



# MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY

(Approved by AICTE , Affiliated to Pondicherry University and Accredited by NBA)

Kalitheerthalkuppam, Puducherry - 605107.



## RESEARCH & DEVELOPMENT

## HANDBOOK

(2021-22)

## **ABOUT THE INSTITUTION**

Manakula Vinayagar Institute of Technology is a premier institute run by Sri Manakula Vinayagar Educational Trust and was established in the year of 2008. It is offering courses in UG- B.Tech (EEE, ECE, CSE, IT, MECH,R & A,CSE(IoT), FT, AL & ML) and PG courses - M.Tech (ECE & CSE) & MBA, with a perspective to give quality education to young citizens. We are having total faculty strength of 125, among them 25 faculty members are with Ph.D qualifications and all others are with PG qualification.

Our Group of Institutions are offering 52 courses in Medicine, Engineering, Nursing and Polytechnic. Our campus is spread across 225 acres of land with built up area of more than 25 lakhs square feet. We have more than 12500 students, 2500 employees, 150 buses, hostel accommodation for 2000 students and more than 200 staff quarters.

Our college is professionally managed and guided with meticulous care to be in conformance with all prudential standards. Innovating new technologies and updating the existing are essential to reinforce the capabilities for achieving sustainable development in economical growth of the world. In this respect, our institute is conducting many activities in respect

## **VISION AND MISSION OF THE INSTITUTE**

### **VISION**

To be a globally reputed Technical Institution creating competent leaders and Skillful innovators in Science, Technology and Management.

### **MISSION**

- Providing a dynamic and creative learning environment for its students to acquire exemplary technical, analytical, professional skills.
- Imbibing a spirit of innovation and research among its students and faculty for solving critical problems.
- Promoting Innovation, Employability and entrepreneurship skills through industry academia collaboration.
- Serving the society through technical intervention and creating socially responsible Professionals.

## **ABOUT THE R&D CELL**

Research is one of the major components of the Education system in order to make the Faculty and Students to understand the concepts in depth and also to apply the concept in engineering applications. In view to this, R&D cell was established in October 2013 to enhance the Research Activities of the Faculty and Students of our Institution.

The Research and Development Cell aims to provide support and guidance to the Faculty and Students by sharing the information about recently developing and challenging areas of Engineering, Technology, Science and Humanities. This upgrades the general examination ability of growing technocrats by the way of participating in conferences, seminars, workshops, project competition etc

The main objectives of the R&D cell are:

- To apply and work on funded research projects sponsored by AICTE, DST, ISRO and DRDO and other funding agencies.
- To encourage Faculties and Students to carry out research at the Undergraduate level and leading to Ph.D.
- To improve number of publications, quality of projects. To provide solutions for projects, organize National Level Conference, Seminar and Workshops for Students and Staff.

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## LIST OF FUNDING AGENCIES WITH WEBSITE LINK

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1	ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE)	<a href="https://www.aicte-india.org/">https://www.aicte-india.org/</a>
2	ATOMIC ENERGY REGULATORY BOARD (AERB)	<a href="https://aerb.gov.in/english/">https://aerb.gov.in/english/</a>
3	BOARD OF RESEARCH IN NUCLEAR SCIENCES (BRNS)	<a href="https://brns.res.in/brns_rp.php">https://brns.res.in/brns_rp.php</a>
4	COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH (CSIR)	<a href="http://www.csir.res.in/">http://www.csir.res.in/</a> <a href="http://www.csir.res.in/knowledge-resource-center/knowledge-repositories">http://www.csir.res.in/knowledge-resource-center/knowledge-repositories</a> <a href="http://csirhrdg.res.in/">http://csirhrdg.res.in/</a>
5	CENTRAL POWER RESEARCH INSTITUTE (CPRI)	<a href="https://www.cpri.in/">https://www.cpri.in/</a>
6	DEFENSE RESEARCH & DEVELOPMENT ORGANISATION (DRDO)	<a href="https://www.drdo.gov.in/">https://www.drdo.gov.in/</a>
7	DEPARTMENT OF BIOTECHNOLOGY	<a href="http://dbtindia.gov.in/">http://dbtindia.gov.in/</a>
8	DEPARTMENT OF ATOMIC ENERGY (DAE)	<a href="http://www.dae.nic.in/">http://www.dae.nic.in/</a>
9	AERONAUTICS RESEARCH AND DEVELOPMENT BOARD (ARDB)	<a href="https://www.drdo.gov.in/drdo/boards/ardb/contact.htm">https://www.drdo.gov.in/drdo/boards/ardb/contact.htm</a>
10	ARMAMENTS RESEARCH BOARD	<a href="https://www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=home.jsp&amp;dir=ARMREB">https://www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=home.jsp&amp;dir=ARMREB</a>
11	NAVAL RESEARCH BOARD (NRB):	<a href="http://nrbdndo.res.in/board_intro.html">http://nrbdndo.res.in/board_intro.html</a> <a href="http://nrbdndo.res.in/submission_proposal.html">http://nrbdndo.res.in/submission_proposal.html</a>
12	LIFE SCIENCES RESEARCH BOARD	<a href="https://www.drdo.gov.in/drdo/boards/lrsb/fplsrb.htm">https://www.drdo.gov.in/drdo/boards/lrsb/fplsrb.htm</a> <a href="https://www.drdo.gov.in/drdo/boards/lrsb/fplsrb.htm">https://www.drdo.gov.in/drdo/boards/lrsb/fplsrb.htm</a> )
13	DEPARTMENT OF BIOTECHNOLOGY	<a href="http://dbtindia.gov.in/">http://dbtindia.gov.in/</a>
14	DEPARTMENT OF CHEMICALS AND PETROCHEMICALS (DCPC)	<a href="https://chemicals.nic.in/about-us/about-department">https://chemicals.nic.in/about-us/about-department</a>
15	DEPARTMENT OF SCIENCE AND TECHNOLOGY (DST)	<a href="http://www.dst.gov.in/">http://www.dst.gov.in/</a>
16	GAS AUTHORITY OF INDIA LIMITED (GAIL)	<a href="https://gailebank.gail.co.in/GUSI/frmStartUpGAIL.aspx">https://gailebank.gail.co.in/GUSI/frmStartUpGAIL.aspx</a>
17	IEEE	<a href="https://www.ieee.org">https://www.ieee.org</a>
18	INDIAN COUNCIL OF MEDICAL RESEARCH	<a href="https://www.icmr.nic.in/">https://www.icmr.nic.in/</a>

	(ICMR)	
19	INDIAN RENEWABLE ENERGY DEVELOPMENT AGENCY LIMITED (IREDA)	<a href="https://ireda.in/">https://ireda.in/</a>
20	INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)	<a href="http://www.isteonline.in/">http://www.isteonline.in/</a>
21	INDIAN SPACE RESEARCH ORGANISATION (ISRO)	<a href="https://www.isro.gov.in/">https://www.isro.gov.in/</a>
22	INDIAN NATIONAL SCIENCE ACADEMY (INSA)	<a href="http://www.insaindia.res.in/">http://www.insaindia.res.in/</a>
23	INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH (IGCAR)	<a href="http://www.igcar.gov.in/contact.html">http://www.igcar.gov.in/contact.html</a>
24	INDUSTRIAL CONSULTANCY & SPONSORED RESEARCH	<a href="https://www.iitm.ac.in/icsr">https://www.iitm.ac.in/icsr</a>
25	LADY TATA MEMORIAL TRUST	<a href="https://www.ladytatatrust.org">https://www.ladytatatrust.org</a>
26	MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY (MEITY)	<a href="https://meity.gov.in/">https://meity.gov.in/</a>
27	MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSME)	<a href="https://msme.gov.in/">https://msme.gov.in/</a>
28	MINISTRY OF NEW AND RENEWABLE ENERGY (MNRE)	<a href="https://mnre.gov.in/">https://mnre.gov.in/</a>
29	MINISTRY OF HUMAN RESOURCE DEVELOPMENT (MHRD)	<a href="https://mhrd.gov.in/">https://mhrd.gov.in/</a>
30	NATIONAL BOARD FOR HIGHER MATHEMATICS (NBHM)	<a href="http://www.nbhm.dae.gov.in">http://www.nbhm.dae.gov.in</a>
31	NATIONAL SCIENCE FOUNDATION (NSF)	<a href="https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&amp;ord=date">https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&amp;ord=date</a>
32	PETROLEUM CONSERVATION RESEARCH ASSOCIATION (PCRA)	<a href="http://www.pkra.org/">http://www.pkra.org/</a>
33	SCIENCE AND ENGINEERING RESEARCH BOARD	<a href="http://serbonline.in/">http://serbonline.in/</a>
34	THE INSTITUTION OF ENGINEERS (INDIA)	<a href="https://www.ieindia.org">https://www.ieindia.org</a>
35	UNIVERSITY GRANTS COMMISSION (UGC)	<a href="https://www.ugc.ac.in/">https://www.ugc.ac.in/</a>

36	VIKRAM SARABHAI SPACE CENTRE	<a href="http://isrohq.vssc.gov.in/VSSC_V4/index.php/respond-vssc?view=featured">http://isrohq.vssc.gov.in/VSSC_V4/index.php/respond-vssc?view=featured</a>
37	THE MINISTRY OF ENVIRONMENT AND FORESTS, NEW DELHI(MOEF)	<a href="http://envfor.nic.in/">http://envfor.nic.in/</a>
38	THE NATIONAL AEROSPACE LABORATORY, BANGALORE.(NAL)	<a href="http://www.nal.res.in/">http://www.nal.res.in/</a>
39	THE NATIONAL INITIATIVE ON CLIMATE RESILIENT AGRICULTURE, HYDERABAD.	<a href="http://www.nicra-icar.in/nicrarevised/">http://www.nicra-icar.in/nicrarevised/</a>
40	THE NATIONAL INSTITUTE OF OCEAN TECHNOLOGY (NIOT), VELACHERY, CHENNAI	<a href="http://www.niot.res.in/index.php">http://www.niot.res.in/index.php</a>
41	THE NATIONAL MEDICINAL PLANTS BOARD, GOI, NEW DELHI.(NMPB)	<a href="http://www.nmpb.nic.in/">http://www.nmpb.nic.in/</a>
42	THE OIL AND NATURAL GAS CORPORATION LTD., CHENNAI(ONGC)	<a href="http://www.ongcindia.com/wps/wcm/connect/ongcindia/home/">http://www.ongcindia.com/wps/wcm/connect/ongcindia/home/</a>
43	THE RESEARCH CENTRE IMARAT, HYDERABAD.(RCI)	<a href="http://rcilab.drdo.in/">http://rcilab.drdo.in/</a>
44	THE SPACE APPLICATIONS CENTRE, GOI, AHMEDABAD.(SAC)	<a href="http://www.sac.gov.in/sacwebi/sacHomePage.iface">http://www.sac.gov.in/sacwebi/sacHomePage.iface</a>
45	THE TAMIL VIRTUAL UNIVERSITY, CHENNAI(TVU)	<a href="http://www.tamilvu.org/">http://www.tamilvu.org/</a>
46	THE TAMILNADU FOREST DEVELOPMENT, CHENNAI(TNFD)	<a href="http://www.forests.tn.nic.in/notice.html">http://www.forests.tn.nic.in/notice.html</a>
47	THE TAMILNADU POLLUTION CONTROL BOARD, GOVT. OF TAMILNADU.(TNPCCB)	<a href="http://www.tnpcb.gov.in/">http://www.tnpcb.gov.in/</a>
48	THE TATA STEEL LIMITED, JAMSHEDPUR	<a href="http://www.tatasteel.com/">http://www.tatasteel.com/</a>
49	THE DEVELOPMENT OF RURAL DEVELOPMENT AND PANCHAYAT RAJ, CHENNAI (DRD&PR)	<a href="http://www.tnrd.gov.in/">http://www.tnrd.gov.in/</a>
50	THE INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS, HYDERABAD (ARCI)	<a href="http://www.arci.res.in/">http://www.arci.res.in/</a>

SL.NO	INTERNATIONAL FUNDING AGENCIES	WEBSITE
51	BRITISH COUNCIL IN INDIA	<a href="https://www.britishcouncil.in/">https://www.britishcouncil.in/</a>
52	AUSTRALIA-INDIA STRATEGIC RESEARCH FUND (AISRF)	<a href="https://www.industry.gov.au/funding-and-incentives/science-and-research/collaborating-with-india-on-science-and-research">https://www.industry.gov.au/funding-and-incentives/science-and-research/collaborating-with-india-on-science-and-research</a>
53	EUROPEAN COMMISSION	<a href="https://ec.europa.eu/energy/en/funding-and-contracts">https://ec.europa.eu/energy/en/funding-and-contracts</a>
54	INDO - SOUTH ASIA RESEARCH FUNDING	<a href="http://www.southasianist.info/india/sfunding.html">http://www.southasianist.info/india/sfunding.html</a>

55	INDO-US RESEARCH FELLOWSHIP FOR INDIAN RESEARCHERS	<a href="http://www.indoustf.org/fellowship.htm">http://www.indoustf.org/fellowship.htm</a>
56	INTEL PUBLIC AFFAIRS INTERNATIONAL CONTRIBUTION	<a href="http://www.intel.com/pressroom/contacts/usa.htm">http://www.intel.com/pressroom/contacts/usa.htm</a>
57	INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY	<a href="http://www.icgeb.org/home.html">http://www.icgeb.org/home.html</a>
58	ROYAL SOCIETY OF UK	<a href="http://royalsociety.org/">http://royalsociety.org/</a>
59	SHASTRI INDO-CANADIAN INSTITUTE	<a href="http://www.sici.org/home/">http://www.sici.org/home/</a>
60	THE EUROPEAN UNION COLLABORATION, SWITZERLAND	<a href="http://www.eda.admin.ch/eda/en/home/topics/eu/eu/misbr.html">http://www.eda.admin.ch/eda/en/home/topics/eu/eu/misbr.html</a>
61	DFG-GERMAN RESEARCH FOUNDATION	<a href="https://www.dfg.de/en/research_funding/programmes/individual/research_fellowships/index.html">https://www.dfg.de/en/research_funding/programmes/individual/research_fellowships/index.html</a>
62	INDO-FRENCH CENTRE FOR THE PROMOTION OF ADVANCED RESEARCH (IFCPAR)	<a href="http://www.cefipra.org/">http://www.cefipra.org/</a>
63	UK-INDIA EDUCATION AND RESEARCH INITIATIVE (UKIERI)	<a href="http://www.ukieri.org/">http://www.ukieri.org/</a>
64	Global Innovation & Technology Alliance (GITA)	<a href="https://www.gita.org.in/">https://www.gita.org.in/</a>
65	International Foundation for Science	<a href="http://www.ifs.se/">http://www.ifs.se/</a>

## THRUST AREAS IN RESEARCH

<b>DEPARTMENT OF ELECTRICALS AND ELECTRONICS ENGINEERING</b>	
<ol style="list-style-type: none"> <li>1. Power System Deregulation</li> <li>2. Pricing of Electricity</li> <li>3. Integration of distributed generation sources to power systems</li> <li>4. Optimization of relay setting in FACTS environment</li> <li>5. AI techniques applications in Power Systems</li> <li>6. Chaos in Power Systems</li> <li>7. Solar Energy Technology</li> <li>8. Wind Energy technology</li> <li>9. Energy Conservation</li> <li>10. Energy Auditing</li> <li>11. Power Systems Dynamics &amp; Stability</li> </ol>	<ol style="list-style-type: none"> <li>12. Optimal operation of power systems</li> <li>13. Interfacing analog signals with DSP</li> <li>14. H-Infinite controls</li> <li>15. Load forecasting and state estimation</li> <li>16. PL controllers</li> <li>17. Hybrid electric vehicles</li> <li>18. Robust controls and facts devices</li> <li>19. Power quality</li> <li>20. Electrical Machines (Axial Flux Machines)</li> <li>21. MEMS in Bio-systems</li> <li>22. Smart grid and Micro grid</li> </ol>
<b>DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING</b>	
<ol style="list-style-type: none"> <li>1. Wireless communication</li> <li>2. Optical Communication</li> <li>3. Satellite Navigational Systems</li> <li>4. Antennas and Propagation</li> <li>5. RF Circuits and systems</li> <li>6. Microwave devices</li> <li>7. Satellite, Space and wireless communication</li> <li>8. Test Measurements and Instrumentation</li> <li>9. Military Technology</li> <li>10. Photo Acoustics Electronics Instrumentation (SPRG)</li> <li>11. Speech Signal Processing (SPRG)</li> <li>12. Bio-Medical Signal &amp; Image Processing</li> <li>13. Radar Signal Processing</li> <li>14. Satellite Navigation &amp; Augmentation Studies</li> <li>15. Ionospheric Studies using GPS Signals</li> <li>16. GPs Radio occultation</li> <li>17. System on Chip Design</li> <li>18. Design for Testability</li> <li>19. Fault Tolerance System Design</li> <li>20. Digital Circuit Design</li> <li>21. Low Power VLSI Circuit Design</li> <li>22. Hardware/Software Co-Design for MPSoC using FPGA</li> <li>23. Low Power Digital Circuit Design</li> <li>24. Analog VLSI Circuit Design</li> <li>25. Digital Forensics</li> </ol>	<ol style="list-style-type: none"> <li>26. Digital Water marking</li> <li>27. Bio Metrics</li> <li>28. Image and Video Processing</li> <li>29. Sensor networks protocols</li> <li>30. Sensor web services</li> <li>31. Cognitive sensor networks</li> <li>32. Data mining sensor networks</li> <li>33. Web Services</li> <li>34. Semantic Web</li> <li>35. Web Security</li> <li>36. Web Commerce</li> <li>37. Remote monitoring and controlling of Embedded systems</li> <li>38. Securing the embedded systems</li> <li>39. Testing ES</li> <li>40. Networking ES</li> <li>41. Development of Communication Standards for Imp. Embedded networks with in local area &amp; wide area Networks</li> <li>42. Sensor networks for agricultural management</li> <li>43. Condition monitoring and controlling through embedded system</li> <li>44. Temperature controlling and monitoring nuclear reactors</li> <li>45. Intelligent Tagging systems</li> </ol>
<b>DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, DEPARTMENT OF INFORMATION TECHNOLOGY, DEPARTMENT OF CSE – ( IOT AND CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY) DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING TECHNOLOGIES</b>	
<ol style="list-style-type: none"> <li>1. Cloud Computing</li> <li>2. WEB Services and semantics</li> <li>3. Sensor Networks</li> <li>4. Data Mining</li> <li>5. WEB Mining</li> <li>6. Application specific Software Engineering</li> <li>7. Wireless Computer networks</li> <li>8. Adhoc Networks</li> <li>9. Cryptography</li> </ol>	<ol style="list-style-type: none"> <li>16. Multicasting in mobile networks</li> <li>17. Grid computing</li> <li>18. Autonomic computing</li> <li>19. Mobile computing</li> <li>20. Digital water marking and stenography</li> <li>21. Scalable algorithm for classification and clustering</li> <li>22. Clustering analysis</li> <li>23. Sensor data mining</li> <li>24. Pattern mining</li> </ol>

<ol style="list-style-type: none"> <li>10. Elliptic-curve Cryptography</li> <li>11. Crypto-analysis</li> <li>12. Cognitive networks</li> <li>13. Network management</li> <li>14. Performance analysis of network resources</li> <li>15. Secured systems</li> </ol>	<ol style="list-style-type: none"> <li>25. Clean room software engineering</li> <li>26. Extreme programming</li> <li>27. Software quality assurance and reliability</li> <li>28. Adaptive software development</li> <li>29. Parallel processing</li> <li>30. Pattern recognition</li> </ol>
<b>DEPARTMENT OF MECHANICAL ENGINEERING</b>	
<ol style="list-style-type: none"> <li>1. Energy Conversion &amp; Conservation</li> <li>2. Heat Transfer Applications in Electronic Systems</li> <li>3. Fluid Flow &amp; Turbo-machinery</li> <li>4. CNC Machines</li> <li>5. Nano-materials</li> <li>6. Unconventional Machining</li> <li>7. Vibration control and condition monitoring</li> <li>8. Fracture mechanics</li> <li>9. Mechanics of composites</li> <li>10. Supply chain management</li> <li>11. Design of cellular manufacturing</li> <li>12. Modeling and analysis of production systems</li> </ol>	<ol style="list-style-type: none"> <li>13. Job shop scheduling- assembly line balancing</li> <li>14. Robotic Support Systems</li> <li>15. Robot Assisted Surgery</li> <li>16. Design of Robotic Systems for Medical &amp; Surgical applications,</li> <li>17. Neural Networks</li> <li>18. Hydraulic Knee joints</li> <li>19. Artificial Intelligence,</li> <li>20. Neural Networks, Fuzzy Logic</li> <li>21. Hepatics</li> <li>22. CFD, Image Processing, Signal processing,</li> <li>23. Under water Machining, Underwater vision</li> </ol>
<b>DEPARTMENT OF ROBOTICS AND AUTOMATION</b>	
<ol style="list-style-type: none"> <li>1. Biologically inspired robot control</li> <li>2. Decision-Theoretic planning and control</li> <li>3. Humanoid robots</li> <li>4. Human-robot interaction</li> <li>5. Hybrid and Distributed Control</li> <li>6. Knowledge sharing among robots</li> <li>7. Mobile robot navigation</li> <li>8. Mobile sensor networks</li> </ol>	<ol style="list-style-type: none"> <li>9. Modeling, simulation and diagnosis</li> <li>10. Multiple robot coordination and cooperation</li> <li>11. Personal and service robots</li> <li>12. Range-free perception-based navigation</li> <li>13. Rehabilitation robotics</li> <li>14. Sensory EgoSphere</li> <li>15. Stochastic hybrid systems for multiple robot teams</li> <li>16. Vision, image and signal processing systems</li> </ol>
<b>DEPARTMENT OF FOOD TECHNOLOGY</b>	
<ol style="list-style-type: none"> <li>1. Isolation and characterization of plant macromolecules like starch, beta-glucan.</li> <li>2. Phytochemical stability during processing of fruits.</li> <li>3. Quality enhancement of traditional food products.</li> <li>4. Bio preservation of food products.</li> <li>5. Preparation and quality evaluation of plant and animal based foods.</li> <li>6. Food Irradiation.</li> <li>7. Enhancement of shelf-life of fresh fruits</li> <li>8. Encapsulation of bioactive compounds</li> </ol>	<ol style="list-style-type: none"> <li>9. Processing of cereals, pulses, fruits and vegetables</li> <li>10. Characterization and utilization of plant gums</li> <li>11. Novel Processing Techniques</li> <li>12. Development of gadgets/ machineries for the Food Processing</li> <li>13. Isolation and Characterization of Bioactive Phytochemicals</li> <li>14. Safety Assurance of Food</li> <li>15. Novel Food Products based on Functional Starter Cultures</li> <li>16. Fermented Foods and Starter Culture and Meat Processing.</li> </ol>
<b>DISCIPLINE MANAGEMENT</b>	
<ol style="list-style-type: none"> <li>1. Employee engagement</li> <li>2. Work-life balance</li> <li>3. 139 Competency mapping</li> <li>4. Organizational change</li> <li>5. Talent management</li> <li>6. Training &amp; Development</li> <li>7. Insurance sector reforms</li> <li>8. Banking sector reforms</li> <li>9. Mutual funds</li> <li>10. Portfolio management</li> </ol>	<ol style="list-style-type: none"> <li>11. Security analysis</li> <li>12. Supply chain management</li> <li>13. Retail business</li> <li>14. Online business</li> <li>15. Handloom sector</li> <li>16. Rural marketing</li> <li>17. Agricultural exports</li> <li>18. Data analytics</li> <li>19. Impact of social media</li> </ol>
<b>DISCIPLINE MATHEMATICS</b>	
<ol style="list-style-type: none"> <li>1. Dynamical Systems on Time scales</li> <li>2. Fuzzy Dynamical Systems on Time scales</li> </ol>	<ol style="list-style-type: none"> <li>4. Tribology</li> <li>5. Hydrodynamic lubrication theory</li> </ol>

3. Lie groups in Fluid dynamics	6. Applications of Queuing Theory in Data Communication and Manufacturing
<b>DISCIPLINE PHYSICS</b>	
<ol style="list-style-type: none"> <li>1. Nanostructured Materials For Energy storage devices, Thin Films, Solid State Ionics</li> <li>2. Bioactive glasses, Nano-materials, Nano-phosphors, Glasses, Polymer</li> </ol>	
<b>DISCIPLINE CHEMISTRY</b>	
<ol style="list-style-type: none"> <li>1. Liquid crystals</li> <li>2. Drug Analysis</li> <li>3. Synthetic Organic Chemistry</li> </ol>	
<b>DISCIPLINE ENGLISH</b>	
<ol style="list-style-type: none"> <li>1. Comparative linguistics</li> <li>2. Transcultural linguistics</li> <li>3. Film literature</li> <li>4. Abridged literature</li> <li>5. Visual media</li> <li>6. Software appreciation</li> </ol>	<ol style="list-style-type: none"> <li>7. 21st century literature</li> <li>8. Form &amp; transformation, from novels to blogs</li> <li>9. Inter cultural communication</li> <li>10. English for specific purpose</li> <li>11. English language teaching through technology</li> </ol>
<b>DISCIPLINE BASIC &amp; APPLIED SCIENCES &amp; AGRICULTURE SCIENCES</b>	
<ol style="list-style-type: none"> <li>1. Nanotechnology</li> <li>2. Global Warming</li> <li>3. Organic Farming</li> <li>4. Physical &amp; Chemical Sciences</li> <li>5. Environmental Sciences /Green Tech.</li> </ol>	<ol style="list-style-type: none"> <li>6. Mathematical &amp; Statistical Science</li> <li>7. Green Technology</li> <li>8. Water-Soil Engineering</li> <li>9. Biotic Environment in Agriculture</li> </ol>

**LIST OF INTERNATIONAL JOURNAL PUBLISHERS**

<b>SL.NO</b>	<b>NAME OF JOURNAL PUBLISHERS</b>	<b>WEBSITE LINK</b>
1.	<u>ACM Digital Library Journals</u>	<a href="https://dl.acm.org/pubs.cfm">https://dl.acm.org/pubs.cfm</a>
2.	<u>ACS Journals</u>	<a href="https://pubs.acs.org/">https://pubs.acs.org/</a>
3.	<u>American Institute of Physics</u>	<a href="https://www.aip.org/">https://www.aip.org/</a> <a href="https://aip.scitation.org/">https://aip.scitation.org/</a>
4.	<u>Annual Reviews Journals</u>	<a href="http://www.annualreviews.org/">http://www.annualreviews.org/</a>
5.	<u>ASCE Journals</u>	<a href="https://ascelibrary.org/journals">https://ascelibrary.org/journals</a>
6.	<u>ASME Journals + Standards</u>	<a href="http://asmedigitalcollection.asme.org/journals.aspx">http://asmedigitalcollection.asme.org/journals.aspx</a>
7.	EBSCO HOST	<a href="http://search.ebscohost.com/login.aspx?profile=ehost">http://search.ebscohost.com/login.aspx?profile=ehost</a>
8.	<u>Economic &amp; Political Weekly</u>	<a href="https://www.epw.in/">https://www.epw.in/</a>
9.	<u>Emerald Journals and Emerald e-Cases</u>	<a href="https://www.emeraldinsight.com/">https://www.emeraldinsight.com/</a>
10.	<u>Elsevier Science Direct</u>	<a href="https://www.sciencedirect.com/browse/journals-and-books">https://www.sciencedirect.com/browse/journals-and-books</a>
11.	<u>GeoScience World and GeoRef Database</u>	<a href="https://pubs.geoscienceworld.org/">https://pubs.geoscienceworld.org/</a>
12.	<u>IEEE / IET Journals</u>	<a href="http://ieeexplore.ieee.org/Xplore/home.jsp?reload=true">http://ieeexplore.ieee.org/Xplore/home.jsp?reload=true</a>
13.	<u>IndiaStat</u>	<a href="https://www.indiastat.com/">https://www.indiastat.com/</a>
14.	<u>JSTOR Journals</u>	<a href="https://www.jstor.org/">https://www.jstor.org/</a>
15.	<u>John Wiley Journals</u>	<a href="https://onlinelibrary.wiley.com/">https://onlinelibrary.wiley.com/</a>
16.	<u>Nature Journals</u>	<a href="http://www.nature.com/siteindex/index.html">http://www.nature.com/siteindex/index.html</a>
17.	<u>Optical Society of America</u>	<a href="https://www.osa.org/en-us/home/">https://www.osa.org/en-us/home/</a>
18.	Onepetro	<a href="https://www.onepetro.org/">https://www.onepetro.org/</a>
19.	<u>OUP Journals</u>	<a href="https://academic.oup.com/journals/">https://academic.oup.com/journals/</a>
20.	<u>Project Muse</u>	<a href="https://muse.jhu.edu/">https://muse.jhu.edu/</a>
21.	<u>PsycArticle Journals</u>	<a href="https://www.apa.org/pubs/databases/psycarticles/index">https://www.apa.org/pubs/databases/psycarticles/index</a>
22.	<u>Proquest (Dissertations &amp; Theses &amp; ABI/INFORM Collection Database)</u>	<a href="http://search.proquest.com/index">http://search.proquest.com/index</a>
23.	<u>RSC Journals</u>	<a href="http://pubs.rsc.org/en/journals?key=title&amp;value=all">http://pubs.rsc.org/en/journals?key=title&amp;value=all</a>
24.	<u>SIAM Journals</u>	<a href="https://www.siam.org/Publications/Journals">https://www.siam.org/Publications/Journals</a>
25.	SAE International Journals and Standards	<a href="https://saemobilus.sae.org/">https://saemobilus.sae.org/</a>
26.	<u>Springer Link Journals</u>	<a href="https://saemobilus.sae.org/">https://saemobilus.sae.org/</a>
27.	<u>SAGE Journals</u>	<a href="https://journals.sagepub.com/action/showPublications">https://journals.sagepub.com/action/showPublications</a>
28.	<u>SciFinder Scholar</u>	<a href="https://sso.cas.org/as/PdaKZ/resume/as/authorization.ping">https://sso.cas.org/as/PdaKZ/resume/as/authorization.ping</a>
29.	<u>Taylor &amp; Francis Journals</u>	<a href="https://www.tandfonline.com/">https://www.tandfonline.com/</a>
30.	worldscientific	<a href="https://www.worldscientific.com/">https://www.worldscientific.com/</a>

**E-BOOKS LINKS**

1. ACS eBooks - [Visit Website](#)
2. CRC / Taylor & Francis Group, eBook are accessible from 2004 to 2018 - [Visit Website](#)
3. Cambridge University Press only Law eBook - [Visit Website](#)
4. Elsevier Chemistry Book Series - [Visit Website](#) | [Download List](#)
5. Gale Law eBooks are accessible - [Visit Website](#)
6. Springer Link eBooks are accessible - [Visit Website](#)
7. Wiley eBooks - [Visit Website](#) | Download List [[Download list1](#) | [Download List2](#)]
8. Wiley Reference Works collection - [Visit Website](#)
9. Taylor & Francis Open Access Publication - [Visit Website](#)

**NATIONAL FUNDING AGENCIES****1. ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE)**

<https://www.aicte-india.org/>

**1.1 INTRODUCTION**

The All India Council for Technical Education (AICTE) has been performing its regulatory, planning and promotional functions through its Bureaus, namely: Administration; Finance; Planning and Coordination; Under Graduate Studies; Post Graduate Education and Research; Faculty Development; Quality Assurance; and Research and Institutional Development Bureaus; and through its Regional Offices located in various parts of the country.

**1.2 NAME OF SCHEME(S)****1.2.1.FACULTY DEVELOPMENT SCHEMES:**

- AICTE- NATIONAL INITIATIVE FOR TECHNICAL TEACHERS TRAINING (AICTE - NITTT)
- AICTE-BEST TEACHERS AWARD (VISVESVARAYA BEST TEACHERS AWARD AND PRITAM SINGH FOUNDATION AWARD)
- AICTE-QUALITY IMPROVEMENT PROGRAM
- AICTE-RESEARCH PROMOTION SCHEME (RPS)
- AICTE-QUALITY IMPROVEMENT PROGRAMME (FOREIGN UNIVERSITY)
- AICTE-FACULTY DEVELOPMENT PROGRAMME (FDP)
- AICTE-SHORT TERM TRAINING PROGRAMME (STTP) (UT-J&K,LADAKH AND NER)
- AICTE-TRAINING PROGRAMS FOR PHYSICAL EDUCATION TRAINERS/SPORT-GAMES TEACHERS/DIRECTOR OF SPORTS
- AICTE- TECHNICAL UNIVERSITY JOINT TRAINING PROGRAMS FOR TEACHERS
- AICTE- TECHNICAL UNIVERSITY JOINT TRAINING PROGRAMS FOR LIBRARIANS
- AICTE-PROFESSIONAL DEVELOPMENT SCHEME
- AICTE-INAE- DISTINGUISHED VISITING PROFESSORSHIP SCHEME
- AICTE – ISTE ORIENTATION/ REFRESHER PROGRAMME
- AICTE-TECHNICAL BOOK WRITING & TRANSLATION
- AICTE-DISTINGUISHED CHAIR PROFESSOR

**1.2.2. STUDENTS DEVELOPMENT SCHEMES:**

- AICTE – SWANATH SCHOLARSHIP SCHEME
- AICTE - YOUTH UNDERTAKING VISIT FOR ACQUIRING KNOWLEDGE (YUVAK)
- AICTE LILAVATI AWARD
- PG SCHOLARSHIP
- AICTE DOCTORAL FELLOWSHIP (ADF)
- PRAGATI SCHOLARSHIP
- SAKSHAM SCHOLARSHIP
- SUPPORT TO STUDENTS FOR PARTICIPATING IN COMPETITION ABROAD (SSPCA)
- PRIME MINISTER'S SPECIAL SCHOLARSHIP SCHEME – PMSSS

- AICTE-INAE TRAVEL GRANT SCHEME
- SMART INDIA HACKATHON 2019
- M.TECH PROJECTS AS INTERNSHIP WITH SMALL AND MEDIUM ENTERPRISES (MSMES)

**1.2.3. INSTITUTIONAL DEVELOPMENT SCHEMES:**

- AICTE- IDEA LAB
- AICTE-SCHEME FOR PROMOTING INTERESTS, CREATIVITY AND ETHICS AMONG STUDENTS (SPICES)
- GRANT FOR ORGANISING CONFERENCE
- MODERNISATION AND REMOVAL OF OBSOLESCENCE (MODROBS)
- E- SHODH SINDHU(SUBSCRIPTION TO E-JOURNALS)
- SCHEME FOR CAMPUS ACCOMMODATION & FACILITIES ENHANCING SOCIAL EXPERIENCE (CAFES)
- AICTE- GRANT FOR AUGMENTING INFRASTRUCTURE IN NORTH EASTERN REGION (GAINER)
- MARGDARSHAN INITIATIVE
  - Part 1 : Margdarshaks
  - Part 2 : Margdarshan Institute

**1.2.4. RESEARCH & INNOVATIONS DEVELOPMENT SCHEMES**

- **COLLABORATIVE RESEARCH SCHEME (CRS) UNDER TEQIP**

**GENERAL SCHEMES**

- KAUSHAL AUGMENTATION AND RESTRUCTURING MISSION OF AICTE (KARMA)
- PRADHAN MANTRI KAUSHAL VIKAS YOJNA (PMKVY)
- SAANSAD AADARSH GRAM YOJNA
- ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENTS (ARIIA)

**Contact Address:**

1. Head Office:  
Nelson Mandela Marg,  
Vasant Kunj, New Delhi-110070  
Phone: 011-26131576-78,80
2. Southern Regional Office:  
AICTE – Southern Regional Office,  
'Shastri Bhavan', 26, Haddows Road,  
Nungambakkam, Chennai – 600 006  
Phone: 044-28279998, 28275650, 28232754

## 2. ATOMIC ENERGY REGULATORY BOARD (AERB)

<https://aerb.gov.in/english/>

### INTRODUCTION:

AERB has been functioning with the mission of ensuring that the use of ionizing radiation and nuclear energy in India under its purview does not cause undue risk to the health of people and the environment.

### Areas of Interest to AERB

Studies in some areas are of special interest to AERB. Some of these areas are indicated in the following list.

- Safety in application of nuclear and radiation facilities
- Environmental Impact Assessment
- Transport of Radioactive material
- Radioactive Waste Management
- Civil and Structural Engineering
- Spent Fuel Storage
- Reactor Physics
- Thermal Hydraulics/Fluid Structure Interactions in PHWRs, LWRs and FBRs under Accident Conditions
- Medical/ Industrial Applications of Radiation
- Applied Metallurgy/Radio metallurgy
- Fire and Industrial Safety
- Use of Radiation Sources for Research Purposes
- Effective Use of Information Technology for Regulatory Activities
- Radiobiology/Radiation Dosimetry/Radiation Protection
- Applied Chemistry in Nuclear Industry
- Safety Evaluation Methodology
- Front and Backend Fuel Cycle Facilities
- Occupational Health and Environmental Safety

### FINANCIAL GRANT FOR ORGANIZING CONFERENCES AND WORKSHOPS:

AERB extends financial support to organizations and institutes to organize conferences, symposia, seminars and workshops on safety related topics. These technical events encourage interaction among scientists and promote interdisciplinary collaboration, an essential factor in promoting radiological, industrial and nuclear safety. Publications from these events are normally made available in electronic form to all participants and also on websites to ensure online availability all over the country to a wider section of professionals.

#### Contact Address:

Chairman  
Atomic Energy Regulatory Board  
Niyamak Bhavan Anushaktinagar,  
Mumbai - 400 094.  
Tel. : +91-22-2556 2343,

### 3. BOARD OF RESEARCH IN NUCLEAR SCIENCES (BRNS)

[https://brns.res.in/brns\\_rp.php](https://brns.res.in/brns_rp.php)

#### INTRODUCTION:

The Board of Research in Nuclear Sciences (BRNS) is an advisory body of the Department of Atomic Energy (DAE) to recommend financial assistance to universities, academic institutions and national laboratories. The key objective is to encourage and promote scientific research in areas of relevance to the mandate of DAE in research groups outside DAE to derive benefits from their expertise.

#### SCHEMES

1. Identify and fund [R & D Projects](#)
2. Financial support to conduct [Symposia / Conferences](#)
3. Recruitment under Krishnan Research Associateship ([KSKRA](#)) scheme
4. Award research projects under [DAE-OIA](#) scheme, through DAE-SRC council.
5. Award fellowships under [DGFS M.Tech](#) scheme
6. Award fellowships to HBNI students under [DGFS-Ph.D](#) scheme
7. Award Fellowships to retired Scientists under [RRF](#) & [HBC](#) schemes, through AEC.

#### Mail To

helpdesk[dot]brns[at]barc[dot]gov[dot]in

For website accessibility related issues.

Also, if the processing status of the research project application remains unchanged for more than two months.

#### Mail To

brns[dot]symp[at]barc[dot]gov[dot]in

If the processing status of the Symposium application does not change in 15 days time. Or any other BRNS related queries.

For general enquiry

Phone:

022-2559 0813 between 02:00 PM to 03:30 PM on all working days.

#### 4. COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH (CSIR)

<http://www.csir.res.in/>

<http://www.csir.res.in/knowledge-resource-center/knowledge-repositories>

<http://csirhrdg.res.in/>

##### **INTRODUCTION:**

Council of Scientific & Industrial Research (CSIR), India, a premier national R&D organisation, is among the world's largest publicly funded R&D organisation. CSIR's pioneering sustained contribution to S&T human resource development is acclaimed nationally. Human Resource Development Group (HRDG), a division of CSIR realises this objective through various grants, fellowship schemes etc.

Human Resource Development Group has been contributing significantly towards producing an inquiring society and fast growing knowledge economy. These numerous schemes cover a wide range of scientists.

##### **MAJOR ACTIVITIES:**

- Junior Research Fellowship JRF
- JRF-GATE Fellowship
- Syllabus for Joint CSIR UGC Test for JRF & LS (NET)
- Senior Research Fellowship SRF
- Research Associateship (RA)
- Senior Research Associateship (SRA) (Scientist's Pool Scheme)
- Emeritus Scientist Terms & Condition Apply Online
- Visiting Associateship
- Research Scheme / Sponsored Research Schemes
- Indian Language Journal
- Travel/Symposium/Seminar Grant
- Shanti Swarup Bhatnagar Prize (SSB)
- G N Ramachandran Gold Medal
- Young Scientist Awards (YSA)
- CSIR Bhatnagar Fellowship
- Shyama Prasad Mukherjee Fellowship (SPMF)
- CSIR-Nehru Science Postdoctoral Research Fellowship Scheme
- Programme on Technology Led Entrepreneurship

##### **Contact Address:**

The Head  
Human Resource Development Group  
CSIR Complex, Library Avenue, Pusa  
New Delhi 110 012 India  
Email : headhrdg[at]csirhrdg[dot]res.in  
Fax : + 91 - 011 – 2584 0887

## 5. CENTRAL POWER RESEARCH INSTITUTE (CPRI)

<https://www.cpri.in/>

### INTRODUCTION:

The Government of India is promoting Research and Development for the Indian power sector through Central Power Research Institute (CPRI), which promotes applied research leading to technology development in the power sector through the following three schemes:

R&D project proposals are invited by CPRI under the above Research schemes. For further details click the links below.

- National Perspective Plans (NPP)
- Research Scheme On Power (RSOP)
- In-House R&D (IHRD)
- Invitation for R &D project proposal
- General Information on Proposal Submission.

### Thrust Areas in Power:

- Generation sector
- Transmission
- Distribution
- Renewable Energy
- Power Sector in General
- Environment, Energy Efficiency

#### Contact Address:

<https://cpri.res.in/r-%26-d-schemes/research-scheme>

The Head of the Division

R&D Management Division

Central Power Research Institute,

Prof.Sir.C.V.Raman Road,

Sadashivanagar P.B.No.8066,

Bengaluru -560080

Phone - 080-22072234

Fax - 080-22072013

E-mail: mvrao[at]cpri[dot]in

## 6. DEFENCE RESEARCH & DEVELOPMENT ORGANISATION (DRDO)

<https://www.drdo.gov.in/>

### INTRODUCTION:

Defence Research & Development Organisation (DRDO) works under Department of Defence Research and Development of Ministry of Defence. DRDO dedicatedly working towards enhancing self-reliance in Defence Systems and undertakes design & development leading to production of world class weapon systems and equipment in accordance with the expressed needs and the qualitative requirements laid down by the three services. DRDO is working in various areas of military technology which include aeronautics, armaments, combat vehicles, electronics, instrumentation engineering systems, missiles, materials, naval systems, advanced computing, simulation and life sciences. DRDO while striving to meet the Cutting edge weapons technology requirements provides ample spinoff benefits to the society at large thereby contributing to the nation building.

### RESEARCH BOARDS

DRDO has constituted four research boards to nurture and harness talent in academic institutions, universities, R&D centres and industry.

- **Aeronautics Research and Development Board (AR&DB)** has approved projects in the filed of Aeronautics and related areas.
- **Armament Research Board (ARMREB)** has approved projects in the fields of high energy materials, sensors, ballistics and other armament related fields.
- **Naval Research Board (NRB)**, projects are being pursued in five technology areas.
- **Life Sciences Research Board (LSRB)** projects have been supported in the areas of biological and bio-medical sciences, psychology, physiology, bio-engineering, specialized high altitude agriculture, food science and technology.

### 6.1. AERONAUTICS RESEARCH AND DEVELOPMENT BOARD (ARDB)

<https://www.drdo.gov.in/drdo/boards/ardb/contact.htm>

### INTRODUCTION:

The scheme will be coordinated through a number of specialist panels duly constituted by the Chairman AR&DB to cover the different disciplines viz.

- Aerodynamics
- Aerospace Resources
- Materials & Manufacturing
- Propulsion
- Structures
- Systems & Systems Engineering

**SCHEMES:**

Projects or schemes of value to aircraft, helicopters, missiles and all other airborne vehicles including their operation would be supported. The Aeronautics R&D Board shall also entertain applications for sanction of grants-in-aid for build up of basic facilities / infrastructure and for conducting seminar, symposia, short courses, deputation / training of manpower, intensive short courses of current interest to Aeronautics and missiles, award of flying scholarships & other promotional activities within the country. AR&DB shall not make personal payments to members of regular staff of universities, colleges and institutions.

**THE GRANT WILL BE UTILISED**

To meet salary of research and laboratory staff, specially recruited for the project / facility and to meet cost of their medical benefits, CPF and leave etc. on the same scales as applicable to the regular employees of the institution and to provide funds for meeting the cost of Institutional overhead expenses, as follows:

- 15% of the total project cost without any upper limit for educational institutions.
- 10% of the total project cost with an upper limit of Rs. 2.00 lakhs for other institutions. (i.e. laboratories & institutes under S&T agencies other than Govt. departments).
- On projects costing more than 40 lakhs, the quantum will be decided on a case-to-case basis.

**Contact Address::**

Aeronautics Research & Development Board (AR&DB), O/o DG  
(Technology Management)/Research Boards, DRDO Headquarters  
Annexe, Old LASTEC Building, 4th Floor, Room No. 411, Metcalfe  
House, Civil Lines, Delhi-110054

**6.2. ARMAMENTS RESEARCH BOARD (ARB)**

<https://www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=home.jsp&dir=ARMREB>

**OBJECTIVES OF ARMREB**

- To foster knowledge-based growth of Armament discipline in the country, strengthening and integrating national resources of knowledge, know how, experience, facilities and infrastructure.
- To catalyze the much needed cross-fertilization of ideas and experiences between DRDO and outside experts in scientific and technical fields that contribute to armament technology.
- To launch and coordinate research in specified areas of armament discipline in academic institutions.
- To create conditions suitable for attracting talent through research collaborations and other academic exchanges and adopt synergic approach towards national needs and priorities in the field of Armaments in the global advancements.
- To adopt synergic approach towards National needs and priorities in the field of Armaments, yet keeping in focus the Global Advances, in order to develop competence in Key Areas.
- To lead the Technological Innovations useful for Combat Multiplier both for the near term and future.

**Charter:**

- To support basic research applicable to armament discipline
- To set principles and practices governing the relationship of DRDO with the academic world
- To consider and approve, by peer evaluation, research proposals submitted to ARMREB
- To set funding pattern and funding methodology for the research panels of ARMREB
- ARMREB will exclude funding of development of system hardware.

**Contact Address:**

Sh Ashish Jauhari, Sc. 'F'  
Member Secretary ARMREB  
Room No 408, West Wing, 4th Floor  
DRDO Hq Annexe, Old LASTEC Building(NTB)  
Metcalfe House, Delhi - 110054  
Phone : 9371857073  
Email : armreb[at]hqr[dot]drdo[dot]in (Preferred Mode of Communication)

### 6. 3. Naval Research Board (NRB)

[http://nrbdndo.res.in/board\\_intro.html](http://nrbdndo.res.in/board_intro.html)

[http://nrbdndo.res.in/submission\\_proposal.html](http://nrbdndo.res.in/submission_proposal.html)

#### OBJECTIVE:

The Board has instituted a Grants-in-Aid Scheme to nurture research talent and to create research facilities in IITs, Universities, higher technological institutions, colleges and other research centers including industries in the country for promoting basic research, design and development.

The scheme is coordinated through seven specialist panels

- Materials (MAT)
- Hydrodynamics (HYDRO)
- Sonar and Signal Behavior(SSB)
- Ocean Environment(OE)
- Scientific Computing(SC)
- Marine systems(MAR)
- Hydro-Vibro- Acoustics (HVA)

#### **Detailed proposal should be addressed to:**

Ashok Kumar Yadav

Member Secretary Naval Research Board (NRB)

Room No. 410, 4th Floor, DRDO HQrs Annexe,

Old LASTEC Building, Metcalfe House Complex

Delhi-110054

Mobile : 9413327917

Mail id: dnrdo[at]hqr[dot]drdo[dot]in (Preferred Mode of Communication)

#### 6. 4. LIFE SCIENCES RESEARCH BOARD (LSRB)

<https://www.drdo.gov.in/drdo/boards/lsrcb/fplsrcb.htm>

<https://www.drdo.gov.in/drdo/boards/lsrcb/fplsrcb.htm>

##### INTRODUCTION:

The Life Sciences Research Board (LSRB) of Defence Research & Development Organisation (DRDO) was set up to support and strengthen research base in the area of life sciences through projects under Grant-in-Aid Scheme to meet the national needs of Defence Services. The scheme is coordinated through five specialist panels:-

- Life Support & Biomedical Devices (LSBD)
- Soldier Health & Drug Development (SH&DD)
- Physiology of Extreme Environment & Behavioural Sciences (PEE&BS)
- Biotechnology and Bioremediation (BTB)
- Food Science, Hill Agriculture, Bio-fuels & Bio resources (FSH&ABB)

##### Contact Address:

Dr. R P Bhatt,  
Member Secretary,  
LIFE SCIENCES RESEARCH BOARD (LSRB)  
Defence Research & Development Organization  
Ministry of Defence  
Room No. 409, 4rd Floor, DRDO HQrs Annexe,  
Old LASTEC Building, METCALFE HOUSE COMPLEX,  
Delhi-110054  
Email ID : lsrcb[at]hqr[dot]drdo[dot]in

## 7. DEPARTMENT OF BIOTECHNOLOGY (DBT)

<http://dbtindia.gov.in/>

### INTRODUCTION:

The new focus on Young India is clear from the various Grants and Funds as well as Awards, and the DBT's commitment to revisit the funding mechanism to ensure a quicker assessment of project values and disbursements of funds for research.

### OBJECTIVES:

- To provide user friendly system for online submission of proposal and various other documents related to ongoing projects.
- To provide information about status of proposal /project.
- To enable online peer review and processing of proposal.
- To facilitate complete monitoring and project management.

### SCHEMES:

- DBT: IC-IMPACTS "Wealth from Waste" Call
- Announcement about Bioenergy-Awards for Cutting Edge Research
- Proposals in the area of biosimilar product development, shared facilities for biotherapeutics development and novel cell line development
- Proposals in the area of biosimilar product development, shared facilities for biotherapeutics development and novel cell line development(rfp)
- Special Call for Proposal for establishment of Biotech-KISAN Hubs in four Agro-climatic Zones (Eastern Plateau & Hills, Gujarat Plain & Hills, Western Dry Region and Islands)
- Indo Australia Biotechnology Fund (11th Round) Advertisement
- Final Indo- Australia (11th Round) Guidelines
- 11th Round Indo-Australia Application Format For R&D proposals
- Crdf global request for proposals(rfp) indo-u.s.vaccine action program(vap)initiative on tuberculosis(tb)research:regional prospectiveo bservational research fortuberculosis- report india

- Funding Opportunities for Indo-German Fundamental Research Projects in the Life Sciences
- B4-Young Scientist Program: Synthetic Biology Workshop
- Vacancies advertisement for the DBT's Apex BTIC Centre
- Cooperation on Research & Innovation between DBT and the EU in 'Horizon 2020' Work programmes 2018-2020
- DBT Announces ATGC Program
- Joint DBT-BIRAC Call for launching "Mission AMR"
- India-EU Research and Innovation Action Towards A Next Generation Influenza Vaccine to Protect Citizens Worldwide
- DBT Alumni Scheme for Newton International Fellows (NIFs)

**Contact Address:**

Department of Biotechnology  
6th-8th Floor, Block 2 CGO Complex, Lodhi Road  
New Delhi - 110 003.  
India

## 8. DEPARTMENT OF ATOMIC ENERGY (DAE)

<http://www.dae.nic.in>

### INTRODUCTION:

The Department of Atomic Energy supports research programmes in Nuclear Science and Technology through the Board of Research in Nuclear Sciences (BRNS). BRNS support the following schemes.

### NAME OF SCHEME(S) & OBJECTIVE(S):

#### 1. R&D PROJECT

Fostering research capabilities and manpower development in universities and similar institutions of higher learning and research.

#### 2. SYMPOSIUM/CONFERENCE/WORKSHOP

To promote large scale interactions in various disciplines of science and technology that are of interest to DAE.

#### 3. DAE YOUNG SCIENTISTS RESEARCH AWARD

To support young scientist below the age of 35 years in their initial years of settling down in a career of R&D.

#### 4. DR. K.S. KRISHNAN RESEARCH ASSOCIATESHIP

To support talented science and engineering research scholars

#### 5. RAJA RAMANNA FELLOWSHIP

To utilize the services of active retired scientists/engineers and technologists, who have been involved in high quality research in their specialized discipline in the units of the DAE or any National Laboratory or University/Institute

#### 6. VISITING SCIENTISTS

To promote close interactions on specialized scientific and technical topics between the scientists and technologists from DAE and Universities/IITs/IISc/ National Labs.

#### 7. HOMI BHABHA CHAIR PROFESSORSHIP

These Chairs are instituted in recognition of sustained record of excellence and creative contribution to research and / or teaching in the area of interest to DAE.

**8. DAE GRADUATE FELLOWSHIPS**

To provide excellent career opportunity to students qualifying for admission to the M.Tech Course in Indian Institute of Technology at Mumbai, New Delhi, Kanpur, Kharagpur, Chennai or Roorkee.

**9. DAE GRADUATE FELLOWSHIPS FOR PH.D.**

To provide an opportunity to work on projects of interest to DAE to those students who aspire to attain the highest academic qualification, (ii) to achieve the basic objective of strengthening linkages between the grant-in-aid institutions and the research centres for the benefit of advancing the pace of research in nuclear sciences, and (iii) to accelerate the speed to translating R&D into technology products and their applications.

**10. DAE-SRC Award**

The core objective is to augment support to individual research workers with highly innovative ideas and with proven abilities to pursue advanced research in frontier areas of science and engineering at an accelerated pace.

**Contact Address:**

The Scientific Secretary / Programme Officer ,BRNS Secretariat,  
Department of Atomic Energy ,1st Floor, Central Complex,  
BARC, Trombay , Mumbai-400 085 . Tel. No: (022) 25505223/  
25593946/25595331/ 25595386  
Fax : (022) 25505151/ 25519613,  
E-mail:drppc@barc.ernet.in/trehan@barc.ernet.in/ gnpandey@barc.ernet.in

## 9. DEPARTMENT OF SCIENCE AND TECHNOLOGY (DST)

<http://www.dst.gov.in/>

### INTRODUCTION:

Department of Science & Technology (DST) was established in May 1971, with the objective of promoting new areas of Science & Technology and to play the role of a nodal department for organising, coordinating and promoting S&T activities in the country.

### 9.1 SCIENTIFIC & ENGINEERING RESEARCH AREAS:

- [Mega Facilities for Basic Research](#)
- [Innovation in Science Pursuit for Inspired Research \(INSPIRE\) programme](#)
- [R&D Infrastructure \(FIST, SAIFs, PURSE\)](#)
- [Science and Technology of Yoga and Meditation \(SATYAM\)](#)
- [Programme for Science Students](#)
- [Swarnajayanti Fellowships](#)
- [National Science & Technology Management Information System \(NSTMIS\)](#)
- [Science and Engineering Research Board \(SERB\)](#)
- [Cognitive Science Research Initiative \(CSRI\)](#)
- [Impacting Research Innovation and Technology \(IMPRINT \)](#)
- [VAJRA \(Visiting Advanced Joint Research\) Faculty Scheme](#)

### 9.2 DST- APPLICATIONS INVITED THROUGHOUT THE YEAR

- Call for proposal under Innovation & STEM Demonstration
- Technology Interventions For Disabled & Elderly (TIDE) Programme
- Call for applications for ASEAN-India Research Training Fellowships
- Call for R&D proposals under ASEAN-India Science & Technology Cooperation program
- Abdul Kalam Technology Innovation National Fellowship
- Announcement for inviting applications for Research & Training Fellowships for Developing Country Scientist (RTF-DCS)
- SERB Research Scientist Scheme
- Announcement for inviting Technologies /Innovation/ Idea for support under ASEAN-India S&T Development Fund

### 9.3 WOMEN SCIENTISTS SCHEME

- **Women Scientist Scheme-A(WOS-A):** Research in Basic/Applied Science
- **Women Scientist Scheme-B (WOS-B):** S&T interventions for Societal Benefit
- **Women Scientist Scheme-C (WOS-C):** Internship in Intellectual Property Rights (IPRs) for the Self-Employment

### ELIGIBILITY:

The scheme is meant to encourage women in S&T domain, preferably those having a break in career and not having regular employment, to explore possibility of re-entry into the profession.

The Scheme is open throughout the year. Therefore, there is no last date of application.

Mode of submission: Online

#### **9.4 INTERNATIONAL S&T COOPERATION**

The Department currently supports three bi-national S&T Centres which are independent entities established under inter-governmental bilateral agreements with France, USA and Germany.

- [Indo-French Centre for Promotion of Advanced Research \(IFCPAR / CEFIPRA\)](#)
- [Indo-US Science & Technology Forum \(IUSSTF\)](#)
- [Indo-German Science & Technology Centre \(IGSTC\)](#)

The collaborations in selected areas of mutual interest with different countries/organisations are materialized through various modes of cooperation like:

#### **CONTACT BUILDING THROUGH**

- Joint Workshops/ Seminars/Frontiers Symposia/Exhibitions
- Visitation, Fellowships & Internships
- Exploratory visits
- Lectures by Eminent Scientists
- Fielding young researchers scholars to international meets with Peers Provide Support for
- Joint R&D Projects of mutual interest
- Project mode mobility based exchanges
- Training and Advanced Schools
- Access to Advanced Facilities
- Participation in Mega-science projects

#### **FACILITATE AND PROMOTE**

- Joint R&D Clusters
- Virtual Networked Centres
- Multi - institutional R&D projects
- Catalyzing creation of Joint Ventures

#### **PROMOTE COMMERCIAL R&D AND INNOVATION**

- Academia – Industry Applied R&D Projects
- PPP for Innovation and Entrepreneurship (GITA Platform)
- Facilitate Technology Development & Tech Transfer
- Annual Technology Summit with partner country

#### **Contact Address:**

Department of Science & Technology,  
Technology Bhavan, New Mehrauli Road,,  
New Delhi-110 016.  
Telephone: +91-11-26562122/25/33/44, 26567373, 26962819  
Fax +91-11-26863847, 26515637

**10. DEPARTMENT OF CHEMICALS AND PETROCHEMICALS (DCPC)**

<https://chemicals.nic.in/about-us/about-department>

**INTRODUCTION:**

The vision is to be achieved through promotion of Research and Development and Human Resource Planning and Development. Towards furtherance of this objective, the policy envisaged institutionalization of National Awards for Technology Innovation in various fields of Petrochemicals and Downstream Plastic Processing Industry.

This innovation award scheme will motivate the inventors to carry out innovative Research & Development in the areas of petrochemicals industry, which in turn will improve performance / quality of the existing product. This award will be on outstanding contribution in R&D leading to better energy consumption, better plastic waste management, increase in product life cycle, development of innovative new products, quality standards, recycling and other emerging areas

**Schemes:**

- Plastic Parks
- Centres of Excellence
- National Petrochemicals Awards
- Chemicals Promotion Development Scheme

**Contact Address:**

Shri H Kam Suanthang  
Dir.(Admin & Vig.)  
Dept. of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers,  
236 A, A-wing, 2nd floor, Shastri Bhawan, New Delhi-110001  
Tel. No.23070712  
Fax No.23385263(F);  
E-mail :hk[dot]suanthang[at]nic[dot]in

## 11. GAS AUTHORITY OF INDIA LIMITED (GAIL)

<https://gailebank.gail.co.in/GUSI/frmStartUpGAIL.aspx>

### INTRODUCTION:

GAIL intends to collaborate with established Incubation Centres (ICs) to leverage their expertise and resources in incubating Start-Ups

#### 11.1 NATURAL GAS

- New applications of Natural Gas
- City Gas Distribution
- Natural Gas Storage
- Gas Sourcing and optimization
- Pipeline Operations and Maintenance

#### 11.2 PETROCHEMICALS

- Polymer Product Optimization
- Development of new polymer grades, catalysts and indigenization of existing catalysts
- New Polymer applications

#### 11.3 ENERGY

- Energy efficiency/conservation in process plants/pipelines
- Renewable and Alternate energy sources

#### 11.4 OTHERS

- Project Management
- Re-engineering of processes
- Nano materials
- Internet -of-Things, Cyber Security, Data Mining and Analytics
- Customer satisfaction
- Water and Effluent Treatment, Desalination
- Any Other area relevant to GAIL's Business

#### Contact Address:

R&D DEPARTMENT,  
GAIL TRAINING INSTITUTE,  
PLOT NO. 24, SECTOR - 16A,  
NOIDA-201301, GAUTAM BUDH NAGAR(U.P.)  
EPBAX Number: 0120-2515353/55/63  
E-mail: cor&d@gail.co.in

## 12. INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

<https://www.ieee.org>

### INTRODUCTION:

IEEE and its members inspire a global community to innovate for a better tomorrow through highly cited publications, conferences, technology standards, and professional and educational activities. IEEE is the trusted “voice” for engineering, computing, and technology information around the globe.

### 12.1. IEEE SCHOLARSHIPS, GRANTS, AND FELLOWSHIPS:

#### 12.1.1. IEEE COMPUTATIONAL INTELLIGENCE SOCIETY CONFERENCE TRAVEL GRANTS:

This program offers a number of travel grants to assist IEEE Student members presenting papers at IEEE NNS (Neural Networks Society) sponsored conferences.

#### 12.1.2. IEEE COMPUTATIONAL INTELLIGENCE SOCIETY SUMMER RESEARCH GRANT:

The program offers scholarships of US\$1,000 to US\$4,000 for deserving graduate students who need financial support for their research during a summer period.

#### 12.1.3. IEEE COMPUTER SOCIETY MERWIN SCHOLARSHIP:

This scholarship recognizes and rewards active leaders in the IEEE Computer Society Student Branch Chapters. Up to 20 US\$2,000 scholarships are available and awarded on an annual basis.

#### 12.1.4. IEEE DIELECTRICS AND ELECTRICAL INSULATION SOCIETY GRADUATE STUDENT FELLOWSHIP:

This fellowship was designed to support graduate research in the area of insulation or dielectrics. Two US\$7,500 or three US\$5,000 scholarships are awarded annually.

#### 12.1.5. IEEE ELECTRON DEVICES SOCIETY GRADUATE STUDENT FELLOWSHIP:

This program promotes, recognizes, and supports graduate-level study and research within EDS, with at least one fellowship awarded to students in each of the main geographic regions: Americas, Europe/Mid-East/Africa, Asia/Pacific.

#### 12.1.6. IEEE EPS PHD FELLOWSHIP:

This fellowship promotes, recognizes, and supports PhD level study and research within the Electronics Packaging Society's field of interest with an annual award of US\$5,000, applicable towards the student's research.

#### 12.1.7. IEEE JAMES C. KLOUDA MEMORIAL SCHOLARSHIP AWARD:

The IEEE James C. Klouda Memorial Scholarship awards a scholarship to a qualified undergraduate student who seeks an electrical engineering degree with emphasis in the field of electromagnetic compatibility or a related discipline, from an accredited US university or college.

**12.1.8. IEEE LIFE MEMBERS' FELLOWSHIP IN ELECTRICAL HISTORY:**

This fellowship in Electrical History supports either one year of full-time graduate work in the history of electrical science and technology at a college or university of recognized standing, or up to one year of post-doctoral research for a scholar in this field who has received his or her Ph.D. within the past three years. The stipend is US\$17,000, and a research budget of US\$3,000 is available.

**12.1.9. IEEE MASTERS STUDENT FELLOWSHIP:**

This one-year fellowship is awarded to promote, recognize, and support graduate masters-level study and research within the Electron Devices Society's field of interest. The prize is US\$2,000 and a plaque to the student, to be presented by the dean or department head of the student's enrolled graduate program.

**12.1.10. IEEE MICROWAVE THEORY AND TECHNIQUES SOCIETY GRADUATE FELLOWSHIPS:**

This program was created to support graduate research studies in microwave engineering. Fellowships are in the amount of US\$5,000 each, and the deadline for submission is 30 November annually.

**12.2. IEEE MADRAS SECTION:**

<https://www.ieemadras.org/student-branches/>

**INTRODUCTION:**

IEEE aims to fostering technology towards humanity, by industrial standards, conferences technical papers, newsletters, symposiums and workshops. Ground level support is from the UG student members and they will be futuristic leader to take up the IEEE executive positions.

**SCHEMES:**

- Teacher – in – Service Program
- Faculty Development Programme
- SSDP (Student Skill Development Program)
- Technical Activities
- Society Activities

**Contact Address:**

IEEE Madras Section  
Room No.3, ISTE Professional Center,  
Gandhi Mandapam Road,  
Kottur, Chennai – 600 025.  
(Opp Anna Centenary library)  
Land Line: +91- 44- 24423939  
Mobile: 9382328776  
Email: ieeemas@gmail.com

### 13. INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR)

<https://www.icmr.nic.in/>

#### INTRODUCTION

The primary aim of the ICMR is to promote research in the country in the fields of medicine, public health and allied areas. The Council promotes biomedical research in the country through intramural research (through Institutes totally funded by ICMR) and extramural research (through grants-in-aid given to projects in non ICMR Institutes)

#### 13.1. SCHEMES

- SHARP
- Fellowship
- Extramural Ad-hoc
- MD/MS-PhD
- MD/MS/DM/MCh/MDS Support
- Post Doctoral Research
- Emeritus Medical Scientist
- Clinical Training/Translational Research Workshops
- Medical Innovation
- International Travel by Non-ICMR Scientists
- Centre For Advanced Research
- Nurturing Clinical Scientists Scheme
- ICMR Chairs
- Short Term Visiting Fellowships
- Ad-hoc Research Schemes
- Research Fellowships/ Associateships
- Junior Research Fellowships
- Centres for Advanced Research
- Task-Force Projects
- ICMR Talent Search Scheme for MD/MS-PhD Programme
- ICMR Postdoctoral Research Fellowship
- New scheme "Medical Innovation Fund"
- Short Term Research Studentship
- Guidance for International Collaboration
- ICMR International Fellowship Programme for Indian Biomedical Scientists
- ICMR International Fellowships for Biomedical Scientists from Developing Countries
- Financial assistance to MD/MS/DM/MCH thesis
- ICMR aided symposia/ seminars/ workshops/ courses/ conferences

#### Contact Address:

Indian Council of Medical Research  
 V. Ramalingaswami Bhawan, P.O. Box No. 4911  
 Ansari Nagar, New Delhi - 110029, India  
 Ph: 91-11-26588895 / 91-11-26588980, 91-11-26589794 / 91-11-26589336, 91-11-26588707  
 Fax: 91-11-26588662  
 Email:icmrhqds[at]sansad[dot]nic[dot]in

## 14. INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH (IGCAR)

<http://www.igcar.gov.in/contact.html>

### INTRODUCTION:

The main objective of the centre is in conducting broad based multidisciplinary programme of scientific research and advanced Engineering, directed towards the development of sodium cooled Fast Breeder Reactor [FBR] and closed fuel-cycle technology, in India.

IGCAR has an excellent team of scientists and engineers to carry out research (both basic and applied) in many disciplines of science and engineering. IGCAR offers excellent opportunities for carrying out research leading to Ph.D. There are already a good number of research scholars in the Centre.

#### Contact Address:

Indira Gandhi Centre for Atomic Research,  
Department of Atomic Energy,  
Kalpakkam,  
Tamilnadu - 603102

## 15. INDIAN RENEWABLE ENERGY DEVELOPMENT AGENCY LIMITED (IREDA)

<https://ireda.in/>

### INTRODUCTION:

Indian Renewable Energy Development Agency Limited (IREDA) is a Mini Ratna (Category – I) Government of India Enterprise under the administrative control of Ministry of New and Renewable Energy (MNRE). IREDA is a Public Limited Government Company established as a Non-Banking Financial Institution in 1987 engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy and energy efficiency/conservation with the motto: “ENERGY FOR EVER”

### SCHEMES:

- Loan against Securitization of Future Cash Flow of Renewable Energy Projects
- “Bridge Loan against MNRE Capital Subsidy payable to Accredited Channel Partners and State Nodal Agencies (SNA) for claims against installation of Solar Water Heating Systems”
- “Bridge loan against GBI Claims Payable to Renewable Energy Developers under MNRE Scheme for Generation Based Incentive (GBI) for grid interactive Wind and Solar power projects”
- IREDA to take up the role of lead FI under Consortium/Syndicated Loans/ Multi banking arrangements by charging Lead Fee.
- Loan Scheme for Rooftop Solar PV Power Projects for Commercial, Industrial and Institutional Sector.
- IREDA Scheme for discounting of Energy bills.
- “Credit Enhancement Guarantee Scheme” for raising Bonds towards Renewable Energy Projects (Solar / Wind)
- IREDA's New Loan Scheme on Concentrated Solar Thermal project under GEF-UNIDO-MNRE Scheme
- Policy for financing of Transmission Projects
- IREDA New Scheme - Financing of Briquettes/ Pellets/RDF manufacturing facilities.
- IREDA New Scheme - financing of Biomass Pellets, Briquettes, RDF Manufacturing Facilities

### Contact Address:

Indian Renewable Energy Development Agency Limited  
(A Government of India Enterprise)

#### Corporate Office

3rd Floor, August Kranti Bhawan,  
Bhikaiji Cama Place, New Delhi – 110  
066.

Tel: +91 11 26717400 - 26717412

Fax: +91 11 26717416

Email: [cmd@ireda.in](mailto:cmd@ireda.in)

#### Registered Office

India Habitat Centre, East Court

Core-4A, 1st Floor, Lodhi Road

New Delhi - 11 00 03

Tel: +91 11 24682206 - 24682219

Fax: +91 11 24682202

## 16. INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)

<http://www.isteonline.in/>

### INTRODUCTION:

The major objective of the ISTE is to provide quality training programmes to teachers and administrators of technical institutions to update their knowledge and skills in their fields of activity and to assist and contribute in the production and development of top quality professional engineers and technicians needed by the industry and other organizations.

### PROPOSAL INVITED TO HOST THE ISTE CONVENTIONS 2019:

Proposals are invited to host the **22nd ISTE Annual Students Convention and 49th ISTE National Annual Faculty Convention 2019**. Interested institutions are requested to send their detailed profile alongwith their willingness letter for hosting the Conventions to ISTE Hqrs., New Delhi by email or hard copy.

As a regular annual feature, **Forty Eight National Annual Faculty Conventions** and **Twenty One Students Convention of ISTE** have been held so far in different States. The major impact of these Conventions are instrumental in providing an opportunity for the Teachers, Educational Planners and Administrators, Students and all other stakeholders who are involved in the field of technical education to get together and share their views and to contribute the development of technical education system.

In this regard, Institutions are welcome to send their proposals for hosting the **22nd ISTE Annual Students Convention and 49th ISTE National Annual Faculty Convention**, which will be organised during October and December 2019 respectively. Proposals received will be placed before the ISTE Executive Council in its meeting for consideration. Interested institutions are requested to send their detailed profile alongwith their willingness letter for hosting the Conventions to the following address:

#### Contact Address:

The Executive Secretary  
Indian Society for Technical Education  
Shaheed Jeet Singh Marg  
Katwaria Sarai, New Delhi - 110 016  
Phone : 011-26513542, 26963431  
Email : istedhq@vsnl.net  
Website : www.isteonline.in

### SELF-FINANCING STTPS

There is a limited budgetary provision for the STTPs under the overall QIP Scheme of the MHRD/ AICTE. Therefore, in order to enable the teachers to enhance their technical competencies and help them to become eligible for Career Advancement opportunities, STTPs on self-financing basis are introduced. The special features of the Self-Financing STTPs are as under:

- These are programmes being conducted locally.
- The participating teacher is not required to take leave.
- The academic schedule of the institution is not affected.
- Boarding & lodging facilities are not required.
- TA/DA expenses are zero.
- The expenses to be incurred on Guest Experts, Instructional Material, etc. could be met by the concerned institute itself.
- The nominal course fee of Rs.300/- per participant to be necessarily paid to the ISTE Headquarters after completion of the programme.

The Member Institutes/Faculty interested in the conduct of Self-Financing STTPs, may please send their proposals alongwith a DD for Rs.1180/- (1000 +180 GST) drawn in favour of ISTE, New Delhi (revision in fee has approved by the Executive Council of ISTE in its 106th EC Meeting) in prescribed STTP proforma on the following address:

### **AICTE – ISTE ORIENTATION/ REFRESHER PROGRAMME**

The objective is to conduct AICTE-ISTE Induction/ Refresher Programmes for the teaching faculty working in technical institutions. Total 100 Refresher programme & 50 Orientation programme with the funding of Rs. 300000 per programme.

#### **Contact Address:**

The Executive Secretary  
Indian Society for Technical Education  
Saheed Jeet Singh Marg,  
Near Katwaria Sarai, New Delhi – 11 0 016  
Phone : 011-26513542, 26963431  
Fax : 011-26852421  
Email : [istedhq@vsnl.net](mailto:istedhq@vsnl.net)  
Website : [www.isteonline.in](http://www.isteonline.in)

**17. INDIAN SPACE RESEARCH ORGANISATION (ISRO)**<https://www.isro.gov.in/>**INTRODUCTION:**

ISRO encouraging academia to participate and contribute in various Space related research activities. Under RESPOND, projects are taken up by Universities/Academic Institutions in the areas of relevance to Space Programme. ISRO has evolved the RESPOND programme through which necessary financial and technical support is provided to academia in India for conducting research and development activities related to Space Science, Space Technology and Space Applications.

**FOR MORE DETAILS VISIT:**

1. [www.sac.gov.in/respond](http://www.sac.gov.in/respond)
2. [www.vssc.gov.in](http://www.vssc.gov.in) > Activities > RESPOND
3. [www.prl.res.in](http://www.prl.res.in)> opportunities>respond programme

Five copies of the proposal, in the respective areas given below should be sent to one of the following **ISRO**

**CENTERS:**

Domain	Address
Space Sciences	Director Physical Research Laboratory Navarangapura, Ahmedabad 380 009. e-mail : director@prl.res.in
Atmospheric Sciences	Director National Atmospheric Research Laboratory Gadanki, Pakala Mandal Pin-517 112 Andra Pradesh e-mail : director@narl.gov.in
Rockets, launch vehicles and space technology including Avionics	Director Vikram Sarabai Space Centre ISRO P.O. Thiruvananthapuram 695 022 e-mail : director@vssc.gov.in
Remote Sensing	Director National Remote Sensing Centre Department of Space, ISRO Balanagar, Hyderabad - 500 625(A.P.) INDIA. e-mail : director@nrsc.gov.in
Space Applications Space communications, Remote sensing and meteorology.	Director Space Applications Centre Jodhpur Tekra Ahmedabad 380 015. e-mail : director@sac.gov.in

<b>Satellite Technology</b>	Director ISRO Satellite Centre P.O. No. 1795, HAL Airport Road Vimanpura Post Bangalore 560 017 e-mail : director@isac.gov.in
<b>Systems studies related to tracking, telemetry, telecommand and other ground instrumentation for satellites and launch vehicles</b>	Director Satish Dhawan Space Centre, SHAR Sriharikota P.O. 524 124 Nellore District. Andhra Pradesh e-mail : director@shar.gov.in
<b>Propulsion</b>	Director Liquid Propulsion System Center Valiamala P.O Thiruvananthapuram 695 547 e-mail : director@lpsc.gov.in
<b>Semiconductors, MEMS</b>	Director Semi-Conductors Laboratory Sector, 72 SAS Nagar 160071 (Near Chandigarh) Punjab e-mail : director@scl.gov.in
<b>Remote sensing, Image processing, Hyperspectral and microwave remote sensing, Forest and environment, Disaster management etc</b>	Director Indian Institute of Remote Sensing 135/4, Kalidas Road, PB No 135 Dehradun 248 001 Uttarkhand e-mail : director@iirs.gov.in
<b>Propulsion</b>	Director ISRO Propulsion Complex (IPRC) Mahendragiri 627133 Tirunelveli, Tamil Nadu e-mail : director@iprc.gov.in
<b>Inertial Systems, micro actuators, Accelerometer etc.</b>	Director ISRO Inertial System Unit Vattiyookavu P.O Thiruvananthapuram 695013 Kerala e-mail : iisu_director_office@vssc.gov.in
<b>Hyperspectral and microwave remote sensing, UAV and applications, Forest phonology, biomass, Location based weather forecasting, Nowcasting for thunderstorms, lightning, space applications specific to NE region etc.</b>	Director North Eastern Space Applications Centre Umiam 793 103 Meghalaya e-mail : director@nesac.gov.in

**Two copies of all proposals must be sent to:**

Director, Capcity Building Programme Office (CBPO) ,  
ISRO Head Quarters,  
Department of Space,  
Antariksh Bhavan,  
New BEL Road,  
Bangalore 560 231  
E-mail : dir.cbpo@isro.gov.in

**18. INDIAN NATIONAL SCIENCE ACADEMY (INSA)**

<http://www.insaindia.res.in/>

**INTRODUCTION:**

Basic research, a pre/requisite for applied research leading to developmental activity, conducted by the academic institutions, was supported by the Academy by instituting programmes to individual scientists, interdisciplinary and multi-institutional programmes. With the emergence of major funding bodies in the country for carrying out scientific research, the Academy modified its programme to support individual scientists. The programme now involves ten positions of INSA Distinguished Professors for promotion and service to science, support to INSA superannuated scientists, research projects of INSA Young Scientist Medal Awardees and INSA Visiting Scientists.

The Academy also provides partial financial assistance for holding/organising international/national conferences, symposia or seminars in India.

**SCHEMES:**

- INSA Distinguished Professors
- Senior Scientists Programme
- Honorary Scientists Programme
- Young Scientist Medal Awardees
- Partial Financial Assistance for Conferences/Seminars/Workshops etc.
- INSA Visiting Scientist Programme
- List of Applications Shortlisted for Partial Financial Assistance of Conferences/Seminars/Workshops etc.
- INSA Emeritus Scientists

**Contact Address:**

The Executive Director  
Indian National Science Academy  
Bahadur Shah Zafar Marg  
New Delhi-110 002  
Email: [esoffice@insa.nic.in](mailto:esoffice@insa.nic.in) , [council@insa.nic.in](mailto:council@insa.nic.in)

**19. INDUSTRIAL CONSULTANCY & SPONSORED RESEARCH (ICSR)**

<https://www.iitm.ac.in/icsr>

**INTRODUCTION:**

The centre for Industrial Consultancy and Sponsored Research (IC&SR) was set up in the early seventies to promote interaction between the Industry and the Institute. Today, the centre for IC&SR is an independent section of the Institute, headed by a Dean. Over the years, this centre has played a vital role in bringing together the people from the Industry and the faculty of the Institute resulting in important contributions to design and development in the country.

The centre for IC&SR facilitates, coordinates and administers Sponsored and Consultancy projects. To know more about IC & SR visit our website at <https://icandsr.iitm.ac.in/>

**TECHNOLOGY TRANSFER / PATENTS & OTHER IPR:**

IIT Madras has an array of technologies / IPR developed through Research and Development work in the Institute. These are available for commercial exploitation through Technology Transfer - Licensing, Startup/Incubation.

**For further details and discussions, please contact us:****Dean (IC&SR)**

Prof. Ravindra Gettu

Email – [deanicsr@iitm.ac.in](mailto:deanicsr@iitm.ac.in)

Tel - +91 044 2257 8060

**Senior Techno Economic Officer**

Dr. V. Suresh

Email – [sureshv@iitm.ac.in](mailto:sureshv@iitm.ac.in)

Tel - +91 044 2257 8353

## 20. LADY TATA MEMORIAL TRUST

<https://www.ladytatatrust.org>

### INTRODUCTION:

The Lady Tata Memorial Trust was established by Sir Dorabji Tata in April 1932 in memory of his wife, Lady Meherbai,

### INTERNATIONAL AWARDS

The Trust spends four-fifths of its income on international research, and an International Scientific Advisory Committee, based in London, invites applications for Awards for individual support for research on leukaemia worldwide through advertisement and on the trust's website. Awards are restricted to studies of leukaemogenic agents, and the epidemiology, pathogenesis, immunology and genetic basis of leukaemia and related diseases. Applications not directly related to the field of leukaemia are not considered. These awards are open to suitably qualified investigators of any nationality. Priority is given to those intending to move to other centres with a view to establishing scientific collaboration between laboratories. The academic year for these awards is October-September.

### INDIAN AWARDS

The Trust offers one-fifth of its income to scholars doing scientific investigations in Indian Universities and Institutes into diseases of the blood, with special references to leukaemia, and for scientific research towards alleviation of human suffering from disease. The awards offered are the Post-Doctoral Fellowship (2-year term) and Junior Scholarship (5-year term leading up to the Senior Scholarship/PhD studies).

#### Contact Address:

Professor D Catovsky or Professor B J Bain,  
c/o Mr F. Parekh,  
Tata Limited,  
18 Grosvenor Place,  
London  
SW1X 7HS.  
Telephone: Tata Trust: 020 7235 8281  
Email: [Sonia@tata.co.uk](mailto:Sonia@tata.co.uk)

**21. MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY****(MEITY)**<https://meity.gov.in/>**INTRODCUTION:**

- e-Government: Providing e-infrastructure for delivery of e-services
- e-Industry: Promotion of electronics hardware manufacturing and IT-ITeS industry
- e-Innovation / R&D: Implementation of R&D Framework - Enabling creation of Innovation/ R&D Infrastructure in emerging areas of ICT&E/Establishment of mechanism for R&D translation
- e-Learning: Providing support for development of e-Skills and Knowledge network
- e-Security: Securing India's cyber space
- e-Inclusion: Promoting the use of ICT for more inclusive growth
- Internet Governance: Enhancing India's role in Global Platforms of Internet Governance.

**21.1 DIVISIONS UNDER R&D IN ELECTRONICS GROUP:**

- [Electronics Systems Development & Application Division](#)
- [R&D in Medical Electronics and Health Informatics Division](#)
- [Electronic Materials & Components Development Division](#)
- [Microelectronics Development Division](#)
- [Nano- Technology Initiative Division](#)
- [Innovation & IPR and Centre of Excellence \(CoE\) Projects](#)

**For further information please contact:**

Shri Arvind Kumar

Group Coordinator &amp; Senior Director

R&amp;D in Electronics Group

**Phone:** +91-11-24364754 (Office)**Fax:** +91-11-24363082**Email:** akumar[at]meity[dot]gov[dot]in**21.2 DIVISIONS UNDER R & D IN INFORMATION TECHNOLOGY**

At present, R&D in IT Group is implementing R&D Programmes through the following Divisions:

- [High performance Computing \(HPC\) Division](#)
- [IT in Emerging Areas \(ITEA\) Division](#)
- [Information Technology Research Academy \(ITRA\) Division](#)

**Contact Address:****Dr. B.K. Murthy**

Scientist G and Group Coordinator

R&amp;D in Information Technology Group

**Phone No :** +91-11-24363138(Office)**E-mail :** bkm[at]meity[dot]gov[dot]in

## 21.3 R&D IN CYBER SECURITY

### Thrust Areas

#### i. Cryptography and Cryptanalysis

- Algorithms and applications, software and hardware realization, FPGA, VLSI, DSP, smart cards for security, protocol analyzers
- Authentication and authorization techniques, role based access rights, Biometric identification / authentication systems, Trust models and technologies that do not rely on a previously determined trusted third party, in dynamic environment

#### ii. Network and Systems Security

- Virtual Private Network Security solutions
- Security of key internet protocols (Ipv4 to Ipv6), Domain Name System (DNS) and Border Gateway Protocol (BGP), routers, servers
- Security of wireless devices, protocols and networks
- OS Security and trusted OS
- Automatic generation of test suites, safe programming languages
- XML security

#### iii. Security Architectures

- Survivable architectures and intrusion tolerant systems that allow for degradation of certain capabilities while ensuring that critical functionality remains available
- Autonomic systems that can sense and reason about their internal components and state and recovery oriented computing
- Self-evolving systems/ Self-strengthening systems that can monitor themselves and adapt to change
- Secure and survivable storage systems

#### iv. Vulnerability and Assurance

##### a) Vulnerability Detection and Analysis

- Source / Object code scanning tools, Device (hardware, firmware, communication media, storage media ) scanning tools, Host and network based scanners, system configuration checkers
- Tools and techniques for modeling interdependencies and vulnerabilities in systems
- Risk analysis tools

##### b) Assurance Technologies

- Tools for efficient product evaluation and system level evaluation
- Assurance tools for software security
- Network Audit Tools

#### v. Monitoring, Surveillance and Forensics

##### a) Intrusion Detection

- Virus scanning, malicious code detection
- Firewalls, Intrusion Detection Systems (network and host based), distributed and intelligent proactive Intrusion Detection Systems
- Intrusion detection for high speed networks

#### b) Content and Traffic Analysis

- Cracking code/passwords /logs
- Content filtering tools for Indian and other languages
- Intelligence gathering tools
- Intelligent traffic analysis
- Steganography and steganalysis

#### c) Computer Forensics

- Computer forensic tools for speech and imaging
- Automated trace-back tools, Network forensics
- Automated Recovery, damage assessment and asset restoration tools

### 21.4 R&D in Convergence Communications & Broadband technologies (CC&BT)

The CC&BT programme is aimed at supporting and developing indigenous capability in R&D in Convergence Communication, Broadband Technologies and in Strategic Electronics. A number of academic institutions, industries, user organizations and research labs spread all over the country are beneficiaries of the programme.

- [Convergence Communications Division](#)
- [Broadband Technologies Division](#)
- [Strategic Electronics Division \(SED\)](#)
- [SAMEER activities](#)
- [Technology Development Plan](#)
- [Working Group Meeting & List of Thrust Areas for Project Funding](#)
- [Composition of Working Group](#)
- [Financial Grants](#)
- [Alternate Technologies for Connectivity](#)

#### Contact Address:

**Shri A.K. Balani**

Scientist G and Group Coordinator

+91-11-24364755 (Office),

+91-11-26889818 (Residence),

+91-11-24364755 (Fax)

## 21.5 IPR Promotion

Towards this, DeitY has established a dedicated division for IPR support with the objectives of:

1. Creating awareness and facilitating support
2. Promoting IPR in the field of ICTE
3. Creating a conducive infrastructure for a strong IPR ecosystem

Some of the major initiatives of the division are:

1. Providing IP Facilitation Support to DeitY Societies and Grantee Institutions
2. Providing Financial Support to Startups and SMEs for International Patent Filing through SIP-EIT Scheme
3. Creation of IPR Awareness through Financial Support to Industry Bodies and Academia
4. Providing IPR Related Services including Prior Art Search
5. Providing Help-Desk services for increased IPR creation
6. Creation of IPR Awareness through Digital Media
7. Creation of IPR Tools, Products and Technologies
8. International Collaborations

### Contact Address:

**Dr. A.K. Garg**

Director

E-mail: ajaik[at]deity[dot]gov[dot]in

Telefax: +91-11-24364799

## 22. MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSME)

<https://msme.gov.in/>

<https://msme.gov.in/sites/default/files/FlipbookEnglishSchemeBooklet.pdf>

### INTRODUCTION:

Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSMEs not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth. MSMEs are complementary to large industries as ancillary units and this sector contributes enormously to the socio-economic development of the country.

### SCHEMES:

- Prime Minister's Employment Generation Programme (PMEGP)
- 2nd Loan for up-gradation of the existing PMEGP/MUDRA units
- Credit Guarantee Scheme for Micro & Small Enterprises (CGTMSE)
- Credit Linked Capital Subsidy Component (CLCS & TU Scheme)
- Procurement and Marketing Support (PMS) scheme
- International Cooperation (IC) Scheme
- Micro & Small Enterprises Cluster Development Programme (MSE– CDP)
- Scheme of Fund for Regeneration of Traditional Industries (SFURTI)
- A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship (ASPIRE)
- ZED Certification Scheme
- Lean Manufacturing Competitiveness for MSMEs
- Design Clinic for Design Expertise to MSMEs
- Digital MSME
- Entrepreneurial and Managerial Development of SMEs through Incubators
- Awareness on Intellectual Property Rights (IPR)
- Entrepreneurship Skill Development Programme (ESDP) Scheme
- National SC-ST Hub
- Assistance to Training Institutions (ATI) Scheme

- Coir Industry Technology Upgradation Scheme
- Skill Upgradation and Mahila Coir Yojana
- Interest Subsidy Eligibility Certificate (ISEC)
- Work-Shed Scheme for Khadi Artisans
- Rojgar Yukt Gaon
- Mahatma Gandhi Institute for Rural Industrialization (MGIRI)
- Pottery Activity under Gramodyog Vikas Yojana (GVY) scheme
- Beekeeping Activity under “Gramodyog Vikas Yojana(GVY) Scheme
- Agarbatti Making Project under “Gramodyog Vikas Yojana(GVY) Scheme
- Tool Rooms and Technical Institutions - A Component of Infrastructure Development & Capacity Building scheme

**Contact Address:**

**Ministry of Micro, Small and Medium Enterprises  
Udyog Bhawan, Rafi Marg, New Delhi - 110011**

**PMEGP (Prime Minister's Employment Generation Programme)**

**PMEGP- Scheme related queries, please contact Shri Anil  
Kumar, Under Secretary, at 011-23063641.**

## 23. MINISTRY OF NEW AND RENEWABLE ENERGY (MNRE)

<https://mnre.gov.in/>

### INTRODUCTION:

The need to refocus attention on Research, Design & Development (RD&D) has arisen. The underlying purpose of RD&D effort is to make industry competitive. A comprehensive statistic that measures competitiveness is net foreign exchange earning. Accordingly, RD&D effort is to make the country a net foreign exchange earner in the New and Renewable Energy Sector. In addition, the share of indigenously designed, developed and manufactured new and renewable energy systems/ devices has also to increase and consequently monitored for its eventual growth to a dominant position.

### 23.1 FOCUS AREAS:

Research, design and development efforts should invariably lead to manufacture of complete systems, even if these efforts are required to be shared among different institutions. Thus, there would be a need for system integration broadly covering the following areas: -

- Alternate Fuels (hydrogen, bio & synthetic) to supplement and eventually substitute liquid hydrocarbons;
- Green Initiative for Future Transport (GIFT) based on Alternate Fuels for land, air & sea applications to supplement and eventually substitute fossil-fuel systems;
- Green Initiative for Power Generation (GIPS) based on Alternate Fuels for stationary & portable power generation applications to supplement and eventually substitute fossil-fuel systems;
- Standalone new and renewable energy products to provide cost-effective energy for cooking, lighting and motive power;
- Distributed new and renewable energy systems to provide cost-competitive energy supply options for cooking, lighting and motive power;
- New and renewable energy products for urban, industrial and commercial applications, including energy recovery from urban and industrial wastes and effluents; and
- MW scale grid interactive renewable electricity systems to contribute towards supplement and eventually substitute fossil-fuel based electricity generation.

### 23.2 SUPPORT PROGRAMMES

#### a) INFORMATION AND PUBLIC AWARENESS PROGRAMME

The objective of “Information & Public Awareness Programme” is to disseminate information on new and renewable sources of energy (NRSE) systems/devices through variety of media like electronic, print & exhibition as well as outdoor media, thereby popularizing and creating awareness about such systems and devices. The

Programme is implemented mainly through State Nodal Agencies, Directorate of Advertising & Visual Publicity (DAVP), Doordarshan, All India Radio (AIR), and Department of Posts, etc.

**b) SPECIAL AREA DEMONSTRATION PROJECT PROGRAMME**

The Special Area Demonstration Project Scheme of the Ministry has been introduced with the objective of demonstrating application of various renewable energy systems in a project mode at places of national and international importance including world heritage sites, heritage monuments, religious locations and places of public interest to create greater awareness of renewable and to supplement the energy requirement at such locations

**c) HUMAN RESOURCES DEVELOPMENT PROGRAMME**

Ministry has been implementing a comprehensive Human Resource Development Programme with the objective of institutionalizing the renewable energy education and training in the country with the following overall goals:

- To update the professionals working in the field of renewable energy on technological, economical and social issues and management of the science and technology and public administration through infusion of scientific temper and accountability;
- To infuse commitment towards building of partnership and participatory decision-making;
- To be responsive to the challenge of changing framework needs in policy, institutional, legal, trade, IPR, knowledge management, organizational and technological development;
- To strive for improving performance and efficiency of renewable energy systems and devices to make them cost competitive;
- To provide adequate knowledge of the technical issues that are essential to help executives in Government, banking and financial sector with non-technical background about renewable energy;
- To bring about attitudinal changes among the renewable energy professionals and those working in the mainstream power sector to enhance the use of renewable energy for energy security of the country; and
- To act as a facilitator for improving the skill sets of professionals and executives in the renewable energy industry and also in research and development institutions.

**d) SEMINAR & SYMPOSIA**

The Ministry provides support to universities, academic institutions/colleges, non-governmental organizations, Government Departments, etc. for organizing workshops, seminars, conferences to provide a forum for professionals, students, policy-makers, managers, economists, industry representatives, etc., to interact and share

their views on identified thrust areas related to renewable or any other emerging area impinging on technology, innovation in regard to renewable.

**Contact Address:**

Ministry of New and Renewable Energy  
Block-14, CGO Complex,  
Lodhi Road, New Delhi-110 003, India.  
Fax: +91-11-24361298

## 24. MINISTRY OF HUMAN RESOURCE DEVELOPMENT (MHRD)

<https://mhrd.gov.in/>

### INTRODUCTION:

The Department of Higher Education, MHRD, is responsible for the overall development of the basic infrastructure of Higher Education sector, both in terms of policy and planning. Under a planned development process, the Department looks after expansion of access and qualitative improvement in the Higher Education, through world class Universities, Colleges and other Institutions.

### SCHEMES:

#### 24.1 UNIVERSITY AND HIGHER EDUCATION

- [Rashtriya Ucchatar Shiksha Abhiyan \(RUSA\)](#)
- [National Initiative for Design Innovation](#)
- [National Research Professorship \(NRP\)](#)
- [Establishment of New Central Universities](#)
- [Indira Gandhi National Tribal University](#)
- [Establishment of 14 World Class Central Universities](#)
- [Setting up of 374 Degree Colleges in Educationally Backward Districts](#)
- [Scheme for incentivising state governments for expansion of higher education institutions](#)
- [Central Sector Interest Subsidy Scheme, 2009 on Model Education Loan Scheme of IBA](#)
- [Construction of girls hostels](#)
- [Supporting uncovered state universities and colleges](#)
- [Additional assistance to about 160 already covered universities and about 5500 colleges](#)
- [Strengthening science based higher education and research in universities](#)
- [Inter universities research institute for policy and evaluation](#)
- [Schemes Implemented through Autonomous Organisations](#)

#### 24.2 TECHNICAL EDUCATION

- [Sub-Mission on Polytechnics under the Coordinated Action for Skill Development](#)
- [Scheme of Apprenticeship Training](#)
- [Support For Distance Education & Web Based Learning \(NPTEL\)](#)
- [Indian National Digital Library in Engineering, Science & Technology \(INDEST-AICTE\) Consortium](#)
- [National Programme of Earthquake Engineering Education \(NPEEE\)](#)
- [Technology Development Mission](#)
- [Direct Admission of Students Abroad](#)
- [Scheme for Upgrading existing Polytechnics to Integrate the Physically Disabled in the mainstream of Technical and Vocational Education](#)
- [Setting up 20 new IIITs](#)

## 25. NATIONAL SCIENCE FOUNDATION (NSA)

[https://www.nsf.gov/funding/pgm\\_list.jsp?org=NSF&ord=date](https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=date)

### INTRODUCTION:

The National Science Foundation (NSF) is an independent federal agency [created by Congress](#) in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..." NSF is vital because we support basic research and people to create knowledge that transforms the future. This type of support:

- Is a primary driver of the U.S. economy.
- Enhances the nation's security.
- Advances knowledge to sustain global leadership.

With an annual budget of \$8.1 billion (FY 2019), we are the funding source for approximately 24 percent of all federally supported basic research conducted by America's colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing.

### FUNDING OPPORTUNITIES AND DUE DATES AVAILABLE IN THE FOLLOWING LINK

[https://www.nsf.gov/funding/pgm\\_list.jsp?org=NSF&ord=date](https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=date)

## 26. NATIONAL BOARD FOR HIGHER MATHEMATICS (NBHM)

<http://www.nbhm.dae.gov.in>

### INTRODUCTION:

The objectives of the board are: to promote the growth of higher mathematics in the country; and to coordinate activities for the development of mathematics. The functions of the NBHM are:

- To continuously evolve and implement policies and programmes for the development of mathematics in the country.
- To help in the establishment and development of mathematical centres.
- To give financial assistance to research projects and to doctoral and postdoctoral scholars.
- To assess the nature and extent of mathematical inputs necessary in applications ophisticated mathematics is involved. and to suggest steps for training adequate personnel specially in areas where
- To determine the funds required for these activities and to administer these funds through suitable machinery set up for this purpose.

NBHM normally provides financial support only to Indian nationals and institutions. Currently NBHM grants postdoctoral fellowships, Ph. D. scholarships, M.A./M.Sc. scholarships for research/education in mathematics. NBHM provides financial support to the Mathematics Olympiad activity, run in collaboration with the Homi Bhabha Centre for Science Education, for students at the junior college/high school level. NBHM provides financial support for holding conferences/seminars/workshops and instructional schools. Granting financial support to libraries of mathematics departments of universities and research institutions in the country is one of the major activities of NBHM.

### FINANCIAL SUPPORT

- [Libraries](#)
- [Book distribution](#)
- [Visiting Professorship](#)
- [Conferences](#)
- [Instructional Schools](#)
- [Research Projects](#)
- [Postdocs](#)
- [Teacher Fellowship](#)
- [Travel](#)
- [Short Term Visits](#)

#### Contact Address:

Smt. Sana N. Shaikh  
National Board for Higher Mathematics  
Department of Atomic Energy  
1st floor, O.Y.C.Building,  
Anushakti Bhavan, C.S.M. Marg,  
Mumbai-400 001, Maharashtra  
INDIA  
Contact no: 022-2202-2533  
Email: sana\_nbhm@dae.gov.in

## 27. PETROLEUM CONSERVATION RESEARCH ASSOCIATION (PCRA)

<http://www.pcra.org/>

### 27.1 PCRA R&D SCHEME

#### OBJECTIVES

- Development of innovative product and process technologies for saving petroleum fuel.
- Strengthening the interface between R&D establishments and Industry
- Accelerating commercialization of products/ processes successful at lab stage

#### SECTORS OF INTEREST

Industrial, Agricultural, Transport & Domestic sector

#### Contact Address:

Director (R&D)  
PETROLEUM CONSERVATION RESEARCH  
ASSOCIATION  
Sanrakshan Bhawan, 10 Bhikaji Cama Place,  
New Delhi-110 066.  
Ph: 011-26183054, Fax: 011-26109668  
Email: dirrnd@pcra.org

### 27.2 PCRA R&D SCHEME FOR INDIVIDUAL /PRIVATE ENTITIES

#### OBJECTIVES

- Development of innovative product and process technologies for saving petroleum fuel.
- Accelerating commercialisation of products/ processes successful at lab stage

#### SECTORS OF INTEREST

- Industrial
- Agricultural
- Transport
- Domestic sector

#### SCOPE & SUPPORT

- Proposals to convert original idea/ invention/ know-how into working prototype/ process shall be supported.
- Proposals should involve industry at some stage of project, to ensure commercialization if project is successful.
- Maximum support is Rs. 25,00,000.00. (Excluding of TDS, if any). However, actual amount of financial support may vary case-to-case

#### Contact Address:

Director (R&D)  
Petroleum Conservation Research Association  
Sanrakshan Bhawan, 10 Bhikaji Cama Place, New Delhi-  
110 066.  
Ph: 011-26183054, Fax: 011-26109668

## 28. SCIENCE AND ENGINEERING RESEARCH BOARD

<http://serbonline.in/>

### INTRODUCTION:

The SERB provides core research support to active researchers to undertake research and development in frontier areas of Science and Engineering.

The project proposal should be prepared according to the guidelines and submitted online through the website [www.serbonline.in](http://www.serbonline.in)

### 28.1 SCHEMES & PROGRAMS

- [Core Research Grant \(CRG\)](#)
- [High Risk High Reward Research \(HRHR\)](#)
- [Industry Relevant R & D \(IRRD\)](#)
- [Empowerment and Equity Opportunities for Excellence in science \(EMEQ\)](#)
- [Intensification of Research in High Priority Area \(IRHPA\)](#)
- [Start-up Research Grant \(SRG\)](#)
- [MATRICS](#)
- [International Travel Support \(ITS\)](#)
- [Assistance to Professional Bodies & Seminars/Symposia](#)
- [Start-up grant for Young Scientists\(YSS\)](#)

### 28.2 AWARDS & FELLOWSHIPS

- [J C Bose National Fellowship](#)
- [Ramanujan Fellowship](#)
- [National Post-Doctoral Fellowship](#)
- [Early Career Research Award](#)
- [SERB Overseas Postdoctoral Fellowship](#)
- [SERB Women Excellence Award](#)
- [SERB Distinguished Fellowship](#)

**29. THE INSTITUTION OF ENGINEERS (INDIA)**<https://www.ieindia.org>**INTRODUCTION:**

The Institution of Engineers (India), the apex body of the engineers of India provides Grant-in-Aid support to its Corporate Members, Student Members and Institutional Members to pursue research and development in the field of engineering and technology.

**[A] SALIENT POINTS OF IEI R&D GRANT-IN-AID SCHEME**

Project Category	Institutional Membership	Guide	Student/ Applicant Membership	Quantum of Grant	Project Duration
Under Graduate (UG)	Applicant's Institute should be an Institutional Member	Should be Corporate Member(s)* [AM/M/F]	Should be SMIE	Not exceeding ₹50,000/- for a single project	Not exceeding Nine (09) months
Post Graduate (PG)	Applicant's Institute should be an Institutional Member	Should be Corporate Member(s)* [M/F]	Should be Corporate Member(s)* [AM/M/F]	Not exceeding ₹1,00,000/- for a single project	Not exceeding Twelve (12) months
Doctoral (PhD)	Applicant's Institute should be an Institutional Member	Should be Corporate Member(s)* [M/F]	Should be Corporate Member(s)* [AM/M/F]	Not exceeding ₹1,50,000/- for a single project	Not exceeding Twenty four (24) months

***\*In case the Applicant(s) and/or Guide(s) are not Corporate Members or the Applicant(s) are not Student Members [only for UG] of IEI, they are required to send project proposal accompanied by filled in Membership Form along with supporting documents and requisite membership fees in the form of DD/Cheque in favour of The Institution of Engineers (India), payable at Kolkata or transaction receipt if payment made online.***

1) Proposals from Corporate Members and Institutional Members will get preference. The Corporate Membership (AMIE, MIE, FIE); Student Membership (SMIE)\* forms can be obtained from the link <https://www.ieindia.org/webui/iei-Memb.aspx#membership-grade>. The Institutional Membership Form can be obtained from the link [https://www.ieindia.org/webui/iei-Memb.aspx#instite\\_Memb](https://www.ieindia.org/webui/iei-Memb.aspx#instite_Memb).

2) The R&D work has to be completed and final report has to be submitted within the scheduled completion of course of the student. [Normally processing of proposals takes about 3 months. So the applicant(s) should keep adequate time for completion accordingly].

3) The proposals should preferably be industry relevant and have in-kind or cash support from the industry partners or those having potential to lead to an entrepreneurship venture or a start-up model. Thematic focus on green energy, clean water, waste-to-energy conversion, versatile simulation, urban rejuvenation, skill development in design & manufacturing, Post harvest technology & food processing and Water resource management will be given due weightage.

4) Grant will be transferred online only to the account of Principal/Director/Registrar/Dean (R&D) directly. Payee details should be provided accordingly. Project proposal should be accompanied by hard or scanned

copy of cancelled cheque. The cancelled cheque should be from the same account against which payee details have been provided. The sanctioned amount will be released in single or multiple installments depending on the amount sanctioned and stage-wise requirement of the project.

*\*Student Member (SMIE) is a **non-corporate category of membership** meant for undergraduate students pursuing BE/BTech (AICTE approved) or equivalent qualification, completion of which will make them eligible for Corporate Membership. It will remain valid for a period for six (06) years w.e.f. the date of enrolment.*

## FELLOWSHIP:

### Eligibility Criteria

- Proposals from Members and Institutional Members will be preferred. It is expected that the applicant's Institution is an **Institutional Member of The Institution of Engineers (India)**. The Guide/s must be a **Corporate Member** of IEI. For details please visit [www.ieindia.org](http://www.ieindia.org). The student should apply for Corporate Membership (if not already a Corporate Member) once they becomes eligible to receive 'Fellowship' under IEI R&D Grant-in-Aid Scheme. Please see the checklist and guidelines of application for membership provided below, before proceeding with submission of proposal. IEI is authorized to make any exception to the above.
- The proposals should preferably be industry relevant and have in-kind or cash support from the industry partners or those having potential to lead to an entrepreneurship venture or a start-up model. Thematic focus on green energy, clean water, waste-to-energy conversion, versatile simulation, urban rejuvenation, skill development in design and manufacturing will be given due weightage.

### Quantum of Fellowship

The quantum of fellowship is @ Rs 10,000/- per month usually for a period of 12 months extendable by six months subsequently for maximum two terms, subject to total duration not exceeding 24 months. Extension may be considered only on valid grounds and the decision of IEI will be final and binding.

The entire amount will be transferred to the account of Principal/Director/Registrar/Dean (R&D) of the concerned Institute/University who will be responsible for periodic release of the grant to the applicant on a monthly basis. IEI may like to withdraw the entire amount if monthly progress report (Annexure-I), duly sealed and signed, is not received from the beneficiary.

### 30. UNIVERSITY GRANTS COMMISSION (UGC)

<https://www.ugc.ac.in/>

#### INTRODUCTION

UGC strives to promote teaching and research in emerging areas in Humanities, Social Sciences, Languages, Literature, Pure Sciences, Engineering & Technology, Pharmacy, Medical, Agricultural Sciences etc.

#### NAME OF SCHEME(S)

##### Major and Minor Research Projects

##### Objective(s)

- To promote excellence in research in higher education by supporting research programmes of University and College teachers in various disciplines.
- Traditionally, universities have been the centers of research. Although, the Government has a network of science and technology laboratories for research and development, the major base of researchers in science and technology remains with the universities. Therefore, university and college teachers need to be supported to meet this requirement.

##### Contact Address:

The Secretary,  
University Grants Commission (UGC)  
Bahadur Shah Zafar Marg,  
New Delhi - 110002.  
011-23604446, 011-23604200

### 31. VIKRAM SARABHAI SPACE CENTRE

[http://isrohq.vssc.gov.in/VSSC\\_V4/index.php/respond-vssc?view=featured](http://isrohq.vssc.gov.in/VSSC_V4/index.php/respond-vssc?view=featured)

#### INTRODUCTION:

The Indian Space Research Organisation (ISRO) has evolved a programme through which financial support is provided for conducting research and development activities related to space science, space technology and space application to academia in India. RESPOND denotes this programme of research sponsored by ISRO. The main objectives of the RESPOND programme is to establish strong links with academic Institutions to carryout quality research and developmental projects which are of relevance to Space and to derive useful outputs of such R&D to support ISRO programmes. RESPOND programme is intended to enhance academic base, generate quality human resources and infrastructure at the academic institutions to support the space programme. In special cases research and development projects proposed by non-academic R&D laboratories are also supported through this programme.

RESPOND also supports to conduct conferences, symposiums, seminars and educational activities of importance to ISRO at the academic institutions to promote interest in ISRO space programmes

(For more details visit: [www.csre.iitb.ac.in/isro\\_cell](http://www.csre.iitb.ac.in/isro_cell); [www.iitk.ac.in/dord/isro](http://www.iitk.ac.in/dord/isro); [www.kcstc.iitkgp.ernet.in](http://www.kcstc.iitkgp.ernet.in); [www.unipune.ac.in/isro](http://www.unipune.ac.in/isro) ).

#### AREA OF RESEARCH:

➤ **Aerospace Engineering :**

Flight dynamics, orbital mechanics Wind tunnel studies, CFD, Flow field analysis, Aero thermal engineering etc

➤ **Launch Vehicle structures:**

Structural Analysis modeling and simulation stability analysis, structural dynamics & testing, honey comb structures, experimental mechanics etc.

➤ **Space Materials & Processing**

Light Alloys, Super alloys, precision fabrication techniques, Heat treatment, surface treatment, welding technology, powder metallurgy, foundry technology, ceramics, materials characterization etc

➤ **Composite Materials:**

Composite Materials processing and control, characterization & testing, NDT, development of composite structure for launch vehicles and spacecraft carbon-carbon composites etc.

➤ **Propellants, Polymers, Chemicals & Space Ordnance:**

Propellant processing, characterization, testing, thermal protection materials, adhesive ceramics/matrix products, thermal paints, polyimides, avionics batteries, fuel cell, space ordnance materials, characterization, nozzle design, advanced propulsion technology, CFD, Heat transfer, performance simulation etc

➤ **Avionics, Guidance & Control:**

Sensors & instrumentation, power electronics Data acquisition, signal processing, technology ASIC/FPGA, onboard inertial systems, servo mechanisms, guidance and control, trajectory simulation and analysis etc

➤ **Space Science**

Physics of ionosphere, magnetosphere, meteorology, atmospheric studies, aerosols, boundary layer physics, climatology, planetary and interplanetary space physics etc.

**Who can apply?**

- Individual or group(s) of scientists, engineers, researchers, members of the teaching staff belonging to recognized academic institutions, universities and research organisations may submit proposals,. Proposals from persons not attached to a recognised institution will not be considered.
- The proposer(s) should be full-time regular employee(s) of the concerned institution

**Information required with the proposal**

- Brief description of the research proposed including the objectives and the scientific/application merits of the work.
- Description of the method or technique to be used for the proposed investigated
- The extent of financial support needed for executing the work within the shortest possible time.
- Name of the Principal Investigator from the institution forwarding the application. There may also be co-investigator(s) from different institutions working on the project. ISRO may also identify a co-investigator. However satisfactory completion of a project will be the responsibility of the Principal Investigator and his institution.
- Bio-data of all the investigators
- A list of research projects related to the proposal undertaken or carried out through funding by other agencies.

**How to apply?**

- The proposal should be duly forwarded through their institutions

- Five copies of the document should be prepared in the formats attached

**Contact Address:**

Vikram Sarabhai Space Centre,

Thiruvananthapuram,

Kerala, India, Pin Code:695022

## 32. BRITISH COUNCIL IN INDIA

<https://www.britishcouncil.in/>

### INTRODUCTION:

Our work in higher education consists two programmes. The first is **Internationalising Higher Education (IHE)** and the second is a multi partner programme called **UK-India Education and Research Initiative (UKIERI)**. IHE facilitates policy dialogues and partnerships, promotes scholarships, student mobility and alumni engagement. **UKIERI** aims to enhance educational links between India and the UK by supporting partnerships across all thematic areas. The programme focuses on Innovation, Skills Development, Leadership across all aspects of education and helps students, staff and researchers gain mobility between the two countries. The programme facilitates policy dialogues and engages with Government agencies both in the UK and India on areas of mutual interest like Credit Recognition, Quality Assurance, Leadership and Knowledge Transfer.

### SCHEMES:

#### 32.1 IN HIGHER EDUCATION

- SWAYAM partnership opportunities for UK institutions
- Newton Bhabha Fund
- Science and Beyond lecture series
- UKIERI

#### 32.2 INTERNATIONALISING HIGHER EDUCATION

- International Seminar on Innovations in Financing of Higher Education
- Education Dialogues
- Education Market Intelligence
- Student Mobility
- Women in STEM - a case for intervention

#### 32.3 UK INDIA EDUCATION AND RESEARCH INITIATIVE (UKIERI)

<https://www.britishcouncil.in/programmes/higher-education/ukieri>

#### OBJECTIVE:

UK-India Education and Research Initiative (UKIERI) started in April 2006 with the aim of enhancing educational linkages between India and the UK. Since then UKIERI has been recognized as a key multi stakeholder programme that has strengthened the research, leadership, education and now skill sector relations between the two countries.

The programme focuses on bilateral and mutual benefits of the learners, researchers, scholars, fellows, skill sector professionals, leaders of higher education and further education institutions in India and UK.

The two strands of UKIERI are:

- [Research and Innovation](#)
- [Education and Training](#)

#### 32.4 RESEARCH AND INNOVATION

E-partnership and Research Incubation strand is focusing on developing jointly funded research and innovation programme with core societal benefit outcomes. Some of the existing UKIERI successful partnerships will be scaled to deepen engagement and greater impact and newer partnerships on key thematic areas will be supported.

#### OBJECTIVES

- Secure long-term UK-India partnerships for the development of the Indian skills infrastructure & deliver capacity in education sector
- Combine work that enables India to benefit from areas of strength within the UK and Vice versa (where the emphasis will be on India learning from UK partners and adapting models, standards and practices to their needs) with others with potential for joint learning e.g.; promoting public private partnerships, internships/apprenticeships with industry etc).

#### **DST THEMATIC RESEARCH PARTNERSHIPS**

The Higher Education and Research strand announced funding worth £3.1 million for 51 successful partnerships between DST recognized and HE institutions of India and UK respectively. The call attracted close to 334 joint research proposals.

#### **UGC THEMATIC RESEARCH PARTNERSHIPS**

The Higher Education and Research strand announced funding worth £2.6 million for 43 successful partnerships between UGC recognized and HE institutions of India and UK respectively. The call attracted close to 219 joint research proposals.

#### **POTENTIAL AREAS OF COLLABORATION**

- Ministry of Human Resource Development GIAN Collaboration
- Early career to mid-career research fellowships
- Support for research incubation centers Policy dialogues, events and workshops will be organised based on priority areas of mutual interest.

### **32.5 EDUCATION AND TRAINING**

- Leadership and Faculty Development strand focusses on developing few strategic leadership initiatives that provide a strong institutional framework leading to high impact, bigger outreach and long-term sustainability.
- Mobility, use of ICT and innovative technology will underpin these partnerships.

#### **OBJECTIVES**

- Under Phase 3 of UKIERI, Leadership and Faculty Development strand will focus on developing few strategic leadership initiatives that provide a strong institutional framework leading to high impact, bigger outreach and long-term sustainability. Mobility, use of ICT and innovative technology will underpin these partnerships.
- To enhance the capacity of institutions through the development of leadership initiatives in higher education as well as skill development and further education
- To increase the capacity of individuals to ensure that they have relevant leadership skills for the future.
- Activities that aim to foster mobility of young faculty across the two countries.

### 33. AUSTRALIA-INDIA STRATEGIC RESEARCH FUND (AISRF)

<https://www.industry.gov.au/funding-and-incentives/science-and-research/collaborating-with-india-on-science-and-research>

#### COLLABORATING WITH INDIA ON SCIENCE AND RESEARCH

##### MAIN CONTENT AREA

The Australia-India Strategic Research Fund (AISRF) supports scientists in India and Australia to collaborate on leading-edge research.

##### PRIORITY AREAS OF RESEARCH

The fund has supported research collaboration across more than 20 different mutual priority areas, including:

- Agriculture
- Astronomy and astrophysics
- Biomedical devices and implants
- Clean energy technologies
- Food and water security
- Information and communication technology
- Marine sciences
- Nanotechnology
- Stem cells and vaccines

##### COLLABORATIVE RESEARCH PROJECTS

- The AISRF links Australian and Indian research institutions together to work on strategically focused, leading-edge scientific research and technology projects.
- The projects build research capacity and maximise the application, commercialisation and sustainability of research outcomes, supporting the continued economic growth and development of both nations.

##### HOW TO APPLY

- Competitive grant rounds are held annually and you may only apply while a round is open.
- To find out more about [AISRF funding round details and to apply for grants visit Business.gov.au](#).
- See the program guidelines for information about the application process, eligibility criteria and assessments. These guidelines apply to Australian applicants only. Indian applicants should follow guidelines issued by the Indian Government.

**TARGETED WORKSHOPS**

The workshops bring together leading researchers from Australia and India to focus on key issues of mutual interest or contemporary challenges facing both nations.

**They aim to:**

- create, promote and strengthen relationships between our nation's researchers and research institutions
- promote scientific and technological cooperation between Australia and India
- find more areas to collaborate where there's significant potential to mutually benefit from outcomes

**EARLY AND MID-CAREER RESEARCHER FELLOWSHIPS**

High-performing Australian early and mid-career researchers can access funding to travel to India and work with leading researchers at major Indian science and technology organisations. The Indian Government also supports Indian researchers to spend time at Australian institutions. These reciprocal fellowships help to facilitate long-term science, technology and innovation collaboration between our nations.

**Contact Address:**

- Email [aisrf@industry.gov.au](mailto:aisrf@industry.gov.au)
- Phone 13 28 46 (8am-8pm, Monday to Friday)
- Indian researchers interested in Australian collaboration should contact the Indian Government [Department of Science and Technology](#) and [Department of Biotechnology](#)

### 34. EUROPEAN COMMISSION

<https://ec.europa.eu/energy/en/funding-and-contracts>

#### INTRODUCTION:

The EU provides funding programmes to help finance European energy projects. Ensuring competitive, sustainable, and secure energy in the years to come requires significant investment. The EU provides a number of funding programmes and lending schemes to help companies, regions, and countries successfully implement energy projects.

#### FILTER BY PROGRAMME PART:

- [Excellent Science](#)
- [Industrial Leadership](#)
- [Societal Challenges](#)
- [Spreading excellence and widening participation](#)
- [Science with and for Society](#)
- [The European Institute of Innovation and Technology \(EIT\)](#)
- [Euratom Research and Training Programme](#)

#### FILTER BY FOCUS AREA:

- [Building a low-carbon, climate resilient future](#)
- [Connecting economic and environmental gains – the Circular Economy](#)
- [Digitising and transforming European industry and services](#)
- [Boosting the effectiveness of the Security Union](#)

#### FUNDING AND TENDER OPPORTUNITIES

Two year work programmes announce the specific areas that will be funded by Horizon 2020. Look out for them at [Funding and tender opportunities](#) site as they can be used as a calendar for the calls for proposals ('calls'), to be published during the year. The [Funding and tender opportunities](#) site is your entry point for electronic administration of EU-funded research and innovation projects, and hosts the services for managing your proposals and projects throughout their lifecycle.

Each call gives more precise information on the questions that the Commission would like you to address in your proposals. All calls can be found in the EU's [Official Journal](#) – the official source for all EU documents – as well as on the [Funding and tender opportunities](#) site. The application process are

### **SUBMIT YOUR PROPOSAL**

If you wish to respond to a call, you must submit a proposal before the deadline. The [Horizon 2020 Online Manual](#) has clear instructions to guide you through the process. The system is simpler than ever – no more paper! All proposals are submitted online.

### **FIND YOUR PARTNERS**

Many calls require a team of at least three partners. If you need help to identify a potential partner with particular competences, facilities or experience, use the partner search options.

### **EVALUATION BY EXPERTS**

Once the deadline has passed, all proposals are evaluated by a panel of independent specialists in their fields. The panel checks each proposal against a list of criteria to see if it should receive funding.

### **GRANT AGREEMENT**

Once a proposal passes the evaluation stage (five months' duration), applicants are informed about the outcome. The European Commission then draws up a grant agreement with each participant. The grant agreement confirms what research & innovation activities will be undertaken, the project duration, budget, rates and costs, the European Commission's contribution, all rights and obligations and more. The time limit for signing the grant agreements is generally three months.



MIT-Manakula Vinayagar  
Institute of Technology



# MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY



Approved by AICTE , Affiliated to Pondicherry University and Accredited by NBA  
Kalitheerthalkuppam, Mannadipet Commune, Puducherry - 605107  
Ph : 0413-2643007, Fax : 2643008, Email : [research@mvit.edu.in](mailto:research@mvit.edu.in), Website : [www.mvit.edu.in](http://www.mvit.edu.in)



## RESEARCH & DEVELOPMENT

## HANDBOOK (2018-19)

## **ABOUT THE INSTITUTION**

Manakula Vinayagar Institute of Technology is a premier institute run by Sri Manakula Vinayagar Educational Trust and was established in the year of 2008. It is offering courses in UG- B.Tech (EEE, ECE, CSE, and IT& MECH) and PG courses - M.Tech (ECE & CSE) & MBA, with a perspective to give quality education to young citizens. We are having total faculty strength of 125, among them 25 faculty members are with Ph.D qualifications and all others are with PG qualification.

Our Group of Institutions are offering 52 courses in Medicine, Engineering, Nursing and Polytechnic. Our campus is spread across 225 acres of land with built up area of more than 25 lakhs square feet. We have more than 12500 students, 2500 employees, 150 buses, hostel accommodation for 2000 students and more than 200 staff quarters.

Our college is professionally managed and guided with meticulous care to be in conformance with all prudential standards. Innovating new technologies and updating the existing are essential to reinforce the capabilities for achieving sustainable development in economical growth of the world. In this respect, our institute is conducting many activities in respect of faculty development, research and overall student's development.

## **VISION AND MISSION OF THE INSTITUTE**

### **VISION**

To accomplish excellence in the field of technical education and scientific research on regional, national and international levels through committing to total quality for its faculty, providing excellent infrastructure, research facilities and conducive atmosphere that would motivate the students in the pursuit of knowledge in Engineering and Technology.

### **MISSION**

- To provide in depth knowledge in fundamentals to students to improve their learning and analytical skills.
- To provide our students with the most progressive, relevant and well-rounded academic programs, supporting their learning through advanced and extensive resource.
- To promote interaction with industries and other institutes of higher learning to equip our students to face the challenges on real time problems.
- To develop the overall personality of the students to mould them into a good citizen with integrity and morality.

## **ABOUT THE R&D CELL**

Research is one of the major components of the Education system in order to make the Faculty and Students to understand the concepts in depth and also to apply the concept in engineering applications. In view to this, R&D cell was established in October 2013 to enhance the Research Activities of the Faculty and Students of our Institution.

The Research and Development Cell aims to provide support and guidance to the Faculty and Students by sharing the information about recently developing and challenging areas of Engineering, Technology, Science and Humanities. This upgrades the general examination ability of growing technocrats by the way of participating in conferences, seminars, workshops, project competition etc

The main objectives of the R&D cell are:

- To apply and work on funded research projects sponsored by AICTE, DST, ISRO and DRDO and other funding agencies.
- To encourage Faculties and Students to carry out research at the Undergraduate level and leading to Ph.D.
- To improve number of publications, quality of projects. To provide solutions for projects, organize National Level Conference, Seminar and Workshops for Students and Staff.

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13	INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR)	26
14	INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH (IGCAR)	27
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## LIST OF FUNDING AGENCIES WITH WEBSITE LINK

SL.NO.	NATIONAL FUNDING AGENCIES	WEBSITE
1	ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE)	<a href="https://www.aicte-india.org/">https://www.aicte-india.org/</a>
2	ATOMIC ENERGY REGULATORY BOARD (AERB)	<a href="https://aerb.gov.in/english/">https://aerb.gov.in/english/</a>
3	BOARD OF RESEARCH IN NUCLEAR SCIENCES (BRNS)	<a href="https://brns.res.in/brns_rp.php">https://brns.res.in/brns_rp.php</a>
4	COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH (CSIR)	<a href="http://www.csir.res.in/">http://www.csir.res.in/</a> <a href="http://www.csir.res.in/knowledge-resource-center/knowledge-repositories">http://www.csir.res.in/knowledge-resource-center/knowledge-repositories</a> <a href="http://csirhrdg.res.in/">http://csirhrdg.res.in/</a>
5	CENTRAL POWER RESEARCH INSTITUTE (CPRI)	<a href="https://www.cpri.in/">https://www.cpri.in/</a>
6	DEFENSE RESEARCH & DEVELOPMENT ORGANISATION (DRDO)	<a href="https://www.drdo.gov.in/">https://www.drdo.gov.in/</a>
7	DEPARTMENT OF BIOTECHNOLOGY	<a href="http://dbtindia.gov.in/">http://dbtindia.gov.in/</a>
8	DEPARTMENT OF ATOMIC ENERGY (DAE)	<a href="http://www.dae.nic.in/">http://www.dae.nic.in/</a>
9	AERONAUTICS RESEARCH AND DEVELOPMENT BOARD (ARDB)	<a href="https://www.drdo.gov.in/drdo/boards/ardb/contact.htm">https://www.drdo.gov.in/drdo/boards/ardb/contact.htm</a>
10	ARMAMENTS RESEARCH BOARD	<a href="https://www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=home.jsp&amp;dir=ARMREB">https://www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=home.jsp&amp;dir=ARMREB</a>
11	NAVAL RESEARCH BOARD (NRB):	<a href="http://nrbdndo.res.in/board_intro.html">http://nrbdndo.res.in/board_intro.html</a> <a href="http://nrbdndo.res.in/submission_proposal.html">http://nrbdndo.res.in/submission_proposal.html</a>
12	LIFE SCIENCES RESEARCH BOARD	<a href="https://www.drdo.gov.in/drdo/boards/lrb/fplrb.htm">https://www.drdo.gov.in/drdo/boards/lrb/fplrb.htm</a> <a href="https://www.drdo.gov.in/drdo/boards/lrb/fplrb.htm">https://www.drdo.gov.in/drdo/boards/lrb/fplrb.htm</a>
13	DEPARTMENT OF BIOTECHNOLOGY	<a href="http://dbtindia.gov.in/">http://dbtindia.gov.in/</a>
14	DEPARTMENT OF CHEMICALS AND PETROCHEMICALS (DCPC)	<a href="https://chemicals.nic.in/about-us/about-department">https://chemicals.nic.in/about-us/about-department</a>
15	DEPARTMENT OF SCIENCE AND TECHNOLOGY (DST)	<a href="http://www.dst.gov.in/">http://www.dst.gov.in/</a>
16	GAS AUTHORITY OF INDIA LIMITED (GAIL)	<a href="https://gailebank.gail.co.in/GUSI/frmStartUpGAIL.aspx">https://gailebank.gail.co.in/GUSI/frmStartUpGAIL.aspx</a>
17	IEEE	<a href="https://www.ieee.org">https://www.ieee.org</a>
18	INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR)	<a href="https://www.icmr.nic.in/">https://www.icmr.nic.in/</a>

19	INDIAN RENEWABLE ENERGY DEVELOPMENT AGENCY LIMITED (IREDA)	<a href="https://ireda.in/">https://ireda.in/</a>
20	INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)	<a href="http://www.isteonline.in/">http://www.isteonline.in/</a>
21	INDIAN SPACE RESEARCH ORGANISATION (ISRO)	<a href="https://www.isro.gov.in/">https://www.isro.gov.in/</a>
22	INDIAN NATIONAL SCIENCE ACADEMY (INSA)	<a href="http://www.insaindia.res.in/">http://www.insaindia.res.in/</a>
23	INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH (IGCAR)	<a href="http://www.igcar.gov.in/contact.html">http://www.igcar.gov.in/contact.html</a>
24	INDUSTRIAL CONSULTANCY & SPONSORED RESEARCH	<a href="https://www.iitm.ac.in/icsr">https://www.iitm.ac.in/icsr</a>
25	LADY TATA MEMORIAL TRUST	<a href="https://www.ladytatatrust.org">https://www.ladytatatrust.org</a>
26	MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY(MEITY)	<a href="https://meity.gov.in/">https://meity.gov.in/</a>
27	MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSME)	<a href="https://msme.gov.in/">https://msme.gov.in/</a>
28	MINISTRY OF NEW AND RENEWABLE ENERGY (MNRE)	<a href="https://mnre.gov.in/">https://mnre.gov.in/</a>
29	MINISTRY OF HUMAN RESOURCE DEVELOPMENT (MHRD)	<a href="https://mhrd.gov.in/">https://mhrd.gov.in/</a>
30	NATIONAL BOARD FOR HIGHER MATHEMATICS (NBHM)	<a href="http://www.nbhm.dae.gov.in">http://www.nbhm.dae.gov.in</a>
31	NATIONAL SCIENCE FOUNDATION (NSA)	<a href="https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&amp;ord=date">https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&amp;ord=date</a>
32	PETROLEUM CONSERVATION RESEARCH ASSOCIATION (PCRA)	<a href="http://www.pcr.org/">http://www.pcr.org/</a>
33	SCIENCE AND ENGINEERING RESEARCH BOARD	<a href="http://serbonline.in/">http://serbonline.in/</a>
34	THE INSTITUTION OF ENGINEERS (INDIA)	<a href="https://www.ieindia.org">https://www.ieindia.org</a>
35	UNIVERSITY GRANTS COMMISSION (UGC)	<a href="https://www.ugc.ac.in/">https://www.ugc.ac.in/</a>
36	VIKRAM SARABHAI SPACE CENTRE	<a href="http://isrohq.vssc.gov.in/VSSC_V4/index.php/respond-vssc?view=featured">http://isrohq.vssc.gov.in/VSSC_V4/index.php/respond-vssc?view=featured</a>
37	THE MINISTRY OF ENVIRONMENT AND FORESTS, NEW DELHI(MOEF)	<a href="http://envfor.nic.in/">http://envfor.nic.in/</a>
38	THE NATIONAL AEROSPACE LABORATORY, BANGALORE.(NAL)	<a href="http://www.nal.res.in/">http://www.nal.res.in/</a>

39	THE NATIONAL INITIATIVE ON CLIMATE RESILIENT AGRICULTURE, HYDERABAD.	<a href="http://www.nicra-icar.in/nicrarevised/">http://www.nicra-icar.in/nicrarevised/</a>
40	THE NATIONAL INSTITUTE OF OCEAN TECHNOLOGY (NIOT), VELACHERY, CHENNAI	<a href="http://www.niot.res.in/index.php">http://www.niot.res.in/index.php</a>
41	THE NATIONAL MEDICINAL PLANTS BOARD, GOI, NEW DELHI.(NMPB)	<a href="http://www.nmpb.nic.in/">http://www.nmpb.nic.in/</a>
42	THE OIL AND NATURAL GAS CORPORATION LTD., CHENNAI(ONGC)	<a href="http://www.ongcindia.com/wps/wcm/connect/ongcindia/home/">http://www.ongcindia.com/wps/wcm/connect/ongcindia/home/</a>
43	THE RESEARCH CENTRE IMARAT, HYDERABAD.(RCI)	<a href="http://rcilab.drdo.in/">http://rcilab.drdo.in/</a>
44	THE SPACE APPLICATIONS CENTRE, GOI, AHMEDABAD.(SAC)	<a href="http://www.sac.gov.in/sacwebi/sacHomePage.iiface">http://www.sac.gov.in/sacwebi/sacHomePage.iiface</a>
45	THE TAMIL VIRTUAL UNIVERSITY, CHENNAI(TVU)	<a href="http://www.tamilvu.org/">http://www.tamilvu.org/</a>
46	THE TAMILNADU FOREST DEVELOPMENT, CHENNAI(TNFD)	<a href="http://www.forests.tn.nic.in/notice.html">http://www.forests.tn.nic.in/notice.html</a>
47	THE TAMILNADU POLLUTION CONTROL BOARD, GOVT. OF TAMILNADU.(TNPCCB)	<a href="http://www.tnpcb.gov.in/">http://www.tnpcb.gov.in/</a>
48	THE TATA STEEL LIMITED, JAMSHEDPUR	<a href="http://www.tatasteel.com/">http://www.tatasteel.com/</a>
49	THE DEVELOPMENT OF RURAL DEVELOPMENT AND PANCHAYAT RAJ, CHENNAI (DRD&PR)	<a href="http://www.tnrd.gov.in/">http://www.tnrd.gov.in/</a>
50	THE INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS, HYDERABAD (ARCI)	<a href="http://www.arci.res.in/">http://www.arci.res.in/</a>
<b>INTERNATIONAL FUNDING AGENCIES</b>		
<b>SL.NO</b>	<b>INTERNATIONAL FUNDING AGENCIES</b>	<b>WEBSITE</b>
51	BRITISH COUNCIL IN INDIA	<a href="https://www.britishcouncil.in/">https://www.britishcouncil.in/</a>
52	AUSTRALIA-INDIA STRATEGIC RESEARCH FUND (AISRF)	<a href="https://www.industry.gov.au/funding-and-incentives/science-and-research/collaborating-with-india-on-science-and-research">https://www.industry.gov.au/funding-and-incentives/science-and-research/collaborating-with-india-on-science-and-research</a>
53	EUROPEAN COMMISSION	<a href="https://ec.europa.eu/energy/en/funding-and-contracts">https://ec.europa.eu/energy/en/funding-and-contracts</a>
54	INDO - SOUTH ASIA RESEARCH FUNDING	<a href="http://www.southasianist.info/india/sfunding.html">http://www.southasianist.info/india/sfunding.html</a>
55	INDO-US RESEARCH FELLOWSHIP FOR INDIAN RESEARCHERS	<a href="http://www.indousstf.org/fellowship.htm">http://www.indousstf.org/fellowship.htm</a>
56	INTEL PUBLIC AFFAIRS INTERNATIONAL CONTRIBUTION	<a href="http://www.intel.com/pressroom/contacts/usa.htm">http://www.intel.com/pressroom/contacts/usa.htm</a>
57	INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY	<a href="http://www.icgeb.org/home.html">http://www.icgeb.org/home.html</a>
58	ROYAL SOCIETY OF UK	<a href="http://royalsociety.org/">http://royalsociety.org/</a>
59	SHASTRI INDO-CANADIAN INSTITUTE	<a href="http://www.sici.org/home/">http://www.sici.org/home/</a>
60	THE EUROPEAN UNION COLLABORATION, SWITZERLAND	<a href="http://www.eda.admin.ch/eda/en/home/topics/eu/eu/misbr.html">http://www.eda.admin.ch/eda/en/home/topics/eu/eu/misbr.html</a>

## THRUST AREAS IN RESEARCH

<b>DISCIPLINE: ELECTRICALS AND ELECTRONICS ENGINEERING</b>	
<ol style="list-style-type: none"> <li>1. Power System Deregulation</li> <li>2. Pricing of Electricity</li> <li>3. Integration of distributed generation sources to power systems</li> <li>4. Optimization of relay setting in FACTS environment</li> <li>5. AI techniques applications in Power Systems</li> <li>6. Chaos in Power Systems</li> <li>7. Solar Energy Technology</li> <li>8. Wind Energy technology</li> <li>9. Energy Conservation</li> <li>10. Energy Auditing</li> <li>11. Power Systems Dynamics &amp; Stability</li> </ol>	<ol style="list-style-type: none"> <li>12. Optimal operation of power systems</li> <li>13. Interfacing analog signals with DSP</li> <li>14. H-Infinite controls</li> <li>15. Load forecasting and state estimation</li> <li>16. PL controllers</li> <li>17. Hybrid electric vehicles</li> <li>18. Robust controls and facts devices</li> <li>19. Power quality</li> <li>20. Electrical Machines (Axial Flux Machines)</li> <li>21. MEMS in Bio-systems</li> <li>22. Smart grid and Micro grid</li> </ol>
<b>DISCIPLINE: ELECTRONICS AND COMMUNICATION ENGINEERING</b>	
<ol style="list-style-type: none"> <li>1. Wireless communication</li> <li>2. Optical Communication</li> <li>3. Satellite Navigational Systems</li> <li>4. Antennas and Propagation</li> <li>5. RF Circuits and systems</li> <li>6. Microwave devices</li> <li>7. Satellite, Space and wireless communication</li> <li>8. Test Measurements and Instrumentation</li> <li>9. Military Technology</li> <li>10. Photo Acoustics Electronics Instrumentation (SPRG)</li> <li>11. Speech Signal Processing (SPRG)</li> <li>12. Bio-Medical Signal &amp; Image Processing</li> <li>13. Radar Signal Processing</li> <li>14. Satellite Navigation &amp; Augmentation Studies</li> <li>15. Ionospheric Studies using GPS Signals</li> <li>16. GPs Radio occultation</li> <li>17. System on Chip Design</li> <li>18. Design for Testability</li> <li>19. Fault Tolerance System Design</li> <li>20. Digital Circuit Design</li> <li>21. Low Power VLSI Circuit Design</li> <li>22. Hardware/Software Co-Design for MPSoC using FPGA</li> <li>23. Low Power Digital Circuit Design</li> <li>24. Analog VLSI Circuit Design</li> <li>25. Digital Forensics</li> </ol>	<ol style="list-style-type: none"> <li>26. Digital Water marking</li> <li>27. Bio Metrics</li> <li>28. Image and Video Processing</li> <li>29. Sensor networks protocols</li> <li>30. Sensor web services</li> <li>31. Cognitive sensor networks</li> <li>32. Data mining sensor networks</li> <li>33. Web Services</li> <li>34. Semantic Web</li> <li>35. Web Security</li> <li>36. Web Commerce</li> <li>37. Remote monitoring and controlling of Embedded systems</li> <li>38. Securing the embedded systems</li> <li>39. Testing ES</li> <li>40. Networking ES</li> <li>41. Development of Communication Standards for Imp. Embedded networks with in local area &amp; wide area Networks</li> <li>42. Sensor networks for agricultural management</li> <li>43. Condition monitoring and controlling through embedded system</li> <li>44. Temperature controlling and monitoring nuclear reactors</li> <li>45. Intelligent Tagging systems</li> </ol>
<b>DISCIPLINE: COMPUTER SCIENCE AND ENGINEERING &amp; INFORMATION TECHNOLOGY</b>	
<ol style="list-style-type: none"> <li>1. Cloud Computing</li> <li>2. WEB Services and semantics</li> <li>3. Sensor Networks</li> <li>4. Data Mining</li> <li>5. WEB Mining</li> <li>6. Application specific Software Engineering</li> <li>7. Wireless Computer networks</li> <li>8. Adhoc Networks</li> <li>9. Cryptography</li> <li>10. Elliptic-curve Cryptography</li> <li>11. Crypto-analysis</li> <li>12. Cognitive networks</li> <li>13. Network management</li> <li>14. Performance analysis of network resources</li> </ol>	<ol style="list-style-type: none"> <li>16. Multicasting in mobile networks</li> <li>17. Grid computing</li> <li>18. Autonomic computing</li> <li>19. Mobile computing</li> <li>20. Digital water marking and stenography</li> <li>21. Scalable algorithm for classification and clustering</li> <li>22. Clustering analysis</li> <li>23. Sensor data mining</li> <li>24. Pattern mining</li> <li>25. Clean room software engineering</li> <li>26. Extreme programming</li> <li>27. Software quality assurance and reliability</li> <li>28. Adaptive software development</li> <li>29. Parallel processing</li> </ol>

15. Secured systems	30. Pattern recognition
<b>DISCIPLINE MECHANICAL ENGINEERING</b>	
<ol style="list-style-type: none"> <li>1. Energy Conversion &amp; Conservation</li> <li>2. Heat Transfer Applications in Electronic Systems</li> <li>3. Fluid Flow &amp; Turbo-machinery</li> <li>4. CNC Machines</li> <li>5. Nano-materials</li> <li>6. Unconventional Machining</li> <li>7. Vibration control and condition monitoring</li> <li>8. Fracture mechanics</li> <li>9. Mechanics of composites</li> <li>10. Supply chain management</li> <li>11. Design of cellular manufacturing</li> <li>12. Modeling and analysis of production systems</li> </ol>	<ol style="list-style-type: none"> <li>13. Job shop scheduling- assembly line balancing</li> <li>14. Robotic Support Systems</li> <li>15. Robot Assisted Surgery</li> <li>16. Design of Robotic Systems for Medical &amp; Surgical applications,</li> <li>17. Neural Networks</li> <li>18. Hydraulic Knee joints</li> <li>19. Artificial Intelligence,</li> <li>20. Neural Networks, Fuzzy Logic</li> <li>21. Hepatics</li> <li>22. CFD, Image Processing, Signal processing,</li> <li>23. Under water Machining, Underwater vision</li> </ol>
<b>DISCIPLINE MANAGEMENT</b>	
<ol style="list-style-type: none"> <li>1. Employee engagement</li> <li>2. Work-life balance</li> <li>3. 139 Competency mapping</li> <li>4. Organizational change</li> <li>5. Talent management</li> <li>6. Training &amp; Development</li> <li>7. Insurance sector reforms</li> <li>8. Banking sector reforms</li> <li>9. Mutual funds</li> <li>10. Portfolio management</li> </ol>	<ol style="list-style-type: none"> <li>11. Security analysis</li> <li>12. Supply chain management</li> <li>13. Retail business</li> <li>14. Online business</li> <li>15. Handloom sector</li> <li>16. Rural marketing</li> <li>17. Agricultural exports</li> <li>18. Data analytics</li> <li>19. Impact of social media</li> </ol>
<b>DISCIPLINE MATHEMATICS</b>	
<ol style="list-style-type: none"> <li>1. Dynamical Systems on Time scales</li> <li>2. Fuzzy Dynamical Systems on Time scales</li> <li>3. Lie groups in Fluid dynamics</li> </ol>	<ol style="list-style-type: none"> <li>4. Tribology</li> <li>5. Hydrodynamic lubrication theory</li> <li>6. Applications of Queuing Theory in Data Communication and Manufacturing</li> </ol>
<b>DISCIPLINE PHYSICS</b>	
<ol style="list-style-type: none"> <li>1. Nanostructured Materials For Energy storage devices, Thin Films, Solid State Ionics</li> <li>2. Bioactive glasses, Nano-materials, Nano-phosphors, Glasses, Polymer</li> </ol>	
<b>DISCIPLINE CHEMISTRY</b>	
<ol style="list-style-type: none"> <li>1. Liquid crystals</li> <li>2. Drug Analysis</li> <li>3. Synthetic Organic Chemistry</li> </ol>	
<b>DISCIPLINE ENGLISH</b>	
<ol style="list-style-type: none"> <li>1. Comparative linguistics</li> <li>2. Transcultural linguistics</li> <li>3. Film literature</li> <li>4. Abridged literature</li> <li>5. Visual media</li> <li>6. Software appreciation</li> </ol>	<ol style="list-style-type: none"> <li>7. 21st century literature</li> <li>8. Form &amp; transformation, from novels to blogs</li> <li>9. Inter cultural communication</li> <li>10. English for specific purpose</li> <li>11. English language teaching through technology</li> </ol>
<b>DISCIPLINE BASIC &amp; APPLIED SCIENCES &amp; AGRICULTURE SCIENCES</b>	
<ol style="list-style-type: none"> <li>1. Nanotechnology</li> <li>2. Global Warming</li> <li>3. Organic Farming</li> <li>4. Physical &amp; Chemical Sciences</li> <li>5. Environmental Sciences /Green Tech.</li> </ol>	<ol style="list-style-type: none"> <li>6. Mathematical &amp; Statistical Science</li> <li>7. Green Technology</li> <li>8. Water-Soil Engineering Biotic Environment in Agriculture</li> </ol>

## LIST OF INTERNATIONAL JOURNAL PUBLISHERS

SL.NO	NAME OF JOURNAL PUBLISHERS	WEBSITE LINK
1.	<a href="#">ACM Digital Library Journals</a>	<a href="https://dl.acm.org/pubs.cfm">https://dl.acm.org/pubs.cfm</a>
2.	<a href="#">ACS Journals</a>	<a href="https://pubs.acs.org/">https://pubs.acs.org/</a>
3.	<a href="#">American Institute of Physics</a>	<a href="https://www.aip.org/">https://www.aip.org/</a> <a href="https://aip.scitation.org/">https://aip.scitation.org/</a>
4.	<a href="#">Annual Reviews Journals</a>	<a href="http://www.annualreviews.org/">http://www.annualreviews.org/</a>
5.	<a href="#">ASCE Journals</a>	<a href="https://ascelibrary.org/journals">https://ascelibrary.org/journals</a>
6.	<a href="#">ASME Journals + Standards</a>	<a href="http://asmedigitalcollection.asme.org/journals.aspx">http://asmedigitalcollection.asme.org/journals.aspx</a>
7.	EBSCO HOST	<a href="http://search.ebscohost.com/login.aspx?profile=ehost">http://search.ebscohost.com/login.aspx?profile=ehost</a>
8.	<a href="#">Economic &amp; Political Weekly</a>	<a href="https://www.epw.in/">https://www.epw.in/</a>
9.	<a href="#">Emerald Journals and Emerald e-Cases</a>	<a href="https://www.emeraldinsight.com/">https://www.emeraldinsight.com/</a>
10.	<a href="#">Elsevier Science Direct</a>	<a href="https://www.sciencedirect.com/browse/journals-and-books">https://www.sciencedirect.com/browse/journals-and-books</a>
11.	<a href="#">GeoScience World and GeoRef Database</a>	<a href="https://pubs.geoscienceworld.org/">https://pubs.geoscienceworld.org/</a>
12.	<a href="#">IEEE / IET Journals</a>	<a href="http://ieeexplore.ieee.org/Xplore/home.jsp?reload=true">http://ieeexplore.ieee.org/Xplore/home.jsp?reload=true</a>
13.	<a href="#">IndiaStat</a>	<a href="https://www.indiastat.com/">https://www.indiastat.com/</a>
14.	<a href="#">JSTOR Journals</a>	<a href="https://www.jstor.org/">https://www.jstor.org/</a>
15.	<a href="#">John Wiley Journals</a>	<a href="https://onlinelibrary.wiley.com/">https://onlinelibrary.wiley.com/</a>
16.	<a href="#">Nature Journals</a>	<a href="http://www.nature.com/siteindex/index.html">http://www.nature.com/siteindex/index.html</a>
17.	<a href="#">Optical Society of America</a>	<a href="https://www.osa.org/en-us/home/">https://www.osa.org/en-us/home/</a>
18.	Onepetro	<a href="https://www.onepetro.org/">https://www.onepetro.org/</a>
19.	<a href="#">OUP Journals</a>	<a href="https://academic.oup.com/journals/">https://academic.oup.com/journals/</a>
20.	<a href="#">Project Muse</a>	<a href="https://muse.jhu.edu/">https://muse.jhu.edu/</a>
21.	<a href="#">PsycArticle Journals</a>	<a href="https://www.apa.org/pubs/databases/psycarticles/index">https://www.apa.org/pubs/databases/psycarticles/index</a>
22.	<a href="#">Proquest (Dissertations &amp; Theses &amp; ABI/INFORM Collection Database)</a>	<a href="http://search.proquest.com/index">http://search.proquest.com/index</a>
23.	<a href="#">RSC Journals</a>	<a href="http://pubs.rsc.org/en/journals?key=title&amp;value=all">http://pubs.rsc.org/en/journals?key=title&amp;value=all</a>
24.	<a href="#">SIAM Journals</a>	<a href="https://www.siam.org/Publications/Journals">https://www.siam.org/Publications/Journals</a>
25.	SAE International Journals and Standards	<a href="https://saemobilus.sae.org/">https://saemobilus.sae.org/</a>
26.	<a href="#">Springer Link Journals</a>	<a href="https://saemobilus.sae.org/">https://saemobilus.sae.org/</a>
27.	<a href="#">SAGE Journals</a>	<a href="https://journals.sagepub.com/action/showPublications">https://journals.sagepub.com/action/showPublications</a>
28.	<a href="#">SciFinder Scholar</a>	<a href="https://sso.cas.org/as/PdaKZ/resume/as/authorization_ping">https://sso.cas.org/as/PdaKZ/resume/as/authorization_ping</a>
29.	<a href="#">Taylor &amp; Francis Journals</a>	<a href="https://www.tandfonline.com/">https://www.tandfonline.com/</a>
30.	worldscientific	<a href="https://www.worldscientific.com/">https://www.worldscientific.com/</a>

### E-BOOKS LINKS

1. ACS eBooks - [Visit Website](#)
2. CRC / Taylor & Francis Group, eBook are accessible from 2004 to 2018 - [Visit Website](#)
3. Cambridge University Press only Law eBook - [Visit Website](#)
4. Elsevier Chemistry Book Series - [Visit Website](#) | [Download List](#)
5. Gale Law eBooks are accessible - [Visit Website](#)
6. Springer Link eBooks are accessible - [Visit Website](#)
7. Wiley eBooks - [Visit Website](#) | Download List [[Download list1](#) | [Download List2](#)]
8. Wiley Reference Works collection - [Visit Website](#)
9. Taylor & Francis Open Access Publication - [Visit Website](#)

**NATIONAL FUNDING AGENCIES****1. ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE)**

<https://www.aicte-india.org/>

**INTRODUCTION**

The All India Council for Technical Education (AICTE) has been performing its regulatory, planning and promotional functions through its Bureaus, namely: Administration; Finance; Planning and Coordination; Under Graduate Studies; Post Graduate Education and Research; Faculty Development; Quality Assurance; and Research and Institutional Development Bureaus; and through its Regional Offices located in various parts of the country.

**NAME OF SCHEME(S)****1.1. STAFF DEVELOPMENT SCHEMES****a) SEMINAR GRANT (SG)**

The scheme provides financial assistance to institutions for organizing Symposium /Conference/ Seminar / Workshop at National and International level in various fields of Technical Education. Total funding up to Rs 1 Lakh for national and Rs 3 Lakh for International seminars is given under the scheme.

**b) INAE (TRF) INDIAN NATIONAL ACADEMY OF ENGG. (TEACHERS RESEARCH FELLOWSHIP)**

The Scheme provides fellowship to Engineering Teachers for Doctoral Research in Central Laboratories in order to promote a research culture amongst the faculty in AICTE approved engineering institutions. Limit of funding is Rs. 5.7 lakh per scholar for three year.

**c) QUALITY IMPROVEMENT PROGRAMME**

The main objective of the programme is to upgrade the qualification of the faculty members of the degree level institutions in the country. Scholarship @Rs. 15000/-PM and Rs. 5000/ PM are given to Ph.D/ M.Tech. Scholars. Total 94 QIP centers are in the country.

**d) FACULTY DEVELOPMENT PROGRAMME (FDP)**

The scheme is intended to Institutions for induction training to teachers employed in AICTE approved Technical Institutions to facilitate up-gradation of knowledge and skill. Rs 5-7 Lakh are granted for the 2 weeks FDP.

**e) ADJUNCT FACULTY**

Scheme encourages quality involvement of academicians, scholars, practitioners, policymakers in teaching, research, and related services. The limit of funding is Rs 6 Lakh/Faculty/Institute.

**f) SCHEME OF TRAVEL GRANTS (TG)**

The scheme enables meritorious faculty to interact at International Level Conferences, both within and outside India, Seminars, and Symposia.

**g) AICTE-INAE-DVP**

AICTE and INAE distinguished visiting Professor scheme envisages promotion of industry-institute interaction.

**h) AICTE – ISTE ORIENTATION/ REFRESHER PROGRAMME**

The objective is to conduct AICTE-ISTE Induction/ Refresher Programmes for the teaching faculty working in technical institutions. Total 100 Refresher programme & 50 Orientation programme with the funding of Rs. 300000 per programme.

**i) TECHNICAL BOOK WRITING & TRANSLATION**

To promote use of 'Scheduled Regional Language' in Technical Education for creating knowledge base in local language and to encourage creation of treasure of latest technical knowledge incorporating the newest developments by grant of financial support to the distinguished faculty/writers/translators.

**j) SHORT TERM TRAINING PROGRAMME (STTP)**

Short Term Training Program (STTP) intends to conduct faculty trainings through financial assistance from AICTE to enable faculty members in the field of technical education to introspect and learn techniques that can help prepare students for active and successful participants in a knowledge society.

**k) EMERITUS PROFESSOR (DISTINGUISHED PRACTICING ENGINEER) FELLOWSHIP**

The Emeritus Professor (Distinguished Practicing Engineer) Fellowship intends to utilize the expertise of highly qualified and experienced superannuated Engineers who have made undoubtable, unchallengeable, unparalleled and exceptional contribution to the society in their respective fields in any discipline in engineering for the benefit of students/faculty of host institutes & of institutes located in the adjoining areas.

**1.2 INSTITUTIONAL DEVELOPMENT SCHEMES:****a) SHARE AND MENTOR INSTITUTIONS (MARGDARSHAN)**

Through this Scheme an Institute of repute as a Mentor within an existing facility to serve as the hub to guide and disperse knowledge to and between around ten technical institutions as spokes. The limit of funding is Rs. 50 Lakhs and the duration of the project is for 3 years.

**b) UNNAT BHARAT ABHIYAN**

Unnat Bharat Abhiyan is inspired by the vision of transformational change in rural development processes by leveraging knowledge institutions. The limit of funding is Rs 5 Lakh/ Institute and duration of the project is 2 years.

**c) MODERNISATION AND REMOVAL OF OBSOLESCENCE (MODROBS)**

The scheme equips technical institutions with infrastructural facilities, laboratories, workshops, and computing facilities to enhance teaching, training and research capabilities. The limit of funding is Rs 20 Lakhs and project duration is 2 years.

**d) SHARE AND MENTOR INSTITUTIONS (MARGDARSHAN)**

Through this Scheme an Institute of repute as a Mentor within an existing facility to serve as the hub to guide and disperse knowledge to and between around ten technical institutions as spokes. The limit of funding is Rs. 50 Lakhs and the duration of the project is for 3 years.

**e) UNNAT BHARAT ABHIYAN**

Unnat Bharat Abhiyan is inspired by the vision of transformational change in rural development processes by leveraging knowledge institutions. The limit of funding is Rs 5 Lakh/ Institute and duration of the project is 2 years.

**f) SKILL AND PERSONALITY DEVELOPMENT PROGRAMME CENTRE FOR SC/ST STUDENTS**

Scheme provides opportunity to SC/ST students in the Institutes to reorient themselves in the light of emerging employment opportunities in Engineering undergraduate/Diploma students at all level to empower the SC and ST students. Maximum funding for the scheme is Rs 25 Lakhs and the project duration is 3 years.

**g) HOSTELS FOR SC/ST STUDENTS**

The scheme aims to support Government / Government-aided engineering colleges for construction of girls/boys hostels for students /researchers belonging to SC/ST category. Total funding up to Rs 3 Crores is provided to complete project within 3 years time.

**h) SPECIAL SCHEME FOR NORTH EASTERN STATES**

To enhance the functional efficiency of the technical institutes located in far-flung areas of North East India, AICTE has launched a scheme for providing logistics support to the technical institutes of NER by extending financial assistance for construction of rain water harvesting system, alternative power support & availability/connection of internet facility.

**1. 3. RESEARCH & INNOVATIONS DEVELOPMENT SCHEMES****a) RESEARCH PROMOTION SCHEME (RPS)**

This scheme Promotes Research in identified thrust areas of in Technical Education. RPS is aimed to create research ambience in the institutes by promoting research in engineering sciences and innovations in established and newer technologies; and to generate Master's and Doctoral degree candidates to augment the quality of faculty and research. The limit of funding is Rs 25 Lakh for project duration of 3 years.

**b) ENTREPRENEURSHIP DEVELOPMENT CELL (EDC)**

This scheme motivates the students to opt for entrepreneurship and self-employment as attractive and viable career option. The limit of funding is Rs. 10 lakh.

**c) E- SHODH SINDHU(SUBSCRIPTION TO E-JOURNALS)**

This scheme aims to provide e- resources on technical education to 126 AICTE supported technical Institutes. Rs. 8.72 crore are the subscription rates paid by AICTE in 2018.

**d) GRANT FOR ORGANISING CONFERENCE**

The scheme provides financial assistance to institutions for organizing Conference at National and International level in various fields of Technical Education.

**1. 4.GENERAL SCHEMES****a) PRADHAN MANTRI KAUSHAL VIKAS YOJNA (PMKVY)**

AICTE is implementing the PMKVY for Technical Institutes scheme through AICTE approved Technical Institutions in the country.Under this Scheme in next three years, 10.5 Lakh youth are to be given Engineering Skills.

**b) PRADHAN MANTRI KAUSHAL VIKAS YOJNA (PMKVY)**

AICTE is implementing the PMKVY for Technical Institutes scheme through AICTE approved Technical Institutions in the country.Under this Scheme in next three years, 10.5 Lakh youth are to be given Engineering Skills.

**c) SAANSAD AADARSH GRAM YOJNA**

Saansad Aadarsh Gram Yojana is a rural development programme broadly focusing upon the development in the villages which includes social development, cultural development and spread motivation among the people on social mobilization of the village community.

**d) ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENTS (ARIIA)**

ARIIA is an initiative of Ministry of Human Resource Development (MHRD), Govt. of India to systematically rank all major higher educational institutions and universities in India on indicators related to “Innovation and Entrepreneurship Development” amongst students and faculties.

**Contact Address:**

1. Head Office:  
Nelson Mandela Marg,  
Vasant Kunj, New Delhi-110070  
Phone: 011-26131576-78,80
2. Southern Regional Office:  
AICTE – Southern Regional Office,  
‘Shastri Bhavan’, 26, Haddows Road,  
Nungambakkam, Chennai – 600 006  
Phone: 044-28279998, 28275650, 28232754

## 2. ATOMIC ENERGY REGULATORY BOARD (AERB)

<https://aerb.gov.in/english/>

### OBJECTIVE:

Promote research and development efforts in the areas of safety.

### Areas of Interest to AERB

Studies in some areas are of special interest to AERB. Some of these areas are indicated in the following list.

- Safety in application of nuclear and radiation facilities
- Environmental Impact Assessment
- Transport of Radioactive material
- Radioactive Waste Management
- Civil and Structural Engineering
- Spent Fuel Storage
- Reactor Physics
- Thermal Hydraulics/Fluid Structure Interactions in PHWRs, LWRs and FBRs under Accident Conditions
- Medical/ Industrial Applications of Radiation
- Applied Metallurgy/Radio metallurgy
- Fire and Industrial Safety
- Use of Radiation Sources for Research Purposes
- Effective Use of Information Technology for Regulatory Activities
- Radiobiology/Radiation Dosimetry/Radiation Protection
- Applied Chemistry in Nuclear Industry
- Safety Evaluation Methodology
- Front and Backend Fuel Cycle Facilities
- Occupational Health and Environmental Safety

### FINANCIAL GRANT FOR ORGANIZING CONFERENCES AND WORKSHOPS:

AERB extends financial support to organizations and institutes to organize conferences, symposia, seminars and workshops on safety related topics. These technical events encourage interaction among scientists and promote interdisciplinary collaboration, an essential factor in promoting radiological, industrial and nuclear safety. Publications from these events are normally made available in electronic form to all participants and also on websites to ensure online availability all over the country to a wider section of professionals.

The conveners of national/international conferences, symposia, seminars and workshops may submit an application to AERB for funding as per given format (Annexure-XII of [CSRP Brochure](#)).

#### Contact Address:

The Director,  
R&DD,  
AERB with copy to Member Secretary, Committee for Safety  
Research Programmes (CSRP),  
Atomic Energy Regulatory Board  
Niyamak Bhavan, Anushakti Nagar, Mumbai-400 094

### 3. BOARD OF RESEARCH IN NUCLEAR SCIENCES (BRNS)

[https://brns.res.in/brns\\_rp.php](https://brns.res.in/brns_rp.php)

#### INTRODUCTION:

The Board of Research in Nuclear Sciences (BRNS) is an advisory body of the Department of Atomic Energy (DAE) to recommend financial assistance to universities, academic institutions and national laboratories. The key objective is to encourage and promote scientific research in areas of relevance to the mandate of DAE in research groups outside DAE to derive benefits from their expertise.

#### SCHEMES

1. Identify and fund [R & D Projects](#)
2. Financial support to conduct [Symposia / Conferences](#)
3. Recruitment under Krishnan Research Associateship ([KSKRA](#)) scheme
4. Award research projects under [DAE-OIA](#) scheme, through DAE-SRC council.
5. Award fellowships under [DGFS M.Tech](#) scheme
6. Award fellowships to HBNI students under [DGFS-Ph.D](#) scheme
7. Award Fellowships to retired Scientists under [RRF](#) & [HBC](#) schemes, through AEC.

#### Mail To

helpdesk[dot]brns[at]barc[dot]gov[dot]in

For website accessibility related issues.

Also, if the processing status of the research project application remains unchanged for more than two months.

#### Mail To

brns[dot]symp[at]barc[dot]gov[dot]in

If the processing status of the Symposium application does not change in 15 days time. Or any other BRNS related queries.

For general enquiry

Phone:

022-2559 0813 between 02:00 PM to 03:30 PM on all working days.

#### Please do not contact for:

i) Knowing the processing status of your application, as it is auto updated and reflected in the applicant's account.

ii) The guidance for ONLINE submission. It is illustrated in the downloadable USER Manual

#### 4. COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH (CSIR)

<http://www.csir.res.in/>

<http://www.csir.res.in/knowledge-resource-center/knowledge-repositories>

<http://csirhrdg.res.in/>

##### **INTRODUCTION:**

Council of Scientific & Industrial Research (CSIR), India, a premier national R&D organisation, is among the world's largest publicly funded R&D organisation. CSIR's pioneering sustained contribution to S&T human resource development is acclaimed nationally. Human Resource Development Group (HRDG), a division of CSIR realises this objective through various grants, fellowship schemes etc.

Human Resource Development Group has been contributing significantly towards producing an inquiring society and fast growing knowledge economy. These numerous schemes cover a wide range of scientists.

##### **MAJOR ACTIVITIES:**

- Junior Research Fellowship JRF
- JRF-GATE Fellowship
- Syllabus for Joint CSIR UGC Test for JRF & LS (NET)
- Senior Research Fellowship SRF
- Research Associateship (RA)
- Senior Research Associateship (SRA) (Scientist's Pool Scheme)
- Emeritus Scientist Terms & Condition Apply Online
- Visiting Associateship
- Research Scheme / Sponsored Research Schemes
- Indian Language Journal
- Travel/Symposium/Seminar Grant
- Shanti Swarup Bhatnagar Prize (SSB)
- G N Ramachandran Gold Medal
- Young Scientist Awards (YSA)
- CSIR Bhatnagar Fellowship
- Shyama Prasad Mukherjee Fellowship (SPMF)
- CSIR-Nehru Science Postdoctoral Research Fellowship Scheme
- Programme on Technology Led Entrepreneurship

##### **Contact Address:**

The Head

Human Resource Development Group

CSIR Complex, Library Avenue, Pusa

New Delhi 110 012 India

Email : headhrdg[at]csirhrdg[dot]res.in

Fax : + 91 - 011 – 2584 0887

EPABX Lines: 25841582, 25842493, 25841701, 25842729

## 5. CENTRAL POWER RESEARCH INSTITUTE (CPRI)

<https://www.cpri.in/>

### INTRODUCTION:

The Government of India is promoting Research and Development for the Indian power sector through Central Power Research Institute (CPRI), which promotes applied research leading to technology development in the power sector through the following three schemes:

- R&D under National Perspective Plan(NPP)
- Research Scheme on Power (RSoP)
- In-House R&D (IHRD)

R&D project proposals are invited by CPRI under the above Research schemes. For further details click the links below.

### NAME OF SCHEME(S)

#### RESEARCH SCHEME ON POWER (RSOP)

The scheme basically aims to provide fund for carrying out need based research in power sector including solving of operational problems encountered in the power system

**For details of the research schemes please click the link below:**

<https://www.cpri.in/r-a-d-schemes/research-scheme.html>

#### Contact Address:

Additional Director - R&D Management Division  
Central Power Research Institute,  
Prof.Sir.C.V.Raman Road,  
Sadashivanagar P.B.No.8066, Bangalore -560 080  
Phone - 080-22072234| Fax - 080-22072013 |E-mail: rad@cpri.in

## 6. DEFENSE RESEARCH & DEVELOPMENT ORGANISATION (DRDO)

<https://www.drdo.gov.in/>

### INTRODUCTION:

Defence Research & Development Organisation (DRDO) works under Department of Defence Research and Development of Ministry of Defence. DRDO dedicatedly working towards enhancing self-reliance in Defence Systems and undertakes design & development leading to production of world class weapon systems and equipment in accordance with the expressed needs and the qualitative requirements laid down by the three services. DRDO is working in various areas of military technology which include aeronautics, armaments, combat vehicles, electronics, instrumentation engineering systems, missiles, materials, naval systems, advanced computing, simulation and life sciences. DRDO while striving to meet the Cutting edge weapons technology requirements provides ample spinoff benefits to the society at large thereby contributing to the nation building.

### RESEARCH BOARDS

DRDO has constituted four research boards to nurture and harness talent in academic institutions, universities, R&D centres and industry.

- **Aeronautics Research and Development Board** (AR&DB) has approved projects in the filed of Aeronautics and related areas.
- **Armament Research Board** (ARMREB) has approved projects in the fields of high energy materials, sensors, ballistics and other armament related fields.
- **Naval Research Board** (NRB), projects are being pursued in five technology areas.
- **Life Sciences Research Board** (LSRB) projects have been supported in the areas of biological and bio-medical sciences, psychology, physiology, bio-engineering, specialized high altitude agriculture, food science and technology.

### 6.1. AERONAUTICS RESEARCH AND DEVELOPMENT BOARD (ARDB)

<https://www.drdo.gov.in/drdo/boards/ardb/contact.htm>

### INTRODUCTION:

The scheme will be coordinated through a number of specialist panels duly constituted by the Chairman AR&DB to cover the different disciplines viz.

- Aerodynamics
- Aerospace Resources
- Materials & Manufacturing
- Propulsion
- Structures
- Systems & Systems Engineering

### SCHEMES:

Projects or schemes of value to aircraft, helicopters, missiles and all other airborne vehicles including their operation would be supported. The Aeronautics R&D Board shall also entertain applications for sanction of grants-

in-aid for build up of basic facilities / infrastructure and for conducting seminar, symposia, short courses, deputation / training of manpower, intensive short courses of current interest to Aeronautics and missiles, award of flying scholarships & other promotional activities within the country. AR&DB shall not make personal payments to members of regular staff of universities, colleges and institutions.

**The grant will be utilised**

To meet salary of research and laboratory staff, specially recruited for the project / facility and to meet cost of their medical benefits, CPF and leave etc. on the same scales as applicable to the regular employees of the institution and to provide funds for meeting the cost of Institutional overhead expenses, as follows:

- 15% of the total project cost without any upper limit for educational institutions.
- 10% of the total project cost with an upper limit of Rs. 2.00 lakhs for other institutions. (i.e. laboratories & institutes under S&T agencies other than Govt. departments).
- On projects costing more than 40 lakhs, the quantum will be decided on a case-to-case basis.

**Effective from: 03.10.1997.**

For procuring special equipment, consumable stores, chemicals etc. or for obtaining special services not normally provided by the institution such as computer time, calibration & testing of equipment and sub-systems; fabrication within workshop of the institution, etc.

- To meet cost of setting up of basic facilities / infrastructure for R&D in aircraft, helicopters, missiles & all other air-borne vehicles & their operations.
- To conduct or sponsor conferences / workshops / seminars / symposia / short courses etc. and to provide funds for training of manpower, promotional activities & deputations within the country and abroad.
- To cover contingency expenses, viz. postage, typing, printing, stationery, expenses on part-time / full-time typists if the workload of the project warrants.
- To meet travel expenses in India for projects / facilities including their monitoring, symposia, seminar, short courses etc. and for deputation abroad in connection with presentation of papers in International Symposia and for visit to advanced Aeronautical R&D facilities and to meet expenses in India for eminent scientists invited by AR&DB.
- To publish research work in the form of a Technical Report for dissemination to Aeronautical community in an approved AR&DB format.
- To conduct Intensive short courses of current interest to Aeronautics including missiles.
- To award flying scholarships to Aeronautical R&D scientists and students.
- To meet the cost of honorarium to invited speakers for AR&DB sponsored short courses / workshops.

**Contact Address::**

Dr K Gopi Nath, Programme Coordinator  
Defence Metallurgical Research Laboratory  
DMRL PO, Kanchanbagh  
Hyderabad-500058  
040-24342647/24586389  
040-24340683 (Fax)

## 6.2. ARMAMENTS RESEARCH BOARD (ARB)

<https://www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=home.jsp&dir=ARMREB>

### OBJECTIVES OF ARMREB

- To foster knowledge-based growth of Armament discipline in the country, strengthening and integrating national resources of knowledge, know how, experience, facilities and infrastructure.
- To catalyze the much needed cross-fertilization of ideas and experiences between DRDO and outside experts in scientific and technical fields that contribute to armament technology.
- To launch and coordinate research in specified areas of armament discipline in academic institutions.
- To create conditions suitable for attracting talent through research collaborations and other academic exchanges and adopt synergic approach towards national needs and priorities in the field of Armaments in the global advancements.
- To adopt synergic approach towards National needs and priorities in the field of Armaments, yet keeping in focus the Global Advances, in order to develop competence in Key Areas.
- To lead the Technological Innovations useful for Combat Multiplier both for the near term and future.

### CHARTER OF ARMREB

- To support basic and applied research applicable to armament discipline.
- To review and approve, research proposals submitted by Academic Institute.
- To set funding pattern and funding methodology for the research panels of ARMREB.
- To decide on specific research programmes of individual projects exceeding Rs 25 lakhs or involving major civil works.
- ARMREB will exclude funding of development of system hardware.

### OBJECTIVES OF RESEARCH PANELS

- To undertake and promote imagination driven research work in the Armament disciplines to create novel/approaches and materials.
- To promote upstream Research & Development activities at Academic Institutions/R&D Organisations/ Industry.
- To train manpower of requisite quality for undertaking/pursuing research in the relevant field.
- To act as catalyst for seeding futuristic technologies at identified Institutions.
- To help in creating self sufficiency in critical technologies needed for development of competitive armament stores and put the armament discipline in the forefront in the global scenario.
- To create data base on specific and allied fields of armaments discipline.

**Project proposals are invited throughout the year.  
Address for Correspondence and submission of proposals:**

Shri RS Gauba  
Secretary ARMREB  
307, DRDO Bhavan  
Rajaji Marg  
New Delhi - 110011  
Phone: 23007307, FAX: 23794562  
Email: armreb@hqr.drdo.in

### 6. 3. Naval Research Board (NRB)

[http://nrbdndo.res.in/board\\_intro.html](http://nrbdndo.res.in/board_intro.html)

[http://nrbdndo.res.in/submission\\_proposal.html](http://nrbdndo.res.in/submission_proposal.html)

#### **OBJECTIVE:**

The Board has instituted a Grants-in-Aid Scheme to nurture research talent and to create research facilities in IITs, Universities, higher technological institutions, colleges and other research centers including industries in the country for promoting basic research, design and development.

#### **THRUST AREAS OF RESEARCH:**

- Polymer & Nano-composites for energy storage devices
- Functional polymers & coatings for marine applications
- Fuel cell & flow batteries
- Non solar PV energy harvesting
- High productivity welding technologies (Thermal Stir welding, Hybrid Laser welding) for Naval ship/submarine construction
- Wear & corrosion resistant amorphous / nanostructured iron & copper base materials
- Multiferroics for transducers of high sensitivity
- High Tc lead free piezoelectric materials
- Microbially induced corrosion of metals
- Anti-fouling coatings
- Microbial fuel cells
- Energy generation from Waste materials
- Additive technologies for manufacturing
- Stealth materials for ships/submarines
- Acoustic signature management materials

Project applications will be assessed and sanctioned twice in a year i.e. 01 May and 01 Nov. Only proposals received three months prior to these dates will be evaluated by the Specialist panel and recommended to the board for approval.

**Detailed proposal should be addressed to:**

(a) Respective Panel Heads, OR  
(b) Member Secretary  
Naval Research Board  
Defence Research & Development Organization  
Dte of Naval R&D, 3rd Floor, DRDO Bhawan  
Rajaji Marg, New Delhi - 110011  
Tele: 011-23007333  
Fax: 011-23017492

**Short Proposal to be submitted to:**

(a) Director,  
Naval Physical & Oceanographic Laboratory (NPOL)  
Thrikkakara, Kochi-682021

Fax: 2424858, 2423931  
Phone No: 0484-2424878,2571111  
E-Mail: director@npol.drdo.in

(b) Director,  
Naval Science & Technological Laboratory,  
Vigyan Nagar, Visakhapatnam-530027  
Fax: 2559464  
Phone No: 0891-2558402, 2586100  
E-mail: director@nstl.drdo.in

(c) Director,  
Naval Materials Research Laboratory  
Shil-Badlapur Road, PO Anand Nagar  
Distt Thane  
Ambernath (East)-421506  
Fax: 2623004  
Phone: 0251-2623037, 2623001  
E-mail: director@nmrl.drdo.in

## 6. 4. LIFE SCIENCES RESEARCH BOARD (LSRB)

<https://www.drdo.gov.in/drdo/boards/lsrcb/fplsrcb.htm>

<https://www.drdo.gov.in/drdo/boards/lsrcb/fplsrcb.htm>

### INTRODUCTION:

The major thrust areas of LSRB are life support system and biomedical technologies for air, land and sea operations, military psychology, cognitive engineering, personnel selection, human adaptation to extreme environments, ergonomics and human factors/engineering for equipment development and man machine interface, nutrition, radioprotection, stress management, combat fatigue, bio-defence against human, animal and plant pathogens, specialized food technologies, vector and malaria control, biotechnology and high altitude agro animal technologies, nuclear, biological and chemical detection, protection and decontamination.

### ELIGIBILITY FOR GRANTS IN AID:

Grants are offered to IITs, universities, colleges, departments, laboratories approved research Institutes, eminent scientists working in reputed industrial / firms (nonprofit earning) with well established R&D facilities, Government and non-Government sector etc.

### APPLICATION PROCEDURE:

Eligible institutes/ candidates should submit project proposals to the following address in the prescribed format available free of cost at the website: <http://drdo.gov.in/boards/lsrcb/fplsrcb.htm> The proposals would be considered twice in a year i.e. April and October each year.

#### Contact Address:

Secretary, LSRB & Director Life Sciences  
Govt. of India. Ministry of Defence  
Defence Research & Development Organisation  
Directorate of Life Sciences  
Room No. 347, 'B' Wing, DRDO Bhawan, Rajaji Marg  
New Delhi-110 105, Tele: 23017752, Fax: 23017753  
Email: [lsrcb1998@rediffmail.com](mailto:lsrcb1998@rediffmail.com) or [dls\\_drdo@hotmail.com](mailto:dls_drdo@hotmail.com)  
Website: <http://drdo.gov.in/boards/lsrcb/fplsrcb.htm>

## 7. DEPARTMENT OF BIOTECHNOLOGY (DBT)

<http://dbtindia.gov.in/>

### INTRODUCTION:

The new focus on Young India is clear from the various Grants and Funds as well as Awards, and the DBT's commitment to revisit the funding mechanism to ensure a quicker assessment of project values and disbursements of funds for research.

### OBJECTIVES:

- To provide user friendly system for online submission of proposal and various other documents related to ongoing projects.
- To provide information about status of proposal /project.
- To enable online peer review and processing of proposal.
- To facilitate complete monitoring and project management.

### KEY FEATURES:

- Online registration for new investigators.
- PIs of ongoing and completed projects have login ID and password for tracking their project.
- Online availability of user manual, various forms etc.
- Online access to proposals for review.
- Online proposal evaluation.
- Reduces time lag, paper work at various stages of processing.

### SCHEMES:

- DBT: IC-IMPACTS “Wealth from Waste” Call
- Announcement about Bioenergy-Awards for Cutting Edge Research
- Proposals in the area of biosimilar product development, shared facilities for biotherapeutics development and novel cell line development
- Proposals in the area of biosimilar product development, shared facilities for biotherapeutics development and novel cell line development(rfp)
- Special Call for Proposal for establishment of Biotech-KISAN Hubs in four Agro-climatic Zones (Eastern Plateau & Hills, Gujarat Plain & Hills, Western Dry Region and Islands)
- Indo Australia Biotechnology Fund (11th Round) Advertisement
- Final Indo- Australia (11th Round) Guidelines
- 11th Round Indo-Australia Application Format For R&D proposals

- Crdf global request for proposals(rfp) indo-u.s.vaccine action program(vap)initiative on tuberculosis(tb)research:regional prospectiveo bservational research fortuberculosis- report india
- Funding Opportunities for Indo-German Fundamental Research Projects in the Life Sciences
- B4-Young Scientist Program: Synthetic Biology Workshop
- Vacancies advertisement for the DBT's Apex BTIC Centre
- Cooperation on Research & Innovation between DBT and the EU in 'Horizon 2020' Work programmes 2018-2020
- DBT Announces ATGC Program
- Joint DBT-BIRAC Call for launching "Mission AMR"
- India-EU Research and Innovation Action Towards A Next Generation Influenza Vaccine to Protect Citizens Worldwide
- DBT Alumni Scheme for Newton International Fellows (NIFs)

**Contact Address:**

Department of Biotechnology  
6th-8th Floor, Block 2 CGO Complex, Lodhi Road  
New Delhi - 110 003.  
India

## **8. DEPARTMENT OF ATOMIC ENERGY (DAE)**

<http://www.dae.nic.in>

### **INTRODUCTION:**

The Department of Atomic Energy supports research programmes in Nuclear Science and Technology through the Board of Research in Nuclear Sciences (BRNS). BRNS support the following schemes.

### **NAME OF SCHEME(S) & OBJECTIVE(S):**

#### **1. R&D PROJECT**

Fostering research capabilities and manpower development in universities and similar institutions of higher learning and research.

#### **2. SYMPOSIUM/CONFERENCE/WORKSHOP**

To promote large scale interactions in various disciplines of science and technology that are of interest to DAE.

#### **3. DAE YOUNG SCIENTISTS RESEARCH AWARD**

To support young scientist below the age of 35 years in their initial years of settling down in a career of R&D.

#### **4. DR. K.S. KRISHNAN RESEARCH ASSOCIATESHIP**

To support talented science and engineering research scholars

#### **5. RAJA RAMANNA FELLOWSHIP**

To utilize the services of active retired scientists/engineers and technologists, who have been involved in high quality research in their specialized discipline in the units of the DAE or any National Laboratory or University/Institute

#### **6. VISITING SCIENTISTS**

To promote close interactions on specialized scientific and technical topics between the scientists and technologists from DAE and Universities/IITs/IISc/ National Labs.

#### **7. HOMI BHABHA CHAIR PROFESSORSHIP**

These Chairs are instituted in recognition of sustained record of excellence and creative contribution to research and / or teaching in the area of interest to DAE.

**8. DAE GRADUATE FELLOWSHIPS**

To provide excellent career opportunity to students qualifying for admission to the M.Tech Course in Indian Institute of Technology at Mumbai, New Delhi, Kanpur, Kharagpur, Chennai or Roorkee.

**9. DAE GRADUATE FELLOWSHIPS FOR PH.D.**

To provide an opportunity to work on projects of interest to DAE to those students who aspire to attain the highest academic qualification, (ii) to achieve the basic objective of strengthening linkages between the grant-in-aid institutions and the research centres for the benefit of advancing the pace of research in nuclear sciences, and (iii) to accelerate the speed to translating R&D into technology products and their applications.

**10. DAE-SRC Award**

The core objective is to augment support to individual research workers with highly innovative ideas and with proven abilities to pursue advanced research in frontier areas of science and engineering at an accelerated pace.

**Contact Address:**

The Scientific Secretary / Programme Officer ,BRNS Secretariat,  
Department of Atomic Energy ,1st Floor, Central Complex,  
BARC, Trombay , Mumbai-400 085 . Tel. No: (022) 25505223/  
25593946/25595331/ 25595386  
Fax : (022) 25505151/ 25519613,  
E-mail:drppc@barc.ernet.in/trehan@barc.ernet.in/ gnpandey@barc.ernet.in

## 9. DEPARTMENT OF SCIENCE AND TECHNOLOGY (DST)

<http://www.dst.gov.in/>

### INTRODUCTION:

Department of Science & Technology (DST) was established in May 1971, with the objective of promoting new areas of Science & Technology and to play the role of a nodal department for organising, coordinating and promoting S&T activities in the country.

### 9.1 SCIENTIFIC & ENGINEERING RESEARCH AREAS:

- [Mega Facilities for Basic Research](#)
- [Innovation in Science Pursuit for Inspired Research \(INSPIRE\) programme](#)
- [R&D Infrastructure \(FIST, SAI Fs, PURSE\)](#)
- [Science and Technology of Yoga and Meditation \(SATYAM\)](#)
- [Programme for Science Students](#)
- [Swarnajayanti Fellowships](#)
- [National Science & Technology Management Information System \(NSTMIS\)](#)
- [Science and Engineering Research Board \(SERB\)](#)
- [Cognitive Science Research Initiative \(CSRI\)](#)
- [Impacting Research Innovation and Technology \(IMPRINT \)](#)
- [VAJRA \(Visiting Advanced Joint Research\) Faculty Scheme](#)

### 9.2 DST- APPLICATIONS INVITED THROUGHOUT THE YEAR

- Call for proposal under Innovation & STEM Demonstration
- Technology Interventions For Disabled & Elderly (TIDE) Programme
- Call for applications for ASEAN-India Research Training Fellowships
- Call for R&D proposals under ASEAN-India Science & Technology Cooperation program
- Abdul Kalam Technology Innovation National Fellowship
- Announcement for inviting applications for Research & Training Fellowships for Developing Country Scientist (RTF-DCS)
- SERB Research Scientist Scheme
- Announcement for inviting Technologies /Innovation/ Idea for support under ASEAN-India S&T Development Fund

### 9.3 WOMEN SCIENTISTS SCHEME

- **Women Scientist Scheme-A(WOS-A):** Research in Basic/Applied Science
- **Women Scientist Scheme-B (WOS-B):** S&T interventions for Societal Benefit
- **Women Scientist Scheme-C (WOS-C):** Internship in Intellectual Property Rights (IPRs) for the Self-Employment

### ELIGIBILITY:

The scheme is meant to encourage women in S&T domain, preferably those having a break in career and not having regular employment, to explore possibility of re-entry into the profession.

The Scheme is open throughout the year. Therefore, there is no last date of application.

Mode of submission: Online

## 9.4 INTERNATIONAL S&T COOPERATION

The Department currently supports three bi-national S&T Centres which are independent entities established under inter-governmental bilateral agreements with France, USA and Germany.

- [Indo-French Centre for Promotion of Advanced Research \(IFCPAR / CEFIPRA\)](#)
- [Indo-US Science & Technology Forum \(IUSSTF\)](#)
- [Indo-German Science & Technology Centre \(IGSTC\)](#)

The collaborations in selected areas of mutual interest with different countries/organisations are materialized through various modes of cooperation like:

### CONTACT BUILDING THROUGH

- Joint Workshops/ Seminars/Frontiers Symposia/Exhibitions
- Visitation, Fellowships & Internships
- Exploratory visits
- Lectures by Eminent Scientists
- Fielding young researchers scholars to international meets with Peers Provide Support for
- Joint R&D Projects of mutual interest
- Project mode mobility based exchanges
- Training and Advanced Schools
- Access to Advanced Facilities
- Participation in Mega-science projects

### FACILITATE AND PROMOTE

- Joint R&D Clusters
- Virtual Networked Centres
- Multi - institutional R&D projects
- Catalyzing creation of Joint Ventures

### PROMOTE COMMERCIAL R&D AND INNOVATION

- Academia – Industry Applied R&D Projects
- PPP for Innovation and Entrepreneurship (GITA Platform)
- Facilitate Technology Development & Tech Transfer
- Annual Technology Summit with partner country

#### For more information on International Co-operation

##### International Bilateral Cooperation Division

Shri Sanjeev K Varshney  
 Scientist - 'G'  
 Department of Science & Technology  
 Technology Bhawan  
 New Mehrauli Road  
 New Delhi-110 016.  
 Tele: 011- 26961912  
 Email: skvdst[at]nic[dot]in

##### International Multilateral & Regional Cooperation Division

Dr. Sadhana Relia  
 Scientist - 'G'  
 Department of Science & Technology  
 Technology Bhawan  
 New Mehrauli Road  
 New Delhi-110 016.  
 Tele: 011-26602216, 26590460  
 Telefax: 011-26602216

**10. DEPARTMENT OF CHEMICALS AND PETROCHEMICALS (DCPC)**

<https://chemicals.nic.in/about-us/about-department>

**INTRODUCTION:**

The vision is to be achieved through promotion of Research and Development and Human Resource Planning and Development. Towards furtherance of this objective, the policy envisaged institutionalization of National Awards for Technology Innovation in various fields of Petrochemicals and Downstream Plastic Processing Industry.

This innovation award scheme will motivate the inventors to carry out innovative Research & Development in the areas of petrochemicals industry, which in turn will improve performance / quality of the existing product. This award will be on outstanding contribution in R&D leading to better energy consumption, better plastic waste management, increase in product life cycle, development of innovative new products, quality standards, recycling and other emerging areas

**PROPOSED CATEGORIES OF AWARDS**

(Individual, Team, Cottage/Micro/Small/Medium/Large Scale Industry, Academic, R&D Institutions etc.)

**1. INNOVATION IN POLYMERIC MATERIALS:**

- New Polymers, Blends & Alloys, filled materials, fibers, Polymer, Composites and Nano composites, Smart Materials etc.
- New Additives, Compounds for newer & special applications in defence & space.

**2. INNOVATION IN POLYMERIC PRODUCTS:**

- New / creative product design.
- Non conventional application / Replacement of conventional materials (eg. Metals, ceramics etc.).
- Modification of product design for performance improvements.
- Application in defence & space

**3. INNOVATION OF POLYMER PROCESSING MACHINERY & EQUIPMENTS:**

- Development of new processing techniques.
- Modification of machinery for higher efficiency/productivity /Automation.
- Energy conservation, product quality improvement.
- Improvement & design of moulds, dies and auxiliary equipments.

**4. INNOVATION IN POLYMER WASTE MANAGEMENT:**

- Newer technology in plastic waste utilization into products/energy recovery.
- Recycling Technology.
- Plastic waste collection, segregation techniques.
- Product design for improved recyclability.

**5. INNOVATION IN GREEN POLYMERIC MATERIALS & PRODUCTS:**

- Biopolymers.
- Biodegradable / compostable Polymers.
- Time controlled degradation.

- Green material filled polymers.
- Biodegradability evaluation techniques.

## **6. INNOVATION IN PACKAGING TECHNIQUES INCLUDING CREATIVE DESIGN:**

- Emerging Packing Technologies
- Smart Packaging
- New compound for replacement of multi-layered packages.
- Packaging for defence

## **7. POLYMERS IN AGRICULTURE AND WATER CONSERVATION:**

- Water transportation, mulching, canal lining, Drip irrigation, Sprinkler system Low Tunnels, Poly house etc.
- Controlled release system for fertilizer, pesticides, micro nutrients, etc.
- Innovative packaging for agriculture, floriculture and horticultural produce.
- Controlled permeability films & packaging for improved shelf life
- Novel Usage of plastics for food security.

## **8. POLYMERS IN PUBLIC HEALTH CARE:**

- Affordable / cost effective implants, implements and devices.
- New innovative products for medical application.
- Polymer based new drugs delivery system.
- Polymer body implants.
- Drinking water storage & transportation.
- Polymer membrane for water purification /Desalination.
- Devices for waste water, drainage, sewage treatment system.

## **9. INNOVATION IN AUTOMOTIVE & TRANSPORTATION SYSTEM:**

- Use of Polymers for Indigenization of products, creative product design, replacement of conventional material, performance optimization of products for automotive & transportation system.
- Developments in Logistics

## **10. INNOVATION IN ROBOTICS & AUTOMATION IN POLYMER PROCESSING:**

- Developments and Applications in Robotics & Automation in different polymer processing techniques.
- Development in material movement system.
- Improvements in moulding & post-moulding operations.

## **11. RESEARCH IN THE FIELD OF POLYMER SCIENCE & TECHNOLOGY (FOR RESEARCH STUDENTS OF ACADEMIC INSTITUTE / RESEARCH LAB.)**

- Individual / Team of researchers in R & D Institutions & laboratories
- Original research work in polymeric materials processing etc. leading to proto type development & future industrial applications.

**11. GAS AUTHORITY OF INDIA LIMITED (GAIL)**

<https://gailebank.gail.co.in/GUSI/frmStartUpGAIL.aspx>

**INTRODUCTION:**

GAIL intends to collaborate with established Incubation Centres (ICs) to leverage their expertise and resources in incubating Start-Ups

**THE START-UPS SHALL BE IN GAIL'S CORE AREAS. AN INDICATIVE LIST OF SUCH AREAS IS AS FOLLOWS:****11.1 NATURAL GAS**

- New applications of Natural Gas
- City Gas Distribution
- Natural Gas Storage
- Gas Sourcing and optimization
- Pipeline Operations and Maintenance

**11.2 PETROCHEMICALS**

- Polymer Product Optimization
- Development of new polymer grades, catalysts and indigenization of existing catalysts
- New Polymer applications

**11.3 ENERGY**

- Energy efficiency/conservation in process plants/pipelines
- Renewable and Alternate energy sources

**11.4 OTHERS**

- Project Management
- Re-engineering of processes
- Nano materials
- Internet -of-Things, Cyber Security, Data Mining and Analytics
- Customer satisfaction
- Water and Effluent Treatment, Desalination
- Any Other area relevant to GAIL's Business

**Contact Address:**

GAIL (INDIA) Limited  
R & D Department, 8th Floor, Jubilee Tower  
B-35 & 36, Sector – 1, Noida (U.P.) – 201301  
Phone Number (EPABX):  
0120-2446400, 4862400  
E-mail: start-up@gail.co.in

## 12. Institute of Electrical and Electronics Engineers (IEEE)

<https://www.ieee.org>

### INTRODUCTION:

IEEE and its members inspire a global community to innovate for a better tomorrow through highly cited publications, conferences, technology standards, and professional and educational activities. IEEE is the trusted “voice” for engineering, computing, and technology information around the globe.

### 12.1. IEEE SCHOLARSHIPS, GRANTS, AND FELLOWSHIPS:

#### 12.1.1. IEEE COMPUTATIONAL INTELLIGENCE SOCIETY CONFERENCE TRAVEL GRANTS:

This program offers a number of travel grants to assist IEEE Student members presenting papers at IEEE NNS (Neural Networks Society) sponsored conferences.

#### 12.1.2. IEEE COMPUTATIONAL INTELLIGENCE SOCIETY SUMMER RESEARCH GRANT:

The program offers scholarships of US\$1,000 to US\$4,000 for deserving graduate students who need financial support for their research during a summer period.

#### 12.1.3. IEEE COMPUTER SOCIETY MERWIN SCHOLARSHIP:

This scholarship recognizes and rewards active leaders in the IEEE Computer Society Student Branch Chapters. Up to 20 US\$2,000 scholarships are available and awarded on an annual basis.

#### 12.1.4. IEEE DIELECTRICS AND ELECTRICAL INSULATION SOCIETY GRADUATE STUDENT FELLOWSHIP:

This fellowship was designed to support graduate research in the area of insulation or dielectrics. Two US\$7,500 or three US\$5,000 scholarships are awarded annually.

#### 12.1.5. IEEE ELECTRON DEVICES SOCIETY GRADUATE STUDENT FELLOWSHIP:

This program promotes, recognizes, and supports graduate-level study and research within EDS, with at least one fellowship awarded to students in each of the main geographic regions: Americas, Europe/Mid-East/Africa, Asia/Pacific.

#### 12.1.6. IEEE EPS PHD FELLOWSHIP:

This fellowship promotes, recognizes, and supports PhD level study and research within the Electronics Packaging Society's field of interest with an annual award of US\$5,000, applicable towards the student's research.

#### 12.1.7. IEEE JAMES C. KLOUDA MEMORIAL SCHOLARSHIP AWARD:

The IEEE James C. Klouda Memorial Scholarship awards a scholarship to a qualified undergraduate student who seeks an electrical engineering degree with emphasis in the field of electromagnetic compatibility or a related discipline, from an accredited US university or college.

**12.1.8. IEEE Life Members' Fellowship in Electrical History:**

This fellowship in Electrical History supports either one year of full-time graduate work in the history of electrical science and technology at a college or university of recognized standing, or up to one year of post-doctoral research for a scholar in this field who has received his or her Ph.D. within the past three years. The stipend is US\$17,000, and a research budget of US\$3,000 is available.

**12.1.9. IEEE MASTERS STUDENT FELLOWSHIP:**

This one-year fellowship is awarded to promote, recognize, and support graduate masters-level study and research within the Electron Devices Society's field of interest. The prize is US\$2,000 and a plaque to the student, to be presented by the dean or department head of the student's enrolled graduate program.

**12.1.10. IEEE Microwave Theory and Techniques Society Graduate Fellowships:**

This program was created to support graduate research studies in microwave engineering. Fellowships are in the amount of US\$5,000 each, and the deadline for submission is 30 November annually.

**12.2. IEEE MADRAS SECTION:**

<https://www.ieemadras.org/student-branches/>

**INTRODUCTION:**

IEEE aims to fostering technology towards humanity, by industrial standards, conferences technical papers, newsletters, symposiums and workshops. Ground level support is from the UG student members and they will be futuristic leader to take up the IEEE executive positions.

**SCHEMES:**

- [Faculty Development Program](#)
- [Financial Assistance to Students Branches](#)
- [IEEE Mas Link](#)
- [Travel Grant](#)
- [Student Project Funding](#)
- [Technical Sponsorship](#)
- [Technical Meetings](#)

**Contact Address:**

IEEE Madras Section  
Room No.3, ISTE Professional  
Center,  
Gandhi Mandapam Road,  
Kottur, Chennai – 600 025.  
(Opp Anna Centenary library)  
Land Line: +91- 44- 24423939  
Mobile: 9382328776  
Email: [ieemas@gmail.com](mailto:ieemas@gmail.com)

## 13. INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR)

<https://www.icmr.nic.in/>

### INTRODUCTION

The primary aim of the ICMR is to promote research in the country in the fields of medicine, public health and allied areas. The Council promotes biomedical research in the country through intramural research (through Institutes totally funded by ICMR) and extramural research (through grants-in-aid given to projects in non ICMR Institutes)

#### 13.1. SCHEMES

- [SHARP](#)
- [Fellowship](#)
- [Extramural Ad-hoc](#)
- [MD/MS-PhD](#)
- [MD/MS/DM/MCh/MDS Support](#)
- [Post Doctoral Research](#)
- [Emeritus Medical Scientist](#)
- [Clinical Training/Translational Research Workshops](#)
- [Medical Innovation](#)
- [International Travel by Non-ICMR Scientists](#)
- [Centre For Advanced Research](#)
- [Nurturing Clinical Scientists Scheme](#)
- [ICMR Chairs](#)
- Short Term Visiting Fellowships
- Ad-hoc Research Schemes
- Research Fellowships/ Associateships
- Junior Research Fellowships
- Centres for Advanced Research
- Task-Force Projects
- ICMR Talent Search Scheme for MD/MS-PhD Programme
- ICMR Postdoctoral Research Fellowship
- New scheme "Medical Innovation Fund"
- Short Term Research Studentship
- Guidance for International Collaboration
- ICMR International Fellowship Programme for Indian Biomedical Scientists
- ICMR International Fellowships for Biomedical Scientists from Developing Countries
- Financial assistance to MD/MS/DM/MCH thesis
- ICMR aided symposia/ seminars/ workshops/ courses/ conferences

#### Contact Address:

Indian Council of Medical Research  
V. Ramalingaswami Bhawan, P.O. Box No. 4911  
Ansari Nagar, New Delhi - 110029, India

## 14. INDIRA GANDHI CENTRE FOR ATOMIC RESEARCH (IGCAR)

<http://www.igcar.gov.in/contact.html>

### INTRODUCTION:

The main objective of the centre is in conducting broad based multidisciplinary programme of scientific research and advanced Engineering, directed towards the development of sodium cooled Fast Breeder Reactor [FBR] and closed fuel-cycle technology, in India.

IGCAR has an excellent team of scientists and engineers to carry out research (both basic and applied) in many disciplines of science and engineering. IGCAR offers excellent opportunities for carrying out research leading to Ph.D. There are already a good number of research scholars in the Centre.

#### **Contact Address:**

Indira Gandhi Centre for Atomic Research,  
Department of Atomic Energy,  
Kalpakkam,  
Tamilnadu - 603102

## 15. INDIAN RENEWABLE ENERGY DEVELOPMENT AGENCY LIMITED (IREDA)

<https://ireda.in/>

### INTRODUCTION:

Indian Renewable Energy Development Agency Limited (IREDA) is a Mini Ratna (Category – I) Government of India Enterprise under the administrative control of Ministry of New and Renewable Energy (MNRE). IREDA is a Public Limited Government Company established as a Non-Banking Financial Institution in 1987 engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy and energy efficiency/conservation with the motto: “ENERGY FOR EVER”

### SCHEMES:

- Loan against Securitization of Future Cash Flow of Renewable Energy Projects
- ”Bridge Loan against MNRE Capital Subsidy payable to Accredited Channel Partners and State Nodal Agencies (SNA) for claims against installation of Solar Water Heating Systems”
- “Bridge loan against GBI Claims Payable to Renewable Energy Developers under MNRE Scheme for Generation Based Incentive (GBI) for grid interactive Wind and Solar power projects”
- IREDA to take up the role of lead FI under Consortium/Syndicated Loans/ Multi banking arrangements by charging Lead Fee.
- Loan Scheme for Rooftop Solar PV Power Projects for Commercial, Industrial and Institutional Sector.
- IREDA Scheme for discounting of Energy bills.
- “Credit Enhancement Guarantee Scheme” for raising Bonds towards Renewable Energy Projects (Solar / Wind)
- IREDA's New Loan Scheme on Concentrated Solar Thermal project under GEF-UNIDO-MNRE Scheme
- Policy for financing of Transmission Projects
- IREDA New Scheme - Financing of Briquettes/ Pellets/RDF manufacturing facilities.
- IREDA New Scheme - financing of Biomass Pellets, Briquettes, RDF Manufacturing Facilities

### Contact Address:

Indian Renewable Energy Development Agency Limited  
(A Government of India Enterprise)

#### Corporate Office

3rd Floor, August Kranti Bhawan,  
Bhikaiji Cama Place, New Delhi – 110  
066.

Tel: +91 11 26717400 - 26717412

Fax: +91 11 26717416

Email: [cmd@ireda.in](mailto:cmd@ireda.in)

#### Registered Office

India Habitat Centre, East Court  
Core-4A, 1st Floor, Lodhi Road

New Delhi - 11 00 03

Tel: +91 11 24682206 - 24682219

Fax: +91 11 24682202

**16. INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)**

<http://www.isteonline.in/>

**INTRODUCTION:**

The major objective of the ISTE is to provide quality training programmes to teachers and administrators of technical institutions to update their knowledge and skills in their fields of activity and to assist and contribute in the production and development of top quality professional engineers and technicians needed by the industry and other organizations.

**PROPOSAL INVITED TO HOST THE ISTE CONVENTIONS 2019:**

Proposals are invited to host the **22nd ISTE Annual Students Convention and 49th ISTE National Annual Faculty Convention 2019**. Interested institutions are requested to send their detailed profile alongwith their willingness letter for hosting the Conventions to ISTE Hqrs., New Delhi by email or hard copy.

As a regular annual feature, **Forty Eight National Annual Faculty Conventions and Twenty One Students Convention of ISTE** have been held so far in different States. The major impact of these Conventions are instrumental in providing an opportunity for the Teachers, Educational Planners and Administrators, Students and all other stakeholders who are involved in the field of technical education to get together and share their views and to contribute the development of technical education system.

In this regard, Institutions are welcome to send their proposals for hosting the **22nd ISTE Annual Students Convention and 49th ISTE National Annual Faculty Convention**, which will be organised during October and December 2019 respectively. Proposals received will be placed before the ISTE Executive Council in its meeting for consideration. Interested institutions are requested to send their detailed profile alongwith their willingness letter for hosting the Conventions to the following address:

**Contact Address:**

The Executive Secretary  
Indian Society for Technical Education  
Shaheed Jeet Singh Marg  
Katwaria Sarai, New Delhi - 110 016  
Phone : 011-26513542, 26963431  
Email : istedhq@vsnl.net  
Website : www.isteonline.in

**SELF-FINANCING STTPS**

There is a limited budgetary provision for the STTPs under the overall QIP Scheme of the MHRD/ AICTE. Therefore, in order to enable the teachers to enhance their technical competencies and help them to become eligible for Career Advancement opportunities, STTPs on self-financing basis are introduced. The special features of the Self-Financing STTPs are as under:

- These are programmes being conducted locally.
- The participating teacher is not required to take leave.
- The academic schedule of the institution is not affected.
- Boarding & lodging facilities are not required.
- TA/DA expenses are zero.
- The expenses to be incurred on Guest Experts, Instructional Material, etc. could be met by the concerned institute itself.
- The nominal course fee of Rs.300/- per participant to be necessarily paid to the ISTE Headquarters after completion of the programme.

The Member Institutes/Faculty interested in the conduct of Self-Financing STTPs, may please send their proposals alongwith a DD for Rs.1180/- (1000 +180 GST) drawn in favour of ISTE, New Delhi (revision in fee has approved by the Executive Council of ISTE in its 106th EC Meeting) in prescribed STTP proforma on the following address:

### **AICTE – ISTE ORIENTATION/ REFRESHER PROGRAMME**

The objective is to conduct AICTE-ISTE Induction/ Refresher Programmes for the teaching faculty working in technical institutions. Total 100 Refresher programme & 50 Orientation programme with the funding of Rs. 300000 per programme.

**Contact Address:**

The Executive Secretary  
Indian Society for Technical Education  
Saheed Jeet Singh Marg,  
Near Katwaria Sarai, New Delhi – 11 0 016  
Phone : 011-26513542, 26963431  
Fax : 011-26852421  
Email : [istedhq@vsnl.net](mailto:istedhq@vsnl.net)  
Website : [www.isteonline.in](http://www.isteonline.in)

**17. INDIAN SPACE RESEARCH ORGANISATION (ISRO)**

<https://www.isro.gov.in/>

**INTRODUCTION:**

ISRO encouraging academia to participate and contribute in various Space related research activities. Under RESPOND, projects are taken up by Universities/Academic Institutions in the areas of relevance to Space Programme. ISRO has evolved the RESPOND programme through which necessary financial and technical support is provided to academia in India for conducting research and development activities related to Space Science, Space Technology and Space Applications.

**FOR MORE DETAILS VISIT:**

1. [www.sac.gov.in/respond](http://www.sac.gov.in/respond)
2. [www.vssc.gov.in](http://www.vssc.gov.in) > Activities > RESPOND
3. [www.prl.res.in](http://www.prl.res.in)> opportunities>respond programme

**Five copies of the proposal, in the respective areas given below should be sent to one of the following ISRO CENTERS:**

<b>Domain</b>	<b>Address</b>
<b>Space Sciences</b>	Director Physical Research Laboratory Navarangapura, Ahmedabad 380 009. e-mail : <a href="mailto:director@prl.res.in">director@prl.res.in</a>
<b>Atmospheric Sciences</b>	Director National Atmospheric Research Laboratory Gadanki, Pakala Mandal Pin-517 112 Andra Pradesh e-mail : <a href="mailto:director@narl.gov.in">director@narl.gov.in</a>
<b>Rockets, launch vehicles and space technology including Avionics</b>	Director Vikram Sarabai Space Centre ISRO P.O. Thiruvananthapuram 695 022 e-mail : <a href="mailto:director@vssc.gov.in">director@vssc.gov.in</a>
<b>Remote Sensing</b>	Director National Remote Sensing Centre Department of Space, ISRO Balanagar, Hyderabad - 500 625(A.P.) INDIA. e-mail : <a href="mailto:director@nrsc.gov.in">director@nrsc.gov.in</a>
<b>Space Applications Space communications, Remote sensing and meteorology.</b>	Director Space Applications Centre Jodhpur Tekra Ahmedabad 380 015. e-mail : <a href="mailto:director@sac.gov.in">director@sac.gov.in</a>
<b>Satellite Technology</b>	Director ISRO Satellite Centre P.O. No. 1795, HAL Airport Road Vimanpura Post

	Bangalore 560 017 e-mail : <a href="mailto:director@isac.gov.in">director@isac.gov.in</a>
<b>Systems studies related to tracking, telemetry, telecommand and other ground instrumentation for satellites and launch vehicles</b>	Director Satish Dhawan Space Centre, SHAR Sriharikota P.O. 524 124 Nellore District. Andhra Pradesh e-mail : <a href="mailto:director@shar.gov.in">director@shar.gov.in</a>
<b>Propulsion</b>	Director Liquid Propulsion System Center Valiamala P.O Thiruvananthapuram 695 547 e-mail : <a href="mailto:director@lpssc.gov.in">director@lpssc.gov.in</a>
<b>Semiconductors, MEMS</b>	Director Semi-Conductors Laboratory Sector, 72 SAS Nagar 160071 (Near Chandigarh) Punjab e-mail : <a href="mailto:director@scl.gov.in">director@scl.gov.in</a>
<b>Remote sensing, Image processing, Hyperspectral and microwave remote sensing, Forest and environment, Disaster management etc</b>	Director Indian Institute of Remote Sensing 135/4, Kalidas Road, PB No 135 Dehradun 248 001 Uttarkhand e-mail : <a href="mailto:director@iirs.gov.in">director@iirs.gov.in</a>
<b>Propulsion</b>	Director ISRO Propulsion Complex (IPRC) Mahendragiri 627133 Tirunelveli, Tamil Nadu e-mail : <a href="mailto:director@iprc.gov.in">director@iprc.gov.in</a>
<b>Inertial Systems, micro actuators, Accelerometer etc.</b>	Director ISRO Inertial System Unit Vattiyookavu P.O Thiruvananthapuram 695013 Kerala e-mail : <a href="mailto:iisu_director_office@vssc.gov.in">iisu_director_office@vssc.gov.in</a>
<b>Hyperspectral and microwave remote sensing, UAV and applications, Forest phonology, biomass, Location based weather forecasting, Nowcasting for thunderstorms, lightning, space applications specific to NE region etc.</b>	Director North Eastern Space Applications Centre Umiam 793 103 Meghalaya e-mail : <a href="mailto:director@nesac.gov.in">director@nesac.gov.in</a>

**Two copies of all proposals must be sent to:**

**Director, Capacity Building Programme Office (CBPO) ,**  
ISRO Head Quarters,  
Department of Space,  
Antariksh Bhavan,  
New BEL Road,  
Bangalore 560 231  
E-mail : [dir.cbpo@isro.gov.in](mailto:dir.cbpo@isro.gov.in)

## 18. INDIAN NATIONAL SCIENCE ACADEMY (INSA)

<http://www.insaindia.res.in/>

### INTRODUCTION:

Basic research, a pre/requisite for applied research leading to developmental activity, conducted by the academic institutions, was supported by the Academy by instituting programmes to individual scientists, interdisciplinary and multi-institutional programmes. With the emergence of major funding bodies in the country for carrying out scientific research, the Academy modified its programme to support individual scientists. The programme now involves ten positions of INSA Distinguished Professors for promotion and service to science, support to INSA superannuated scientists, research projects of INSA Young Scientist Medal Awardees and INSA Visiting Scientists.

The Academy also provides partial financial assistance for holding/organising international/national conferences, symposia or seminars in India.

### SCHEMES:

- INSA Distinguished Professors
- Senior Scientists Programme
- Honorary Scientists Programme
- Young Scientist Medal Awardees
- Partial Financial Assistance for Conferences/Seminars/Workshops etc.
- INSA Visiting Scientist Programme
- List of Applications Shortlisted for Partial Financial Assistance of Conferences/Seminars/Workshops etc.
- INSA Emeritus Scientists

#### **Contact Address:**

The Executive Director  
Indian National Science Academy  
Bahadur Shah Zafar Marg  
New Delhi-110 002  
Email: [esoffice@insa.nic.in](mailto:esoffice@insa.nic.in) , [council@insa.nic.in](mailto:council@insa.nic.in)

## 19. INDUSTRIAL CONSULTANCY & SPONSORED RESEARCH (ICSR)

<https://www.iitm.ac.in/icsr>

### INTRODUCTION:

The centre for Industrial Consultancy and Sponsored Research (IC&SR) was set up in the early seventies to promote interaction between the Industry and the Institute. Today, the centre for IC&SR is an independent section of the Institute, headed by a Dean. Over the years, this centre has played a vital role in bringing together the people from the Industry and the faculty of the Institute resulting in important contributions to design and development in the country.

The centre for IC&SR facilitates, coordinates and administers Sponsored and Consultancy projects. To know more about IC & SR visit our website at <https://icandsr.iitm.ac.in/>

### TECHNOLOGY TRANSFER / PATENTS & OTHER IPR:

IIT Madras has an array of technologies / IPR developed through Research and Development work in the Institute. These are available for commercial exploitation through Technology Transfer - Licensing, Startup/Incubation.

**For further details and discussions, please contact us:**

**Dean (IC&SR)**

Prof. Ravindra Gettu

Email – [deanicsr@iitm.ac.in](mailto:deanicsr@iitm.ac.in)

Tel - +91 044 2257 8060

**Senior Techno Economic Officer**

Dr. V. Suresh

Email – [sureshv@iitm.ac.in](mailto:sureshv@iitm.ac.in)

Tel - +91 044 2257 8353

## 20. LADY TATA MEMORIAL TRUST

<https://www.ladytatatrust.org>

### INTRODUCTION:

The Lady Tata Memorial Trust was established by Sir Dorabji Tata in April 1932 in memory of his wife, Lady Meherbai,

### INTERNATIONAL AWARDS

The Trust spends four-fifths of its income on international research, and an International Scientific Advisory Committee, based in London, invites applications for Awards for individual support for research on leukaemia worldwide through advertisement and on the trust's website. Awards are restricted to studies of leukaemogenic agents, and the epidemiology, pathogenesis, immunology and genetic basis of leukaemia and related diseases. Applications not directly related to the field of leukaemia are not considered. These awards are open to suitably qualified investigators of any nationality. Priority is given to those intending to move to other centres with a view to establishing scientific collaboration between laboratories. The academic year for these awards is October-September.

### INDIAN AWARDS

The Trust offers one-fifth of its income to scholars doing scientific investigations in Indian Universities and Institutes into diseases of the blood, with special references to leukaemia, and for scientific research towards alleviation of human suffering from disease. The awards offered are the Post-Doctoral Fellowship (2-year term) and Junior Scholarship (5-year term leading up to the Senior Scholarship/PhD studies).

#### Contact Address:

Professor D Catovsky or Professor B J Bain,  
c/o Mr F. Parekh,  
Tata Limited,  
18 Grosvenor Place,  
London  
SW1X 7HS.  
Telephone: Tata Trust: 020 7235 8281  
Email: [Sonia@tata.co.uk](mailto:Sonia@tata.co.uk)

**21. MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY****(MEITY)****<https://meity.gov.in/>****INTRODCUTION:**

- e-Government: Providing e-infrastructure for delivery of e-services
- e-Industry: Promotion of electronics hardware manufacturing and IT-ITeS industry
- e-Innovation / R&D: Implementation of R&D Framework - Enabling creation of Innovation/ R&D Infrastructure in emerging areas of ICT&E/Establishment of mechanism for R&D translation
- e-Learning: Providing support for development of e-Skills and Knowledge network
- e-Security: Securing India's cyber space
- e-Inclusion: Promoting the use of ICT for more inclusive growth
- Internet Governance: Enhancing India's role in Global Platforms of Internet Governance.

**21.1 DIVISIONS UNDER R&D IN ELECTRONICS GROUP:**

- [Electronics Systems Development & Application Division](#)
- [R&D in Medical Electronics and Health Informatics Division](#)
- [Electronic Materials & Components Development Division](#)
- [Microelectronics Development Division](#)
- [Nano- Technology Initiative Division](#)
- [Innovation & IPR and Centre of Excellence \(CoE\) Projects](#)

**For further information please contact:**

Shri Arvind Kumar

Group Coordinator &amp; Senior Director

R&amp;D in Electronics Group

**Phone:** +91-11-24364754 (Office)**Fax:** +91-11-24363082**Email:** akumar[at]meity[dot]gov[dot]in**21.2 DIVISIONS UNDER R & D IN INFORMATION TECHNOLOGY**

At present, R&amp;D in IT Group is implementing R&amp;D Programmes through the following Divisions:

- [High performance Computing \(HPC\) Division](#)
- [IT in Emerging Areas \(ITEA\) Division](#)
- [Information Technology Research Academy \(ITRA\) Division](#)

**Contact Address:****Dr. B.K. Murthy**

Scientist G and Group Coordinator

R&amp;D in Information Technology Group

**Phone No :** +91-11-24363138(Office)**E-mail :** bkm[at]meity[dot]gov[dot]in

## 21.3 R&D IN CYBER SECURITY

### Thrust Areas

#### i. Cryptography and Cryptanalysis

- Algorithms and applications, software and hardware realization, FPGA, VLSI, DSP, smart cards for security, protocol analyzers
- Authentication and authorization techniques, role based access rights, Biometric identification / authentication systems, Trust models and technologies that do not rely on a previously determined trusted third party, in dynamic environment

#### ii. Network and Systems Security

- Virtual Private Network Security solutions
- Security of key internet protocols (Ipv4 to Ipv6), Domain Name System (DNS) and Border Gateway Protocol (BGP), routers, servers
- Security of wireless devices, protocols and networks
- OS Security and trusted OS
- Automatic generation of test suites, safe programming languages
- XML security

#### iii. Security Architectures

- Survivable architectures and intrusion tolerant systems that allow for degradation of certain capabilities while ensuring that critical functionality remains available
- Autonomic systems that can sense and reason about their internal components and state and recovery oriented computing
- Self-evolving systems/ Self-strengthening systems that can monitor themselves and adapt to change
- Secure and survivable storage systems

#### iv. Vulnerability and Assurance

##### Vulnerability Detection and Analysis

- Source / Object code scanning tools, Device (hardware, firmware, communication media, storage media ) scanning tools, Host and network based scanners, system configuration checkers
- Tools and techniques for modeling interdependencies and vulnerabilities in systems
- Risk analysis tools

##### Assurance Technologies

- Tools for efficient product evaluation and system level evaluation
- Assurance tools for software security
- Network Audit Tools

#### v. Monitoring, Surveillance and Forensics

##### Intrusion Detection

- Virus scanning, malicious code detection
- Firewalls, Intrusion Detection Systems (network and host based), distributed and intelligent proactive Intrusion Detection Systems
- Intrusion detection for high speed networks

## Content and Traffic Analysis

- Cracking code/passwords /logs
- Content filtering tools for Indian and other languages
- Intelligence gathering tools
- Intelligent traffic analysis
- Steganography and steganalysis

## Computer Forensics

- Computer forensic tools for speech and imaging
- Automated trace-back tools, Network forensics
- Automated Recovery, damage assessment and asset restoration tools

### 21.4 R&D in Convergence Communications & Broadband technologies (CC&BT)

The CC&BT programme is aimed at supporting and developing indigenous capability in R&D in Convergence Communication, Broadband Technologies and in Strategic Electronics. A number of academic institutions, industries, user organizations and research labs spread all over the country are beneficiaries of the programme.

- [Convergence Communications Division](#)
- [Broadband Technologies Division](#)
- [Strategic Electronics Division \(SED\)](#)
- [SAMEER activities](#)
- [Technology Development Plan](#)
- [Working Group Meeting & List of Thrust Areas for Project Funding](#)
- [Composition of Working Group](#)
- [Financial Grants](#)
- [Alternate Technologies for Connectivity](#)

#### Contact Address:

**Shri A.K. Balani**

Scientist G and Group Coordinator

+91-11-24364755 (Office),

+91-11-26889818 (Residence),

+91-11-24364755 (Fax)

### 21.5 IPR Promotion

Towards this, DeitY has established a dedicated division for IPR support with the objectives of:

1. Creating awareness and facilitating support
2. Promoting IPR in the field of ICTE
3. Creating a conducive infrastructure for a strong IPR ecosystem

Some of the major initiatives of the division are:

1. [Providing IP Facilitation Support to DeitY Societies and Grantee Institutions](#)

2. [Providing Financial Support to Startups and SMEs for International Patent Filing through SIP-EIT Scheme](#)
3. [Creation of IPR Awareness through Financial Support to Industry Bodies and Academia](#)
4. [Providing IPR Related Services including Prior Art Search](#)
5. [Providing Help-Desk services for increased IPR creation](#)
6. [Creation of IPR Awareness through Digital Media](#)
7. [Creation of IPR Tools, Products and Technologies](#)
8. [International Collaborations](#)

**Contact Address:**

**Dr. A.K. Garg**

Director

E-mail: [ajaik\[at\]deity\[dot\]gov\[dot\]in](mailto:ajaik[at]deity[dot]gov[dot]in)

Telefax: +91-11-24364799

**22. MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSME)**

<https://msme.gov.in/>

**INTRODUCTION:**

Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSMEs not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth.

**SCHEMES:****22.1 TECHNOLOGY AND QUALITY UPGRADATION SUPPORT TO MSMEs**

<b>Related Scheme</b>	Technology and Quality Upgradation Support to MSMEs
<b>Description</b>	The scheme advocates the use of energy efficient technologies (EETs) in manufacturing units so as to reduce the cost of production and adopt clean development mechanism.
<b>Nature of assistance</b>	<ul style="list-style-type: none"> <li>➤ Capacity building of MSME clusters for energy efficiency/clean development and related technologies. Funding support of up to 75% for awareness programmes, subject to maximum of Rs 75,000 per programme;</li> <li>➤ Implementation of energy efficient technologies in MSME units 75% of actual expenditure for cluster level energy audit and preparation of model DPR;</li> <li>➤ Setting up of Carbon Credit Aggregation Centres. 50% of actual expenditure subject to maximum Rs 1.5 lakh per DPR towards preparation of subsequent detailed project reports for individual MSMEs on EET projects;</li> <li>➤ Encouraging MSMEs to acquire product certification / licenses from National / International bodies. 75% of the actual expenditure, subject to a maximum Rs 15; 25% of the project cost as subsidy by Government of India, balance amount to be funded through loan from SIDBI/banks/ financial Institutions. MSMEs are required to make the minimum contribution as required by the funding agency;</li> <li>➤ 75% subsidy towards licensing of products to national/ international standards; ceiling Rs 1.5 lakh for obtaining product licensing/marketing to National standards and Rs 2 lakhs for International standards.</li> </ul>
<b>Who can apply?</b>	Expert organisations like PCRA, BEE, TERI, IITs, NITs, etc. State Govt. agencies like MITCON, GEDA, etc. Cluster/industry based associations of MSMEs NGOs and Technical Institutions.
<b>How to apply?</b>	Obtain product certification from national standardisation bodies (like BIS and BEE) or international product certifications (CE, UL, ANSI, etc.) Applicant applies in the specified format (given in annexure-IV of scheme guidelines) along with required documents for re-imbusement of fees, forwarding it, to MSME-DI concerned. <a href="http://www.dcmsme.gov.in/schemes/TEQUPDetail.htm">www.dcmsme.gov.in/schemes/TEQUPDetail.htm</a>

<b>Whom to contact</b>	JDC (TEQUP), O/o DC, MSME Ph : 011-23062394 Email : bisariya[dot]sanjay[at]nic[dot]in
<a href="#">Download Scheme Guidelines</a>	

## 22.2. ENTREPRENEURIAL AND MANAGERIAL DEVELOPMENT OF SMES THROUGH INCUBATORS

<b>Related Scheme</b>	Entrepreneurial and Managerial Development of SMEs through Incubators
<b>Description</b>	The objective of the scheme is to provide early stage funding to nurture innovative business ideas (new indigenous technology, processes, products, procedures, etc.) that could be commercialised in a year. The scheme provides financial assistance for setting up business incubators.
<b>Nature of assistance</b>	Funding support for setting up of 'Business Incubators (BI)': The cost may vary from Rs 4 to 8 lakh for each incubatee/idea, subject to overall ceiling of Rs 62.5 lakh for each BI. <ul style="list-style-type: none"> <li>➤ Upgradation of infrastructure Rs 2.50 lakh</li> <li>➤ Orientation/training Rs 1.28 lakh</li> <li>➤ Administrative expenses Rs 0.22 lakh</li> <li>➤ Total assistance per BI Rs 66.50 lakh</li> </ul>
<b>Who can apply?</b>	Any individual or MSME with innovative ideas ready for commercialisation can apply to the host institution (e.g., IITs, NITs, technical colleges, research institutes, etc.) in order to obtain fund support. See the list of host institutions at following web address: <a href="#">Download The file ( bytes)</a> Any technical institution (as given in the EoI) that wants to become a host institution can apply to the office of the Development Commissioner-MSME or their nearest MSME-DI for funding support.
<b>How to apply?</b>	Application can be made by the technical institution desirous of becoming the host institution, once a Request for Proposal (RFP)/ Expression of Interest (EoI) is released.  Any individual or MSME can apply directly to their nearest host institution. A list of host institutions is given on the website: <a href="http://www.dcmsme.gov.in/schemes/Institutions_Detail.pdf">http://www.dcmsme.gov.in/schemes/Institutions_Detail.pdf</a>  Website: <a href="http://www.dcmsme.gov.in/schemes/supportforemdti.html">www.dcmsme.gov.in/schemes/supportforemdti.html</a>
<b>Whom to contact</b>	JDC, O/o DC, MSME Ph: 011-23062394 Email : bisariya[dot]sanjay[at]nic[dot]in
<a href="#">Download Scheme Guidelines</a>	

## 22.3 BUILDING AWARENESS ON INTELLECTUAL PROPERTY RIGHTS (IPR)

<b>Related Scheme</b>	Building Awareness on Intellectual Property Rights (IPR)
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<b>Description</b>	The purpose of the scheme is to enhance awareness among the MSMEs about Intellectual Property Rights, to take measures for protecting their ideas and business strategies. Effective utilisation of IPR tools by MSMEs would also assist them in technology upgradation and enhancement of their competitiveness.
<b>Nature of assistance</b>	<ul style="list-style-type: none"> <li>➤ Conducting awareness/sensitization programmes on IPR (Applicants in this case are MSME organisations and expert agencies) GoI assistance of Rs 1 lakh per awareness programme</li> <li>➤ Conducting pilot studies for selected clusters/groups of industries (Applicants in this case are MSME organisations, competent agencies and expert agencies). GoI assistance of Rs 2.5 lakh per pilot study.</li> <li>➤ Funding support for conducting interactive seminars / workshops (Applicants in this case are MSME organisations and expert agencies)</li> <li>➤ Funding support for conducting specialised training on IPR (Applicants – Expert agencies)</li> <li>➤ Funding support in the form of Grant on Patent/GI Registration (Applicants in this case are MSME units and MSME organisations)</li> <li>➤ Funding support for setting up IP Facilitation</li> </ul>
<b>Who can apply?</b>	Registered MSME units, association, consultancy firms, expert agencies etc.
<b>How to apply?</b>	Application forms for each of the components are provided along with scheme guidelines at: <a href="http://www.dcmsme.gov.in/schemes/IPRDetail.html">www.dcmsme.gov.in/schemes/IPRDetail.html</a>
<b>Whom to contact</b>	JDC (IPR), O/o DC, MSME Ph: 011-23062394 Email : bisariya[dot]sanjay[at]nic[dot]in

## 23. MINISTRY OF NEW AND RENEWABLE ENERGY (MNRE)

<https://mnre.gov.in/>

### INTRODUCTION:

The need to refocus attention on Research, Design & Development (RD&D) has arisen. The underlying purpose of RD&D effort is to make industry competitive. A comprehensive statistic that measures competitiveness is net foreign exchange earning. Accordingly, RD&D effort is to make the country a net foreign exchange earner in the New and Renewable Energy Sector. In addition, the share of indigenously designed, developed and manufactured new and renewable energy systems/ devices has also to increase and consequently monitored for its eventual growth to a dominant position.

### 23.1 FOCUS AREAS:

Research, design and development efforts should invariably lead to manufacture of complete systems, even if these efforts are required to be shared among different institutions. Thus, there would be a need for system integration broadly covering the following areas: -

- Alternate Fuels (hydrogen, bio & synthetic) to supplement and eventually substitute liquid hydrocarbons;
- Green Initiative for Future Transport (GIFT) based on Alternate Fuels for land, air & sea applications to supplement and eventually substitute fossil-fuel systems;
- Green Initiative for Power Generation (GIPS) based on Alternate Fuels for stationary & portable power generation applications to supplement and eventually substitute fossil-fuel systems;
- Standalone new and renewable energy products to provide cost-effective energy for cooking, lighting and motive power;
- Distributed new and renewable energy systems to provide cost-competitive energy supply options for cooking, lighting and motive power;
- New and renewable energy products for urban, industrial and commercial applications, including energy recovery from urban and industrial wastes and effluents; and
- MW scale grid interactive renewable electricity systems to contribute towards supplement and eventually substitute fossil-fuel based electricity generation.

### 23.2 SUPPORT PROGRAMMES

#### a) INFORMATION AND PUBLIC AWARENESS PROGRAMME

The objective of “Information & Public Awareness Programme” is to disseminate information on new and renewable sources of energy (NRSE) systems/devices through variety of media like electronic, print & exhibition as well as outdoor media, thereby popularizing and creating awareness about such systems and devices. The Programme is implemented mainly through State Nodal Agencies, Directorate of Advertising & Visual Publicity (DAVP), Doordarshan, All India Radio (AIR), and Department of Posts, etc.

**b) SPECIAL AREA DEMONSTRATION PROJECT PROGRAMME**

The Special Area Demonstration Project Scheme of the Ministry has been introduced with the objective of demonstrating application of various renewable energy systems in a project mode at places of national and international importance including world heritage sites, heritage monuments, religious locations and places of public interest to create greater awareness of renewable and to supplement the energy requirement at such locations

**c) HUMAN RESOURCES DEVELOPMENT PROGRAMME**

Ministry has been implementing a comprehensive Human Resource Development Programme with the objective of institutionalizing the renewable energy education and training in the country with the following overall goals:

- To update the professionals working in the field of renewable energy on technological, economical and social issues and management of the science and technology and public administration through infusion of scientific temper and accountability;
- To infuse commitment towards building of partnership and participatory decision-making;
- To be responsive to the challenge of changing framework needs in policy, institutional, legal, trade, IPR, knowledge management, organizational and technological development;
- To strive for improving performance and efficiency of renewable energy systems and devices to make them cost competitive;
- To provide adequate knowledge of the technical issues that are essential to help executives in Government, banking and financial sector with non-technical background about renewable energy;
- To bring about attitudinal changes among the renewable energy professionals and those working in the mainstream power sector to enhance the use of renewable energy for energy security of the country; and
- To act as a facilitator for improving the skill sets of professionals and executives in the renewable energy industry and also in research and development institutions.

**d) SEMINAR & SYMPOSIA**

The Ministry provides support to universities, academic institutions/colleges, non-governmental organizations, Government Departments, etc. for organizing workshops, seminars, conferences to provide a forum for professionals, students, policy-makers, managers, economists, industry representatives, etc., to interact and share their views on identified thrust areas related to renewable or any other emerging area impinging on technology, innovation in regard to renewable.

**Contact Address:**

Ministry of New and Renewable Energy  
Block-14, CGO Complex,  
Lodhi Road, New Delhi-110 003, India.  
Fax: +91-11-24361298

**24. MINISTRY OF HUMAN RESOURCE DEVELOPMENT (MHRD)**

<https://mhrd.gov.in/>

**INTRODUCTION:**

The Department of Higher Education, MHRD, is responsible for the overall development of the basic infrastructure of Higher Education sector, both in terms of policy and planning. Under a planned development process, the Department looks after expansion of access and qualitative improvement in the Higher Education, through world class Universities, Colleges and other Institutions.

**SCHEMES:****24.1 UNIVERSITY AND HIGHER EDUCATION**

- [Rashtriya Uchchar Shiksha Abhiyan \(RUSA\)](#)
- [National Initiative for Design Innovation](#)
- [National Research Professorship \(NRP\)](#)
- [Establishment of New Central Universities](#)
- [Indira Gandhi National Tribal University](#)
- [Establishment of 14 World Class Central Universities](#)
- [Setting up of 374 Degree Colleges in Educationally Backward Districts](#)
- [Scheme for incentivising state governments for expansion of higher education institutions](#)
- [Central Sector Interest Subsidy Scheme, 2009 on Model Education Loan Scheme of IBA](#)
- [Construction of girls hostels](#)
- [Supporting uncovered state universities and colleges](#)
- [Additional assistance to about 160 already covered universities and about 5500 colleges](#)
- [Strengthening science based higher education and research in universities](#)
- [Inter universities research institute for policy and evaluation](#)
- [Schemes Implemented through Autonomous Organisations](#)

**24.2 TECHNICAL EDUCATION**

- [Sub-Mission on Polytechnics under the Coordinated Action for Skill Development](#)
- [Scheme of Apprenticeship Training](#)
- [Support For Distance Education & Web Based Learning \(NPTEL\)](#)
- [Indian National Digital Library in Engineering, Science & Technology \(INDEST-AICTE\) Consortium](#)
- [National Programme of Earthquake Engineering Education \(NPEEE\)](#)
- [Technology Development Mission](#)
- [Direct Admission of Students Abroad](#)
- [Scheme for Upgrading existing Polytechnics to Integrate the Physically Disabled in the mainstream of Technical and Vocational Education](#)
- [Setting up 20 new IITs](#)

**25. NATIONAL SCIENCE FOUNDATION (NSA)**

**[https://www.nsf.gov/funding/pgm\\_list.jsp?org=NSF&ord=date](https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=date)**

**INTRODUCTION:**

The National Science Foundation (NSF) is an independent federal agency [created by Congress](#) in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..." NSF is vital because we support basic research and people to create knowledge that transforms the future. This type of support:

- Is a primary driver of the U.S. economy.
- Enhances the nation's security.
- Advances knowledge to sustain global leadership.

With an annual budget of \$8.1 billion (FY 2019), we are the funding source for approximately 24 percent of all federally supported basic research conducted by America's colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing.

**FUNDING OPPORTUNITIES AND DUE DATES AVAILABLE IN THE FOLLOWING LINK**

**[https://www.nsf.gov/funding/pgm\\_list.jsp?org=NSF&ord=date](https://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=date)**

**26. NATIONAL BOARD FOR HIGHER MATHEMATICS (NBHM)**

<http://www.nbhm.dae.gov.in>

**INTRODUCTION:**

The objectives of the board are: to promote the growth of higher mathematics in the country; and to coordinate activities for the development of mathematics. The functions of the NBHM are:

- To continuously evolve and implement policies and programmes for the development of mathematics in the country.
- To help in the establishment and development of mathematical centres.
- To give financial assistance to research projects and to doctoral and postdoctoral scholars.
- To assess the nature and extent of mathematical inputs necessary in applications sophisticated mathematics is involved. and to suggest steps for training adequate personnel specially in areas where
- To determine the funds required for these activities and to administer these funds through suitable machinery set up for this purpose.

NBHM normally provides financial support only to Indian nationals and institutions. Currently NBHM grants postdoctoral fellowships, Ph. D. scholarships, M.A./M.Sc. scholarships for research/education in mathematics. NBHM provides financial support to the Mathematics Olympiad activity, run in collaboration with the Homi Bhabha Centre for Science Education, for students at the junior college/high school level. NBHM provides financial support for holding conferences/seminars/workshops and instructional schools. Granting financial support to libraries of mathematics departments of universities and research institutions in the country is one of the major activities of NBHM.

**FINANCIAL SUPPORT**

- [Libraries](#)
- [Book distribution](#)
- [Visiting Professorship](#)
- [Conferences](#)
- [Instructional Schools](#)
- [Research Projects](#)
- [Postdocs](#)
- [Teacher Fellowship](#)
- [Travel](#)
- [Short Term Visits](#)

**Contact Address:**

Smt. Sana N. Shaikh  
National Board for Higher Mathematics  
Department of Atomic Energy  
1st floor, O.Y.C. Building,  
Anushakti Bhavan, C.S.M. Marg,  
Mumbai-400 001, Maharashtra  
INDIA  
Contact no: 022-2202-2533  
Email: sana\_nbhm@dae.gov.in

## 27. PETROLEUM CONSERVATION RESEARCH ASSOCIATION (PCRA)

<http://www.pcr.org/>

### 27.1 PCRA R&D SCHEME

#### OBJECTIVES

- Development of innovative product and process technologies for saving petroleum fuel.
- Strengthening the interface between R&D establishments and Industry
- Accelerating commercialization of products/ processes successful at lab stage

#### SECTORS OF INTEREST

Industrial, Agricultural, Transport & Domestic sector

##### Contact Address:

Director (R&D)  
PETROLEUM CONSERVATION RESEARCH  
ASSOCIATION  
Sanrakshan Bhawan, 10 Bhikaji Cama Place,  
New Delhi-110 066.  
Ph: 011-26183054, Fax: 011-26109668  
Email: dirrnd@pcra.org

### 27.2 PCRA R&D SCHEME FOR INDIVIDUAL /PRIVATE ENTITIES

#### OBJECTIVES

- Development of innovative product and process technologies for saving petroleum fuel.
- Accelerating commercialisation of products/ processes successful at lab stage

#### SECTORS OF INTEREST

- Industrial
- Agricultural
- Transport
- Domestic sector

#### SCOPE & SUPPORT

- Proposals to convert original idea/ invention/ know-how into working prototype/ process shall be supported.
- Proposals should involve industry at some stage of project, to ensure commercialization if project is successful.
- Maximum support is Rs. 25,00,000.00. (Excluding of TDS, if any). However, actual amount of financial support may vary case-to-case

##### Contact Address:

Director (R&D)  
Petroleum Conservation Research Association  
Sanrakshan Bhawan, 10 Bhikaji Cama Place, New Delhi-  
110 066.  
Ph: 011-26183054, Fax: 011-26109668

## 28. SCIENCE AND ENGINEERING RESEARCH BOARD

<http://serbonline.in/>

### INTRODUCTION:

The SERB provides core research support to active researchers to undertake research and development in frontier areas of Science and Engineering.

The project proposal should be prepared according to the guidelines and submitted online through the website [www.serbonline.in](http://www.serbonline.in)

### 28.1 SCHEMES & PROGRAMS

- [Core Research Grant \(CRG\)](#)
- [High Risk High Reward Research \(HRHR\)](#)
- [Industry Relevant R & D \(IRRD\)](#)
- [Empowerment and Equity Opportunities for Excellence in science \(EMEQ\)](#)
- [Intensification of Research in High Priority Area \(IRHPA\)](#)
- [Start-up Research Grant \(SRG\)](#)
- [MATRICS](#)
- [International Travel Support \(ITS\)](#)
- [Assistance to Professional Bodies & Seminars/Symposia](#)
- [Start-up grant for Young Scientists\(YSS\)](#)

### 28.2 AWARDS & FELLOWSHIPS

- [J C Bose National Fellowship](#)
- [Ramanujan Fellowship](#)
- [National Post-Doctoral Fellowship](#)
- [Early Career Research Award](#)
- [SERB Overseas Postdoctoral Fellowship](#)
- [SERB Women Excellence Award](#)
- [SERB Distinguished Fellowship](#)

**29. THE INSTITUTION OF ENGINEERS (INDIA)**

<https://www.ieindia.org>

**INTRODUCTION:**

The Institution of Engineers (India), the apex body of the engineers of India provides Grant-in-Aid support to its Corporate Members, Student Members and Institutional Members to pursue research and development in the field of engineering and technology.

**[A] SALIENT POINTS OF IEI R&D GRANT-IN-AID SCHEME**

Project Category	Institutional Membership	Guide	Student/ Applicant Membership	Quantum of Grant	Project Duration
Under Graduate (UG)	Applicant's Institute should be an Institutional Member	Should be Corporate Member(s)* [AM/M/F]	Should be SMIE	Not exceeding □ 50,000/- for a single project	Not exceeding Nine (09) months
Post Graduate (PG)	Applicant's Institute should be an Institutional Member	Should be Corporate Member(s)* [M/F]	Should be Corporate Member(s)* [AM/M/F]	Not exceeding □ 1,00,000/- for a single project	Not exceeding Twelve (12) months
Doctoral (PhD)	Applicant's Institute should be an Institutional Member	Should be Corporate Member(s)* [M/F]	Should be Corporate Member(s)* [AM/M/F]	Not exceeding □ 1,50,000/- for a single project	Not exceeding Twenty four (24) months

***\*In case the Applicant(s) and/or Guide(s) are not Corporate Members or the Applicant(s) are not Student Members [only for UG] of IEI, they are required to send project proposal accompanied by filled in Membership Form along with supporting documents and requisite membership fees in the form of DD/Cheque in favour of The Institution of Engineers (India), payable at Kolkata or transaction receipt if payment made online.***

1) Proposals from Corporate Members and Institutional Members will get preference. The Corporate Membership (AMIE, MIE, FIE); Student Membership (SMIE)\* forms can be obtained from the link <https://www.ieindia.org/webui/iei-Memb.aspx#membership-grade>. The Institutional Membership Form can be obtained from the link [https://www.ieindia.org/webui/iei-Memb.aspx#instite\\_Memb](https://www.ieindia.org/webui/iei-Memb.aspx#instite_Memb).

2) The R&D work has to be completed and final report has to be submitted within the scheduled completion of course of the student. [Normally processing of proposals takes about 3 months. So the applicant(s) should keep adequate time for completion accordingly].

3) The proposals should preferably be industry relevant and have in-kind or cash support from the industry partners or those having potential to lead to an entrepreneurship venture or a start-up model. Thematic focus on green energy, clean water, waste-to-energy conversion, versatile simulation, urban rejuvenation, skill development in design & manufacturing, Post harvest technology & food processing and Water resource management will be given due weightage.

4) Grant will be transferred online only to the account of Principal/Director/Registrar/Dean (R&D) directly. Payee details should be provided accordingly. Project proposal should be accompanied by hard or scanned copy of cancelled cheque. The cancelled cheque should be from the same account against which payee details have been provided. The sanctioned amount will be released in single or multiple installments depending on the amount sanctioned and stage-wise requirement of the project.

*\*Student Member (SMIE) is a **non-corporate category of membership** meant for undergraduate students pursuing BE/BTech (AICTE approved) or equivalent qualification, completion of which will make them eligible for Corporate Membership. It will remain valid for a period for six (06) years w.e.f. the date of enrolment.*

## FELLOWSHIP:

### Eligibility Criteria

- Proposals from Members and Institutional Members will be preferred. It is expected that the applicant's Institution is an **Institutional Member of The Institution of Engineers (India)**. The Guide/s must be a **Corporate Member** of IEI. For details please visit [www.ieindia.org](http://www.ieindia.org). The student should apply for Corporate Membership (if not already a Corporate Member) once they become eligible to receive 'Fellowship' under IEI R&D Grant-in-Aid Scheme. Please see the checklist and guidelines of application for membership provided below, before proceeding with submission of proposal. IEI is authorized to make any exception to the above.
  
- The proposals should preferably be industry relevant and have in-kind or cash support from the industry partners or those having potential to lead to an entrepreneurship venture or a start-up model. Thematic focus on green energy, clean water, waste-to-energy conversion, versatile simulation, urban rejuvenation, skill development in design and manufacturing will be given due weightage.

### Quantum of Fellowship

The quantum of fellowship is @ Rs 10,000/- per month usually for a period of 12 months extendable by six months subsequently for maximum two terms, subject to total duration not exceeding 24 months. Extension may be considered only on valid grounds and the decision of IEI will be final and binding.

The entire amount will be transferred to the account of Principal/Director/Registrar/Dean (R&D) of the concerned Institute/University who will be responsible for periodic release of the grant to the applicant on a monthly basis. IEI may like to withdraw the entire amount if monthly progress report (Annexure-I), duly sealed and signed, is not received from the beneficiary.

### 30. UNIVERSITY GRANTS COMMISSION (UGC)

<https://www.ugc.ac.in/>

#### INTRODUCTION

UGC strives to promote teaching and research in emerging areas in Humanities, Social Sciences, Languages, Literature, Pure Sciences, Engineering & Technology, Pharmacy, Medical, Agricultural Sciences etc.

#### NAME OF SCHEME(S)

##### Major and Minor Research Projects

#### Objective(s)

- To promote excellence in research in higher education by supporting research programmes of University and College teachers in various disciplines.
- Traditionally, universities have been the centers of research. Although, the Government has a network of science and technology laboratories for research and development, the major base of researchers in science and technology remains with the universities. Therefore, university and college teachers need to be supported to meet this requirement.

#### Contact Address:

The Secretary,  
University Grants Commission (UGC)  
Bahadur Shah Zafar Marg,  
New Delhi - 110002.  
011-23604446, 011-23604200

### 31. VIKRAM SARABHAI SPACE CENTRE

[http://isrohq.vssc.gov.in/VSSC\\_V4/index.php/respond-vssc?view=featured](http://isrohq.vssc.gov.in/VSSC_V4/index.php/respond-vssc?view=featured)

#### INTRODUCTION:

The Indian Space Research Organisation (ISRO) has evolved a programme through which financial support is provided for conducting research and development activities related to space science, space technology and space application to academia in India. RESPOND denotes this programme of research sponsored by ISRO. The main objectives of the RESPOND programme is to establish strong links with academic Institutions to carryout quality research and developmental projects which are of relevance to Space and to derive useful outputs of such R&D to support ISRO programmes. RESPOND programme is intended to enhance academic base, generate quality human resources and infrastructure at the academic institutions to support the space programme. In special cases research and development projects proposed by non-academic R&D laboratories are also supported through this programme.

RESPOND also supports to conduct conferences, symposiums, seminars and educational activities of importance to ISRO at the academic institutions to promote interest in ISRO space programmes

**(For more details visit: [www.csre.iitb.ac.in/isro\\_cell](http://www.csre.iitb.ac.in/isro_cell); [www.iitk.ac.in/dord/isro](http://www.iitk.ac.in/dord/isro); [www.kcstc.iitkgp.ernet.in](http://www.kcstc.iitkgp.ernet.in); [www.unipune.ac.in/isro](http://www.unipune.ac.in/isro) ).**

#### AREA OF RESEARCH:

➤ **Aerospace Engineering :**

Flight dynamics, orbital mechanics Wind tunnel studies, CFD, Flow field analysis, Aero thermal engineering etc

➤ **Launch Vehicle structures:**

Structural Analysis modeling and simulation stability analysis, structural dynamics & testing, honey comb structures, experimental mechanics etc.

➤ **Space Materials & Processing**

Light Alloys, Super alloys, precision fabrication techniques, Heat treatment, surface treatment, welding technology, powder metallurgy, foundry technology, ceramics, materials characterization etc

➤ **Composite Materials:**

Composite Materials processing and control, characterization & testing, NDT, development of composite structure for launch vehicles and spacecraft carbon-carbon composites etc.

➤ **Propellants, Polymers, Chemicals & Space Ordnance:**

Propellant processing, characterization, testing, thermal protection materials, adhesive ceramics/matrix products, thermal paints, polyimides, avionics batteries, fuel cell, space ordnance materials, characterization, nozzle design, advanced propulsion technology, CFD, Heat transfer, performance simulation etc

➤ **Avionics, Guidance & Control:**

Sensors & instrumentation, power electronics Data acquisition, signal processing, technology ASIC/FPGA, onboard inertial systems, servo mechanisms, guidance and control, trajectory simulation and analysis etc

➤ **Space Science**

Physics of ionosphere,magnetosphere,meteorology,atmospheric studies,aerosols,boundary layer physics,climatology,planetaty and interplanetary space physics etc.

### Who can apply?

- Individual or group(s) of scientists, engineers, researchers, members of the teaching staff belonging to recognized academic institutions, universities and research organisations may submit proposals,. Proposals from persons not attached to a recognised institution will not be considered.
- The proposer(s) should be full-time regular employee(s) of the concerned institution

### Information required with the proposal

- Brief description of the research proposed including the objectives and the scientific/application merits of the work.
- Description of the method or technique to be used for the proposed investigated
- The extent of financial support needed for executing the work within the shortest possible time.
- Name of the Principal Investigator from the institution forwarding the application. There may also be co-investigator(s) from different institutions working on the project. ISRO may also identify a co-investigator. However satisfactory completion of a project will be the responsibility of the Principal Investigator and his institution.
- Bio-data of all the investigators
- A list of research projects related to the proposal undertaken or carried out through funding by other agencies.

### How to apply?

- The proposal should be duly forwarded through their institutions
- Five copies of the document should be prepared in the formats attached

**Contact Address:**

Vikram Sarabhai Space Centre,  
Thiruvananthapuram,  
Kerala, India, Pin Code:695022

## INTERNATIONAL FUNDING AGENCIES

## 32. BRITISH COUNCIL IN INDIA

<https://www.britishcouncil.in/>

**INTRODUCTION:**

Our work in higher education consists two programmes. The first is **Internationalising Higher Education (IHE)** and the second is a multi partner programme called **UK-India Education and Research Initiative (UKIERI)**. IHE facilitates policy dialogues and partnerships, promotes scholarships, student mobility and alumni engagement. **UKIERI** aims to enhance educational links between India and the UK by supporting partnerships across all thematic areas. The programme focuses on Innovation, Skills Development, Leadership across all aspects of education and helps students, staff and researchers gain mobility between the two countries. The programme facilitates policy dialogues and engages with Government agencies both in the UK and India on areas of mutual interest like Credit Recognition, Quality Assurance, Leadership and Knowledge Transfer.

**SCHEMES:****32.1 IN HIGHER EDUCATION**

- SWAYAM partnership opportunities for UK institutions
- Newton Bhabha Fund
- Science and Beyond lecture series
- UKIERI

**32.2 INTERNATIONALISING HIGHER EDUCATION**

- International Seminar on Innovations in Financing of Higher Education
- Education Dialogues
- Education Market Intelligence
- Student Mobility
- Women in STEM - a case for intervention

**32.3 UK INDIA EDUCATION AND RESEARCH INITIATIVE (UKIERI)**

<https://www.britishcouncil.in/programmes/higher-education/ukieri>

**OBJECTIVE:**

UK-India Education and Research Initiative (UKIERI) started in April 2006 with the aim of enhancing educational linkages between India and the UK. Since then UKIERI has been recognized as a key multi stakeholder programme that has strengthened the research, leadership, education and now skill sector relations between the two countries.

The programme focuses on bilateral and mutual benefits of the learners, researchers, scholars, fellows, skill sector professionals, leaders of higher education and further education institutions in India and UK.

The two strands of UKIERI are:

- [Research and Innovation](#)
- [Education and Training](#)

**32.4 RESEARCH AND INNOVATION**

E-partnership and Research Incubation strand is focusing on developing jointly funded research and innovation programme with core societal benefit outcomes. Some of the existing UKIERI successful partnerships

will be scaled to deepen engagement and greater impact and newer partnerships on key thematic areas will be supported.

**OBJECTIVES**

- Secure long-term UK-India partnerships for the development of the Indian skills infrastructure & deliver capacity in education sector
- Combine work that enables India to benefit from areas of strength within the UK and Vice versa (where the emphasis will be on India learning from UK partners and adapting models, standards and practices to their needs) with others with potential for joint learning e.g.; promoting public private partnerships, internships/apprenticeships with industry etc).

**DST THEMATIC RESEARCH PARTNERSHIPS**

The Higher Education and Research strand announced funding worth £3.1 million for 51 successful partnerships between DST recognized and HE institutions of India and UK respectively. The call attracted close to 334 joint research proposals.

**UGC THEMATIC RESEARCH PARTNERSHIPS**

The Higher Education and Research strand announced funding worth £2.6 million for 43 successful partnerships between UGC recognized and HE institutions of India and UK respectively. The call attracted close to 219 joint research proposals.

**POTENTIAL AREAS OF COLLABORATION**

- Ministry of Human Resource Development GIAN Collaboration
- Early career to mid-career research fellowships
- Support for research incubation centers Policy dialogues, events and workshops will be organised based on priority areas of mutual interest.

**32.5 EDUCATION AND TRAINING**

- Leadership and Faculty Development strand focusses on developing few strategic leadership initiatives that provide a strong institutional framework leading to high impact, bigger outreach and long-term sustainability.
- Mobility, use of ICT and innovative technology will underpin these partnerships.

**OBJECTIVES**

- Under Phase 3 of UKIERI, Leadership and Faculty Development strand will focus on developing few strategic leadership initiatives that provide a strong institutional framework leading to high impact, bigger outreach and long-term sustainability. Mobility, use of ICT and innovative technology will underpin these partnerships.
- To enhance the capacity of institutions through the development of leadership initiatives in higher education as well as skill development and further education
- To increase the capacity of individuals to ensure that they have relevant leadership skills for the future.
- Activities that aim to foster mobility of young faculty across the two countries.

### 33. AUSTRALIA-INDIA STRATEGIC RESEARCH FUND (AISRF)

<https://www.industry.gov.au/funding-and-incentives/science-and-research/collaborating-with-india-on-science-and-research>

#### COLLABORATING WITH INDIA ON SCIENCE AND RESEARCH

##### MAIN CONTENT AREA

The Australia-India Strategic Research Fund (AISRF) supports scientists in India and Australia to collaborate on leading-edge research.

##### PRIORITY AREAS OF RESEARCH

The fund has supported research collaboration across more than 20 different mutual priority areas, including:

- Agriculture
- Astronomy and astrophysics
- Biomedical devices and implants
- Clean energy technologies
- Food and water security
- Information and communication technology
- Marine sciences
- Nanotechnology
- Stem cells and vaccines

##### COLLABORATIVE RESEARCH PROJECTS

- The AISRF links Australian and Indian research institutions together to work on strategically focused, leading-edge scientific research and technology projects.
- The projects build research capacity and maximise the application, commercialisation and sustainability of research outcomes, supporting the continued economic growth and development of both nations.

##### HOW TO APPLY

- Competitive grant rounds are held annually and you may only apply while a round is open.
- To find out more about [AISRF funding round details and to apply for grants visit Business.gov.au](#).
- See the program guidelines for information about the application process, eligibility criteria and assessments. These guidelines apply to Australian applicants only. Indian applicants should follow guidelines issued by the Indian Government.

##### TARGETED WORKSHOPS

The workshops bring together leading researchers from Australia and India to focus on key issues of mutual interest or contemporary challenges facing both nations.

**They aim to:**

- create, promote and strengthen relationships between our nation's researchers and research institutions
- promote scientific and technological cooperation between Australia and India
- find more areas to collaborate where there's significant potential to mutually benefit from outcomes

**EARLY AND MID-CAREER RESEARCHER FELLOWSHIPS**

High-performing Australian early and mid-career researchers can access funding to travel to India and work with leading researchers at major Indian science and technology organisations. The Indian Government also supports Indian researchers to spend time at Australian institutions. These reciprocal fellowships help to facilitate long-term science, technology and innovation collaboration between our nations.

**Contact Address:**

- Email [aisrf@industry.gov.au](mailto:aisrf@industry.gov.au)
- Phone 13 28 46 (8am-8pm, Monday to Friday)
- Indian researchers interested in Australian collaboration should contact the Indian Government [Department of Science and Technology](#) and [Department of Biotechnology](#)

## 34. EUROPEAN COMMISSION

<https://ec.europa.eu/energy/en/funding-and-contracts>

### INTRODUCTION:

The EU provides funding programmes to help finance European energy projects. Ensuring competitive, sustainable, and secure energy in the years to come requires significant investment. The EU provides a number of funding programmes and lending schemes to help companies, regions, and countries successfully implement energy projects.

### FILTER BY PROGRAMME PART:

- [Excellent Science](#)
- [Industrial Leadership](#)
- [Societal Challenges](#)
- [Spreading excellence and widening participation](#)
- [Science with and for Society](#)
- [The European Institute of Innovation and Technology \(EIT\)](#)
- [Euratom Research and Training Programme](#)

### FILTER BY FOCUS AREA:

- [Building a low-carbon, climate resilient future](#)
- [Connecting economic and environmental gains – the Circular Economy](#)
- [Digitising and transforming European industry and services](#)
- [Boosting the effectiveness of the Security Union](#)

### FUNDING AND TENDER OPPORTUNITIES

Two year work programmes announce the specific areas that will be funded by Horizon 2020. Look out for them at [Funding and tender opportunities](#) site as they can be used as a calendar for the calls for proposals ('calls'), to be published during the year. The [Funding and tender opportunities](#) site is your entry point for electronic administration of EU-funded research and innovation projects, and hosts the services for managing your proposals and projects throughout their lifecycle.

Each call gives more precise information on the questions that the Commission would like you to address in your proposals. All calls can be found in the EU's [Official Journal](#) – the official source for all EU documents – as well as on the [Funding and tender opportunities](#) site.

## THE APPLICATION PROCESS ARE

### SUBMIT YOUR PROPOSAL

If you wish to respond to a call, you must submit a proposal before the deadline. The [Horizon 2020 Online Manual](#) has clear instructions to guide you through the process. The system is simpler than ever – no more paper! All proposals are submitted online.

### FIND YOUR PARTNERS

Many calls require a team of at least three partners. If you need help to identify a potential partner with particular competences, facilities or experience, use the partner search options.

### EVALUATION BY EXPERTS

Once the deadline has passed, all proposals are evaluated by a panel of independent specialists in their fields. The panel checks each proposal against a list of criteria to see if it should receive funding.

### GRANT AGREEMENT

Once a proposal passes the evaluation stage (five months' duration), applicants are informed about the outcome. The European Commission then draws up a grant agreement with each participant. The grant agreement confirms what research & innovation activities will be undertaken, the project duration, budget, rates and costs, the European Commission's contribution, all rights and obligations and more. The time limit for signing the grant agreements is generally three months.



Dept. of ECE - Innovative Project on Reverse Persistence Of Vision



Dept. of ECE - SIH2019 WINNER



Dept. of ECE - TBI Project



Dept. of ECE - Idea Contest



Dept. of EEE - Innovative Idea Contest



Dept. of EEE - Internal workshop



Dept. of EEE - Project on Intelligent Control, Monitoring And Automation of Electrical Outlets & Devices(IOT)



Dept. of CSE - Smart Dust Bin Project



Dept. of CSE - SIH2019 Participants



Dept. of IT - Home Automation using Smart Mirror Project



Dept. of IT - Won 4<sup>th</sup> Place in SIH 2018



Dept. of Mech - Refabrication of magnedo Air conditioner by increasing the magnetic power Project



Dept. of Mech - Innovative Project on Multipurpose machine for Agriculture operation



ICSCAN 2019



IEEE Mini POCO - 2019

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