



**SRI SIVASUBRAMANIYA NADAR COLLEGE OF
ENGINEERING**

(An Autonomous Institution)
Kalavakkam – 603 110

SELF STUDY REPORT

3.2.1 Research funding received by the institution and its faculties through Government and non-government sources such as industry, corporate houses, international bodies for research project, endowment research chairs during the last five years

Submitted to

The National Assessment and Accreditation Council

February 2024

3.2.1 Research funding received by the institution and its faculties through Government and non-government sources such as industry, corporate houses, international bodies for research project, endowment research chairs during the last five Years

Sl. No.	Name of the PI/ Co-PI/Name of the person holding the Chair	Title of the research project, endowments, Research Chairs	Name of the funding agency	Duration	Year of award or sanction	Amount in INR. (in Lakh)
1	Dr. Kamaraj V (PI) Dr. Rengaraj R (Co-PI) Dr. Prahlad Vadakkepat (Co-PI) (NUS, Singapore) Dr. Rajesh Chandrasekhara Panicker (Co-PI) (NUS, Singapore)	Artificial Intelligence Techniques to Design and Development of Power Quality Monitoring System	SPARC	2 Years	2023	50.54
2	Dr.R.Jayaparvathy (PI) Dr.S.Pravin Kumar (Co-PI)	Human Reliability Assessment and in-situ health monitoring for manned submersible crew	Ministry of Earth sciences	2 Years	2023	46.18
3	Dr.C.Vaithilingam, VIT Chennai (PI) Dr.R.Deepalaxmi (CO- PI)	Design and Development of Replicable and Scalable Cyper Physical Micro Grid System	DST, International Bilateral Co-operation Division (India-Serbia, Bilateral Scientific and Technological Cooperation)	3 Years	2023	12.15
4	Dr Mrunal Deshpande (PI) Dr Govindaraj R, SSNRC (Co-PI)	Development of black phase Formamidinium lead triiodide-based hybrid perovskite light absorber with improve thermal stability for solar cell applications	UGC DAE CSR	1 Year	2023	0.45
5	Dr. B. Bhararathi (PI)	Real time multi dialect automatic speect	Tamil Virtual University	1 Year	2023	13.77
6	Dr Shahina A (PI) Dr. T T Mirnalinee (Co-PI) Dr. Nayeemulla Khan (Co-PI) Dr. Devaprasad Markandeyan (Co-PI)	Dhi-Vach: A Brain-Computer Interface System Converting thoughts to Speech for Speech-Impaired Patients with neurodegenerative Diseases	Science & Engineering Research Board (SERB)	3 Years	2023	19.67
7	Dr.R.Jayaparvathy (PI) Dr.S.Pravin Kumar (Co-PI)	Human Reliability Assessment and in-situ health monitoring for manned submersible crew	Ministry of Earth Sciences - DOM	2 Years	2023	46.36
8	Dr. S. Pravin Kumar (PI) Dr. A. Kavitha (Co-PI) Dr. S. Saranya (Co-PI) Dr.S.Kanagaraj (IIT-G) (Co-PI) Dr. G. Sudhir (SRMC) (Co-PI)	A personalized visual guidance system for musculoskeletal therapeutic interventions	SERB- CRG	3 Years	2023	27.81
9	Dr. S. R. Koteswara Rao (PI) Dr. A. K. Lakshminarayanan (Co-PI)	Wire arc additive manufacturing of Inconel718 to Stainless steel functionally graded materials using dual filler TIG Welding	DRDO	3 Years	2023	24.20

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10	Dr.Satheesh Kumar Gopal (PI) Dr. Vijayalakshmi P (Co-PI) Dr.Dhanalakshmi M (Co-PI) Dr.Rajini Kumar Palaniyappan (TPESU) (Co-PI)	A powered EMG-based embedded system controlled transfemoral prosthesis	DST-SERB	3 Years	2023	34.82
11	Dr.M.Senthil Pandian (PI)	Development of large size and high quality Piperazinederivative single crystal: Unidirectional RSR and ISR Methods	SERB-CRG	3 Years	2023	19.98
12	Dr.K.Aravinth (PI)	Growth of salt-inclusion chalcogenides and different-composition chalcogenides single crystals and Raman spectroscopic studies on these crystals	SERB	3 Years	2023	33.00
13	Dr.M.Srinivasan (PI)	Development of High-Quality Novel Half Heusler Single Crystal (TaFeSb) for Waste Energy Recovery: Theoretical and Experimental Approach	UGC-DAE-CSR	3 Years	2023	1.35
14	Dr.M.Srinivasan (PI)	Synthesis and Characterizations of Novel Heusler Alloys for Thermoelectric Applications	GIMRT,Japan	1 Year	2023	2.80
15	Dr.M.Srinivasan (PI)	In-Situ Observations of Silicon Based Crystalline Materials with Various Dopants for PV Applications	GIMRT,Japan	1 Year	2023	2.80
16	Dr.M.Srinivasan (PI)	Development and Growth of Industry Scale DS and CCz Silicon Ingots for PV Applications	DST-MOST	3 Years	2023	11.91
17	Dr.P.Karuppusamy (PI)	Growth Of High Quality Alkali Metal halide Perovsite Single crystals for High Energy Radiation Detector Applicatons	UCG-DAE	3 Years	2023	1.30
18	Dr. K. Usha (PI)	Experimental Analysis And Optimization of Electric Field Distribution Around Polymeric Insulators In Extra High Voltage Transmission Lines	DST-SERB	3 Years	2022	29.74
19	Dr. R. Seyezhai (PI) Dr. D. Umarani (Co-PI)	Eco-Friendly Solar Photovoltaic Pole for Multi-utility	ANIHWS (AU-NLCIL Innovation Hub for Energy, Environment & Sustainability – ‘ANIHEES, Chennai)	1 Year	2022	
20	Dr.P.Vijayalakshmi (PI) Dr.T.Nagarajan, SNU (Co-PI)	Speech Assistive technologies	MeiTY	3 Years	2022	87.62
21	Dr.T.Nagarajan, SNU Chennai (PI) Dr.P.Vijayalakshmi (Co-PI)	Prosody Modelling	MeiTY	3 Years	2022	99.00

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22	Dr. D. Thenmozhi (PI)	BARF - Blind Abled Reading Frame	DST – TDP scheme	3 Years	2022	24.00
23	Dr. ValliDevi (PI) Dr. T.Thiruvankadam (Co-PI) Dr. Hariharanath K (Co-PI)	Creating Seller Data warehouse	Whitechilly Trading and Services Pvt. Ltd	6 Months	2022	1.60
24	Dr. J. Suresh (PI) Dr.D.Venkatavara Prasad (Co-PI)	Designing a lightweight Consensus Mechanism in Blockchain for IoT based Asset Management	AICTE – RPS Scheme	3 Years	2022	9.59
25	Dr. J Vijay (PI) Dr. K. Nirmala (Co-PI)	An Integrated Framework to aid Non-Contact Measurement of vital parameters for mass infection Screening	AICTE - RPS	3 Years	2022	4.13
26	Dr. Selvaraj Palanisamy, TNVASU, Chennai (PI) Prof. Sanjay Kumar Singh, IIT, BHU, Varanasi (Co-PI) Dr. Sameer Shrivastava, ICAR-IVRI, Izattnagar (Co-PI) Dr. Pandiyarasan Veluswamy, IIIT, Design & Manufacturing, Chennai (Co-PI) Dr. A. Kavitha (Co-PI)	Artificial Intelligence & IoT based Smart Vet Ecosystem for Animal Health, Patient Care & Precision Livestock Farming	ICAR NASF	3 Years	2022	215.39
27	Dr. N. Lakshmi Narasimhan (PI)	Design and Development of a Thermal Chamber	Srushty Global solution Pvt. Ltd.	2 Months	2022	1.50
28	Dr. S. Rajkumar (PI)	Upgradation of Municipal Solid Wastes into Commercial Grade Fuel using Co-Liquefaction and study of its Performance and Emission characteristics on Dual Fuel Compression Ignition Engine	AICTE	3 Years	2022	14.54
29	Dr. S. Suresh Kumar (PI) Dr. S. R. Koteswara Rao (Co-PI) Dr. Ajay Krishnan, DMRL Lab (Co-PI) Dr. Atul Kumar, Sc 'F' DMRL (Co-PI)	Understanding the influence of corrosion on the shock response of DMR 249A steel plates and welded joints	Naval Research Board	3 Years	2022	42.05
30	Dr. Srinivas Gumparthi (PI) Dr.K.Sampath Kumar (Co-PI) Dr.T.Girija (Co- Project Director)	A Project on Identifying Social Entrepreneurial Opportunities for Women in New Area of Urbanisation	Indian Council of Social Science Research (ICSSR)	1 Year	2022	4.00
31	Dr. R. Sundareswaran (PI)	Valnability parameter graphs and their application in biomedical engineering	Mount carmel college	1 Year	2022	1.20
32	Dr. R. Sundareswaran (PI)	Analyzing diabetic neoropathy -A graph theoretic approach	TNSCST	1 Year	2022	0.08

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33	Dr.M.Srinivasan (PI)	Computational and Experimental Investigations of Novel Heusler Thermoelectric Materials for Waste Heat Recovery	GIMRT, Japan	1 Year	2022	2.80
34	Dr.Nafis Ahmed (PI)	Investigations on Ag/Au nanoparticles decorated Au assisted PECVD grown Si nanowires for highly sensitive SERS substrate	UGC-DAE-CSR	3 Years	2022	1.35
35	Dr. Tanusree Sengupta (PI)	Characterization of Novel Mutants of Human Protein Z- dependent Protease Inhibitor(ZPI): "Potential Therapeutics for Hemophilia"	DST-SERB	3 Years	2022	60.46
36	Dr.M.Gulam Nabi Alsath (PI) Dr.S.Radha (Co-PI)	Optimum Design of C and X Band Reflectarray Antennas	Big Cat Wireless	6 Months	2021	200.00
37	Dr. Malathi Kanagasabai (PI) (CEG, Guindy) Dr.Gulam Nabi Alsath (Co-PI) Dr.Y.Ramana Rao (Co-PI) (CEG, Guindy)	Design, Development and Experimental Evaluation of Highly Integrated Multi-Standard Antennas for MIMO Implementation in Automobiles as a Part of Intelligent Transport System	DST	2 Years	2021	20.88
38	Dr.K.T.Selvan (PI)	Design of metasurface based shared aperture phased array antenna operating in S and X bands	LRDE, Ministry of Defence, DRDO	18 Months	2021	9.71
39	Dr.Chitra Babu (PI) Dr. K. Vallidevi (Co-PI)	Automated Tool for the Extraction of Custom Metrics from Azure DevOps and Generation of Reports.	Caterpillar India Pvt. Ltd, Chennai, India	6 Months	2021	1.50
40	Dr.Chitra Babu (PI) Mrs S. Rajalakshmi (Co-PI) Mrs. S. Angel (Co-PI)	Scalable Mobile Application for performing Full Text Search(FTS) in SQLite Database	Caterpillar India Pvt. Ltd, Chennai, India	7 Months	2021	1.87
41	Dr. S. Arun Karthick (PI) Dr. Sachin (Co-PI) Dr. S. Pravin Kumar (Co-PI)	Design and development of 16 channel functional Near Infrared Spectroscopy system for measuring hemodynamics in Brain Prefrontal Cortex	DST-BDTD	2 Years	2021	25.34
42	Dr. J. Vijay (Co-PI)	Development of Multispectral (Thermal/Visible) Imaging System for Fever Screening in Crowded Places for Detection of Infectious Diseases	SERB	2 Years	2021	11.61
43	Dr. A. Kavitha (PI) Dr. S. Pravin Kumar (Co-PI)	Augmented Reality Based Surgical Support System	SERB-POWER	3 Years	2021	25.94

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44	Dr. R. Subashini (PI) Dr.N.P. Rajesh (PI)	Dose Assessment of Partial Body Exposure using Premature Chromosome Condensation Assay for Mass Casualty Accidents	IGCAR	2 Years	2021	24.34
45	Dr. B. Geethanjali (PI) Dr. V. Mahesh (Co-PI) Dr. Bikesh Kumar Singh ,NIT,Raipur (Co-PI)	Enhancing Brain Cognition through Neuro Feedback model in Indian Children with Learning Disability	SERB- CRG	3 Years	2021	44.03
46	Dr.M.Srinivasan (PI)	Development of mc-Si growth process by Modeling, Experiments and ML	DST-JSPS	2 Years	2021	5.40
47	Dr.R.JayaParvathy (PI)	Assesment and Monitoring of Invasive Alien Plant species in India and formulation of strategies for the management of Key Invasive Alien Plant Species in different regions of the country	Ministry of Environment Frest & Climate Change , ICFRE	5 Years	2020	31.15
48	Dr.S.Radha (PI) Dr.B.S.Sreeja (Co-PI) Dr.K.Muthumeenakshi (Co-PI)	High Performance Integrated Two-stage Electrochemical Technology for Recovery of Water from Electroplaing Effluent with Realtime Monitoring and Control System	DST - TMD	3 Years	2020	34.46
49	Dr. R. Srinivasan (PI) Dr. Premanand V. Chandramani (Co-PI) Dr.K. K. Nagarajan (Co-PI)	Radiation Resilient RF Receiver Front End Components Through SiGe BiCMOS: Design and Validation	Department of Atomic Energy, Board of Research in Nuclear Sciences	3 Years	2020	32.50
50	Dr. B. Ambedkar (PI)	Bench-Scale Design and Development: Investigation of High-Frequency, High-Intensity Ultrasonics for Carbon-Rich Solvent Regeneration in Solvent-Based Post-Combustion CO2 Capture Process (PCCC) for Reducing CO2 Capture Energy Demand	DST (Mission Innovation Challenge)	3 Years	2020	208.00
51	Dr.P.Senthil Kumar (PI) Dr.B.S.Sreeja (Co-PI)	Electrochemical Sensing of Sulfamethoxzole Antibiotic in Water at GO/ZnO Nanocomposites - Modified Electrodes, Optimization and Real Time Measurement	Department of Science and Technology Technology Mission Division	3 Years	2020	63.29
52	Dr. A. S. Ramana (PI)	Experimental analysis of an Energy Recovery Ventilator (ERV) combined with UVGI and air filtration system for enhancing IAQ (Indoor Air Quality) in non- ventilated spaces	ISHRAE Student Research Project Grant	1 Year	2020	0.50

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53	Dr. P. Rajesh (PI)	Fabrication of homogeneous plastic scintillators by thermal polymerization reaction for fast neutron detection applications	SERB	3 Years	2020	43.00
54	Dr. P. Rajesh (PI)	Growth of CdMnTe single crystals by Bridgman Technique for application in Gamma ray Detectors	BRNS	3 Years	2020	33.00
55	Dr.G.Anandha babu (PI)	Development of high - Curie temperature piezoceramics for aviation applications	DRDO	3 Years	2020	12.30
56	Dr.Balaji Bhargav (PI)	Silver nanowires and MoS2 microsphere based filtration system for efficient bacterial removal from potable water	SERB	3 Years	2020	23.67
57	Dr.M.Srinivasan (PI)	Renewable Energy Dynamics (Silicon Crystal Growth)	RIAM, Japan	1 Year	2020	1.12
58	Dr.R.Govindaraj (PI)	Synthesis of lead-free silver bismuth iodide light absorbers for mesoscopic solar cells	BRNS	3 Years	2020	44.60
59	Dr. N.P. Rajesh (PI) Dr.ChitraBabu (Co-PI)	Development of GPS based Comprehensive Mobile App for Water Quality Assessment Monitoring for promoting Water Security, Farm Security, Urban Development and Civic Improvement	DST – SSTP scheme	2 Years	2019	47.57
60	Dr.L.Suganthi BME (Mentor)	Noninvasive Measurement of Blood Glucose and Hemoglobin	AICTE	2 Years	2019	10.00
61	Dr.V.Kamaraj (PI) Dr.R.Seyezhai (Co-PI)	Modernization of Renewable Energy Conversion Laboratory	AICTE	2 Years	2019	11.00
62	Dr.V.Kamaraj (PI) Dr.M.Balaji (Co-PI) V S Nagaraj (Co-PI)	Design and Development of Energy Efficient Permanent Magnet Assisted Reluctance Motor Drives for Pump Application	SERB	3 Years	2019	21.18
63	Dr.S.Radha (PI) Dr.B.S.Sreeja (Co-PI)	Development of ultrasonic sensors for monitoring heavy mineral accumulation in the littoral zone of Mahabalipuram coast	TNSCST	2 Years	2019	4.80
64	Dr.B.S.Sreeja (PI) Dr.S.Radha (Co-PI)	Developement of low cost wearable semi automatic insulin delivery smart system	DST DBT	3 Years	2019	35.04

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65	Dr.N.Venkateswaran (PI) Dr.K.Madheswari (Co-PI)	Development of Fusion algorithms for Multispectral and PAN images in cartographic applications	ISRO	2 Years	2019	14.29
66	Dr.S.Radha (PI) Dr.R.Hemalatha (Co-PI)	Development of an efficient IoT enabled plant disease pest detection system	DST SSTP	3 Years	2019	62.26
67	Dr.R.Amutha (PI) Dr.R.Rajavel (Co-PI)	Design of game based communication platform for children with cerebral palsy	DST SSTP	3 Years	2019	17.01
68	Dr.V.S.Felix Enigo (PI) Dr.B.Prabavathy (Co PI) Dr.K.Nirmala (Co PI) & Dr.Sachin Gaurishankar Sarate (Co PI)	Artificial Intelligence (AI) based 'Screening Tool' to predict future Osteoporotic Hip Fracture Risk in Post-menopausal women and Elderly population using X-ray Image	BIRAC-BIG Scheme	18 Months	2019	50.00
69	Dr. B. Bharathi (PI) Hema A Murthy (IIT, Madras) (Co-PI)	Development of anti-spoofing method for Automatic Speaker Verification System	DST TARE scheme	3 Years	2019	18.30 lakhs, (IITM-8.25 lakhs, SSN-8.25 lakhs, Research grant for PI-1.80 lakhs)
70	Dr.D.Thenmozhi (PI)	An Automated Tool for Early Detection of Depression from Social Media Text for Mental Health using Deep Learning Approach to Assist Student Counsellors and Psychiatrists of Hospitals in India	DST – EEQ scheme	3 Years	2019	28.14
71	Dr. Chitra Babu (PI) Dr. B. Prabavathy (Co-PI)	An efficient algorithm for fast processing of message quadruples	Caterpillar India Pvt. Ltd, Chennai, India	6 Months	2019	1.87
72	Dr. V.S. Felix Enigo	Dynamic Reporting Framework	Caterpillar India Pvt. Ltd, Chennai, India	6 Months	2019	1.33
73	Dr. T.T. Mirnalinee (PI) Dr. J.Bhuvana (Co-PI)	Generating machine productivity using video analytics	Caterpillar India Pvt. Ltd, Chennai, India	12 weeks	2019	1.05
74	Dr. S. Chithra (PI) Dr. N. Bhalaji (Co-PI) Dr. S. Karthika (Co-PI)	Assistive Technology for Parkinson and Alzheimer Disease (PAD) affected people	Tamilnadu State council for Science and Technology	2 Years	2019	4.10
75	Dr.P.Senthil Kumar (PI)	Development of Sustainable Magnetic Carbon Based Nanocomposite Films from Agro Waste and Evaluate its Application in Removal of Antibiotics from Water	The Institution of Engineers (India)	1 Year	2019	0.70
76	Dr. V. E. Annamalai (PI) Dr. K. Rajkumar (Co-PI)	Value addition of calcined bauxite for possible use as abrasives in waterjet cutting applications	Dept of Mining	2 Years	2019	27.47

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77	Dr. L. Poovazhagan (PI)	Hybrid casting approach for manufacturing magnesium nanocomposites	DST-SERB	3 Years	2019	24.94
78	Dr.G.Anandha babu (PI)	Development of Bismuth-based complex perovskites piezoelectric single crystals for strategic applications	SERB	3 Years	2019	28.78
79	Dr. M.Senthil Pandian (PI)	Device quality and bulk size high performance thermoelectric silver bismuth sulfide (AgBiS ₂) and silver bismuth selenide (AgBiSe ₂) single crystals for thermoelectric (TE) applications	SERB-EMEQ	3 Years	2019	40.70
80	Dr Mrunal Deshpande (PI)	A Robustly Optimal Energy Management System for High PVpenetrated Smart Cities with A Case Study: Implementation of PVs for Smart Street Light Poles”	UNSW Sydney	1 Year	2018	5.85
81	Dr. P.Saravanan (PI)	Design and Development of Axial Flux Switched Reluctance Motor based Battery operated Vehicle	DST-SERB	3 Years	2018	55.00
82	Dr.N.Gulam Nabi Alsath (PI) Dr.S.Ramprabhu (Co-PI) Dr.S.Kirubaveni (Co-PI)	Theoretical and Experimental Analysis on the design of Compound Reconfigurable Reflectarray Antenna with an Integrated Electronic Control System	DST SERB CRG	3 Years	2018	34.04
83	Dr. R. Kanchana (PI) Dr.S.Selvakumar (PI: IIIT, Una, HP)	Nagarik Rog Pratirakshak: Unified Smart Immunization Coverage Monitoring and Analysis (UniSICMA)	BIRAC scheme	18 Months	2018	106 lakhs - (IIITU - 55.99 lakh, SSNCE- 50.01lakh)
84	Dr. A. Kavitha (PI) Dr. S. Bagyaraj (Co-PI) Ms. R. Nithya (Co-PI)	Design and development of biosignal controlled hand exoskeleton	LSRB	2 Years	2018	23.70
85	Dr. S.R. Koteswara Rao (PI) Dr. R. Damodaram (Co-PI)	Optimization of Ballistic performance of AA7075 thick plate friction stir welds	DRDO - ARMREB	3 Years	2018	18.78
86	Dr.G.Anandha babu (PI)	Development of high-performance ternary piezoelectric ceramics for transducer applications	CSIR	3 Years	2018	24.47
87	Dr. Tanusree Sengupta (PI)	Understanding the Sturcture Function Relationship of the Natural Anticoagulant ZPI, a Member of Serpin Superfamily	DST-SERB	3 Years	2018	34.63