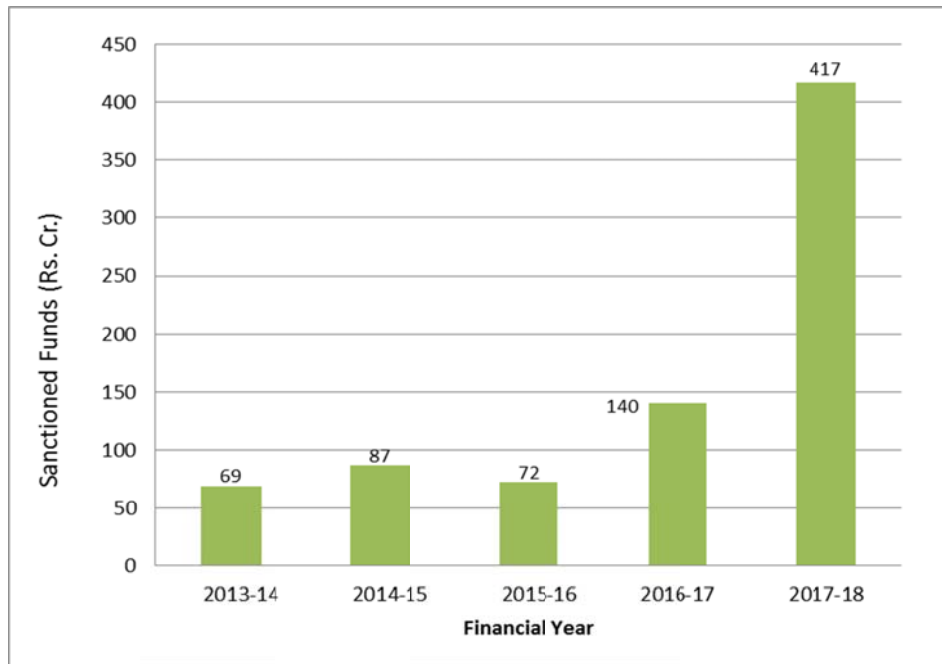


## Sponsored Research Projects Undertaken

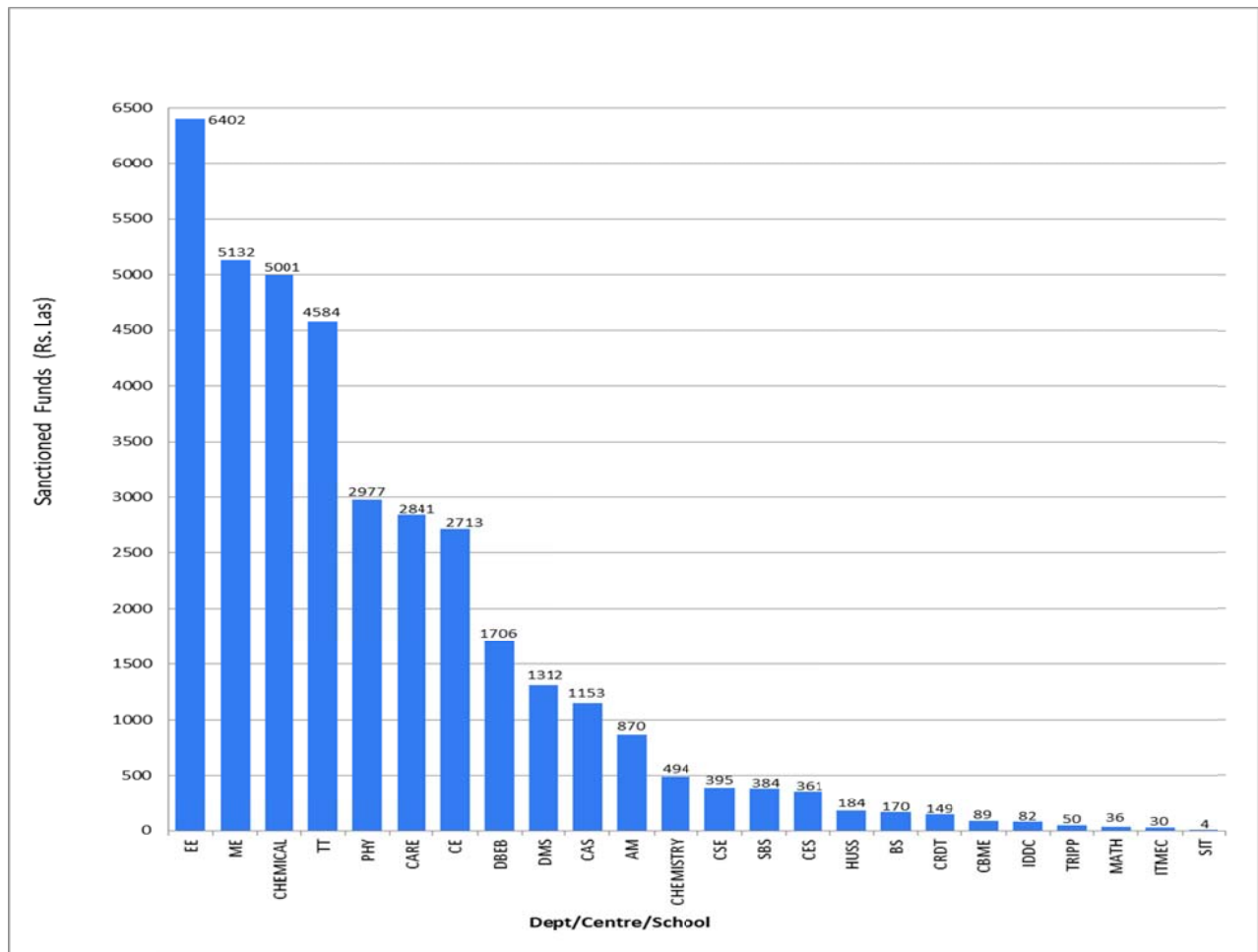
Financial Year	Sponsored Research Projects	
	Numbers	Value (Rs. Cr.)
2013-14	150	68.65
2014-15	164	87.10
2015-16	136	72.44
2016-17	158	140.21
2017-18	282	417.19



**Department-wise Summary of Sponsored Research Projects Undertaken  
During the Financial Year 2017-18**

<b>Department / Centre / School</b>	<b>No. of Sanctioned Projects</b>	<b>Total Sanctioned Funds (Rs. Lacs)</b>
Dept. of Electrical Engineering	38	6402
Dept. of Mechanical Engineering	20	5132
Dept. of Chemical Engineering	18	5001
Dept. of Textile Technology	22	4584
Dept. of Physics	27	2977
Centre for Applied Research in Electronics	9	2841
Dept. of Civil Engineering	18	2713
Dept. of Biochemical Engineering & Biotechnology	9	1706
Dept. of Management Studies	14	1312
Centre for Atmospheric Sciences	15	1153
Dept. of Applied Mechanics	6	870
Dept. of Chemistry	24	494
Dept. of Computer Science & Engg	9	395
School of Biological Science	17	384
Centre of Energy Studies	8	361
Dept. of Humanities & Social Sciences	5	184
Bharti School of Telecommunication Technology & Management	2	170
Centre for Rural Development & Technology	6	149
Centre for Biomedical Engineering	3	89
Instrument Design & Development Centre	2	82
TRIPP	2	50
Dept. of Mathematics	4	36
Industrial Tribology, Machine Dynamics & Maintenance Engg.	1	30
School of Information Technology	1	4

## Department-wise Summary of Sponsored Research Projects Undertaken During the Financial Year 2017-18



EE	Dept. of Electrical Engineering	CSE	Dept. of Computer Science & Engg
ME	Dept. of Mechanical Engineering	SBS	School of Biological Sciences
CHEMICAL	Dept. of Chemical Engineering	CES	Centre for Energy Studies
TT	Dept. of Textile Technology	HUSS	Dept. of Humanities & Social Sciences
PHY	Dept. of Physics	BS	Bharti School of Telecommunication Technology & Management
CARE	Centre for Applied Research in Electronics	CRDT	Centre for Rural Development Technology
CE	Dept. of Civil Engineering	CBME	Centre for Biomedical Engineering
DBEB	Dept. of Biochemical Engineering & Biotechnology	IDDC	Instrument Design & Development Centre
DMS	Dept. of Management Studies	TRIPP	TRIPP
CAS	Centre for Atmospheric Sciences	MATH	Dept. of Mathematics
AM	Department of Applied Mechanics	ITMEC	Industrial Tribology, Machine Dynamics & Maintenance Engg.
CHEMISTRY	Dept. of Chemistry	SIT	School of Information Technology

**Major International Sponsored Research Projects Undertaken  
During the Financial Year 2017-18**

<b>Project Title</b>	<b>Sponsoring Agency / Collaborators</b>	<b>Sanctioned Funds (Rs. Lacs)</b>	<b>Principal Investigator &amp; Department</b>
Public Engagement on Health and Development in India	Bill & Melinda Gates Foundation United States	960.00	Mahim Sagar Dept. of Management Studies
Civil Society Advocacy and Inclusive Development in India	Netherlands Organization for Scientific Research Netherlands	133.72	Sarbeswar Sahoo Dept. of Humanities & Social Sciences
Tractable Probabilistic Logic Models: A New Deep Explainable Representation	University of Texas United States of America	128.54	PARAG SINGLA Dept. of Computer Science & Engg.
Support for Secure Execution in Distributed Systems Using Encrypted Keys	Semiconductor Research Corporation United States of America	58.09	SMRUTI RANJAN SARANGI Dept. of Computer Science & Engg.
Influence of sulphates on the hydration of cements	Chryso SAS France	36.00	Shashank Bishnoi Dept. of Civil Engineering
Pedestrian Safe Public Transport System: Infrastructure, Operations, Vehicles, Policies and Legislation II (PS - PTS II)	Volvo Research Education Foundations, Sweden	31.62	GEETAM TIWARI Dept. of Civil Engineering
Indo-US Center for Algorithms under Uncertainty	Indo-US Science and Technology Forum (IUSSTF) United States	24.63	Amit Kumar Dept. of Computer Science & Engg.
A Systems Approach to Air Pollution in Delhi (ASAAP)	Global Challenges Research Fund (GCRF) United Kingdom	22.58	Mukesh Khare Dept. of Civil Engineering
Towards an Integrated Global Transport and Health Assessment Tool (TIGTHAT)	University of Cambridge United Kingdom	21.48	GEETAM TIWARI Dept. of Civil Engineering
Ultra Fast Thermal Simulation of Electronic Systems	Semiconductor Research Corporation, USA	20.09	SMRUTI RANJAN SARANGI Dept. of Computer Science & Engg.
Electrical Degradation and Reliability of 45nm SOI Transistors under RF Operation	Global Foundries Inc. United States	19.50	Abhisek Dixit Dept. of Electrical Engineering
Memory Hierarchy Bandwidth Management in Multiprocessor Systems on chip	Semiconductor Research Corporation United States of America	19.50	PREETI RANJAN PANDA Dept. of Computer Science & Engg.
Integrated hydro-economic framework for basin-scale water quality and quantity management	Shastri Indo-Canadian Institute Canada	10.00	Dhanya C.T. Dept. of Civil Engineering
Probabilistic Inference over Textual Knowledge bases	International Business Machines United States	9.58	Mausam Dept. of Computer Science & Engg.
Collaboration with Indiana University in Tactile Graphics	Indiana university United States of America	6.40	M. BALAKRISHNAN Dept. of Computer Science & Engg.

GCRF-EPSRC Institutional Sponsorship 2017-18	Engineering & Physical Sciences Research Council United Kingdom	4.30	P V Madhusudhan Rao Dept. of Mechanical Engineering
Joint Research on Global issues in Container Supply Chain	University of Connecticut United States	0.94	Ravi Shankar Dept. of Management Studies
Local Treatment of Urban Sewage Streams for Healthy Reuse (LOTUS)(INDO-DUTCH Joint project)	Through Department of Biotechnology, India Participating Dutch Institute : TU Delft	1272.98	T.R.SREEKRISHNAN Dept. of Biochemical Engineering & Biotechnology
UI-ASSIST: US India Collaborative for Smart Distribution System with Storage	Indo-US Science and Technology Forum (IUSSTF) United States of America Participating US Institutes : Massachusetts Institute of Technology, Cambridge, Texas A&M University, Idaho National Laboratory, Lawrence Berkley National Lab GE Grid Solutions , SnoPUD Burns and McDonnell AVISTA ETAP	753.42	ABHIJIT RAMCHANDRA ABHYANKAR Dept. of Electrical Engineering
UK India Clean energy Research Institute (UKICERI) - Project II	Through International Division, Dept. of Science & Technology, Participating UK Institutes : Loughborough University, Imperial College London, University of Mancheste, University of Birmingham, University of Southampton, University of Warwick, kCardiff University, University of Exeter, Swansea University United Kingdom	298.50	BHIM SINGH Dept. of Electrical Engineering
UK India Clean Energy Research Institute (UKICERI) - Project I.	Through International Division, Dept. of Science & Technology, Participating UK Institutes : Loughborough University, Imperial College London, University of Mancheste, University of Birmingham, University of Southampton, University of Warwick, kCardiff University, University of Exeter, Swansea University United Kingdom	85.34	SUKUMAR MISHRA Dept. of Electrical Engineering
Collaborative Decision Making on Container Supply Chains	Through University Grants Commission, India (Under UKEIRI-UGC scheme) UK participating Institutes : Newcastle University Business School, United Kingdom	53.26	SURYA PRAKASH SINGH Dept. of Management Studies

Advanced Analytics for Green and Resilient Supply Chain Decision Making	Through University Grants Commission, India (Under UKEIRI-UGC scheme) UK participating Institutes : Loughborough University, UK, The Carbon Trust, London, United Kingdom	52.73	RAVI SHANKAR Dept. of Management Studies
Theoretical and experimental studies of suspensions of magnetic nanoparticles, their applications and generalizations	Through Dept. of Science & Technology, India (under DST-UKIERI scheme) Participating UK Institutes : University of Bath, United Kingdom	45.48	VARSHA BANERJEE Dept. of Physics
Collaborative Activities Under India-Ethiopia Science and Technology Cooperation Framework	Through Department of Science & Technology (Collaborative Activities Under India-Ethiopia Science and Technology Cooperation Framework : collaborative activities between MoST (Ethiopia) and DST )	38.59	Bijaya Ketan Panigrahi Dept. of Electrical Engineering
Electrospun Nanofibers with Embedded Yolk-Shell Particles for Catalytic Applications	Through International Division, Dept. of Science & Technology, India Collaborating agency : DFG (Deutsche Forschungsgemeinschaft), Germany Participating Institute : LeibnizInstitut für Polymerforschung Dresden e.V., Hohe Str. 6, 01069 Dresden	37.18	BHANU NANDAN Dept. of Textile Technology
Process Development and Assessment/Evaluation of Microalgae Based Biofuels and Value Added Products	Through International Division, Dept. of Science & Technology Participating Institute : University of Moratuwa, Sri Lanka	30.20	ANUSHREE MALIK Centre for Rural Development Technology (CRDT)
synthesis of Novel Low Cost Biosorbents based on Modified Cellulosic agrowastes by Tetraethylenepentamine, Triethylenetriamine and adsorption study for Anionic dyes Removal	Dept. of Science & Technology, India Ministry of Higher Education and Scientific Research of the Republic of Tunisia	18.17	SUNIL KUMAR KHARE Dept. of Chemistry
QoS provision for Multigigabit-supporting 5G wireless mobile networks	Through Department of Science & Technology (DST), India Participating Institutes : Hanyang University and Chungnam National University, Korea	15.17	Jun Bae Seo Dept. of Electrical Engineering

Development of 3D Bioprinted Osteochondral Tissue	Through International Division, Dept. of Science & Technology, India Participating Institute : Orthopedic Rizzoli Institute Laboratory of Immunoreumatology and Tissue Regeneration, Italy	10.80	SOURABH GHOSH Dept. of Textile Technology
Towards an integrated approach for assessing the impact of climatic stresses on agriculture and the exchange of greenhouse gas on the Indo-Gangetic Plain	Through Department of Science & Technology, India Participating UK Institute : Earth Observation Science Leicester Institute for Space and Earth Observation University of Leicester United Kingdom	7.48	Sagnik Dey Centre for Atmospheric Sciences
Fabrication and Characterization of Function Polymeric Matrix by Click-Chemistry for Medical Applications and 3D Bioprinting (Joint project of Indo-Egypt - Exchange visit)	Through International Division, Dept. of Science & Technology, India Participating Institute : El Behouth, St. Dokki, Cairo, Egypt	6.20	SOURABH GHOSH Dept. of Textile Technology
Integrated low cost water sensors for real- time river water monitoring and decision- making	Indo-US Science and Technology Forum (IUSSTF) United States	900.00	Arun Kumar Dept. of Civil Engineering
Development of an Integrated Process for Conversion of Biomass to Affordable Liquid Biofuel	Through Department of Science & Technology (DST) Latvia	90.09	Atul Narang Dept. of Biochemical Engineering & Biotechnology

**Major Sponsored Research Projects Undertaken During the Financial Year 2017-18**  
(with value Rs. 1 Cr. and above)

S. No.	Project No.	Project Title	Sponsoring Agency	Sanctioned Funds (Rs. Lacs)	Principal Investigator & Department
1.	RP03506G	Methanol Production from Indian Coal: Pilot Plant Demonstration, Catalysis and Scale-up Technologies	Department of Science & Technology India	3825	Shantanu Roy Dept. of Chemical Engineering
2.	RP03519G	Virtual Labs (Phase III)	Ministry of Human Resource & Development India	1500	V Ramgopal Rao Office the Director
3.	RP03426G	Design and Development of Light Weight Bullet Proof Jacket (BPJ) for Protection against High Threat Level of NIJ Level 3+ and NIJ Level IV	DRDO, Ministry of Defence India	1325	NARESH BHATNAGAR Dept. of Mechanical Engineering
4.	RP03349G	Local Treatment of Urban Sewage Streams for Healthy Reuse (LOTUS)(INDO-DUTCH Joint project)	Department of Biotechnology, Ministry of Sc.& Tech Holland	1273	T.R.SREEKRISHNAN Dept. of Biochemical Engineering & Biotechnology
5.	RP03430G	Human Body Tissue Characterization under Blast, Impact and Penetration	DRDO, Ministry of Defence India	1225	NARESH VARMA DATLA Dept. of Mechanical Engineering
6.	RP03361G	A Technology Platform for Application of Advanced Textile Structures for the Development of Structural Composites including Green and Waste Composites	Ministry of Textile, Textile Commissioner of India India	983	B.K.BEHERA Dept. of Textile Technology
7.	RP03458F	Public Engagement on Health and Development in India	Bill & Melinda Gates Foundation United States	960	Mahim Sagar Dept. of Management Studies
8.	RP03436G	Fabrication and Integration of Chemical, GAS and Physiological Monitoring Sensors on Textiles Substrates	DRDO, Ministry of Defence India	903	ANUJ DHAWAN Dept. of Electrical Engineering
9.	RP03472G	Integrated low cost water sensors for real- time river water monitoring and decision- making	Indo-US Science and Technology Forum (IUSSTF) United States	900	Arun Kumar Dept. of Civil Engineering
10.	RP03429G	Design of Blast Resistant Structures	DRDO, Ministry of Defence India	882	TANUSREE CHAKRABORTY Dept. of Civil Engineering
11.	RP03446G	Development of Time Resolved THz Imaging and Spectroscopy System for Studying High Energy Density Materials and Condensed Explosives under Functionalized Condition	DRDO, Ministry of Defence India	852	AMARTYA SENGUPTA Dept. of Physics
12.	RP03465G	Development of Multilayered Coated and Laminated Fabric for Aerostat Hull Material	Directorate of Extramural R&I Property Right, DRDO, Ministry of Defence India	796	Mangala Joshi Dept. of Textile Technology
13.	RP03441G	THz Components and Systems using Synthesized Sources and Phase-coherent Techniques	DRDO, Ministry of Defence India	792	Ananjan Basu Centre for Applied Research in Electronics (CARE)



14.	RP03428G	Human Body FE Model Development for Blast and Impact	DRDO, Ministry of Defence India	767	ANOOP CHAWLA Dept. of Mechanical Engineering
15.	RP03443G	UI-ASSIST: US India Collaborative for Smart Distribution System with Storage	Indo-US Science and Technology Forum (IUSSTF) United States of America	753	ABHIJIT RAMCHANDRA ABHYANKAR Dept. of Electrical Engineering
16.	RP03439G	Design of Anti-Mine Boots (AMBs) using Finite Element Simulations with Human Body Model (HBM)	DRDO, Ministry of Defence India	745	DEVENDRA KUMAR DUBEY Dept. of Mechanical Engineering
17.	RP03350G	DST's Centre of Excellence in Climate Modeling [under Climate Change Programme - (SPLICE)]	Department of Science & Technology (DST) India	719	SAROJ KANTA MISHRA Centre for Atmospheric Sciences
18.	RP03455G	Millimeter Wave & RF MEMS Components and System for Imaging and Surveillance	DRDO, Ministry of Defence India	683	ANANJAN BASU Centre for Applied Research in Electronics (CARE)
19.	RP03438G	Characterization of EMRG using Electromagnetic Modeling and Design of Rail Armature and Compulsator	DRDO, Ministry of Defence India	681	JITENDRA PRASAD KHATAIT Dept. of Mechanical Engineering
20.	RP03449G	Design and Development of Laminated Fabric for High Altitude Airship	DRDO, Ministry of Defence India	638	BHUPENDRA SINGH BUTOLA Dept. of Textile Technology
21.	RP03442G	Spintronic based Tunable and Powerful Broadband THz Emitters	DRDO, Ministry of Defence India	628	SUNIL KUMAR Dept. of Physics
22.	RP03466G	Design & Development of Extreme Cold Climate Clothing for Defence Personnel	Directorate of Extramural R&I Property Right, DRDO, Ministry of Defence India	603	R S Rengasamy Dept. of Textile Technology
23.	RP03440G	High Efficiency THz detectors Based on Field Effect Transistors	DRDO, Ministry of Defence India	568	SAMARESH DAS Centre for Applied Research in Electronics (CARE)
24.	RP03427G	Development of Soft Body Armour using Shear Thickening Fluids	DRDO, Ministry of Defence India	536	ABHIJIT MAJUMDAR Dept. of Textile Technology
25.	RP03447G	Development of Explosive Resistant Structures	DRDO, Ministry of Defence India	533	TANUSREE CHAKRABORTY Dept. of Civil Engineering
26.	RP03437G	Development of Textile Based Interconnects and Antennas	DRDO, Ministry of Defence India	497	ANUJ DHAWAN Dept. of Electrical Engineering
27.	RP03363G	Extraction of Precious Metals from E-waste using Chelation Technology	Department of Science & Technology (DST) India	428	KAMAL KISHORE PANT Dept. of Chemical Engineering
28.	RP03353G	Electronically Tuned Ultra-wide Band Microwave Monolithic Devices using Magnetic Nanostructures	Ministry of Human Resource Development India	405	PRANABA KISHOR MUDULI Dept. of Physics
29.	RP03431G	Computational Modeling of Ballistic Impact of Bullet Proof Panels for Body Armour	DRDO, Ministry of Defence India	401	PUNEET MAHAJAN Dept. of Applied Mechanics
30.	RP03417G	Smart Integrated Landmine Detection System (SILDS) Based on Explosive Vapor-	Ministry of Human Resource Development India	400	ANUJ DHAWAN Dept. of Electrical Engineering

		sensing Nose high Sensitive Magnetic Field sensing and Novel Microwave Radar Imaging	India		
31.	RP03433G	Mechanical Behaviour of Light Weight Materials Under Different Rates of Dynamics Loading	DRDO, Ministry of Defence India	369	VIKRANT TIWARI Dept. of Applied Mechanics
32.	RP03356G	Surface Enhanced Raman Scattering (SERS) Based Point Detection and Stand off Detection of Explosives and Chemical & Biological Warfare Agents	DRDO, Ministry of Defence India	354	ANUJ DHAWAN Dept. of Electrical Engineering
33.	RP03416G	3-dimensional forward-looking Imaging Sonar for Autonomous Underwater Vehicles	Ministry of Human Resource Development India	342	ARUN KUMAR Centre for Applied Research in Electronics (CARE)
34.	RP03470G	Development of roller carding machine for manufacturing of nonwovens	Department of Heavy Industry India	327	Dipayan Das Dept. of Textile Technology
35.	RP03346G	Energy Efficient Buildings: Technology with Intelligence	Department of Science & Technology (DST) India	318	BIJAYA KETAN PANIGRAHI Dept. of Electrical Engineering
36.	RP03391G	UK India Clean energy Research Institute (UKICERI)	International Division, Dept. of Science & Technology United Kingdom	299	BHIM SINGH Dept. of Electrical Engineering
37.	RP03432G	Nano Springs Layered Energy Dissipating and Energy Dispersing Non-ballistics Materials	DRDO, Ministry of Defence India	285	JITENDRA PRATAP SINGH Dept. of Physics
38.	RP03481G	Community-scale Energy Demand Reduction in India (CEDRI)	Department of Science & Technology India	275	Abhijit Ramchandra Abhyankar Dept. of Electrical Engineering
39.	RP03467N	Development of Biocompatible Non-fluorinated Surfactant System for Fluoro-polymer Polymerization	Gujarat Fluorochemicals Ltd., India	275	Bhuvanesh Gupta Dept. of Textile Technology
40.	RP03357G	Design and Development of Solar PV Integrated System with Island and Resynchronization Capabilities	Department of Science & Technology (DST) India	234	BHIM SINGH Dept. of Electrical Engineering
41.	RP03367G	Reduction of NOx from H2 Engines using EGR and After treatment Devices	Ministry of New and Renewable Energy India	181	DIVESH BHATIA Dept. of Chemical Engineering
42.	RP03495G	Improvement of S&T Infrastructure in Centre for Applied Research in Electronics, IIT Delhi (Under FIST scheme of DST)	Department of Science & Technology (DST) India	158	Ananjan Basu Centre for Applied Research in Electronics (CARE)
43.	RP03480G	CyCLOPES : Proposal for monitoring landslide movement using large arrays of cooperating cyber-physical systems	Department of Science & Technology (DST) India	150	Subrat Kar Dept. of Electrical Engineering
44.	RP03471G	Development and Demonstration of enhanced performance of the Commercial automotive Vehicle with Alternative	Department of Science & Technology India	143	K A Subramanian Centre for Energy Studies (CES)

		Transportation Fuel			
45.	RP03482F	Civil Society Advocacy and Inclusive Development in India	Netherlands Organisation for Scientific Research Netherlands	134	Sarbeswar Sahoo Dept. of Humanities & Social Sciences
46.	RP03423G	Ultra-high efficiency CMOS compatible Si/Ge Single Nanowire Photodetectors in Infrared and THz Wavelengths for Defence and Security Applications	Ministry of Human Resource Development India	132	SAMARESH DAS Centre for Applied Research in Electronics (CARE)
47.	RP03453F	Tractable Probabilistic Logic Models: A New Deep Explainable Representation	University of Texas United States of America	129	PARAG SINGLA Dept. of Computer Science & Engg.
48.	RP03498G	Identification and Demonstration of Cost effective Technologies to Maximize habitat Energy self-sufficiency	Department of Science & Technology India	124	Sukumar Mishra Dept. of Electrical Engineering
49.	RP03317G	Development of SERB based Ultra-sensitive, Rapid, Portable and Field Deployable Platform for Detection of Pathogenic Bacteria and Dengue Virus	Ministry of Human Resource Development India	122	JITENDRA PRATAP SINGH Dept. of Physics
50.	RP03373G	State-of-the-Art Facilities under Underwater Signal Processing at CARE, IIT Delhi	Directorate of Naval Training, Ministry of Defence, India	122	ARUN KUMAR Centre for Applied Research in Electronics (CARE)
51.	RP03370G	Development of a Suite of Indigenous Assistive Systems and Tools for the Disabled Community in India	IIT Kharagpur India	121	M. BALAKRISHNAN Dept. of Computer Science & Engg.
52.	RP03457N	Flexibility Assessment and Establishment for Strengthening the Grid for Large Scale Renewable Integration (RE)	Renew Power Ventures Pvt. Ltd. India	120	NILANJAN SENROY Dept. of Electrical Engineering
53.	RP03397G	Development of Web Enabled Learning/Training Modules for Nano-Materials, Fabrication and Devices	Ministry of Human Resource Development India	120	NEERAJ KHARE Dept. of Physics
54.	RP03473G	Development of protocols for the production of value added bio-degradable polymers from methane & CO <sub>2</sub>	GAIL (India) Limited India	113	A K Srivastava Dept. of Biochemical Engineering & Biotechnology
55.	RP03362G	Scale-up Studies and Process Development for Hydrogen Production by Catalytic Decomposition of Natural Gas	Hindustan Petroleum Corporation Limited India	102	KAMAL KISHORE PANT Dept. of Chemical Engineering
56.	RP03461N	Design and Development of a Charging Station for Electric Vehicles	Renew Power Ventures Pvt. Ltd. India	100	Bhim Singh Dept. of Electrical Engineering