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# PRIME MINISTER'S FELLOWSHIP SCHEME FOR DOCTORAL RESEARCH

A PPP Initiative of Science & Engineering Research Board (SERB)  
Department of Science & Technology, Government of India and  
Confederation of Indian Industry (CII)



**100 FELLOWSHIPS IN  
THE AREAS OF**  
SCIENCE | TECHNOLOGY | ENGINEERING  
AGRICULTURE | MEDICINE

**AN OPEN-ENDED  
SCHEME**

## ABOUT THE SCHEME

The scheme supports full-time PhD scholars with a scholarship of up to Rs 8.7 lakh per annum per candidate. The scheme has the provision to award up to 100 new scholarships every year. As per the provisions of the scheme, as approved by the Department of Science and Technology, the scholarship will be given for a maximum period of four years, 50 per cent of which will come from the government and 50 per cent from the partner company.

## ELIGIBILITY

- The applicant should be a full-time PhD scholar in any recognized Indian university / institute / research laboratory. The scholar's PhD registration date should not be more than 14 months from the date of submission of application.
- The applicant should have a valid industry partner who should be ready to support the research project financially as well as provide guidance and mentorship.

## BROAD CRITERIA FOR SELECTION

- The projects should be innovative and of high scientific merit; with discrete R&D as opposed to exploratory investigation.
- The proposed research project should have a high commercialisation potential.
- The applicant, the academic guide and the industry mentor should have strong track record.

## RESEARCH PROJECTS AWARDED IN 2013 - 2016

S. No.	PM Fellow	Partner Company	Partner Institute	Research Topic
1.	Abhijnan Chakraborty	Google India Pvt. Ltd.	IIT Kharagpur	Designing Information Retrieval Systems Optimized to Users' Sampling Strategies
2.	Adinarayana Ganjigunta	Nuziveedu Seeds Ltd.	Acharya Nagarjuna University	Improvement of Tropical Maize By Introgression Superior Alleles Responsible For Increase Of Lysine, Tryptophan & B - Carotene
3.	Ajay Krishnan	Godrej & Boyce Mfg Co. Ltd.	IIT Bombay	Influence of Temper Conditions on the Environmentally Assisted Cracking of AA 7085 Alloy
4.	Akash Dilipkumar Patel	Abellon Clean Energy Ltd.	Hemchandracharya North Gujarat University	Economic and Environmental Potential of Industrially Useful Microalgae cultivation
5.	Akula Durga Vara Prasad	Tata Steel Limited	IIT Bombay	Microstructural Engineering in Wire Rod: Possibilities?
6.	Andugupati Sai Balaji	Strand Life Sciences	Karnataka College of Pharmaceutical Sciences, Karnataka University	To Study the Role of ABC Family of Drug Transporters in Breast Cancer Chemoresistance
7.	Ankit Kumar Agarwal	Sahajanand Medical Technologies Pvt. Ltd.	ICT Mumbai	Development of Smart Drug Eluting Stents
8.	Anup Kundu	Forbes Marshall Pvt. Ltd.	IIT Bombay	Numerical and Experimental Investigation of Heat Transfer Enhancement in Heat Exchanger
9.	Archana Rajendran	Hoganas AB	CSIR-CERI, Karaikudi	Fabrication of porous Ti and Ti alloys with multi element substituted nano-structured titania layer having bioactivity, antibacterial activity and bone cell responses for biomedical application
10.	Ashok Babadev Jagtap	Maxim Crop Sciences Pvt. Ltd.	Punjab Agricultural University	Identification And Characterization Of High Temperature Stress Responsive Genes In Maize ( <i>Zea Mays</i> L.)
11.	Avick Sinha	GE India Technology Center Pvt. Ltd.	IIT Bombay	Numerical and Experimental Study of Superheated Liquid Jet
12.	Babita Mukhija	Sampurn Agri Ventures Pvt. Ltd.	Punjab Agricultural University	Characterization of native <i>Bacillus thuringiensis</i> isolates against <i>Mylabris pustulata</i> Thunberg in Pigeonpea and optimization of Bioprocess parameters
13.	Barnali Banerjee	Shell India Markets Private Limited	NIT Rourkela	Fundamental Investigations of Cationic Surfactants with Bitumen Product Components
14.	Bhaskar Bethi	K-Pack Systems Private Limited	NIT Warangal	Development of pilot scale cavitation assisted catalytic membrane reactor for wastewater treatment
15.	Boyapati Subrahmanyam	Intel Corporation, USA	IIT Bombay	Low-Noise Nano Scale Signal Conditioning Integrated Circuits for Portable Electro-Medical and Electro-Sensor Applications
16.	Chandresh Kumar Maurya	Robert Bosch Engineering and Business Solutions Limited	IIT Roorkee	Anomaly Detection in Big Data
17.	Chiranjeevi Yarra	Xerox India Limited	IISc Bangalore	Analysis of Temporal Contours of Spoken Language Learning
18.	Darshak Bhatt	Intel Corporation, USA	IIT Bombay	Study and Design of Integrated Mixer and Local Oscillator Topologies for WiFi and WiMAX Systems
19.	Darshen Jitendrabhai Kotak	Zim Laboratories Ltd.	ICT Mumbai	Design and Development of Non-Invasive Drug Delivery Systems For Large Molecules
20.	Deepak C Akiwate	Eaton Technologies Pvt. Ltd.	IIT Hyderabad	Acoustic Analysis of Periodic Structures
21.	Deepika Pandey	Tata Chemicals Ltd.	Karnataka University	Study on Production of Gamma-Polyglutamic Acid by <i>Bacillus</i> Sp.
22.	Dhivyaraja Kumaran	Corporate Research & Technology, Eaton Corporation	IIT Madras	Advanced Micro Spray Cooling Technologies For High Power Density Hydraulics
23.	Dinesh Bapurao Balgude	Nova-Surface Care Centre Pvt. Ltd.	ICT Mumbai	Modification of Renewable Resources for Coating Applications
24.	Ejaz Ahmad	Hindustan Petroleum Corporation Limited	IIT Delhi	Catalytic Conversion of Biomass Derived Residual Lignin into Aromatics and Value Added Chemicals
25.	Govardhan Rao Talluri	Maxim Integrated, California	IIT Bombay	High Speed I/Os for Chip to Chip Interconnects
26.	Gundappa Saha	Cadila Pharmaceuticals Limited	IIT Guwahati	Immunosuppression during <i>Leishmania</i> infection and immuno-therapeutics against the parasite.
27.	Gunjan Gurunath Naik	Persistent Systems Limited	Savitribai Phule Pune University	Adaptive kernel framework for Active mechanism for effective segmentation strategies
28.	Gunjan kumar Jagdishbhai Mehta	Skymax Research & Regulations	Saurashtra University, Rajkot, Gujarat, India	Isolation, Identification and Evaluation of Quorum Sensing Inhibitors (QSIs) From Medicinal Phytoextracts
29.	Hament Thakur	Verdenta Hybrid Seeds Pvt. Ltd.	Punjab Agricultural University	Genetics and Molecular Mapping Of Leaf Curl Virus Disease Resistance Gene(S) in Chilli Pepper ( <i>Capsicum Annuum</i> L.)
30.	Harshal Agarwal	Thermax Ltd.	AcSIR Chennai	Thermal Management of High Temperature Proton Exchange Membrane Fuel Cell (HT-PEMFC) Integrated with Fuel Reformer and Vapor Absorption Machine
31.	Hiren Kumar Mansukhbhai	Solar Agrotech Pvt. Ltd.	Saurashtra University	Isolation and Evaluation of Anti-Pathogenic Bacteria from Cotton Rhizosphere
32.	Inayathullah Ghori	Kamineni Hospital Ltd.	IIT Hyderabad	Development of a low-cost screening system devised to identify cardiac diseases in a rural health care setup.
33.	Indu Elizabeth	EON Electric Ltd.	Academy of Scientific and Innovative Research (AcSIR)	Novel Electrode Materials For Lithium Ion Batteries
34.	Ishita Das	Krish Biotech Research Pvt. Ltd.	NIT Durgapur	Microbial production of a surfactant and study of its agricultural application
35.	Jagreeti Gupta	Beauscape Farms	Punjab Agricultural University	Morphological And Physiological Parameters of Subtropical Ornamental Trees Under Salt Stress
36.	Jailakshmi Menon	Autosys Engineering (P) Ltd.	Anna University	Development of Control Algorithm for Canal Automation
37.	Jaydeep Bipin Deshpande	NanoXpert Technologies	National Chemical Laboratory	Process Design for the synthesis of Nanomaterials and Scale-up
38.	Jyoti Shankar Jha	Bharat Forge Limited	IIT Bombay	Microstructure based fatigue modeling of Titanium Alloy (Ti-6Al-4V)
39.	Karanveer Singh Aneja	Talga Resources Ltd.	IIT Bombay	Graphene based anticorrosive coatings

## SELECTION PROCESS

A high level Apex Council consisting of members from academia, industry and government will review the applications and select the candidates for award of PM Fellowship.

## FUNDING SUPPORT

- Fellowships for up to 100 research projects will be supported in every financial year.
- Fellowship amount of up to Rs. 8,70,000/- per annum per candidate

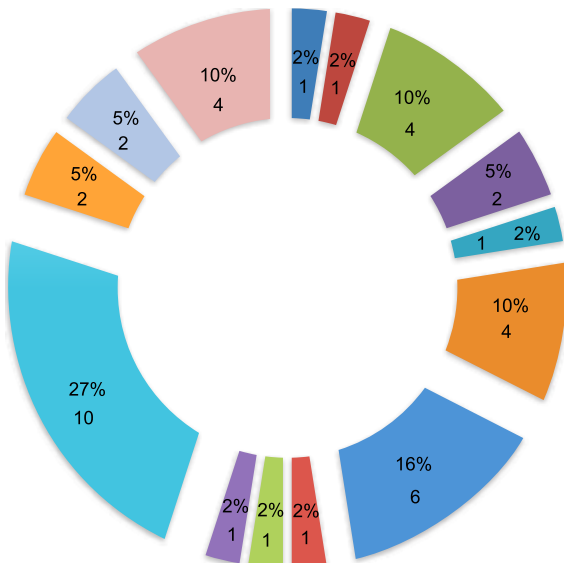
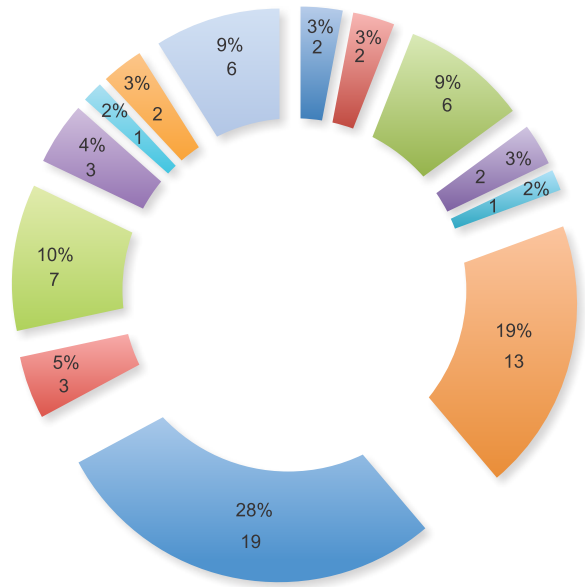
*50% contribution is by SERB [being equivalent to the prevailing Government norms for JRF /SRF (inclusive of HRA)]. This amount is subject to revision as per the JRF/SRF norms from time to time. Rest 50% (matching equivalent of SERB component) will come from the partner company.*

S. No.	PM Fellow	Partner Company	Partner Institute	Research Topic
40.	Karthikeyan Palaniswamy	Joegeetha Plastic Pipes	Tamil Nadu Agricultural University	Techno - Economic Prospects and Environmental Perspective of Recycling Agricultural Plastic Waste towards Sustainable Productivity
41.	Kaushal Rameshchandra Parmar	Hindustan Petroleum Corporation Limited	IIT Delhi	Catalytic decomposition of methane in fluidized bed reactor.
42.	Kavitha Manoharan	Sree Akzya Dyeing	Alagappa University	Nanoparticles Based Biodegradation & Power Generation by Waste Water Bacteria
43.	Madhava Krishna C	Morphing Machines Pvt. Ltd.	Indian Institute of Science, Karnataka	Architecture and Compiler Support for Concurrent Program Execution on Application Specific Massively Parallel Processors
44.	Mahesh Maroti Dhakate	United Phosphorus Ltd.	IIT Bombay	Optimum Design and Scale-up of Air Jet Mills: Experimental and Computation
45.	Manoj Kumar Puniya	Prathista Industries Limited	Indian Agricultural Research Institute	Anthocyanins as ingredients for food industry: Strategy for extraction, functional characterization and enhanced stability
46.	Monika Gupta	Infosys Ltd.	IIIT Delhi	Mining Peer Code Review Process
47.	Mrityunjay Kehsavprasad Sharma	Aarti Industries Ltd.	CSIR- NCL Pune	Selectivity Engineering of Exothermic Multi-step Reactions using Flow Reactors
48.	Murugan Ezhumalai	Arche Biologics	PSG College of Arts & Science	Designing and Prototyping of Computer Interfaced Embedded Design for Psychological Patients & Future Warrior Hand Wear System
49.	Narendra Akiti	P&G, Beijing	IIT Bombay	Granule Breakage in a Controlled Shear Field - Modelling and Experiments
50.	Naveen Kaushik	Applied Materials, Inc.	IIT Bombay	Germanium as Channel Material for Future CMOS Applications
51..	Neeraj C Hanumante	Tata Chemicals Limited	IIT Bombay - Monash University Research Academy	Agent based modeling for sustainability assessment
52.	Neha Bhardwaj	Petrotech Society	IIT Delhi	Oil-slick Control and Development of an Intelligent Oil-recovery System
53.	Nidhina M Bhaskaran	Jai Bharath Gum & Chemical Ltd.	CSIR-CFTRI, Mysore	Biotechnological Approaches for Value Addition of Industrial Guar Meal
54.	Padma Ishwarya Shankaran	General Mills India Pvt. Ltd.	CFTRI Mysore	A combined computational modeling and experimental approach to investigate the influence of non-wheat particulate ingredients on volume and structure development in baked food systems
55.	Piyali Dhar	Thermax India Limited	IIT Madras	Pre-Treatment of Lignin By Non-Conventional Methods and Catalytic Conversion to Useful Compounds
56.	Poonam Mishra	Tata Chemicals Ltd.	Karnataka University	Isolation, Purification, characterization and optimization of fermentation conditions of $\gamma$ -Polyglutamic acid producing Microbes
57.	Porselvam Subramanian	Envian Engineers Pvt. Limited	CSIR-CLRI, Chennai	Study on Influence of Pre-Treatment and Co-Digestion on Biogas Production from Slaughter House Solid Waste With Other Organic Waste
58.	Pratichi Singh	IBIDEN Co. Ltd.	Banaras Hindu University	Quaternary Catalyst for Control of Diesel Engine Exhausts Emissions
59.	Rahul Dubey	Robert Bosch Engineering and Business Solutions Ltd.	IIT Delhi	Adaptive and Intelligent Protection Scheme for Transmission Network Including Facts and Off-Shore Wind-Farms
60.	Rahul Jain	Intel Technology India Pvt. Ltd.	IIT Delhi	Runtime System Adaptation for Optimal Energy-Performance Trade-off
61.	Rajpreet Kaur Goraya	The Punjab State Cooperative Milk Producers Fed Limited (Milkfed Punjab)	Punjab Agricultural University	Development of Low Sugar/Sugar Free Ice Cream and Whey Beverages with Improved Physico-Chemical And Sensory Attributes
62.	Ravi Bhandari	Microsoft Research India	IIT Bombay	Improving Road Safety using Smart Sensing
63.	Rohit Kumar	Petrotech Society	IIT Delhi	Catalytic Tri-reforming of Methane for Syn-gas Generation over Multi-functional Catalysts
64.	Sajal Saha	Tata Steel Limited	Bidhan Chandra Krishi Viswavidyalaya	From Wastes to Assets - Use of Iron Slime in Agriculture
65.	Sameena Naaz Malik	Ozone Research and Application India Pvt. Ltd.	IIT Bombay	Development, Optimization, Modelling and Scale-Up of a High Performance Pre-Treatment System For Complex Industrial Wastewaters For Biodegradability Enhancement, Colour and Toxicity Reduction Along With Concomitant Biofuel Production
66.	Sameer Kumar Sarma Pachalla	Preca Solutions India Pvt. Ltd.	IIT Hyderabad	Effect of Openings in Prestressed Precast Hollow Core Slabs
67.	Sammit Ekanath Karekar	Suyog Nirmitti	ICT Mumbai	Development of Nanocontainers for Performance Applications
68.	Sandeep Kumar	Cymk Inks LLP	University Institute of Engineering and Technology, Kurukshetra University	Synthesis & Characterization of Graphene Based Conductive Ink for Flexible & Printable Electronics
69.	Sankaran K	Trichy Distilleries & Chemicals Ltd.	NIT Trichy	Microalgae Treatment of Distillery Wastewater
70.	Sankepally Samara Shekar Reddy	Varsha Bioscience and Technology	Amity University, Jaipur	Abiotic stress tolerance in <i>Oryza sativa</i> .L (paddy) mainly drought and salinity tolerance using genetic transformation techniques
71.	Shamayeeta Rey	Piramal Healthcare Ltd.	IIT Bombay	Structural Characterization of Regulatory Proteins Useful in Developing Biosensors for Water Purification System
72.	Shibin Krishnan Tc	Simco Global Technology & Systems Ltd.	National Physical Laboratory (CSIR-NPL)	Growth of $In_xGa_{1-x}N$ Based Heterostructures and Characterization for High-Efficiency Nitride Solar Cell
73.	Snehkumar Narendrakumar Shahani	Persistent Systems Ltd.	Savitribai Phule Pune University	Techniques of Privacy Preserving Data Aggregation in an Untrusted Distributed Environment
74.	Soujit Sengupta	Thermax Ltd.	IIT Bombay	Graphene-Based Composite for Capacitive Deionization and Water Purification
75.	Srinivasa Sudharsan Govindan	Vaata Infra Limited	Thiagarajar College of Engineering	Advanced Controllers For Optimizing Wind Energy
76.	Subhadeep Das	Piramal Enterprises Ltd.	IIT Bombay	Engineering Amyloids for Nanotechnology and Neuronal Cell Regeneration
77.	Subhtrakanti Nanda	G.E. Motors Pvt. Ltd.	Bengal Engineering and Science University, Shibpur	Investigations on Permanent Magnet Synchronous Generator (PMSG) for Different Renewable Energy Sources
78.	Sushrut Sandeep Bhanushali	Thermax Ltd.	IIT Bombay	Investigation of Thermo-Physical Properties of Nanofluids
79.	Vaishakhi Trivedi	Natco Pharma Limited	Tata Memorial Hospital	Characterization of therapeutically relevant alterations in human cancer
80.	Veera Asha Kumari Aketi	National Mineral Development Corporation (NMDC) Limited	IIT Hyderabad	Improving the Efficiency of Dense Medium Cyclone Treating High NGM Coal Using CFD and PEPT Methods
81.	Venkatesh Vinayakarao	Microsoft Research, India	IIIT Delhi	Semantic Analysis & Synthesis of Source Code

## Geographical Spread of Industry Partners

A total of 67 companies spread all across the world are partners in the Prime Minister's Fellowship Scheme. These include 61 Indian companies and 6 international companies.

- Andhra Pradesh
- Delhi
- Gujarat
- Haryana
- Jharkhand
- Karnataka
- Maharashtra
- Punjab
- Tamil Nadu
- Telangana
- Uttar Pradesh
- West Bengal
- Overseas



## Geographical Spread of Institutes

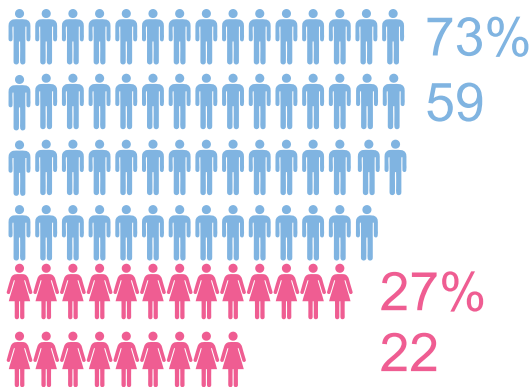
- Andhra Pradesh
- Assam
- Delhi
- Gujarat
- Haryana
- Karnataka
- Maharashtra
- Orissa
- Punjab
- Rajasthan
- Tamil Nadu
- Telangana
- Uttar Pradesh
- West Bengal

The 81 candidates receiving the Prime Minister's Fellowship are spread over 40 institutes across 14 states. Maximum number of institutes with PM Fellows are in Tamil Nadu.

## Stream-wise Spread of Research Subjects

Maximum candidates are working on research projects which are in Engineering domain.

- Chemistry
- Engineering
- Life Sciences
- Physics



## Gender Ratio of PM Fellows

- Male
- Female

While there are 22 female candidates, there are 59 male candidates.

Confederation of Indian Industry (CII)

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