



# USC University of Southern California

## OFFICE OF RESEARCH & INNOVATION

### Request For Proposals

## University of Southern California (USC) & Indian Institute of Science (IISc) Collaborative Network Award

#### **FUNDING ORGANIZATION APPLICATION DEADLINE**

**USC Office of Research & Innovation (OORI)**  
**5 PM, May 20, 2024, Annually.** Proposals submitted after this deadline will be rejected without review. When a due date falls on a weekend, federal holiday, or when USC offices are closed due to weather or other circumstances, the application deadline is automatically extended to the next business day.

#### **SCIENTIFIC MERIT REVIEW**

**June – July**

#### **PROGRAMMATIC REVIEW**

**July**

#### **NOTIFICATION**

**August**

#### **EARLIEST AWARD DATE**

**September**

#### **AWARD PROJECT PERIOD**

**Maximum project period is one year.**

#### **AWARD (UP TO)**

**\$5,000 per USC investigator.**

#### **BACKGROUND**

The University of Southern California (USC) and the Indian Institute of Science (IISc) have partnered to identify new ways to spark deeper academic cooperation, catalyze research collaborations, and jumpstart increased people-to-people scientific exchanges. Leading research universities in the United States and India are deeply committed to strengthening meaningful, high-impact, and co-designed research partnerships. This partnership will enable bilateral academic cooperation, critical to our shared security and geopolitical, commercial, and economic futures. The **USC-IISc Collaborative Network Award** program, an innovative program funded through the USC Office of Research & Innovation (OORI), will promote highly innovative collaborative research projects and activities that include faculty from both institutions.

IISc (<https://iisc.ac.in/>) was established in 1909 by a visionary partnership between the industrialist Jamsetji Nusserwanji Tata, the Mysore royal family and the Government of India. Over the last 115 years, IISc has become India's premier institute for advanced scientific and technological research and education. Its mandate is to provide advanced instruction and to conduct original investigations in all branches of knowledge as are likely to promote the material and industrial welfare of India. In keeping with this guiding principle, the Institute has strived to foster a balance between the pursuit of essential knowledge and applying its research for industrial and social benefit. IISc's research output is diverse, interdisciplinary, and cuts across traditional boundaries. The Institute has over 42 academic departments and centers under six divisions. It also places equal emphasis on student learning, with about 4,000 students pursuing several postgraduate

and PhD programs and a dedicated four-year undergraduate program that provides research-oriented training for young students in the basic sciences. IISc's newest frontier is their one-of-its-kind postgraduate medical school and an 832-bed not-for-profit hospital, named the Bagchi-Parthasarathy Hospital, set to open on their Bengaluru campus by the end of 2025.

## **OPPORTUNITY**

USC-IISc Collaborative Network Awards will support the development of collaborative scientific activities, scientific exchanges, and research projects between a network of USC faculty and IISc faculty. To support USC-IISc research teams and provide opportunities for in-person collaboration, travel awards for USC researchers to travel to India to meet with IISc partners and participate in a workshop will be supported by this program. Expenses for workshops that may be held at USC will be paid by OORI and will not be included in budgets for applications solicited through this RFP. Proposals submitted to this program must identify IISc collaborators and outline the envisioned innovative research project to be addressed by the proposal team and presented at the workshop. USC faculty must engage IISc partners before submission of their application and include a letter of support. Potential partners can be found on the IISc website (<https://iisc.ac.in/>). It is encouraged that faculty collaborators include their PhD students as part of the research team to carry out jointly supervised studies.

## **FOCUS**

This award's overarching goal and focus will be to encourage and facilitate increased collaborations between a network of USC and IISc faculty in any area of science and engineering, including health and medicine. Multidisciplinary projects that cross disciplines are strongly encouraged.

## **FUNDING TARGETS**

USC applicants who submit a proposal for funding under this program are required to identify future funding targets to pursue with their IISc collaborators. These targets can be any source of external funding, public or private, in the United States or India. Collaborative efforts that include funding from both U.S. and Indian sources, are strongly encouraged. Examples of relevant funding targets are provided below.

### ***National Institutes of Health (NIH) Fogarty International Center:***

The Fogarty International Center at the U.S. National Institutes of Health (NIH) is dedicated to advancing the NIH mission by supporting and facilitating global health research conducted by U.S. and international investigators, building partnerships between health research institutions in the U.S. and abroad, and training the next generation of scientists to address global health needs.

Currently active Fogarty International Center Funding Opportunities can be found at:

- <https://www.fic.nih.gov/Funding/Pages/Fogarty-Funding-Opps.aspx>

### ***National Science Foundation (NSF) International Collaborations (India):***

NSF and entities in India have signed Implementation Arrangements that streamline the selection and funding process of joint research projects involving researchers in the United States and India. The Implementation Arrangements provide a framework to encourage collaboration between U.S. and Indian research communities and set out the principles by which joint activities might be supported. Through this research agency partnership, researchers in the U.S. may receive funding from NSF, and researchers in India may receive funding from Indian agencies, respectively.

Currently active programs at NSF accepting U.S.-India collaborative proposals include:

- *CISE Core Programs*
  - <https://new.nsf.gov/funding/opportunities/computer-information-science-engineering-core>
- *Cyber-Physical Systems (CPS) program - Directorate of Computer and Information Science and Engineering and Directorate of Engineering*
  - <https://new.nsf.gov/funding/opportunities/cyber-physical-systems-cps>

- *Secure and Trustworthy Cyberspace (SaTC) program - Directorate of Computer and Information Science and Engineering, Directorate of Engineering and Directorate of Mathematical and Physical Sciences*
  - <https://new.nsf.gov/funding/opportunities/secure-trustworthy-cyberspace-satc>

## RETURN ON INVESTMENT

It is expected that projects funded under this program will yield a return on investment, that which will be determined by considering the magnitude of future funding awarded external sponsors that was enabled by the collaborative networks facilitated and created as a direct result of this award. A return on investment also may be provided by future revenue from any commercial licensing of intellectual property (IP) that results from this effort.

## RESEARCH & INNOVATION RESOURCES

Applicants selected for funding are required to contact USC Office for Research Strategy & Development (RSD), an OORI suboffice dedicated to supporting faculty in the preparation of competitive applications to federal funding agencies. RSD has considerable experience in generating and submitting proposals to federal agencies. RSD can provide support services to applicants, including science writing, budget preparation, and supporting documentation collection. Specific support provided is contingent on RSD workload and prior commitments. Applicants should contact RSD by sending an email to [robbyngil@usc.edu](mailto:robbyngil@usc.edu).

## INNOVATION RESOURCES

Applicants selected for funding may contact USC Stevens Center for Innovation (USC Stevens). USC Stevens is the university's technology licensing office, responsible for the translation of USC research into products for public benefit through licenses, collaborations, and the promotion of entrepreneurship and innovation. USC Stevens staff can provide critical guidance related to the invention disclosure and technology licensing processes, as well as an overview of USC's policies related to intellectual property, researcher IP rights and responsibilities, amongst other topics. Applicants should contact USC Stevens by sending an email to [stvinfo@usc.edu](mailto:stvinfo@usc.edu).

## ELIGIBILITY REQUIREMENTS

Each proposal must have a team that includes at least one USC faculty and one IISc faculty. Postdoctoral researchers, undergraduate and graduate students from each institution may also be included. The USC-hosted and IISc-hosted workshop will include all participating groups funded under this program, i.e., the workshops likely will have themes that reflect multiple disparate scientific and engineering domains.

## PROPOSAL REQUIREMENTS

Applicants must carefully follow instructions. Information uploaded beyond what is requested will not be included in the proposal package provided to reviewers; proposal documents must be converted to PDFs prior to uploading to the application portal.

- Award Program:** Specify the award program name and a tentative title for the proposed research effort.
- Brief Description** (not to exceed 60 words): A succinct description of the proposed work.
- Abstract** (not to exceed 20 lines of text): Provide a stand-alone succinct description.
- Program Plan** (not to exceed 5 pages): Include a detailed description of one or more research projects on which the network of USC and IISc investigators will work on collaboratively and discuss at the two workshops. Page limits are inclusive of figures and tables and include 1" margins of single-spaced text in 11-point Arial font. The following headers should be included:

- a. *Significance/Innovation*: Provide a brief background and the specific aims of the work. Explain the work's specific innovations and significance.
  - b. *Scientific Expertise*: List the name, academic titles, and scientific expertise of at least one USC faculty and at least one IISc faculty who will comprise the collaborative research team. Provide the qualifications of the identified research team for the proposed work and describe how the skills of the USC and IISc researchers complement each other to achieve the project aims. Describe how the project will be organized and the contributions of each participant.
  - c. *Approach*: Present the approach that will be followed, including any aspects of experimental design. If applicable, describe how the proposed project can follow a path to commercialization.
  - d. *Outcomes*: Describe the anticipated outcomes of the project and how the project results will be disseminated. Describe future plans to extend the proposed research through external funding.
- e) ***Budget and Budget Justification*** (not to exceed 1 page): Per standard grant submission requirements, a budget and budget justification must be submitted as part of the proposal. Funds from this program may only be used towards travel, lodging, and food/beverage expenses as part of traveling to India to meet with IISc collaborators. The funding cap is set at \$5,000 per USC investigator.
  - f) ***Return on Investment*** (complete form in application portal): Identify a Funding Target (including URL).
  - g) ***Grant Submission Commitment*** (complete form in application portal): The proposal must include a statement in which the applicant commits to submit a proposal to an external sponsor identified as the Funding Target, as well as the intended proposal submission date.
  - h) ***Innovation Ecosystem Commitment*** (complete form in application portal): OORI is committed to establishing a thriving innovation ecosystem at USC that will build collaborations between USC researchers and venture capital firms, accelerators, incubators, small and large businesses, and foundations. OORI is working closely with USC University Advancement to develop these partnerships. The proposal must include a statement in which the applicant commits to contacting USC University Advancement at [hpourman@usc.edu](mailto:hpourman@usc.edu) to discuss the potential for obtaining funding for research from venture capital firms, accelerators, incubators, small and large businesses, and foundations that are part of USC's developing innovation ecosystem that may arise from the research activities funded under this award. It is expected that such funding ultimately will lead to the commercial licensing of IP.
  - i) ***Active Funding***: List all sources of active internal and external support awarded during the past five years, current or pending, for the PD(s)/PI(s) and key personnel. For each source, specify who on this proposal was involved, their role on the project, title of the award, period, award amount, and sponsor (including subagency).
  - j) ***Letter(s) of Support***: Provide letters of support from each IISc researcher you intend to work with.
  - k) ***Scientific References*** (not to exceed 1 page): This includes citations listed in the narrative.
  - l) ***Curriculum Vitae*** (not to exceed 5 pages per investigator): Provide a CV for each USC and IISc investigator. Applicants and their collaborators may use any standardized CV format (e.g., NIH Biographical Sketch, NSF Biographical Sketch, etc.).

## GRANT CONDITIONS

OORI awards and grant programs are administered by a suboffice, the USC Office of Research Initiatives and Infrastructure (RII).

- At the time of being notified by RII that an award will be made and as a condition of funding, awardees will provide to RII the name, title, and email address of a USC senior business official who will establish an internal funding account in which RII funds for the award will be transferred. The account must be unique to this award with no additional funds added.
- Within one month of being notified by RII that an award will be made and as a condition of funding, awardees will provide RII with an account number and enable view access for the account, such that RII staff will be able to view the account balance. If this information is not provided to RII within this timeframe, RII may elect to rescind the award and use the funds to make an award to another applicant.
- Awardees commit to submitting a future application or applications to a funding opportunity (Funding Target) sponsored by an external source.
- Prior to release of funds, all awardees will attend an in-person ceremony with R&I leadership.
- Failure to spend at least half of the awarded travel funds within six months of the project start date may result in the suspension of the remaining funds.
- Awardees have 12 months from the date funds are received to complete travel. Funds not expended by that time are returned to R&I to support other research awards.
- This award will not provide financial support beyond the duration of the award and does not carry the opportunity for renewal.
- Awards are not transferable to other researchers or institutions. Recipients must be faculty of USC during the award period.
- All USC rules, concerning conflict of interest, human subject research, animal research, etc., apply to projects funded under this program. Funding only will be provided following confirmation that all pertinent reviews have been submitted for approval by relevant committees (e.g., IRB, IACUC).
- Allowable budget expenses:
  - Travel & travel-related expenses (lodging, food/beverage) – funding will be dispersed in the form of a travel stipend award, fixed at \$5,000 per USC investigator.
- Non-allowable budget expenses:
  - Faculty salary & fringe
  - Student tuition and other student fees (such as health insurance).
  - Postdocs/graduate/undergraduate student RAs/administrative personnel salary & fringe, excluding funding student tuition and other student-related fees
  - Materials & supplies
  - Other expenses (equipment purchases require pre-approval)
  - Consultants
  - Subcontracts

## SCIENTIFIC REVIEW CRITERIA

Applications will be reviewed by a standing committee of researchers with expertise relevant to the areas of proposed research. The committee will be convened yearly to review applications submitted to this program. Review criteria will be based on the following:

1. *Research Focus:* The research focus is on new and creative approaches and breakthrough interdisciplinary ideas with great societal impact.
2. *Scientific Expertise:* The applicant describes their relevant and necessary experience in research and administrative duties in direct relevance to the research focus area and regarding potentially leading to future research support and to the development of commercialized products.
3. *Potential for Collaboration:* The proposal demonstrates promise for catalyzing innovative research partnerships and collaborations between a network of USC and IISc faculty. The effort has the potential to identify new ways to spark deeper academic cooperation, catalyze research

collaborations, and jumpstart increased people-to-people scientific exchanges between faculty at USC and IISc.

## **PROGRAMMATIC REVIEW**

OORI and RII will incorporate aspects of existing policies and procedures regarding funding decisions that are utilized by major federal funding agencies like NIH, i.e., proposals will be subject to scientific peer review and programmatic review. Programmatic review assures maximum efficiency for funding awards and strategic alignment with this program and both USC and IISc strategic research priorities. Ultimate funding decisions will be made based on both scientific peer and programmatic reviews.

## **DIVERSITY, EQUITY, AND INCLUSION**

OORI and RII strongly support a culture of diversity, equity, and inclusion. Proposals should incorporate meaningful DEI practices across the project team and proposed activities. This will be a consideration during programmatic review.

## **REPORTING AND ACKNOWLEDGEMENT OF SUPPORT**

Awardees will be required to submit a one-page progress report, which will be due at the point of project period completion. This report must detail activities over the award period.

## **PROPOSAL SUBMISSION**

Submit your proposal application utilizing the RII application submission and reporting portal. Go to <https://rii.usc.edu/funding/oor-portal/> to log in or create an account using your USC email address.

## **FURTHER INFORMATION AND PROGRAM CONTACT INFORMATION**

We encourage inquiries to RII concerning this funding opportunity and welcome the opportunity to answer questions from potential applicants. For additional information or inquiries, please send an email to [rii@usc.edu](mailto:rii@usc.edu) with “USC-IISc Collaborative Network Award” in the subject line.

## **APPLICATION CHECKLIST**

- Award Program
- Brief Description
- Abstract
- Program Plan
  - Significance/Innovation
  - Scientific Expertise
  - Approach
  - Outcomes
- Budget and Budget Justification
- Return on Investment
- Grant Submission Commitment
- Innovation Ecosystem Commitment
- Active Funding
- Letter(s) of Support
- Federal Agency Review Documents (as applicable)
- Scientific References
- Curriculum Vitae

## **FREQUENTLY ASKED QUESTIONS**

**Q1: Can I utilize award funds to support the research I am proposing to do with IISc collaborators?**

A1: No. Funds awarded under this program will be dispersed in the form of a travel stipend, only to cover travel and travel-related expenses to the workshop with IISc collaborators in India. Funds cannot be used to support the research being proposed.

**Q2: I am dissatisfied with my review. Can I rebut the review and get a new one?**

A2: RII goes to considerable effort to ensure that the scientific peer review is fair and impartial. Constituting review committees and organizing reviews takes considerable time and effort. Thus, RII does not have the resources or a mechanism to re-review proposals.

**Q3: Should I budget the cost of the workshop hosted in the United States at USC?**

A3: No. RII will pay the expenses of the workshop hosted at USC.

**Q4: If I have collaborators at another Indian institution, is this program suitable to encourage collaborations there?**

A4: The focus of this program is to specifically encourage collaboration between USC and IISc. While Indian researchers at another institution can be included and attend the workshops at USC and IISc, this program will only support travel of USC faculty to IISc to attend a workshop there. Also, the research project described in the application to this program must include IISc faculty.