Scheme for Promotion of Academic and Research Collaboration (SPARC)

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Scheme for Promotion of Academic and Research Collaboration (SPARC) is a flagship mobility grant funded by the Ministry of Education, GoI which 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

The program 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** nations to jointly solve problems of national and / or international relevance.

Partner Countries

Australia	Austria	Belgium	Brazil	Canada	China	Denmark	Finland	France
Germany	Hong Kong	Israel	Italy	Japan	Netherlands	New Zealand	Norway	Portugal
Russia	Singapore	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	United Kingdom (UK)
United States of America (USA)								

Eligible Institutes

Indian Institutes

Eligibility

- Top 100 Higher Education Institutions as per the NIRF (National Institutional Ranking Framework, MoE) ranking in 'Overall' or all 'Subject-wise' categories are eligible under SPARC.

- All Central Universities and Institutes of National Importance (including those having a NIRF ranking of more than 100) are eligible under SPARC.

Coordination Mechanism

Each eligible Institution will have an identified Institute Coordinator selected by the Head of the Institution and a SPARC Committee for monitoring the SPARC programme in the Institute. The institute coordinator will invite the PI to submit the proposal with user ID and Password

International Institutes

- Top 800 Overseas Higher Education Institutions based on the QS (Quacquarelli Symonds) world ranking, from as many as 28 foreign countries (the countries originally involved in SPARC), will be under the purview of SPARC.

- Foreign Institutes may also be outside QS 800 rankings, if recommended by the Institute Coordinator (IC) & approved by ECIIC subject to proposals relevance based on strategic priorities.

Brief History of SPARC

- The program started in 2018. In the first phase 392 projects were approved.

- The call for the second phase was out in 2019, but it got severely affected due to the pandemic. Results were declared in 2023. 262 proposals were approved.

- Call for the third phase was opened in January 2024. The results have been declared in April 2024.

- In phase 3, a total of 755 proposals were submitted. 133 proposals have been accepted.

- For SPARC 3, UKIERI (UK-India Education & Research Initiative) collaborated with SPARC and all the proposals with UK were funded jointly by SPARC (MoE, Government of India) and the British Council (Government of UK).

SPARC Phase 3

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. If some funds from SPARC can be earmarked for such focused research with countries like USA, UK, Germany, Australia, etc. it might be more useful than having it spread across lower impactful areas.

Thus, for the next phase, it has been proposed to modify some features of the program to undertake targeted research with specific countries to suit our national strategic priorities.

SPARC Phase 3 themes

Proposals have been accepted in 12 focused themes, identified by the Empowered Committee on Industrialization and International Collaboration (ECIIC)

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

Also UKIERI (UK-India Education and Research Initiative) collaborated with SPARC to jointly fund research projects with the UK.

IISc Bangalore was the coordinating Institute for SPARC-UKIERI

Funding was available in two strands:

1) **Strand 1:** Research Projects
   - Semiconductors
   - Artificial Intelligence
   - Advance Computing
   - Next Gen Communication

2) **Strand 3:** Capacity Building Projects
   - Energy, Sustainability and Climate Change

Funding for Advanced Hands on Training have been introduced in Advanced areas to create a pool of research ready man-power in the country, which will involve students of different level (Undergraduate, Post-graduate and PhD). This will involve first level training in Indian Institutes followed by higher level advanced training Abroad for students who perform well in the National Level training (Pre-screening workshop).

Upper limit of Project increase to INR 12.0 Cr.

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Essential Components of SPARC proposal (minimum items must be part of proposal):

- Two visits by the Foreign Faculty to Indian Institutes totalling a combined 2 to 8 months over two years. A visit can be of duration of 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, in the form of workshop that may also include hands on training sessions.

- 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 pilots / demonstrations, course materials, etc.

- 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 workshop should not be limited only to the institute of the PI and must include researchers/ students from IISERs/NITs/Sate and Central Universities/ Private Institutes and Colleges, depending on the relevance.

Optional Components of SPARC proposal (one or more may be part of proposal):

- Support to Indian research students for long term visits of up to a year to the partner Institution of the foreign collaborator for carrying out experiments and getting trained in an advanced laboratory facility not easily available in India.

- Partial support of foreign students to spend time in the Indian Institutes as. visiting students/researchers. (Air fare is NOT funded from SPARC)

- Hands-on Training of students and researchers in Indian institutions/universities/labs having the requisite facilities as a preparatory course for Capacity building and also as a pathway for higher level training. Participants in these training program should not be limited only to the institute of the PI and must include researchers/ students from IISERs/NITs/Sate and Central Universities/ Private Institutes and Colleges, depending on the relevance.

- Training of students and researchers in foreign /institutions/universities/labs. The choice of students may be based on the performance of students who have attended the preliminary training workshop held in India.

SPARC Phase 3 Key Statistics

- The call was declared open on **5th January 2024**

- The call was closed on **15th February 2024** (after one extension)

- All proposals were accepted through the SPARC portal

- An online "Clarification" meeting was hosted by IIT Kharagpur on 1st February 2024, to clarify doubts about the revised guidelines to the PIs as much as possible. It was attended by around 375 faculty members, including some International PIs.

A total of 755 proposals were submitted

Australia: **142**	Netherlands: 18
Austria: 4	New Zealand: 2
Belgium: 5	Norway: 15
Brazil: 6	Portugal: 4
Canada: **44**	Russia: 9
China: 3	Singapore: 13
Denmark: 10	South Africa: 8
Finland: 6	South Korea: **20**
France: 7	Spain: 6
Germany: **29**	Sweden: 10
Hong Kong: 1	Switzerland: 3
Israel: 8	Taiwan: **26**
Italy: 19	United Kingdom: **152**
Japan: **20**	United States of America: **165**

Institutes from which large number of proposals were submitted:

IIT Kharagpur:	69	NIT Trichy:	19
NIT Warangal:	58	SRM:	19
BITS:	40	IIT Bhubaneswar:	18
IIT Roorkee:	28	MAHE:	17
IIT Delhi:	28	IIT Kanpur:	14
VIT:	23	Jadavpur University:	11
IIT Madras:	20	IIT Bombay:	10

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SPARC Phase 3 Key Statistics

Theme	No. of Proposals
Advanced Materials, Rare-earth & Critical Minerals	37
Energy, Sustainability and Climate Change *	208
Agri & Food Technologies	53
Semiconductors*	41
Advanced Computing (Supercomputing, AI, Quantum Computing)*	88
Healthcare & MedTech	126
Space and Defence	13
Next-Gen Communications*	52
Disaster Management & Resilient Infrastructure	36
Blue Economy	9
Smart Cities & Mobility	60
Manufacturing & Industry 4.0	32

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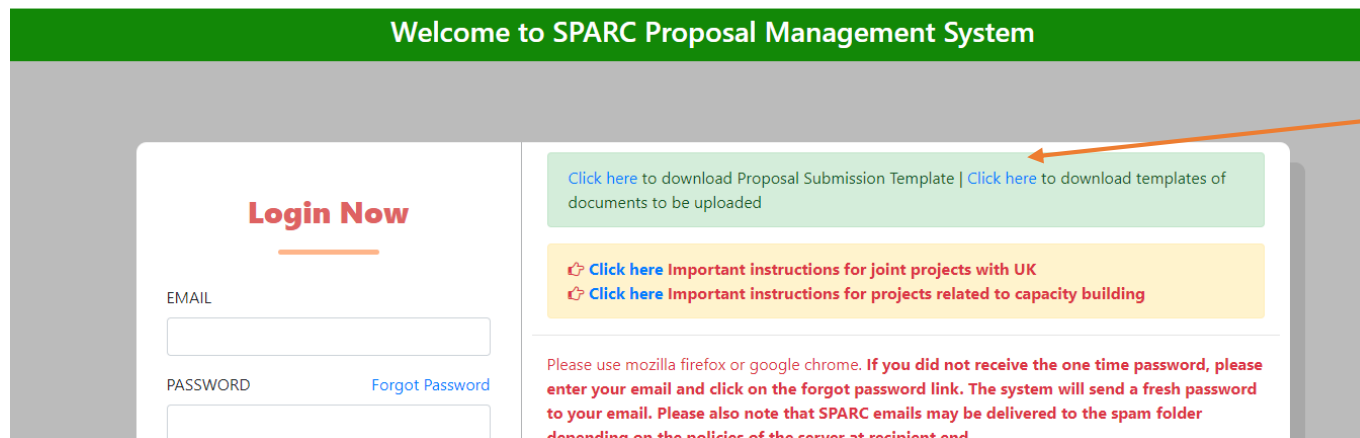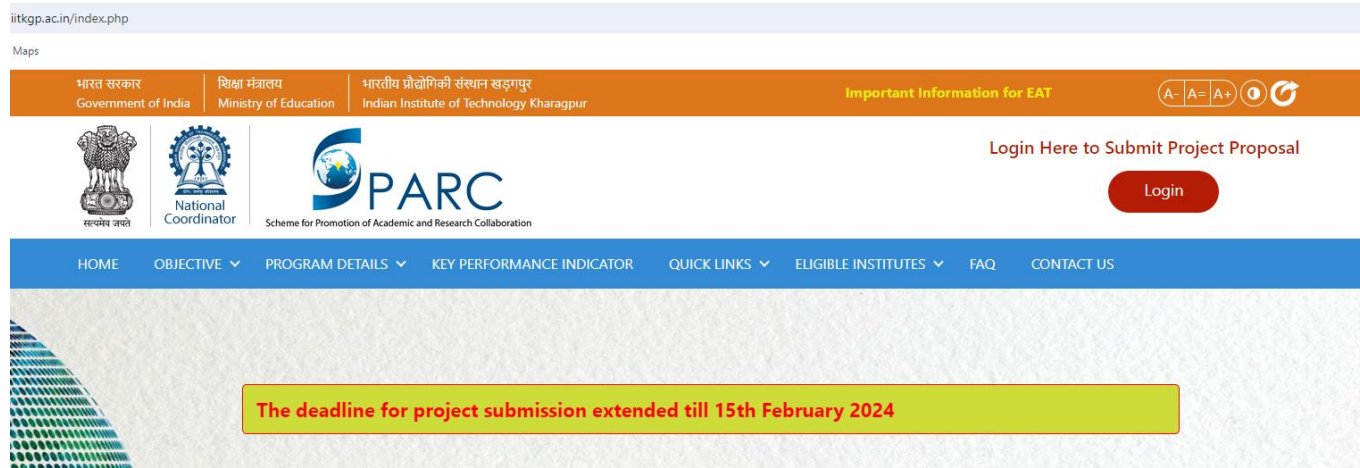
SPARC – UKIERI Results: Statistics

Theme	No. of Proposals Accepted
Advanced Materials, Rare-earth & Critical Minerals	08 (37)
Energy, Sustainability and Climate Change *	22 (208)
Agri & Food Technologies	9 (53)
Semiconductors*	8 (41)
Advanced Computing (Supercomputing, AI, Quantum Computing)*	09 (88)
Healthcare & MedTech	18 (126)
Space and Defence	3 (13)
Next-Gen Communications*	7 (52)
Disaster Management & Resilient Infrastructure	4 (36)
Blue Economy	1 (9)
Smart Cities & Mobility	6 (60)
Manufacturing & Industry 4.0	4 (32)

Country Wise Distribution

	Country	No		Country	No
1	Australia	20	13	Newzealand	1
2	Belgium	2	14	Portugal	2
3	Brazil	1	15	Russia	2
4	Canada	8	16	Singapore	2
5	Denmark	2	17	South Africa	1
6	Finland	1	18	South Korea	3
7	France	1	19	Spain	1
8	Germany	10	20	Sweeden	1
9	Israel	3	21	Switzerland	2
10	Italy	3	22	Taiwan	4
11	Japan	1	23	USA	24
12	Netherelands	2	24	UK	33

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Submitting a Proposal:

The deadline for project submission extended till 15th February 2024

Welcome to SPARC Proposal Management System

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Click here to download Proposal Submission Template | Click here to download templates of documents to be uploaded

↻ **Click here** Important instructions for joint projects with UK
↻ **Click here** Important instructions for projects related to capacity building

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Please use mozilla firefox or google chrome. **If you did not receive the one time password, please enter your email and click on the forgot password link. The system will send a fresh password to your email. Please also note that SPARC emails may be delivered to the spam folder depending on the policies of the server at recipient end.**

You login ID you will get from the Institute Coordinator (And NOT from us)

In case your Institute has Not submitted SPARC proposal before, then ask your Director/ VC/ Dean R&D to first nominate an Institute Coordinator, who will be assigned the role by us.

Please send the mail to support@sparc.iitkgp.ac.in with copy to Prof Debalay Chakrabarti (debalay@metal.iitkgp.ac.in)

Please download all the formats here first.

About Honorarium

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".

Honorarium includes travel (international & Domestic) and Accommodation in India (To be paid in actuals)

International faculty endorsement MUST be signed by Dean/ Head of the Institute/ Head of the Department

Number of days of stay in the Indian Host Institute without Travel (International or Domestic)

7 day trip allowed only for Capacity building projects and participation in pre-screening workshops

Minimum stay ideally would be 15 days

0-14 days: Honorarium amount 0

15 – 29 days: USD 12,000

30 days: USD 15,000

60 days: USD 25,000 and so on

About Honorarium

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Rest of the amount will be treated as honorarium and will be subject to **TDS u/s 195 @ 30%.**

Respective institutes may place the matter before their tax consultant.

Tax consultant will generate the 15CA form income tax portal against the foreign Tax payer name and subsequently, the TDS is to be deducted and deposited to Income Tax Department.

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- *We leave the class of travel flexible (ONLY for visiting International Faculty) subject to approval by competent authority of the Host Institute.*

- *SPARC National coordinator's office will NOT give any approval.*

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SPARC – UKIERI Program

Prof. Rajesh Sundaresan, IISc Bangalore is the Coordinator for the SPARC – UKIERI proposals.

- This year, for SPARC Phase 3 all joint projects with UK will be funded jointly with the UK-India Education and Research Initiative (UKIERI) programme, which is a bilateral programme between Governments of India and the UK.

- It has been decided to align Phase 4 of UKIERI with the SPARC Phase-III guidelines.

- The Institute in this regard, to coordinate with the British Council under UKIERI programme will be IISc working through SPARC Secretariat & approved SPARC Phase-III guidelines

Strand 1 (Research Projects): *Semiconductors, Artificial Intelligence, Advance Computing and Next Gen Communication*

Strand 3 (Capacity Building Projects): Related to *Energy, Sustainability and Climate Change*

What it means that joint proposals with UK will be accepted ONLY in these themes. (As per Ministry Decision)

No UK Co-PI travel can be funded through SPARC if the proposal falls outside the Overlapping Domains with UKIERI.

However, if there is overlap with UKIERI and there is a non UK Co-PI, her/his travel can be charged to SPARC.

SPARC – UKIERI Additional Points

- However, if you Read carefully the UKIERI funding is available only up to March 2025.

Other Subtle Differences in SPARC – UKIERI due to UKIERI funding are as follows:

1) ***International student Air Fare will be funded by UKIERI*** (in regular SPARC grant there is NO provision of Air Fare for International Student).

2) International Faculty Air Fare to be funded by UKIERI (in a regular SPARC grant it is to be charged to SPARC project fund)

3) Indian Faculty visiting UK will get GBP 1700 per month as sustenance fee from UKIERI (in a regular SPARC grant there is no such provision)

4) Indian student visiting UK will get GBP 800 per month as sustenance fee from UKIERI (in a regular SPARC grant it is USD 1000 per month and t be charged to SPARC grant)

 In regular SPARC grant as well as SPARC – UKIERI grant, the travel of Indian Faculty is NOT funded from the project.*

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.

Institutes who have participated in Phase 1 and Phase 2

Many Institutes who have participated in SPARC Phase 1 are yet to Submit UC and "Details of Achievements".

These factors will be considered during evaluation of the projects under Phase 3.

We are earnestly requesting all Faculty members present here to contact their Institute Coordinators and please check with them that the UC for Phase 1 for all projects and Revised Budget for all projects of Phase 2 have been submitted to the SPARC office.

Monograph writing is compulsory

You can keep budget for prototype development. But if you have budget under this head, then there MUST be a working Model/ prototype

E-mail queries: support@sparc.iitkgp.ac.in with a copy to rabibrata@che.iitkgp.ac.in

Expected outcome from SPARC grants

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

2. Undertaking targeted research in sectoral areas with selected countries.

3. Providing the best international expertise in solving major national problems.

4. Help Indian academicians and researchers unravel deep and open research problems with the help of the best collaborators abroad.

5. Enable long-term stay for international faculty the simultaneously helps in academic interactions, research collaborations, niche course development.

6. **Enable a large number of Indian students to be trained in high end experimental facilities available in the best laboratories in the world.**

7. 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.

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Expected outcome from SPARC grants

8. Have strong thematic interactions which enable students in the country interact with high quality research groups through Workshops held in India

9. Enable most of the top ranked Indian Institutions to develop academic and research collaboration with foreign institutions.

10. Improve International Rankings of Indian Institutions through a combination of internationalization, research outcomes and academic interactions.

11. Develop a set of success stories that can enable International agencies, Indian industries, partner ministries support follow up projects.

12. Develop strong Bilateral relationships in academics and research with top countries in the world.

13. Create a major International impact for catapulting Indian Academics and Research and help make it competitive with the best worldwide.

SPARC IPR Clause

- 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.

The national Coordinating Institute

- IIT Kharagpur is the National Coordinator (NC) for SPARC. Its role will be as follows:

  o All funds for SPARC to Indian Institutions, NIs, SC, Reviewers, etc will be routed through the NC.

  o The NC will modify the SPARC Portal for submission, evaluation, monitoring, dissemination of SPARC proposals and selected projects as per these guidelines.

  o **All applications will be received and managed through the SPARC Portal.**

  o 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.

  o Hold regular meeting and interactions with the sectoral chairs, Institutes SPARC Coordinators for coordination, monitor progress and facilitate final reviews.

  o Coordinate with SPARC Liaison Cell in MOE to resolve all issues that sectoral chairs/empowered committee are unable to resolve.

- In addition to the Director, the NC will have a National SPARC Coordinator for managing- who will be the first point of contact.

- 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, SC as needed and facilitate submission of reports for annual and final review.

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The SPARC Core Committee

Prof. Virendra Kumar Tewari
Director, IIT Kharagpur &
National Coordinator, SPARC

Prof. Tarun Kanti Bhattacharyya
Professor, Electronics &
Communication Engineering & Core
Committee Member

Prof. Pallab Banerji
Professor, Materials Science
Centre & Core Committee
Member

Prof. Debalay Chakrabarti
Professor, Metallurgical & Materials
Engineering; Associate Dean R&D;
Institute Coordinator IIT Kharagpur, &
Core Committee Member SPARC

Prof. Pulak Mishra
Professor, Humanities & Social
Sciences & Core Committee
Member

Prof. Sanjeev K Srivastava
Professor, Physics & Core
Committee Member, SPARC

Prof. Arijit De
Professor, Electronics &
Communication
Engineering & Core
Committee Member,
SPARC

Prof. Rabibrata Mukherjee
Professor, Chemical
Engineering & Joint National
Coordinator, SPARC

Priya Nandi
Undergraduate Student,
Chemical Engineering
& SPARC Intern

Soumick Sarker
Undergraduate Student,
Chemical Engineering
& SPARC Intern

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