

**DETAILS of SPONSORED RESEARCH PROJECTS IN ELECTRONICS ENGINEERING DEPARTMENT**  
(as on May 21, 2024)

**Ongoing Projects**

Sr. No.	Title of the project	Sponsoring agency	Date/ From ___To___	Total Sanctioned Amount	Coordinator / Project Investigator	Co-PI
1.	Secure and Energy efficient Mixed domain Compute in memory-based AI accelerator Chip for Edge applications	Ministry of Electronics and IT, Gol	15/01/2024 5 Years	Rs. 96,00,000	Dr. P. J. Engineer	Dr. A. D. Darji Dr. Z. M. Patel Dr. R. N. Dhavse Dr. A. Acharya
2.	Lead Free Perovskite Indoor/Outdoor Solar Cell Design for Self-Sustainable Cyber Physical System Design: Bangap Engineering and cell Fabrication	i-Hub Divyasampark, IIT Roorkee	26/09/2023 1 Year	Rs. 11,00,000	Dr. Shivendra Yadav	
3.	Design & Fabrication of BIOI based Indoor Photovoltaic	i-Hub Divyasampark, IIT Roorkee	26/09/2023 1 Year	Rs. 11,00,000	Dr. Vivek Garg	Dr. Deepak Joshi Dr. N. Chatterji Dr. A. Acharya
4.	Machine Learning Based Mobile Application for Early Shrimp Dieses Diagnosis in Aquaculture	i-Hub Divyasampark, IIT Roorkee	26/09/2023 1 Year	Rs. 11,00,000	Dr. Kamal Captain	
5.	Design, Fabrication and Characterization of Optimized 2D-material SOT-MTJ for Energy Efficient Embedded Memory (MRAM) / Sensing Applications	i-Hub Divyasampark, IIT Roorkee	26/09/2023 1 Year	Rs. 11,00,000	Dr. Abhishek Acharya	
6.	Development of Speech Based Mobile application For Lung Dieses Detection	i-Hub Divyasampark, IIT Roorkee	26/09/2023 1 Year	Rs. 11,00,000	Dr. Suman Deb	
7.	Onboard Spectral Preprocessing for multispectral image compression using FPGA	ISRO RAC-S, MNIT, Jaipur	16/02/2023 3 Years	Rs. 18,62,920	Dr. A. D. Darji	
8.	Polarization tunable circularly polarized antenna with graphene for Ka band applications	ISRO RAC-S, MNIT, Jaipur	16/02/2023 3 Years	Rs. 71,500	Dr. S. Gupta	
9.	Capacity building for Human Resources Development in Unmanned Aircraft System (UAS) and Drone and related Technology.	MiETY, New Delhi	Sept., 2022 5 Years	Rs. 1,87,00,000	Dr. A. D. Darji	Dr. D. P. Rana Dr. Suresh Dahiya
10.	Design and Development of MEMS-Based portable platform with ionselective Self-Assembled Monolayer SAMs for the detection of toxic Heavy Metal Ions HMLs in ground water	Department of Science and Technology, New Delhi	24/03/2022 3 Years	Rs. 34,27,402	Dr. A. D. Darji	Dr. Dinesh Rotake
11.	CapsNetwork – International Network for Capsule Imaging in Endoscopy	Research Council of Norway (RCN), Norway	01/06/2021 6 Years	Rs. 61,00,000	Dr. K. P. Upla	

<b>12.</b>	Fractal Metamaterials and its application to Wearable Antennas	Department of Science & Technology, Technology Bhavan, New Delhi	20/02/2018 3 Years	Rs. 22,54,920	Dr. Kirti Inamdar	Dr. U. D. Dalal (Mentor)
<b>Total Rs.</b>				<b>Rs.</b> <b>4,75,16,742</b>		

**Completed Projects:**

Sr. No.	Title of the project	Sponsoring agency	Date/ From ___To___	Total Sanctioned Amount	Coordinator / Project Investigator	Co-PI
1.	Deep Learning Based Signal Classification for Position Accuracy of NavIC/GPS”.	Department of Science & Technology, Technology Bhavan, New Delhi	30/09/21 to 30/09/23	Rs. 24,80,220	Dr. Darshna Jagiwala	Dr. S. N. Shah (Mentor)
2.	Design and Development of Co-Planar Waveguide based Wearable Bio-Sensor for Medical Application	Ministry Of Science and Technology Department of Bio Technology	02/03/20 to 01/03/22	Rs. 17,57,440	Dr. P. N. Patel	Dr. J. N. Sarvaiya
3.	Visvesvarya Project – Young Faculty Research Fellowship	Digital India Corporation (formerly Media Lab Asia), Govt. of India	1/2/18 to 30/09/22	Rs. 15,84,200	Dr. P. N. Patel	-
4.	Study & Implementation of GANS for Image Super-resolution: Application to Images captured using CCTV	Deity, Ministry of Communication and Information Technology, New Delhi	10/08/18 to 09/08/21	Rs. 23,03,180	Dr. K. P. Upla	-
5.	SIRMI – Strengthening IRNSS receiver by mitigation of Interference	ISRO, Bengaluru	13/09/17 to 31/03/21	Rs. 31,21,000	Dr. U. D. Dalal	Dr. S. N. Shah
6.	Study, Design and Simulation of Ionospheric Delay Effects Based On Ionospheric Models & Their Correction Techniques Using Software Define Radio	SAC, ISRO, Ahmedabad	23/01/17 to 31/03/20	Rs. 18,90,000	Dr. S. N. Shah	-
7.	Special Manpower Development Programme for chips to System Design (SMDP-C2SD)	DEIT, MCIT, Gol, New Delhi	01/02/15 to 30/11/21	Rs. 88,62,530	Dr. A. D. Darji	Dr. P. J. Engineer
8.	IRNSS Navigation Receiver Field Trail and Data Collection	Space Application Center, Ahmedabad	01/03/15 to 31/03/17	---	Dr. U. D. Dalal	-
9.	FPGA Based Adaptive Filter Algorithm Implementation for external noise cancellation	DAE, BRNS, Gol, Mumbai	27/10/15 to 30/07/18	Rs. 24,87,750	Dr. A. D. Darji	Dr. J. N. Sarvaiya

10.	Fabrication & Characterization of Conventional & Quantum Dots Floating GATE MOSCAP Structure for Thin Tunnel Oxides	INUP, IIT Bombay	1/10/13 to 31/03/14	---	Dr. R. M. Patrikar	Dr. V. Mishra Dr. R. N. Dhavse
11.	Fabrication of Fiber Granting	INUP, IIT Bombay	01/01/13 to 30/06/13	---	Dr. V. Mishra	-
12.	Characterization of Porous Silicon Structure	INUP, IIT Bombay	01/01/12 to 30/06/12	---	Dr. V. Mishra	Dr. P. N. Patel Dr. A. K. Panchal
13.	Spectrum Security in Cognitive Radio.net	University of Pune, BCUD	01/01/14 to 31/12/14	---	Dr. V. Mishra	
14.	Development of Intelligent optical bio-chemical sensor using optical fiber gratings	Department of Science and Technology, New Delhi	01/10/12 to 31/03/16	Rs. 27,60,000	Dr. V. Mishra	
15.	Laboratory Development for Wireless Communication	Agilent Technologies	28/03/11 to 31/03/16	16 lacs in terms of System Vue Software and VSA	Dr. U. D. Dalal	
16.	Fabrication and Characterization of Porous Silicon and its Application as an Optical Biosensor	Defence Research & Development Organization, New Delhi	15/03/11 to 05/05/15	Rs. 28,50,000	Dr. V. Mishra	Dr. P. N. Patel Dr. J. N. Sarvaiya
17.	Performance Appraisal of A FGMOS Transistor by Using Quantum Dots Floating Gate in 45 nm Regime	Department of Science and Technology, New Delhi	21-11-11 to 25-06-14	Rs. 16,43,117	Dr. V. Mishra	Dr. R. N. Dhavse
18.	Special Manpower Development Project for VLSI Design and Related Software (SMDP-II)	DIT, MCIT, GoI, New Delhi	08-11-05 to 31-05-13	Rs. 45,47,950	Dr. A. D. Darji	Dr. Z. M. Patel
<b>Total Rs.</b>					<b>Rs. 3,62,87,387</b>	