

Call for Proposals

Scheme for Promotion of Academic and Research Collaboration (SPARC)

Approved Guidelines

Overview:

The Scheme for Promotion of Academic and Research Collaboration (SPARC) aims at improving the research ecosystem of India's Higher Educational Institutions by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world from 28 selected nations to jointly solve problems of national and / or international relevance.

The scheme enables productive academic cooperation in the areas including Joint Research Projects, Exchange of faculty and students, Joint Degrees, by supporting the following critical components that can catalyze impact making research, namely: (a) Visits and long-term stay of top international faculty / researchers in Indian institutions to pursue teaching and research (b) Visits by Indian students for training and experimentation in premier laboratories worldwide, (c) Joint development of niche courses, world-class books and monographs, translatable patents, demonstrable technologies or action research outcomes and products (d) Consolidation of Bilateral cooperation through academic and research partnerships through Workshops in India, (e) Publication, Dissemination and Visibility through a high profile annual international Conference in India and (f) training of researchers and students. So far, 658 proposals have been approved under SPARC in two phases.

During India's G20 Presidency, **"Strengthening research and promoting innovation through richer collaboration in education and training"** was one of the four priority areas under the Education Working Group. The Leaders Declaration has *"Reaffirm our commitment to promote open, equitable and secure scientific collaboration and encourage mobility of students, scholars, researchers, and scientists across research and higher education institutions."* Digital transformation, AI and other critical and emerging technologies, sustainability and green transitions are some of the areas that have been prioritized under the G20 deliberations and the outcomes

documents including the reports, since these are sectors which require the world to work together and come up with sustainable solutions.

It is therefore proposed that the third phase of research under SPARC may be focused on these areas and the research can be done bilaterally by identifying countries that specialize in specific fields, particularly champions in research areas that are oriented with the national priorities of our country. With this vision, some funds from SPARC have been earmarked for such focused research with countries like USA, UK, Germany, Australia, Taiwan etc. to make the SPARC program more impactful than having it spread across wide-ranging areas.

Features of the SPARC Program

The SPARC Programme will have the following salient features:

.For the third phase of SPARC, the Empowered Committee for Industry & International Collaborations (ECIIC) (at Annexure-I) has decided that proposals will be accepted on research areas relating to the focused research in certain specific areas to ensure alignment with national priorities for larger impact. In this regard, the ECIIC has identified twelve themes for collaborative funding under SPARC based on emergent relevance and priorities for the nation.

These themes are as follows*:

- i. Advanced Materials, Rare-earth & Critical Minerals
- ii. Energy, Sustainability and Climate Change
- iii. Agri & Food Technologies
- iv. Semiconductors
- v. Advanced Computing (Supercomputing, AI, Quantum Computing)
- vi. Healthcare & MedTech
- vii. Space and Defence
- viii. Next-Gen Communications
- ix. Disaster Management & Resilient Infrastructure
- x. Blue Economy
- xi. Smart Cities & Mobility
- xii. Manufacturing & Industry 4.0

All SPARC projects will have a duration of 2 years from the date of sanction of the project.

Following are the critical points related to project submission under the SPARC call.

1. All Indian Institutions ranked in the overall top 100 or category-wise top 100 in the India Rankings (NIRF), all Central Universities and Institutes of National Importance are eligible to apply. Each eligible Institution will have an identified Institute Coordinator (IC) selected by the Head of the Institution for monitoring the SPARC programme in the Institute. Eligible partner Foreign Institutions will be as identified by the IC in consultation with National Coordinator and ECIIC. These may also be outside QS 800 rankings, if recommended by the IC and approved by ECIIC.

2. A proposal for a joint research or training project has to be submitted by an Indian Institution / University for a two-year period having the following:
- a) Component of MoE funding (under SPARC), Indian Institution's funding, Foreign Institution's funding and clear Deliverables.
 - b) Details of identified Institute Coordinator (IC) selected by the Head of the Institution for monitoring the SPARC programme in the Institute.
 - c) Each partner group will contain at least two international faculty members, two Indian Faculty members and at least two students/researchers pursuing Undergraduate/Postgraduate/PhD or post-doc level from each side. The faculty members may be from one or two eligible institutions in each side. The students/researchers have to be registered as full-time students in their respective institutions. From the Foreign side, it is desirable that the team will be from the same country, though it is not mandatory. Each side will have a Lead Institution (LI) and a Principal and co-Principal Investigator.
 - d) The proposal will address a topic in any of the identified twelve themes of SPARC and address a challenging issue of theoretical, experimental and/or translational value. The proposal will be evaluated upon quality / relevance of the area proposed, joint strength and of the teams, proposed outcome & deliverables, available and complementary experimental infrastructure in the institutions. Additional financial support from other sources and its potential to significantly advance knowledge and / or create impact on society. The proposal shall have the following essential and optional components:

I. Essential (minimum items must be part of proposal):

- i. At least two visits by the Foreign Faculty to Indian Institutes totaling a combined 2 to 8 months over two years. Each visit can be of duration varying between 15 days to 4 months. During a visit, in addition to carrying out the project related collaboration and research the Foreign Faculty will Co-develop course content and teach one course on the topic of the proposal for 8 to 36 hours depending on the period of stay. **The visiting faculty may also conduct workshop that may include hands-on training.**
- ii. A set of tangible earmarked deliverables of the collaborative efforts on the proposed topic consisting of joint research outcomes including but not limited to two or more of the following: - top journal publications, text books, research monographs, patents, products, scaled up pilot plants/ demonstration units, course materials, etc
- iii. Holding at least one Workshop in India on the topic of the proposal to bring together a larger community of researchers for strengthening the collaborative research component. These may be part of premier international conferences held in India as workshops or special sessions. Participants in these workshops should not be limited only to the institute of the PI and must include students from IISERs/NITs/Sate and Central Universities/ Private Institutes and Colleges, depending on the relevance.

II. Optional (one or more may be part of proposal):

- i. Visits by Indian students for training and experimentation in premier laboratories worldwide and in India. Support to Indian research students for long term visits of up to a year to the partner foreign collaborator for carrying out experiments and getting trained in an advanced laboratory facility. Support will also be provided to India students (Undergraduate/ Post Graduate & Research Students) to have hands on training in sophisticated analytical and fabrication facilities. As part of this training, a pre-screening workshop may be conducted in an Indian Institution. Participants in these training program should not be limited only to the institute of the PI and must include researchers/students from IISERs/NITs/State and Central Universities/Private Institutes and Colleges, depending on the relevance. The cost of participation in Hands on “pre-screening workshop” for the selected students will be borne from the project funds for students from centrally funded Institutes. For students from Private institutes, the funding may be borne by the respective Institute/ AICTE.
 - ii. Support of foreign students to spend time in the Indian Institutes as visiting students/researchers.
- e) The proposal will be for a period of two years. The budget of a SPARC project can be up to Rs 12 Cr. Any proposals above Rs.5 crores must have participation of at least 3 Institutes (at least 3) of different types (IITs/NITs/Private Institutions etc.)
- f) No major equipment will be supported under any SPARC project. International travel of Indian Faculty will not be supported under this project.
- g) No scholarship/stipend of Indian scholars will be supported under this proposal. They will continue to receive their regular mode of remuneration (as applicable) from their respective institutions.
- h) The project budget will be defined as per the following norms:
- i. The minimum duration of the visit of an international faculty is 15 days for a research project and 7 days for a “pre-screening” workshop. The maximum duration of stay for an international faculty can be up to 4 months.
 - ii. For a visit of foreign faculty ranging from 1 to 4 month, payment will be made up to as per VAJRA norms (DST) of US\$15,000/- for the first month and US\$10,000/- thereafter including honorarium, travel, stay, etc.
 - iii. For a visit of foreign faculty of 15 days or more but less than a month, payment will be made up to as per GIAN norms of US\$12,000/- including honorarium, travel, stay, etc. For a faculty visit spanning between 7 days and 15 days payment will be US\$8,000. as per GIAN norms.
 - iv. For the visit of an Indian student to the Foreign Institution, payment will be made as per the following: up to US\$2000 for travel and up to \$1000 per month for out-of-pocket allowances. Foreign partner should provide support i.e. local hospitality (boarding/lodging) if the out-of-pocket allowance is insufficient. Any other expenses for the visiting students may be specifically highlighted depending on the nature of the “hands on training”.

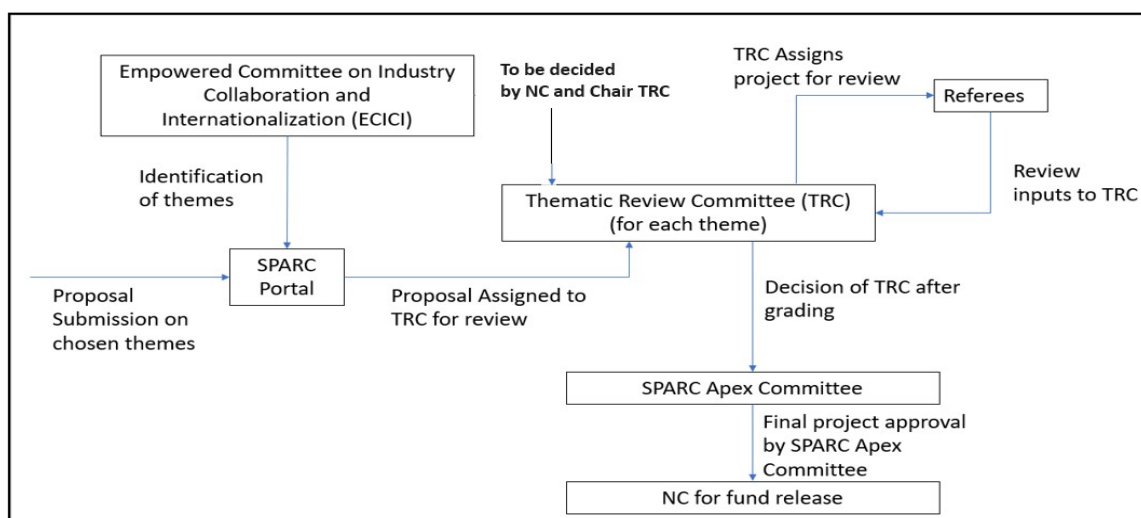
- v. Up to Rs 10 lakhs will be approved for Workshop. Institutions may invite participants from other relevant universities, institutions, polytechnics, etc.
 - vi. No money shall be paid for the visit of a foreign student to India from SPARC funds. However, the local hospitality (boarding /lodging) would be taken care of by the receiving side institution.
 - vii. For visit of Indian faculty abroad in connection with a research project or workshop or training, Cumulative Professional Development Allowance (CPDA) will be utilized. An undertaking will be taken from the Institution before making funding for the proposal, that if funds are not available/ falling short under CPDA, funding will be arranged from the SPARC fund for one visit only for round trip in economy class.
 - viii. Overheads and contingency expense of up to 20% of the sum cost of other items mentioned above or Rs 15 lakhs (whichever is minimum) for accessories, consumables, chemicals, video recording, field work, documentation, local travel in India, contingencies, institutional costs, miscellaneous, etc.
 - ix. The Institutions will list out the support provided to the project in terms of faculty, researchers, infrastructure, waivers, stipends, explicit costs to various components that are met by the Institute and the source from where the same is being met. These sources could also be external funding agencies. Additional support from the International partner may also be listed in quantitative terms. This additional support will also be an important criterion for evaluation of interest from the submitting team for ensuring success of the project.
 - x. The IPR developed out of the project will be decided as per norms of the participating Institutes. The Indian Institute should get the benefits out of Patents / Royalty, rather than the foreign institute or the individual faculty. All disputes must have Indian jurisdiction and applicable laws of India (for any act taking place in India) to be clearly defined by the parties. Any special deviation must be resolved by MOE through the SPARC Liaison cell and approved by the Apex Committee.
 - xi. Each proposal will clearly state that this proposal does not duplicate any other similar proposal funded by the Government of India which funds the same aspects of SPARC including but not limited to those partially or fully funded by MOE, DST, DBT and other Ministries of the Government of India. Complementary ongoing projects will be separately indicated.
3. One Annual SPARC Conference will be held for each theme.
4. All projects will be monitored and reviewed once mid-way and once at the end of the project to evaluate progress and final outcome. Institutes will keep on updating real time progress on the SPARC portal.

SPARC Program Implementation Plan

The SPARC Scheme will be implemented in the following manner:

1. There is an Apex Committee (AC) for SPARC constituted as follows:
 - a) Secretary (HE), MoE, Chairman
 - b) Joint Secretary, ICC, MOE, Member Secretary
 - c) JS & FA, MOE, Member
 - d) Chairman UGC, Member
 - e) Chairman AICTE, Member
 - f) Nominee of Secretary DST, Member
 - g) Nominee of Secretary, DBT, Member
 - h) Nominee of Secretary MEA, Member
 - i) Nominee of Secretary, Culture, Member
 - j) Joint Secretary (TE), MoE, Member
 - k) Director, National Coordinating (NC) Institution, Member
 - l) Two Reputed Academicians / Researchers nominated by Secretary (HE), Members
 - m) One reputed Academician / Researcher from Private sector, nominated by Secretary (HE), Member
 - n) National Coordinator of SPARC, Permanent Invitee
 - o) Invitees, as approved by Chairman, Invitees
2. The Apex Committee is authorized to formulate guidelines, processes, approve the list of projects, review and monitor the progress of the projects and facilitate all issues that require interventions, including that of the Government of India.
3. There will be a SPARC Liaison Cell in MOE chaired by Joint Secretary (ICC), MOE and Member Secretary SPARC Apex Committee to connect and interact with the relevant stakeholders of the participating Foreign Country including their appropriate councils if available in India. It will also liaison with Indian Embassies and Indian S&T and other similar relevant stakeholders in the partner countries. The role of MoE through the SPARC Liaison Cell will be to develop MoUs with partner countries for the SPARC Programme that helps in ease of mobility and visas, complementary Foreign Government support to the SPARC programme in terms of augmented funding, waivers, etc.
4. IIT Kharagpur is the National Coordinator (NC) for SPARC. Its role will be as follows:
 - a) All funds for SPARC to Indian Institutions, NIs, Coordinating Institutes, Reviewers, etc. will be routed through the NC.
 - b) The NC will modify the SPARC Portal for submission, evaluation, monitoring, dissemination of SPARC proposals and selected projects as per these guidelines.
 - c) All applications will be received and managed through the SPARC Portal.

- d) The NC will look after coordination of all publications that come out of SPARC in terms of text-books, monographs, brochures, documents, marketing materials, advertisements, etc. The NC will also ensure that patents/royalties emerging out of the research works under this scheme would be with the concerned Institution and not the faculty.
 - e) Hold regular meeting and interactions with the Coordinating Institutes, Institutes SPARC Coordinators for coordination, monitor progress and facilitate final reviews.
 - f) Coordinate with SPARC Liaison Cell in MOE to resolve all issues that Coordinating Institutes /empowered committee are unable to resolve.
 - g) In addition to the Director, the NC will have a National SPARC Coordinator for managing- who will be the first point of contact.
5. Each Participating Indian Institution will have a SPARC Committee headed by an Institutional Coordinator (IC) nominated by the Head of the Institution. The IC will be the single point of contact for the Institution for overall institutional coordination, project upload, receipt, management, internal approval of funds, submissions of Statement of Expenditures, Utilization Statements, maintenance of documents related to the proposals and selected projects, interaction with MOE, NC as needed and facilitate submission of reports for annual and final review.
6. The review process will be as follows:
- a) National coordinator (NC) will select a coordinator for reviewing each theme, who will act as the chair of the “Thematic Review Committee” (TRC).
 - b) The chair of the TRC will select other members of the committee (at least 3 more members), in consultation with the NC.
 - c) The National Coordinator will assign all the projects submitted to a particular theme to the respective “Thematic Review Committee”.
 - d) The “Thematic Review Committee” will invite peers and assign the projects to them for review.
 - e) Based on the referee input there will be provision for submitting a revised version of the project.
 - f) The projects will be graded based on the referee input, and the decision of the “Thematic Review Committee” will be forwarded to the National Coordinator of SPARC.
 - g) The final approval of the projects will be given by SPARC Apex Committee.



Expected Outcomes

The SPARC Scheme is expected to have a major impact in the following areas:

1. Providing the best international expertise in solving major national problems.
2. Help Indian academicians and researchers unravel deep and open research problems with the help of the best collaborators abroad.
3. Enable long-term stay for international faculty the simultaneously helps in academic interactions, research collaborations, niche course development.
4. Produce a large volume of educational and research content in terms of high quality journal publications, text books, research monographs, patents, demonstrable technologies, products that are jointly authored by Indian and Foreign collaborators.
5. Have strong thematic interactions which enable students in the country interact with high quality research groups through Workshops held in India
6. Enable most of the top ranked Indian Institutions to develop academic and research collaboration with foreign institutions.
7. Improve International Rankings of Indian Institutions through a combination of internationalization, research outcomes and academic interactions. Develop a set of success stories that can enable International agencies, Indian industries, partner ministries support follow up projects.
8. Develop strong Bilateral relationships in academics and research with top countries in the world.
9. Create a major International impact for catapulting Indian Academics and Research and help make it competitive with the best worldwide.
