

SwarnaJayanti Fellowships Scheme- 2018-19

**Shortlisted Candidates for Presentation before Subject Area
Committee in**

Engineering Sciences

Date of Presentation/ Meeting: Saturday, 19th October, 2019 &

Sunday, 20th October, 2019

Time: 9.00 a.m.

**Venue: Indian National Science Academy
Bahadur Shah Zafar Marg
(Near ITO Metro Station)
New Delhi-110002**

S.No	Project Title / Temporary Reference No.	Applicant Name & Address
1.	Scalable Management and Analytics of Temporal Graphs DST/SJF/ET/2019/1	Prof. Yogesh Simmhan Department of Computational and Data Sciences, Indian Institute of Science, Bengaluru -560012
2.	Van der Waals Heterojunctions - A Platform for Quantum Technologies DST/SJF/ET/2019/6	Dr. Kausik Majumdar Deptt. of Electrical Communication Engineering, Indian Institute of Science, Bengaluru -560012
3.	Self healing Integrated Circuits on Flexible Substrates DST/SJF/ET/2019/10	Prof. Sanjiv Sambandan Deptt. of Instrumentation and Applied Physics, Indian Institute of Science, Bengaluru -560012
4.	Development of High Energy Density Batteries for Automobiles and Grid Storage Using Versatile Sodium Insertion Materials DST/SJF/ET/2019/11	Dr. Prabeer Barpanda Materials Research Centre, Indian Institute of Science, Bengaluru -560012
5.	Deep Learning for Small Sample Size Problems (DL4S3) DST/SJF/ET/2019/15	Dr. Richa Singh Deptt. of Computer Science, Indraprastha Institute of Information Technology (IIT Delhi), Okhla Phase III, New Delhi-110020
6.	Mid-Infrared Photonic Integrated Circuit for On-Chip Sensing DST/SJF/ET/2019/31	Dr. Shankar Kumar Selvaraja Center for Nano Science and Engineering, Indian Institute of Science, Bengaluru -560012

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7.	Phonon Source for Imaging and Quantum Computing DST/SJF/ET/2019/34	Dr. Prabhu Rajagopal Deptt. of Mechanical Engineering Indian Institute of Technology Madras, Chennai-600036
8.	Disruptive Techniques for Achieving Reliability in 2D Material and Gallium Nitride Devices DST/SJF/ET/2019/35	Dr. Mayank Shrivastava Department of Electronic Systems Engineering, Indian Institute of Science, Bengaluru -560012
9.	High performance GaN transistors based on one-dimensional and two-dimensional electron gas systems DST/SJF/ET/2019/37	Prof. Dipankar Saha Deptt. of Electrical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai-400076
10.	Drying droplets of colloidal suspensions and blood on a solid surface from fundamentals to applications in bioengineering and forensics DST/SJF/ET/2019/44	Dr. Rajneesh Bhardwaj Deptt. of Mechanical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai-400076
11.	Graphene based Meta-FET Device a Unique Multifunctional Platform for Integrated Molecular Sensing and Opto-electronic Communication DST/SJF/ET/2019/45	Dr. Abha Misra Instrumentation and Applied Physics Indian Institute of Science, Bengaluru, Karnataka (560012)
12.	Next generation Mg-based alloys for automotive and biomedical applications Development, characterization and property evaluation DST/SJF/ET/2019/46	Dr. Sumantra Mandal Deptt. of Metallurgical and Materials Engineering, Indian Institute of Technology Kharagpur, Kharagpur-721302
13.	Harvesting ambient vibration and wind energy for air-cleaning using piezoelectric materials DST/SJF/ET/2019/53	Dr. Rahul Vaish Indian Institute of Technology Mandi, Kamand Campus, VPO Kamand Distt. Mandi Kamand -175005
14.	Multi-Spectral Optical Imaging for Non-Invasive In-Vivo Detection and Diagnosis of Oral Potentially Malignant Disorders. DST/SJF/ET/2019/54	Prof. Phaneendra Kumar Yalavarthy Deptt. of Computational and Data Sciences, Indian Institute of Science, Bengaluru -560012
15.	Post Quantum Cryptography Challenges, Opportunities and Beyond DST/SJF/ET/2019/73	Dr. Shweta Agrawal Deptt. of Computer Science and Engineering, Indian Institute of Technology Madras, Chennai -600036

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16.	TKR4plus-- The Next-Generation High Performance and Long-Lasting Knee Implant DST/SJF/ET/2019/76	Dr. Kaushik Chatterjee Deptt. of Materials Engineering, Indian Institute of Science, Bengaluru -560012
17.	Real-time and portable sensor technology for health protection and environmental sustainability DST/SJF/ET/2019/84	Dr. Shaibal Mukherjee Deptt. of Electrical Engineering Indian Institute of Technology Indore, Simrol Indore-453552
18.	Rendering the usage of high voltage and high capacity cathode materials for Li-ion batteries feasible via innovative surface engineering DST/SJF/ET/2019/90	Prof. Amartya Mukhopadhyay Deptt. of Metallurgical Engg. & Materials Science, Indian Institute of Technology Bombay, Powai, Mumbai-400076
19.	Bio-inspired, energy efficient and a sustainable strategy for treating landfill leachate using porous 2D and 3D hierarchical carbon structures DST/SJF/ET/2019/101	Prof. S Bose Deptt. of Materials Engineering, Indian Institute of Science, Bengaluru -560012
20.	Advanced Rare Event Simulator for Investigating Dynamics of Complex Functional Materials At Molecular Scale Resolution DST/SJF/ET/2019/102	Prof. Abhijit Chatterjee Deptt. of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai-400076
21.	Bridging The Information Exchange Divide Over the Internet DST/SJF/ET/2019/108	Dr. Rahul Vaze School of Technology and Computer Science, Tata Institute of Fundamental Research (TIFR), 1, Homi Bhabha Road, Colaba, Mumbai -400005
22.	Processing the entities of social media for post-disaster situation analysis DST/SJF/ET/2019/118	Dr. Animesh Mukherjee Deptt. of Computer Science and Engineering, Indian Institute of Technology Kharagpur, Kharagpur -721301
23.	Investigation of Dynamic Process of Non-equilibrium Spontaneous Condensation in a Rapidly Expanding Transonic Superheated Wetted Fluids DST/SJF/ET/2019/122	Dr. Sandip Kumar Saha Department of Mechanical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076
24.	Development of Microfluidic Bottle Cap for Wastewater Treatment and Recovery Systems for Water Reuse in Flooded Area DST/SJF/ET/2019/124	Dr. Arup Kumar Das Deptt. of Mechanical and Industrial Engineering, Indian Institute of Technology Roorkee, Roorkee-247667