binding.

8. **Declaration**

**I have read the above "Policy on Conflict of Interest" of the DST applicable to the Reviewer/ Committee Member/ Applicant/ DST Scheme or Program Officer # and agree to abide by provisions thereof.**

I hereby declare that I have no conflict of interest of any form pertaining to the proposed grant \*

I hereby declare that I have conflict of interest of any form pertaining to the proposed grant \*

\* & # (Tick whichever is applicable)

**Name of the Reviewer/ Committee Member or Applicant or DST Officer**

*(Strike out whichever is not applicable)*

(Signature with date)