

**SSN College of Engineering**  
**Department of Electronics and Communication Engineering**  
**Externally Funded Projects**  
**(Completed)**

S.No	Project Title	Principal Investigators / Co Investigators	Funding Agency	Amount in Rs. (Lakhs)		Duration
				Sanctioned	Utilized	
1	Development of Text-to-speech synthesis for Indian languages	Dr.T.Nagarajan (PI) (Dept. of IT) Dr.P.Vijayalakshmi (Co-PI) Dr.A.Shanina (Co-PI) (Dept. of IT)	MCIT	77	77	2012 - 2017
2	Hardware implementation of SPWM control for Standalone Hybrid Renewable Energy using DSP processor	Dr.B.S.Sreeja (PI) Dr.S.Radha (Co-PI)	Linton University College, Malaysia	4.3888	4.3134	2014 - 2016
3	Study of soft errors in 65nm gate length CMOS SRAM and 30nm gate length FINFET, Tunnel FET and Junction-less FET based SRAM using TCAD Simulation	Dr.R.Srinivasan (PI) (Dept. of IT) Mr.K.K.Nagarajan (Co-PI)	DRDO	30.47	29.47	2012 - 2015
4	Intel Embedded Curriculum Initiative in India	Dr.S.Radha (PI) Dr.Premanand V.Chandramani (PI)	INTEL	6.5	6.5	2011 - 2014
5	An Assessment and Intelligibility modification system for Dysarthric speakers	Dr.P.Vijayalakshmi (PI) Dr.T.Nagarajan (Co-PI) (Dept of IT)	AICTE	9	9	2010 - 2013
6	Design and Hardware Implementation of an Adaptive Filter to Improve the Signal to Noise Ratio due to Wind Driven Ambient Noise in Shallow Water	Dr.S.Radha (PI) Dr.S.Sakthivel Murugan (Co-PI)	NIOT	20.64	20.11	2010 - 2012
7	Design and Development of Wireless Sensor Node	Dr.S.Radha (PI)	IGCAR	28.58	28.17	2008 - 2010
8	FPGA Design for Pulsed Signal Processing	Dr.V.S.Kanchana Bhaskaran (PI)	IGCAR	6	6	2008 - 2009
9	Reconfigurable Wavelength selective filter based on one dimensional Photonic Band Gap structures in silicon for ROADM applications	Dr.V.Nagarajan (PI) Dr.Prita Nair (PI)	AICTE	15	15	2007 - 2009

**SSN College of Engineering**  
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**(Ongoing)**

S.No	Project Title	Principal Investigators / Co Investigators	Funding Agency	Amount in Rs. (Lakhs)		Duration
				Sanctioned	Utilized	
1	Establishment of Microwave and Antenna Testing Laboratory	Dr.S.Radha (PI) Dr.M.Gulam Nabi Alsath (Co-PI) Dr.S.Ramprabhu (Co-PI)	AICTE	8.75	In progress	2017 - 2019
2	Implementation of Magnetic Induction (MI) based Wireless Underground Sensor Network (WUSN) System for Smart Irrigation	Dr.S.Sakthivel Murugan (PI) Dr.K.Muthumeenakshi (Co-PI)	TNSCST	7.3520	In progress	2017 - 2019
3	Omni-directional to Directional Pattern Switching Patch Antenna for WSN at Reactor Container Building	Dr.B.S.Sreeja (PI) Dr.S.Radha (Co-PI)	BRNS	25	In progress	2017 -2020
5	The feasibility of bandwidth enhancement of reflectarray antenna at Ku band for conventional and shaped beams	Dr.K.T.Selvan (PI) Dr.A.Patnaik (IIT Roorke) Dr.R.Kalidoss (CI)	ISRO	12.8100	In progress	2016 - 2018
6	Design and development of a computer controlled system for the production of textile antennas and sensors	Dr.S.Esther Florence (PI) Mr.Vimal Sam Singh (Co-PI)(Dept. Of Mechanical)	DST SERB Extramural	30.9622	In progress	2016 - 2019
7	Speech-Input Speech-Output Communication Aid (SISOCA) for Speakers with Cerebral Palsy	Dr.P.Vijayalakshmi Dr.T.Nagarajan	DST - TIDE	22.7800	In progress	2016 - 2018
8	HMM-based Text-to-speech synthesis system for Malaysian Tamil	Dr. T. Nagarajan Dr. P. Vijayalakshmi	Murasu systems Sdn Bhd, Malaysia	4	In progress	2016 - 2017 (6 months)
9	Speech enabled interactive enquiry system in Tamil	Dr.T.Nagarajan (PI) (Dept. of IT) Dr.P.Vijayalakshmi (Co - PI) Dr.B.Bharathi (Co-PI) (Dept. of CSE) Ms.Sasirekha (Co-PI) (Dept. of IT)	Tamil Virtual Academy	9.52	In progress	2016 - 2017
10	Fund for Improvement of S&T Infrastructure	Dr.S.Salivahanan (PI) Dr.S.Radha (PI)	DST - FIST	50	23.5	2014 - 2019

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1	Design and Development of Polymer Composite based reflect array for space applications	Dr.M.Gulam Nabi Alsath (PI) Ms.S.Esther Florence (Co-PI)	6.5	6.45	2013 - 2015
2	Development of Underwater Acoustic Communication Research Lab	Dr.S.Sakthivel Murugan (PI) Mr.I.Nelson (Co-PI)	7	6.99469	2013 - 2014
3	Development of Super-Resolution Algorithms	Mr.W.Jino Hans (PI)	1.25	1.25	2012 - 2013
4	Development of Successive Approximation Analog to Digital Converter (SAR ADC) for Ultra Wide Band (UWB)	Dr.Premanand V. Chandramani (PI) Mr.P.Saravanan (Co-PI)	8.8	7.29	2011 - 2013
5	Anatomical Vibration Sensor speech Corpus for Speech Applications in Noisy environments	Dr. A. Shahina (PI) Dr. T. Nagarajan (Co-PI) Dr. P. Vijayalakshmi (Co-PI)	1.23	1.23	2011 - 2012
6	Design of lab model of improved digital speech processor for cochlear implant	Dr. P. Vijayalakshmi (PI) Dr. T. Nagarajan (Co-PI) Dr. A. Shahina (Co-PI)	0.85	0.85	2010 - 2012
7	Reconfigurable Optical Components based on Photonic Band-Gap materials	Dr.V.Nagarajan & Dr.Prita Nair	20	20	2006 - 2010

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#### Internally Funded Projects (Ongoing)

S.No	Project Title	Principal Investigators / Co Investigators	Amount in Rs. (Lakhs)		Duration
			Sanctioned	Utilized	
1	Electromagnetic infrared energy harvester on flexible substrate	Dr.B.S.Sreeja Dr.S.Radha	2.13		2016 - 2018
2	Facility enhancement of underwater acoustic research laboratory	Dr.S.Sakthivel Murugan	3.4		2016 - 2017
3	Battery operated autonomous vehicle with IoT	Dr. M. Anbuselvi (ECE) Mr. P. Saravanan (EEE)	2.8		2016 - 2018
4	Design and fabrication of miniaturized FSS for shielding WLAN signals	Mr.S.Ramprabhu (PI) Dr.S.Esther Florence (Co-PI)	2.9	0.88	2015 - 2017
5	Real time performance analysis using RF wireless signals for cognitive radio applications	Dr.K.Muthumeenakshi (PI) Dr.S.Radha (Co-PI)	2.75		2015 - 2017
6	Fabrication and Characterization of Bi-stable MEMS Switch	Dr.B.S.Sreeja (PI) Dr.S.Radha (Co-PI)	5.5		2014 - 2016
7	Design of MEMS based vibration energy harvester	Ms.S.Kirubaveni (PI) Dr.S.Radha (Co-PI) Dr.B.S.Sreeja (Co-PI)	1.5	0.14	2014 - 2016
8	Data Collection and Characterization of Under Water Ambient Noise at Bay of Bengal (Pondicherry / Cuddalore or Cochin)	Dr.S.Sakthivel Murugan (PI)	2.5	0.95	2014 - 2015
9	Energy Efficient Image Communication over Wireless Sensor Network (Energy Group)	Dr.R.Amutha (PI)	0.35		2014 - 2015

S.No	Project Title	Principal Investigators / Co Investigators	Amount in Rs. (Lakhs)		Duration
			Sanctioned	Utilized	
10	Ergonomics through Image Processing	Mr.K.K.Nagarajan (PI) Mr.R.Srinivasan (Co-PI) (Dept. of IT)	0.6	0.485	2013 - 2015
11	Energy and Bandwidth efficient pixel processing algorithm for image transmission over Wireless Sensor Networks using compressive sampling	Dr. S. Radha, Dr. A. Jawahar Dr. R. Kishore Ms. R. Hemalatha	7.5	4.5	2012 - 2015

## SSN College of Engineering

### Department of Electronics and Communication Engineering

#### UG Students - Internally Funded Projects (Completed)

S.No	Project Title	Name of the Students	Project Guide	Amount in Rs		Duration	Year
				Sanctioned	Utilized		
1	Effect Of Tin Oxide'S Grain Size on The Efficiency of a Solar Cell Constructed with Polyaniline-Tin Oxide Nanocomposite	Aparna Srinivasan Elakhya Nedumaran Gayathri Gopal	Dr. P. Rajesh Dr. R. Hemalatha	25000		2015-2016	II
2	Keyless to Remote-Less Access of Car Security Systems Using Mobile App.	K. Arvind Chakravarthy V. Krithika	Dr.V. Vaithianathan	10,000		2015-2016	II
3	Way Finding Gloves For Visually Impaired	Jeyavanta Shakthi Poorna	Dr. R. Jayaparvathy	10,000		2015-2016	II
4	Wireless Electronic Notice Board Using GSM	Praveen Narayan V. Shrinidhi Gokulakrishnan	Mr. Suresh R Norman	7,000		2015-2016	II
5	Istand Robot, A Prototype Of Segway (Self Balancing Robot)	Roshan Arvind Sanjana Mallya Supreeta Venkatesan Varsha Srinivasan	Dr. Premanand Chandramani	25,000		2015-2016	II
6	Prototype For Field Monitoring and Automation in Agriculture	R. Suresh Kumar K. Sreeram S. Vinubhagavath	Dr. K. Muthumeenakshi	12,000		2015-2016	III

S.No	Project Title	Name of the Students	Project Guide	Amount in Rs		Duration	Year
				Sanctioned	Utilized		
7	Assistive Device For People Suffering From Dysgraphia and Other Writing Disorders.	Atul Taneja (BME) Harshvardhan Raju Karnik Ram	Dr. R. Jayaparvathy	22,500		2015-2016	III
8	Smart Walking Cane For The Blind	M. Sharada R. Shrivatsan V. Sreenivas Srihaarika Vijjappu	Dr. S. Joseph Gladwin Dr. R. Rajavel	11,000		2015-2016	III
9	Automated Seed Planter	Nandagopal Srinivasan Prithviraj Prabhu S. Sanjana Smruthi N. Vivek Sivaraman	Dr. S. Joseph Gladwin Dr. R. Rajavel	20,000		2015-2016	III
10	GPS Aided Search And Rescue	B. Nitin Srinivas S. Sabarish M. Sunil Kumar	Dr. Esther Florence S	20,000		2015-2016	III
11	Wired And Wireless Data Transfer From A Pen-Drive	P.M. Vishal Kumar	Dr. N.Edna Elizabeth	18,000		2015-2016	III
12	Smart Helmet	C. Sreenithy C. Sneha	Dr. N.Edna Elizabeth	18,000		2015-2016	III
13	E-Akshayapatra	S. Srihari S. Praveen Ramesh Ashwath	Dr. S. Radha	20,000		2015-2016	IV
14	Surveillance Using Ornithopter	P. Abarna Banu K. Karthikeyan T. Keerthi Priya	Dr. K. S. Vishvaksenan	20,000		2015-2016	IV
15	Automatic Skyscraper Window Cleaning System	C. Arun Kumar M.S. Karthik S. Kavya	S. Joseph Gladwin & Dr. R. Rajavel	20000	20000	2014 - 2015	III
16	Development of A Low Cost Programmable Communication	Ramesh Ashwath Shoban Narayan Varshini T.N	Dr.N.Venkateswaran	22,000		2014 - 2015	III

S.No	Project Title	Name of the Students	Project Guide	Amount in Rs		Duration	Year
				Sanctioned	Utilized		
17	Closed Loop Surveillance Quadcopter	G.Harshavarshan Raju R.Karnik Ram S.Harish V.Aditya V.Ashwin G.J.Krishna Divakar	Dr.Prita Nair	30,000		2014 - 2015	II
18	Information Broadcast Through Bluetooth	B.Motthilal I.Jayanathan M.R.Irfan Ahmed	Dr.N.Edna Elizabeth	20,000	20,000	2014 - 2015	IV
19	Energy Harvesting Using PvdF Film	K.Sundaralakshmi S.Swethambari	Mr.Suresh R. Norman	10,000	9,250	2014 - 2015	III
20	Traffic Congestion Prediction Module	Joseph.J.Sankoorikal	Dr.N.Edna Elizabeth	25,000	nil	2014 - 2015	IV
21	Internet Controlled Power Management System	B.Rahul S.Rajeshwer D.Samsunder	Dr.B.S.Sreeja	12,000		2014 - 2015	IV
22	Optimization of Structural Design Of Cantilever	Shshank Murthy Sibi Chakravarthy	Ms.S.Kirubaveni	25,000	25,000	2014 - 2015	IV
23	Design of Servo Humanoid Robot	S.Prakash	Ms.S.Kirubaveni	25,000	25,000	2014 - 2015	IV
24	Automated Parental Drug Infusion System	Sistla Venkata Anish L.R.Vignesh M.Vijayakumar	Dr.R.Jayaparvathy	20,000	20,000	2014 - 2015	IV
25	Table Tennis Playing Robotic System	R.Hariramkumar M.Kamaleshwar L.Kaviarasu	Mr.Suresh.R.Norman	20,000	7,140	2011 - 2012	IV
26	Automatic Lawn Mower Embedded System	Martin.J Murugesh.K Ramprasad.N	Mr.Suresh.R.Norman	20,000	20,000	2011 - 2012	IV



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**PG Students - Internally Funded Projects (Completed)**

S.No	Project Title	Name of the Students	Project Guide	Amount in Rs		Duration	Year
				Sanctioned	Utilized		
1	Electrical Tuning of Piezo-electric Vibration Energy Harvester	M. Ani Melfa Roji	Ms. S. Kirubaveni	22,000		2015-2016	II VLSI
2	Vibration based wide band and Power enhanced Piezo-electric Energy Harvester	M. Sudha	Dr. R. Hemalatha Ms. S. Kirubaveni	24,000		2015-2016	II AE
3	Sewer Gas Detecting Self Powered Wireless Sensor Node Sysystem	J. Vinitha	Dr. B.S. Sreeja Ms. S. Kirubaveni	24,000		2015-2016	II CS
4	Ambulatory Assistive System	S. Vinoth Kumar	Dr. R. Jayaparvathy	26,000		2015-2016	II VLSI
5	Integrated Insulin Infusion System	M. Deepalakshmi	Dr. R. Jayaparvathy	26,000		2015-2016	II VLSI
6	Development of wind speed frequency distribution	N.Archana	Dr.S.Sakthivel Murugan	20,000	16,000	2014 - 2015	II VLSI
7	Development of an energy harvesting microbial fuel cell system	P.Janani	Dr.S.Sakthivel Murugan	25,000	24,260	2014 - 2015	II VLSI
8	A hybrid flexi-mode pricing scheme for smart grid	K.Malarvizhi	Dr.R.Jayaparvathy	30,000	30,000	2014 - 2015	II VLSI
9	Automation of green house and its remote access	S.Raghuvaran	Mr.Suresh.R.Norman	10000, Chellamal Agro Award Rs.25,000	10000, Chellamal Agro Award Rs.25,000	2013 - 2014	II AE
10	MEMS based design of Energy Harvesters for Wireless Sensor Nodes	T.Sivenesan	Dr.B.S.Sreeja	25,000	Not utilized	2013 - 2014	II VLSI

11	Performance measurement and comparison of microstrip bandpass filter topologies for wireless applications	M.Monica N.Priyanka	Mr.S.Karthie	20,000	3,000	2013 - 2014	II CS
12	Design, Analysis and Implementation of Microwave Power Amplifier for Biomedical Devices	S.Dhivya	Dr.B.S.Sreeja	20,000	16,800	2013 - 2014	II CS
13	An extended robotic arm for defense and rescue applications	Harrison Kurunathan. J	Dr.R.Jayaparvathy	25,000	25,000	2013 - 2014	II VLSI

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**UG Students - Internally Funded Projects (Ongoing)**

S.No	Project Title	Name of the Students	Project Guide	Amount in Rs		Duration	Year
				Sanctioned	Utilized		
1	Study on the feasibility of energy generation from piezoelectric plates fitted on the car tyres	N.Bharath S.Brathinda R.Kashyaap	Dr. S. Radha	20000		2016 - 2017	II
2	DroNet	Sai M Anjesh A.S.Shaahan Thevin Arokiaraj	Dr. B. S. Sreeja	18000		2016 - 2017	II
3	Flexible body vitals monitoring patch for atheletes	Akilesh Venkatasubramanian N. Elakhya V. Krithika	Dr. R. Jayaparvathy	18000		2016 - 2017	III
4	Fuel level detector for consumer protection in vehicles	Jayavanta Shakthi Poorna	Dr. R. Jayaparvathy	10000		2016 - 2017	III
5	Implementation of a mobile wireless sensor network using small differential drive robotic nodes	R. Shrivatsan(IV- Year) Nandagopal Srinivasan(IV Year) K. Akash(III-Year)	Dr. A. Jawahar	18000		2016 - 2017	IV & III
6	Smart traffic signals	A. Kishore M. Sindhu L. Barath S. Amirthavarshini	Dr. Esther Florence	25000		2016 - 2017	II
7	Flexible cardiac sensor development	S. Indulakshmi	Dr. Esther Florence	20000		2016 - 2017	III
8	Smart display system using IOT	G. Hemanth Ajay Nair V.M. Kumar	Mr. W. Jino Hans	10000		2016 - 2017	II

S.No	Project Title	Name of the Students	Project Guide	Amount in Rs		Duration	Year
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9	Smart garbage management	S.S. Ramachandran S. Promodram J. Rishi Ganesh	Dr. B. S. Sreeja	25000		2016 - 2017	II
10	Medication intake adherence with real timeactivity recognition on IOT	B. Varshini L. Saranya D. Priyadarshini	Dr. R. Amutha	15000		2016 - 2017	III
11	A startup for a smart workplace	S. Dyaneshwar G. Jaiyashri K. Monica	Dr. K. Muthumeenakshi	15000		2016 - 2017	III
12	Vehicle Speed Controller	Gunupati Sumadhura S. Harini N. Mahalakshmi	Dr. K. Muthumeenakshi	15000		2016 - 2017	II
13	Agricultural soil analysis using image processing	A. Rekha Sowmya Bhatraju S. Srivaishnavi	Dr. N. Venkateswaran	22000		2016 - 2017	III
14	Four quadrant speed control of robotic vehicle using ARM Cortex processor	K. Arun J. Allen Fernando	Dr. M. Anbu Selvi	10000		2016 - 2017	III
15	Emulation of a quantum computer using classical analog electronic circuits	Prithviraj Prabhu(IV-Year) Rishab Venkataraman(IV-Year) Preetha Ganesh (CSE III-Year)	Dr. M. Anbu Selvi	8000		2016 - 2017	IV & III
16	E-Bin	A. Divya Sanchana Nishita Maria Govias	Mr. W. Jino Hans	20000		2016 - 2017	II
17	Robotic floor map	Aadesh Samdaria K. Raeshak	Mr. C. Annadurai	15000		2016 - 2017	II
18	Intelligent and interactive road safety system for young bikers	Nishanth Vimallesh	Dr. M. Gulam Nabi Alsath	25000		2016 - 2017	III
19	Wrap the scrap	R. Poorani G. Pradeep	Dr. S. Joseph Gladwin Dr. R. Rajavel	25000		2016 - 2017	III
20	Smart Seat Belts	C. Akshay Kumar M. Nagulan J. Shaktivelu S. Udaya Ezhil	Dr. K.J. Jegadish Kumar	16000		2016 - 2017	II

# SSN College of Engineering

## Department of Electronics and Communication Engineering

### PG Students - Internally Funded Projects (Ongoing)

S.No	Project Title	Name of the Students	Project Guide	Amount in Rs		Duration	Year
				Sanctioned	Utilized		
1	Design and development of PDMS membrane for bio applications	K.M. Shreemathi (II-Year)	Dr. S. Radha	20000		2016 -2017	II
2	Reduction of screening effect on ZnO nanostructure based nanogenerator with self powered gas sensor	R. Kiruthika (II-Year)	Mrs. S. Kirubaveni Dr.M.Senthil Pandian	20000		2016 -2017	II
3	Wideband piezoelectric vibration energy harvester for array hydrophone	G. Roshini Singh (II-Year)	Ms. S. Kirubaveni Dr.K.Aravinth	18000		2016 -2017	II
4	Design and development of insulation tester	D. Harshita (II-Year)	Dr. S. Sakthivel Murugan	18000		2016 -2017	II
5	Efficient decision support system for agriculture using ARM processor	R. Devi (II-Year)	Dr. R. Hemalatha	20000		2016 -2017	II
6	Reduction of vampire power by smart power socket	B. Dhivya Mullai (II-Year)	Mr. S. Ramprabhu	8000		2016 -2017	II