

**F. No. 13-52/2018-ICC**  
**Government of India**  
**Ministry of Human Resource Development**  
**Department of Higher Education**

**Minutes of SPARC Apex Committee Meeting held on 22.05.2019**

The Apex Committee constituted for considering the projects to be sanctioned under the Scheme for Promotion of Academic and Research Collaboration (SPARC) has met under the Chairmanship of Secretary, Higher Education on 22<sup>nd</sup> May 2019. The list of participants is enclosed.

2. Secretary, Higher Education while welcoming the members of the committee shared that SPARC is getting appreciation from all the corners of world. He further add that during his recent participation in ASEM Meeting held at Bucharest Romania, India has announced to be a partner of ASEM DUO Scholarship scheme from the year 2019 onwards. The proposal is to exchange 100 students and 50 teachers from India to Europe and the same number from Europe to India. The members of the committee welcomed the proposal and suggested that this can be made as a part of the SPARC programme, which will further strengthen the bilateral collaboration.

3. The meeting took stock of the progress in the projects sanctioned so far and the following have been decided after deliberations:

- a) The Committee noted that out of the 363 sanctioned proposals, 101 Principal Investigators have not been provided the seed money. IIT Kharagpur informed that even after repeated requests, the PIs could not share budget/Account details and so the money is on hold. All other PIs have received the seed money. The committee opined that a time line may fix for the 101 PIs to share the details/required information and the seed money transaction may be completed by 01<sup>st</sup> June 2019. Representative from UGC assured that they will talk to the defaulted Indian Universities to provide necessary information to IIT Kharagpur at the earliest.
- b) It was brought to the notice of the Committee that some of the Indian PIs are not able to travel abroad as there is no CPDA grant available with them. After discussion the Committee decided that wherever there is no provision of CPDA, such PI should be provided fund for their foreign travel for accessing the lab facilities etc. In case of PIs from private universities, like the model followed by DST, 50 per cent may be funded by SPARC budget and the matching funding can be provided by the parent private university.
- c) The Committee also suggested that wherever there is a visa requirement of at least \$ 1500 per month as monthly income/fellowship, such issues may be considered on

a case to case basis by National Coordinating Institution and \$1500 to PIs may be agreed to. The PIs may be asked to revise their budget details accordingly.

- d) The Committee stressed on the need to have a strong monitoring system in place so that progress of SPARC proposals can be gauged on monthly basis. Also, as decided in the last meeting, a SPARC knowledge portal may be created in association with IMPRINT. Uploading of the gist of the approved projects may be completed by 31<sup>st</sup> June 2019.
  - e) On the issue of inclusion of research institutions which are not in the QS ranking or any other world ranking but are conducting cutting edge research (eg. Max Planck institute), the Committee felt that intensive discussion is required in this regard and each member may come up with their views in the next Apex Committee meeting.
  - f) Mr. Bhattacharyya (MEA) brought to the notice of the committee about showing China, Taiwan and Hong Kong as three different countries in public domain as Govt. of India has not recognized Taiwan as a country. He suggested that China would include Hong Kong and Taiwan can be put in a separate sub category.
4. Professor Chakrabarti, IIT kharagpur shared that in the Phase IV total 93 proposals were reviewed and 33 are shortlisted for the approval of the Apex Committee.
- a) Out of 33 shortlisted proposals, 31 proposals (**Annexure I**) were approved by the Committee including 2 proposals (#1026 and #40) approved with some comments. The comments will be shared to the PIs by IIT kharagpur. 1 proposal (#1333) will be further reviewed by Professor V. S. Chauhan and Professor Sandeep Verma for approval and 1 proposal (#780) has been rejected by the Apex Committee. The total budget for 31 approved proposals is Rs.1954.98/- Lakhs.
  - b) The Committee asked the National Coordinator to streamline the guidelines for reviewers of SPARC before the next call of SPARC proposals. Committee also suggested that those proposals which can be translated in Industrial participation should be encouraged. Committee agreed that the next call can be in the month of August 2019.
  - c) Committee asked the National coordinator to share the abstract of the proposals in advance to the members of the committee so that decision can be taken quickly in the meeting.
5. The next Apex Committee meeting will be held in July, 2019
6. The Meeting ended with thanks to the Chair.

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List of Participants:

1. Mr. R. Subrahmanyam, Secretary (Higher Education), MHRD – Chair
2. Professor Partha P. Chakrabarti, Director, IIT, Kharagpur
3. Professor Virander S. Chauhan, Chairman, Executive Committee, NAAC
4. Dr. Manju Singh, Joint Secretary, UGC
5. Mr. Dileep Malkhede, Advisor, AICTE
6. Dr. Shailja Vaidya Gupta, Advisor, DBT
7. Professor Adrijit Goswami, IIT, Kharagpur
8. Professor Indranil Manna, IIT, Kharagpur
9. Professor Sandeep Verma, Secretary, SERB
10. Mr. Arindam Bhattarcharya, Director, MEA
11. Mr. Anil Kumar, Director, Finance, MHRD
12. Mr. V.K. Siljo, Director, ICC
13. Dr. Amitava Roy, SC-G, DST
14. Dr. S. Vaidhyasubramaniam, Vice Chancellor, SASTRA Deemed University
15. Dr. Anamika, Senior Consultant, MHRD

## Phase IV Approved Proposals

Proposal Details	Number of Proposals	Sum of SPARC Budget (in Lakhs)
#1004 [Strong Accept] [9] [Indian Institute of Technology Kanpur-Dr.Nilesh Prakash Gurao] [IMPERIAL COLLEGE LONDON, United Kingdom-Dr. T Ben Britton] Adding value to additive manufacturing - advanced characterization of the structure-properties-performance of Ti6Al4V	1	85.2
#1026 [Accept] [7.5] [Indian Institute of Technology Gandhinagar-Dr. Abhayraj Singh Gautam] [UNIVERSITY OF CONNECTICUT, United States of America-Prof.Avinash M. Dongare] Development of a novel vacuum based process for producing porous metal structures	1	52.8
#1037 [Accept] [7.5] [Indian Institute of Engineering Science and Technology, Shibpur-Prof. SUSANTA Chakraborty] [NATIONAL TSING HUA UNIVERSITY, Taiwan-Prof.Tsung-Yi Ho] Design Optimization and Security Prediction of RealTimeCyberphysical Digital Microfluidic Biochips	1	47.62
#1078 [Accept] [7.5] [Malaviya National Institute of Technology-Dr.Arun Kumar Verma] [THE UNIVERSITY OF NEW SOUTH WALES (UNSW), Australia-Prof.Hemanshu Roy Pota] Cooperative Micro Grids Integrated Smart Electric Transportation Systems (CMGISETS): Coordinated Technologies for Seamless Energy Management	1	97
#1179 [Accept] [8] [National Institute of Technology Durgapur-Dr.AniruddhaMondal] [Queen's University at Kingston, Canada-Prof. Jean-Michel Nunzi] Universal advanced low cost nano-hybrid platform for air pollution, water and bio-fluids	1	84.6
#1186 [Weak Accept] [6.5] [Anna University-Dr. RENUGADEVI SOMU] [SHANGHAI UNIVERSITY, China-Dr. Juan Du] A Decision Support System for Structural Defects Diagnosis in Underground Transportation Tunnels using Semantic Technologies	1	50
#1195 [Accept] [8.75] [Indian Institute of Technology Gandhinagar-Prof. Uddipta Ghosh] [UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, United States of America-Prof. Surya PratapVanka] High-Performance Numerical Simulations and Experimental Investigation of Particle Transport and Turbulence in Rotational Flows: Applications to Eccentric and Conical Taylor-Couette Configurations	1	53.52
#1204 [Accept] [6.5] [Indian Institute of Engineering Science and Technology, Shibpur-Dr. Manojit Ghosh] [UNIVERSITY OF GHENT, Belgium-Prof. Leo Kestens] Development of advanced ultrafine grained aluminium alloys for aircraft and aerospace applications through Severe Plastic Deformation: correlating microstructure, mechanical properties and crystallographic texture	1	46.3

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#1211 [Strong Accept] [8.5] [Indian Institute of Technology Kharagpur-Dr. Somnath Roy] [UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, United States of America-Prof. Surya PratapVanka] High-Performance GPU based Immersed Boundary Methods for Simulations of Biological Flows	1	65.4
#1219 [Accept] [6] [University of Delhi-Prof.Tribhuvanprasad] [University of Witwatersrand, South Africa-Dr. Emmanuel O. Ojo] Traditional Medicine in India and South Africa: A Comparative study	1	76.4
#1239 [Accept] [7.5] [Indian Institute of Technology Kharagpur-Prof. Soumya K. Ghosh] [THE UNIVERSITY OF MELBOURNE, Australia-Prof.RajkumarBuyya] Spatial Cloud Federation: Orchestration of Multiple Spatial Clouds for Efficient Provisioning of Spatial Services	1	45.5
#1406 [Accept] [8] [National Institute of Technology Tiruchirappalli-Dr. Rajeswari Sridhar] [MACQUARIE UNIVERSITY, Australia-Dr. Michael Sheng] Digital Health Records Storage and Analysis for Healthcare Provisioning of Global Patients “an India Initiative” Australia	1	44.88
#1478 [Weak Accept] [7] [Manipal Academy of Higher Education-Dr. Baby SathishNayak] [UCL (UNIVERSITY COLLEGE LONDON), United Kingdom-Prof. Sandy Olivers] Indigenizing Evidence Synthesis and Systematic Reviews for International Development and Global Challenges	1	71.51
#1538 [Accept] [7.5] [Indian Institute of Technology Patna-Dr.Murshid Imam] [THE UNIVERSITY OF MANCHESTER, United Kingdom-Dr. Enrique Jimenez-Melero] Hybrid 3D printing with GMAW-twin wire based additive layer enhanced by friction stir processing	1	43.2
#199 [Accept] [7.5] [Indian Institute of Technology Kanpur-Dr.IndraniI Saha] [UNIVERSITY OF SOUTHERN CALIFORNIA, United States of America-Dr.JyotirmoyVinayDeshmukh] Developing Safe and Secure Autonomous Cyber-Physical Systems	1	72
#218 [Accept] [8.5] [Indian Institute of Technology Kanpur-Dr.Ashoke De] [RUPRECHT-KARLS-UNIVERSITÄT HEIDELBERG, Germany-Prof. Eva Gutheil] Modeling of diluted turbulent spray flames in Hot Coflow using LES-FGM	1	36
#224 [Strong Accept] [9] [National Institute of Technology Tiruchirappalli-Dr. Karthick P.A] [NEWCASTLE UNIVERSITY, United Kingdom-Dr.KianoushNazarpour] Novel human machine Interaction Technology for the Tetraplegics (NITT)	1	49.92

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#263 [Accept] [7.5] [National Institute of Technology Warangal-Dr.Nagarajan S] [HEBREW UNIVERSITY OF JERUSALEM, Israel-Prof.Shlomo YITZCHAIK] Fabrication of Printable Nanosensor Patch for Direct Detection of Plant Diseases from Nanocellulose Based Polydiacetylene using Molecular Self-assembly	1	49.8
#40 [Accept] [7.25] [Indian Institute of Technology Roorkee-Dr. Apurbba Kumar Sharma] [PENNSYLVANIA STATE UNIVERSITY, United States of America-Prof. Dinesh Kumar Agrawal] A Resource Efficient Method for Producing Orthopedic Bone Plate Using Microwave Energy	1	74.99
#435 [Accept] [8] [Indian Institute of Technology (Banaras Hindu University) Varanasi-Dr.Vinod Tiwari] [JOHNS HOPKINS UNIVERSITY, United States of America-Prof. SRINIVASA N. Raja] Targeting Kinesins Mediated Regulation of Nociceptors for the Treatment of Neuropathic Pain	1	50.57
#439 [Accept] [6.75] [National Institute of Technology Surathkal-Dr. MrityunjayDoddamani] [UNIVERSITY OF WISCONSIN-MADISON, United States of America-Dr. PAVANA PRABHAKAR] Additive Manufacturing of Novel Structural Foam Composites for Durability and Damage Tolerance	1	87.62
#450 [Accept] [7.5] [Indian Institute of Technology Ropar-Dr. Chittarajan Mishra] [MONASH UNIVERSITY, Australia-Prof.GregoireLoeper] Development of efficient computational techniques for convection-diffusion-reaction type problems in econophysics.	1	59.58
#693 [Accept] [8] [Indian Institute of Technology Madras-Dr.AnandKrishnasamy] [TIANJIN UNIVERSITY, China-Prof.Mingfa Yao] Experimental and Numerical Investigations on Utilizing Gasoline like High Volatile Low Reactive Fuels in Advanced Diesel Combustion Modes	1	53.24
#730 [Strong Accept] [8] [Indian Institute of Technology Madras-Dr. R K Amit] [THE UNIVERSITY OF NOTTINGHAM, United Kingdom-Prof.Kulwant S Pawar] Readiness Assessment of Cloud-based Manufacturing Systems (RACM)	1	73.67
#746 [Strong Accept] [8.75] [Indian Institute of Science Education & Research Kolkata-Prof.Dibyendu Nandi] [STOCKHOLM UNIVERSITY, Sweden-Prof. Axel Brandenburg] Machine Learning Based Assessment of the Solar Forcing of Space Environment	1	84.24
#751 [Strong Accept] [9] [Indian Institute of Technology Kharagpur-Prof. TrilochanSahoo] [UNIVERSITY OF NEWCASTLE, Australia-Prof. Michael H. Meylan] Flexural-Gravity Waves: A Complete Theoretical Development	1	70.12
#834 [Accept] [8.75] [Indian Institute of Technology Madras-Mr.Radhakrishna G Pillai] [OREGON STATE UNIVERSITY, United States of America-Prof. David Trejo] Enhancing the durability and sustainability of concrete structures in emerging economies	1	93

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#872 [Accept] [7.5] [Sathyabama Institute of Science and Technology-Dr. Vinita Vishwakarma] [UNIVERSITY OF TECHNOLOGY SYDNEY (UTS), Australia-Dr.SaravanamuthuVigneswaran] Development of Nanostructured Polymetallic Antifouling Coatings in Oil and Gas/Biofuel Pipelines	1	39.6
#938 [Accept] [8] [Indian Institute of Technology Gandhinagar-Dr. Sameer V Dalvi] [UNIVERSITY OF COLORADO AT BOULDER, United States of America-Dr. Mark Borden] NIR porphyrin-microbubbles as multi-colour molecular imaging probes	1	66.51
#950 [Accept] [7] [Indraprastha Institute of Information Technology Delhi-Prof.VivekBohara] [UNIVERSITY OF SURREY, United Kingdom-Prof. Pei Xiao] Design of Non-Orthogonal Multiple Access (NOMA) Systems for Future Vehicular Communications.	1	68.99
#988 [Accept] [7.5] [Indian Institute of Technology Madras-Prof.Velmurugan R] [SWINBURNE UNIVERSITY OF TECHNOLOGY, Australia-Prof. Dong Ruan] High Strain Rate Studies of Additively Manufactured Aerospace Components	1	61.2
<b>Grand Total</b>	<b>31</b>	<b>1954.98</b>