SRI SIVASUBRAMANIYA NADAR COLLEGE OF ENGINEERING

(An Autonomous Institution)
Kalavakkam – 603 110

ACADEMICS

6.1 Percentage of Academic Departments Engaged in Sustainability Research

Submitted to

The Sustainability Tracking, Assessment & Rating System (STARS)

6.1 Percentage of Academic Departments Engaged in Sustainability Research

- Number of academic departments engaged research –13
  https://www.ssn.edu.in/college-of-engineering/

- Number of academic departments engaged in sustainable research-10
  (Civil/Mechanical/Chemical/EEE/ECE/IT/BME/Chemistry/Physics/CSE)
- list or inventory of the institution's sustainability research by department- files attached
- Description of the process used to identify the institution's sustainability research

At SSN College, the process of identifying sustainability research is systematic and thorough. It begins with defining clear criteria for what qualifies as sustainability research, focusing on environmental, social, and economic aspects, such as climate change, renewable energy, and social equity. Academic departments are surveyed, and faculty members report their ongoing and completed sustainability-related projects, publications, and student theses. In addition, the college collaborates with research centers specializing in sustainability topics, and reviews grant applications to identify funded sustainability research. Once gathered, the data is verified, categorized by sustainability themes, and compiled into a central report. This process helps track and promote SSN College's contributions to sustainability research while ensuring that these efforts are aligned with the institution's broader goals of environmental stewardship and social responsibility

AC09 Research & Scholarship

Name of the Faculty	Department	Research topics
Dr. Satheesh Kumar Gopal	Mechanical Engineering	• Beach cleaning applications for robots • Amphibious robots for cleaning aquatic bodies • Research on robots for Sewage cleaning applications • Chess playing robots for the geriatric community
Dr. R. Vimal Samsingh		• Research on Digital twins for the geriatric community • Sensor development for industries and specific requirements
Dr. A.S. Ramana		• Energy conservation in Thermal Systems • Green Buildings
Dr. N. Lakshmi Narasimhan		• Battery Thermal Management • Electronic Cooling based on PCM • Renewable Energy Storage
Dr. S. Raj Kumar		• Alternate Fuels • Thermal Energy Storage Systems
Dr. S. Vijayan		• Intelligent supply chain management
Dr. D. Ebenezer		• Energy Conversion • Solar systems
Dr. S. A. Srinivasan		• Hydrogen systems • Thermal systems design

Dr.S.Ramana Gopal	Civil Engineering	• Use of Slag aggregate concrete in composite columns. • Use of recycled aggregate concrete in building construction.
Dr.Srinath Rajagopalan		• Use of M-sand residue in fire Brick manufacture
Dr.P.Sangeetha		• Study on mechanical properties of concrete with silicon carbide waste as partial replacement of aggregate.
Dr.R.Vijayalakshmi		• Influence of bagasse ash and coconut shell in scrap steel fiber reinforced concrete. • Utilization of glass as a partial replacement for fine aggregate in geopolymer mortar.
Dr.Sivapriya S.V		• Soil stabilization using copper and steel slag wastes as partial replacement material in a sand compaction column. • Permeability Characteristics of Construction waste as a column material in Expansive Clay.
Dr. S. Arun Karthick	Biomedical Engineering	• Upcycling of thermocol Waste into value added products. • Extraction of chitosan from seafood waste and its application.
Dr. J.Vijay		• Non-Contact measurement of vital parameters
Dr. B. Ambedkar	Chemical Engineering	• CO_2 capture process
Dr. R. Anantharaj		• Green separation technology

Dr B Sakthi Abirami	Electronics & Communication Engineering	• Experiential Learning Innovation for Sustainability
Dr. M. Anbuselvi		• Green Technology- Lifetime Prediction of EV batteries
Dr.Edna Elizabeth.N		• Building Energy Management System.
Dr. P.Kaythry		• Letting Villages Go smart in Indian Scenario • Engineering Education and Indian Students Perception on Environment and sustainable Development.
Dr. M. Siluvai Michael	Chemistry	Conversion of Bio waste into electrode materials for energy storage devices
Dr. M. Mahalakshmi		• Green hydrogen production by photocatalytic water splitting under solar light.
Dr.A. M Shanmgharaj		• Development of carbonaceous electrode materials from waste plastics/tires for energy storage devices
Dr. A. Murugesan		• Conversion of waste plastic into value added products
Dr.N. Priyadarshini		• Developing functional materials for nuclear energy and environmental sustainability.
Dr.V. Tamilmani		• Nano materials for healthcare applications.
Dr.V.Rajini		• Power converters for wind energy

Dr. R.Seyezhai	Electrical & Electronics Engineering	• Power converters for solar energy
Dr.R.Ramaprabha		• Power converters for solar energy
Dr.M.Balaji		• Power converters for solar energy
DR. N.B. Muthu selvan		• Power converters for Electrical vehicle
Dr.P.Saravanan		• Electrical machines for Electric vehicle
Dr.V.S. Nagarajan		• Electrical machines for Electric vehicle
Dr. V Thiyagarajan		• Power converters for renewable energy
Dr. A. Shahina	Information Technology	• Brain-speech recognition • Brain-computer interface system for speech impaired patients
Dr. A. Sandana karuppan		• IOT based air pollution monitoring system. • Energy management scheme for Green IOT environment.
Dr.R.Swathika		• Parkinson's disease diagnosis through image processing. • Periodontal disease prediction by deep learning approach.
Dr. J. Sofia Jennifer		• Detection of Covid-19 cases using X-ray images
Dr. T. Sree Sharmila		• Pulse based diagnostic system for siddha and varma treatment.

Dr. P. Vasuki		• Voice assist for speech impaired people using ML & IOT.
Dr. S. Poornima		• Prediction system for pest and disease occurrences in plant
Dr. S. Chitra		• Automated protective and preventive measures of leaf diseases
Dr. S. Mohanavalli.		• Real-time image captioning for CCTV grabs to improve home security. • Remote Sensing Image Analysis for Monitoring Vegetation Health
Dr. N. Sripriya		• A.V.I (Assistant for Visually Impaired)
Dr. S.Sasirekha		• Early Detection of Yellow Stemborer Pests in Paddy Fields
Dr. Joe Louis Paul		• Effective Cardiovascular Disease Prediction using Machine Learning Algorithms
Dr. J. K. Josephine Julina		• Lung Cancer Detection Using Convolutional Neural Netwok
Dr.K.S.Gayathri & Dr. R. Vinob Chander		• Ambient assisted dementia care through smart home with activity recognition, abnormality detection and decision support system using artificial intelligence and machine learning technique

Ongoing Internal Funded Students Projects -IFSP2023 related to Sustainability Research

Sl. No.	Name of the Student(s)	Project Guide & Department	Project title	Amount in Rs. Lakh
1	Ayisha Sameera Janani Shivrupan III Year EEE	Dr. R. Deepalaxmi, EEE	Design and implementation of solar powered wireless charging	0.20
2	M. Thanga Sheriff N.S. Vishwajith S. J. Raghul III Year EEE	Dr. M. Balaji, EEE Dr. R. Ramaprabha, EEE.	Design and implementation of solar tracking system	0.30
3	A. Siyan Ananth R. Sonu III Year EEE	Dr. P. Saravanan EEE Dr. M. Anbuselvi ECE	Design and development of an adaptive battery management system for electric vehicle	0.26
4	R. Sunitha I. Vanaja III Year EEE	Dr. S. Tamil Selvi EEE	A smart glove to convert sign to speech/text to assist deaf and dumb people	0.21
5	S. Sivaranjani A. Swarnalalitha P. Raja Dharshini S. P. Tushar Balaji II Year ECE	Dr. W. Jino Hans Dr. Vijayalakshmi, ECE	Design of a robotic arm for a smart wheelchair for elderly people and paralytic patients	0.20
6	Achanta Sree Rama Shriya K.B. Jeevaharini S. Krishna Lakshmi B. Krithika II Year ECE	Dr. R. Hemalatha ECE	An effective water quality monitoring of RO purifiers	0.15
7	S.P. Harshida V. Keerthan A. Mohith II Year CSE	Dr. T.T. Mirnalinee Dr. J. Bhuvana CSE	Vehicle sound sensing and classification system for Auditorily – Impaired drivers	0.24
8	Loganathan Sri Shalini M. Harshini II Year CSE G. Ramyalakshmi II Year EEE	Dr. B. Prabavathy Dr. K. R. Sarath Chandran Dr. K.Lekshmi Dr. M. Saritha CSE	Smart Suit: A suit for frontline mine workers	0.20

9	D. Medha J. Thenmozhi II Year ECE Karthik Vijayakumar K.H. Gopalakrishnan II Year CSE	Dr, Chitra Babu CSE	Prediction of Maternal health risk and architecture for remote monitoring of pregnant women using ML and IoT	0.21
10	M. V. Harish Kumar Heera Ethirajan II Year CSE	Dr. B. Prabavathy Dr. K. R. Sarath Chandran Dr. K.Lekshmi Dr. M. Saritha CSE	Bus assist for ophthalmologic individuals	0.21
11	J. Swetha D. Swathika II Year CSE R. Mathangi II Year IT	Dr. V. Balasubramanian CSE	Smart food ordering system using IoT	0.27
12	M. S. Mukil Aadhithian R.R. Nandhini Sree II Year CSE S.P. Raghul Prasanth II Year IT	Dr. S. Rajalakshmi Ms. S. Angel Deborah CSE	Smart chaperone for visually impaired	0.24
13	Adithi Shankar S. Gomathy Dhanya R. Dhivyaharshini	Dr. K. R. Sarath Chandran Ms. S. Angel Deborah CSE	Remote power usage monitoring and conservation system for hostels in educational institutions	0.25
14	M. Priya II Year CSE S. Anisha II Year Chemical R. Saran II Year Mechanical V.R. Anuprapaa II Year ECE	Ms. S. Lakshmi Priya Dr. N. Sujaudeen CSE	IoT enabled solar distillation system	0.22
15	R. Sujay R. Sridhar V. Vijay S. Nandhana II Year	Dr. T. Sree Sharmila IT	Pulse based diagnostic system for siddha and varma treatment	0.25

16	Pavithra Manikandan Meghana Srikanth III Year IT	Dr. S. Chithra IT	Automated protective and preventive measures of leaf diseases	0.19
17	Jovitha Sahayaraj K. Kaviyapriya II Year IT	Dr. P. Vasuki IT	Voice assist for speech impaired people using ML and IoT	0.23
18	Saairithvik V Rahul P II-year Mech.	Dr. S. Sakthivel Murugan Dr. G. Satheesh Kumar, Mech.	Amphibious water body and beach cleaning BOT	0.28
19	Dhineshkumar R Rohit Kumar Shruthi V III Mech.	Dr. Anirudh V K Mech.	Developing sustainable materials to replace plastic enclosures.	0.28
20	Pradhyumnan S Vaidheeshwaran R Shobhan Kumar P III year Mech.	Dr.A.S. Ramana Mech.	Development of solar powered heat pipe dryer for fruits and vegetables	0.30
21	K. Poornima K. Swetha P. Nitish Noel III year Chemical	Dr.P.Senthil Kumar Chemical	Biofuel from algal biomass through hydrothermal liquefaction	0.30

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ACADEMICS

6.2 Incentives for sustainability research

Submitted to

The Sustainability Tracking, Assessment & Rating System (STARS)

6.2 Incentives for sustainability research

- Description of the sustainability research incentives for academic staff. -files attached

- Description of the sustainability research incentives for students. -files attached

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam - 603110

Scheme for Research staff

Type 1 - Ph.D Admitted from Anna University [Fully Residential]

All Full Time Scholars, who get admission through Anna University, will be directly considered on merit basis under any of the following categories

Category	Designation	Eligibility	Max. Period (Months)	Work Description	Remuneration per month for Engg Stream	Remuneration per month for Science Stream
I	JRF	PhD Selection from Anna University + consistently good academic record of 70% and above, since tenth standard without any history of arrears	36	PhD Research work	Rs. 20,000 + rent free shared accommodation	Rs. 18,000 + rent free shared accommodation
II	JRA*	PhD Selection from Anna University + candidate having above 70% marks in tenth, plus two, UG degree and PG degree, and not having more than TWO history of arrears in UG & PG / PhD Selection from Anna University + candidate having above 60% marks in tenth, plus two, UG degree and PG degree, and not having any history of arrears	12	PhD Research work & 1 publication in TR / AU listed Scopus indexed Journals as first author	Rs. 6,000 + rent free shared accommodation in hostel	Rs.5,000 + rent free shared accommodation in hostel
	RA*		6	PhD Research work & 1 publication in TR / AU listed Scopus indexed Journals as first author	Rs. 7,000 + rent free shared accommodation	Rs. 6,000 + rent free shared accommodation in hostel
	JRF		36 - [JRA*/(JRA + RA)*] period	PhD Research work & publication in Journals as per the requirement	Rs. 20,000 + rent free shared accommodation	Rs. 18,000 + rent free shared accommodation

Note: For those who stay in Campus Quarters, an amount of Rs.2,000 will be waived in the quarters rent

*** Candidates can apply for JRF scheme with doi no. as soon as the journal paper is accepted in TR / AU listed scopus**

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam - 603110

Scheme for Research staff

Type 2 - Aptitude Channel [Fully Residential]

To create a seamless migration from Research Staff to Research Scholar in Anna University

Level	Designation		Eligibility	Max. Period (Months)	Work Description	Remuneration per month for Engg Stream	Remuneration per month for Science Stream
Entry	JRA*		Candidate has above 70 % in tenth, +2, UG & PG degree + not having more than TWO history of arrears./ candidate having above 60% marks in tenth, plus two, UG degree and PG degree, and not having any history of arrears	6	Initiation of research work & applying for AU PhD scheme	Rs. 6,000 + rent free shared accommodation in hostel	Rs.5,000 + rent free shared accommodation in hostel
Second	RA*		JRA	6	Continuation of work / Conversion into publication/ applying for AU PhD scheme	Rs. 7,000 + rent free shared accommodation	Rs. 6,000 + rent free shared accommodation in hostel
Third	SRA*		RA + Communicated one Journal paper	6	Continuation of work / Conversion into publication/ applying for AU PhD scheme	Rs. 8,000 + rent free shared accommodation in hostel	Rs. 7,000 + rent free shared accommodation in hostel
Fourth	JRF	70 % & Without Arrears	PhD registered Scholar of Anna University will go under Category 1 of Type 1		PhD Research work	Rs. 20,000 + rent free shared accommodation	Rs. 18,000 + rent free shared accommodation
	JRA/RA/ SRA **	others	PhD registered Scholar of Anna University will go under Category II of Type 1		PhD Research work + 1 publication in TR / AU listed Scopus Journals		

Note: For those who stay in Campus Quarters, an amount of Rs.2,000 will be waived in the quarters rent

***Candidates can apply for JRF scheme as soon as they get PhD admission from AU**

****Same previous designation will continue till one journal paper is accepted**

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam - 603110

Scheme for Research staff

Type 1 - Ph.D Admitted from Anna University [Fully Residential]

All Full Time Scholars, who get admission through Anna University, will be directly considered on merit basis under any of the following categories

Category	Designation	Eligibility	Max. Period (Months)	Work Description	Remuneration per month for Engg Stream	Remuneration per month for Science Stream
I	JRF	PhD Selection from Anna University + consistently good academic record of 70% and above, since tenth standard without any history of arrears	36	PhD Research work	Rs. 20,000 + rent free shared accommodation	Rs. 18,000 + rent free shared accommodation
II	JRA*	PhD Selection from Anna University + candidate having above 70% marks in tenth, plus two, UG degree and PG degree, and not having more than TWO history of arrears in UG & PG / PhD Selection from Anna University + candidate having above 60% marks in tenth, plus two, UG degree and PG degree, and not having any history of arrears	12	PhD Research work & 1 publication in TR / AU listed Scopus indexed Journals as first author	Rs. 6,000 + rent free shared accommodation in hostel	Rs.5,000 + rent free shared accommodation in hostel
	RA*		6	PhD Research work & 1 publication in TR / AU listed Scopus indexed Journals as first author	Rs. 7,000 + rent free shared accommodation	Rs. 6,000 + rent free shared accommodation in hostel
	JRF		36 - [JRA*/(JRA + RA)*] period	PhD Research work & publication in Journals as per the requirement	Rs. 20,000 + rent free shared accommodation	Rs. 18,000 + rent free shared accommodation

Note: For those who stay in Campus Quarters, an amount of Rs.2,000 will be waived in the quarters rent

*** Candidates can apply for JRF scheme with doi no. as soon as the journal paper is accepted in TR / AU listed scopus**

International Conference / Competition by Students & Scholars

SSN is a student-centric and research focused Institution, committed to support its student members in carrying out their research and overall development. Accordingly, it has created suitable provisions, under the Student Research Development Assistance (SRDA) program, or (STIRS) for the students to have a development fund available at their disposal to pursue relevant opportunities for their growth and development which in-turn would benefit the students and the Institution as well. Further, it has created provisions under the Student Research Incentive (SRI) program to create and sustain a research focused ecosystem at SSN.

Student Research Development Assistance (SRDA) Program

Scope

The SRDA is extended to all students engaged in research at both undergraduate, post graduate and PhD level. The SRDA provision excludes part-time research scholars.

Eligibility & Applicability

The SRDA fund of ₹ 1 Lac or 50% of the registration plus travel whichever is lesser shall be made available to the students on a reimbursable basis, for a block period of 2 years starting from October 1, 2023.

The SRDA earmarked for attending conferences / presenting papers / participating in international competitions / etc., over the 2-year block period.

General Guidelines

- While the SRDA fund is available to an eligible student, it can only be used under the approval of the competent authority of the Institution.
- The SRDA fund can only be used towards below specified professional activities:
  - Expenses for attending prestigious International Conferences / Symposiums / International Competitions held abroad.
  - The International conference / Symposium should be organized by the professional societies.
  - The International competitions should be organized by the top Industries, Government Organizations, etc.
  - The list of top 50 ranking conferences with respect to the department will be shared by the Heads of the departments in which students can submit their research papers.

- **For Conference Participation / Symposium / Competitions:**

- Acceptance of a paper/ selection list from the competition / a letter of Invitation would be a requirement for seeking approval of expenses towards conference participation.
- Every student (UG/PG) applicant for conference participation must fulfill the pre-requisites as given below:
    1. The applicant should have at least 1 internally funded students project (IFSP) received during 1 / 2 / 3 years of study.
    2. The applicant should have published one refereed journal paper.
    3. The applicant must present it at the conference.
    4. The applicant should have applied to other agencies towards support for international travel.
- Every scholar applicant for conference participation must fulfill the pre-requisites as given below:
    1. The applicant should have completed his/her provisional PhD registration.
    2. The applicant must be receiving fellowship.
    3. The applicant should have published at least one Journals in Q1 / Q2
    4. The applicant should be the first author of the paper and must be presenting at the conference.
    5. The applicant should have applied for other agencies towards support for international travel.
- Expenses for a conference may include cost of travel (by most economical mode and route of travel), and registration fee only.
- Approval from the competent authority of the Institution, upon recommendation of the concerned Head of Department, would be a pre-requisite for the student / research scholars to avail of the SRDA fund towards attending any conference / presenting papers/ participating in the international competitions.
- Additionally, for any international travel, approval from the competent authority of the organizer / Institution will also need to be obtained.

- The corroboration between the SRDA amount spent and the actual outcome would be a key criterion for a Student member's coverage under the SRDA program in the subsequent block. The Competent Institutional Authority shall review and take a call on extending the SRDA program to the concerned student r for the next block.

The above policy / guidelines may be modified, changed, altered, or withdrawn at any point in time at the sole discretion of the Institution's Management.

SSN College of Engineering, Kalavakkam – 603110.

Policy on Incentive claims for Journal Publication, Funded Projects, Consultancy related works

1-8-2023

1. Research Paper Publication in Journals

For the research papers published in journals indexed in Clarivate Analytics / Web of Science /Scopus, the incentive shall be claimed based on Q1, Q2, and Q3 categories as below:

Journal Classification	Amount	Eligible Amount
The journals published under the Q1 category	Rs.15000	Amount/number of authors
The journals published under the Q2 category	Rs.10000	
The journals published under the Q3 category	Rs.5000	

2. Funded Projects

a. Faculty who get external project funding, are eligible for an incentive of 1% of the received and utilized amount of the project.

b. The incentive amount of 1% shall be claimed from the 50% of the overhead component after the completion of the project and submission of the final project report. The balance amount of the 50% overhead shall be utilized by the PI for research enhancement purposes only.

3. Patent

a. The team of inventors shall claim a total incentive of Rs.2,000 on publishing a patent and Rs.15,000 on getting it granted.

b. Post grant, on commercialization, 50% of the revenue generated, shall be shared with the investors. All Inventors shall have an equal share of this income.

4. Consultancy

(i) Testing Using SSN Facility created by PI with external fund

- 25% of the Revenue generated by testing shall be granted to the PI as an incentive.

(ii) Testing Using SSN Facility

- 10% of the Revenue generated by testing shall be granted to the investigators as an incentive.

(iii) Consultancy-based project work

a. For Consultancy based project work, the whole working expenditure for the consultancy projects sponsored by industries shall be borne by the industry sponsoring the project.

b. The Sanction letter shall clearly mention the Consultancy charge component.

c. Two-thirds of the revenue assigned as 'consultancy charges component' shall be granted to the project investigators concerned after the completion of the

consultancy-based project report work submission, if the college facility is not used.

d. If the college facility is used, one-third of the revenue assigned as a 'consultancy charges component' shall be granted to the project investigators concerned after the completion of the consultancy-based project report work submission.

(iv) Training using SSN facility/infrastructure

- In cases where training is done by faculty/group of faculty, without external vendors, using SSN facility/infrastructure, Rs.1500/hr shall be reimbursed to the faculty concerned, provided it does not exceed 50% of the revenue generated.

(v) Training without using SSN facility/infrastructure

- For training conducted by the faculty externally without using the SSN facility, Rs.2000/hr shall be reimbursed to the faculty concerned, provided it does not exceed 50% of the revenue generated. The conveyance costs are not eligible for reimbursement for the training program.

Note:

1. All Consulting/training assignments shall be taken up only after obtaining prior permission from the Principal.
2. All payments shall be made in the name of "SSN College of Engineering"
3. All payments to faculty shall be made only after receiving payment from external agencies and after the completion of the work as per the MOU /SOW agreement.

Approved by

The President, SSNI

FACULTY DEVELOPMENT PROGRAMS

SSN is a student-centric and research focused Institution, committed to support its faculty members in carrying out their research and overall development. Accordingly, it has created suitable provisions, under the Faculty Professional Development Assistance (FPDA) program, for the faculty members to have a development fund available at their disposal to pursue relevant opportunities for their growth and development which in-turn would benefit the students and the Institution as well. Further, it has created provisions under the Faculty Research Incentive (FRI) program to create and sustain a research focused ecosystem at SSN.

Faculty Professional Development Assistance (FPDA) Program

Scope

The FPDA is extended to all SSN faculty members engaged on full-time employment basis. The FPDA provision excludes part-time / visiting / guest / adjunct faculty members.

Eligibility & Applicability

The FPDA fund of ₹ 3 Lacs shall be made available to all existing faculty members on a reimbursable basis, for a block period of 3 years starting from April 1, 2023. For faculty members joining in the middle of a financial year, the FPDA eligibility and their block period of 3 years shall commence from 1st April of the subsequent year.

A faculty member would be able to avail the FPDA benefits only after putting in a minimum of 6 months of service with SSN while their FPDA block period and entitlement may start earlier as per eligibility criteria mentioned in the previous para.

Out of the total of ₹ 3 Lacs provision, a minimum of ₹ 2.5 Lacs shall be earmarked for attending conferences / presenting papers / research lab visits / incentive for publications, etc. and a maximum of ₹ 0.5 Lac may be used for purchasing books, purchase of software, data bases and membership of Professional Bodies / Societies, etc., over the 3-year block period.

General Guidelines

- While the FPDA fund is available to an eligible faculty member, it can only be used under the approval of the competent authority of the Institution.
- The FPDA fund can only be used towards below specified professional activities:
  - Expenses for attending prestigious National / International Conferences / Symposiums / Foreign Universities & Research Lab visits / incentive for publications / National Labs / National Institutes
  - Purchase of books, Purchase of software, data bases and Membership of Professional Bodies / Societies etc.

- **For Conference Participation / Symposium / Internship / Research Lab Visits:**

  - Acceptance of a paper / a letter of Invitation to chair a session / a letter of invitation to the research labs / institute would be a requirement for seeking approval of expenses towards conference participation.

  - Every Faculty applicant for conference participation / Symposium / Internship / must fulfill the pre-requisites as given below:

    1. The applicant should have 4 Journal publications in either Q1 or Q2 in last two years, in refereed journals.
    2. The applicant i.e. the author of the paper, must be presenting it at the conference.
    3. The applicant must be guiding at least one Ph.D. scholar.
    4. The applicant should have applied to other agencies towards support for international travel, such as DST, AICTE, etc.

  - For Research Lab / Institute visits for a period of 1 to 3 months
    1. The applicant should have at least 6 Journal publications either in Q1 or Q2, during the preceding 3 years, in refereed journals.
    2. He / She must be guiding at least one PhD scholar.

  - Additional living expenses will be supported by the SSN based on the number of visit days and the country of the visit

  - Every Faculty applicant for conference participation / Symposium / Internship / Research Lab visit shall be required to submit the following details along with his / her request, as necessary:

    1. Alternative arrangement of "duty" [including student supervision] during his / her absence
    2. Name of the organizers and address, subject matter of meeting, how prestigious the conference is; duration of the conference and dates along with copy of invitation / announcement received from organizers
    3. Title and full author list of any paper to be presented (an abstract of the paper to be provided), and whether the proceedings are going to be published or not? What is the plan / time-scale of publishing the paper in a regular journal?
    4. Whether to Chair (a section of) the Conference / Seminar etc.?
    5. Whether the organizers will meet all expenses, and if not, specify whether outside grants have been sought and the extent of financial support requested from the Institution.

6. List of participation in Conferences / Seminars / Meetings etc. during the last two years along with information on financial support, if any, received from SSN for each such participation

- Expenses for a conference may include cost of travel (by most economical mode and route of travel), local transport, overseas medical insurance, registration fee and living expenses (as per Institution's travel policy) for the period of conference and two additional days (for travel) preceding / succeeding the conference, for a maximum period of (5+2) days. If the available amount in the FPDA fund falls short of what the actual expenses turn out to be, one may supplement this from other sources (projects, travel grants from organizations like DST etc.).
- Approval from the competent authority of the Institution, upon recommendation of the concerned Head of Department, would be a pre-requisite for the faculty to avail of the FPDA fund towards attending any conference / presenting papers or research visit.
- Additionally, for any international travel, approval from the competent authority of the Institution will also need to be obtained.

- **For other expenses:**
  - FPDA fund towards purchase of books, Purchase of software, data bases and membership of Professional Bodies / Societies, etc. cannot be incurred in one go. Out of the maximum allocation of 0.5 Lac in the block of three years, an amount up to 15,000 can be spent in the year one, a further 15,000 plus any unused portion of the first year's allocation in year two, and the entire unspent balance out of the total allocation in the last year.
  - In case of books, faculty members should buy books, get the same accessioned with SSN Library as SSN assets and have the same issued to them in their name before claiming reimbursement from the Finance department from within their FPDA fund balance towards this category of expense.
  - In case of purchase of any software items, the purchased item will need to be registered in the asset register with SSN store before claiming the reimbursement against original bills / invoices. If so required, any help may be sought from the SSN Purchase department towards such purchases.
  - In case a faculty member resigns from SSN and has used FPDA amount under "Membership of Professional Bodies / Societies", there will be a recovery on pro-rata basis for the balance period of subscription (i.e. from the date of leaving until end of subscription). In case of a life-time membership, recovery shall be calculated from date of leaving to the age of retirement of a faculty member as per the SSN policy which, currently, is 65 years of age.

- In the event of separation from SSN for any reason, the faculty member would be required to surrender all SSN assets (books / software / data bases etc.) acquired under the provision of the FPDA program, to the respective departments while seeking exit clearance.
- Any un-availed FPDA fund amount shall lapse on completion of three years block period and will not be carried forward under any circumstances.
- The corroboration between the FPDA amount spent and the actual outcome would be a key criterion for a Faculty member's coverage under the FPDA program in the subsequent block. Competent Institutional Authority shall review and take a call on extending the FPDA program to the concerned faculty member for the next block.

The above policy / guidelines may be modified, changed, altered or withdrawn at any point in time at the sole discretion of the Institution's Management.

Ongoing Internal Funded Students Projects -IFSP2023 related to Sustainability Research

Sl. No.	Name of the Student(s)	Project Guide & Department	Project title	Amount in Rs. Lakh
1	Ayisha Sameera Janani Shivrupan III Year EEE	Dr. R. Deepalaxmi, EEE	Design and implementation of solar powered wireless charging	0.20
2	M. Thanga Sheriff N.S. Vishwajith S. J. Raghul III Year EEE	Dr. M. Balaji, EEE Dr. R. Ramaprabha, EEE.	Design and implementation of solar tracking system	0.30
3	A. Siyan Ananth R. Sonu III Year EEE	Dr. P. Saravanan EEE Dr. M. Anbuselvi ECE	Design and development of an adaptive battery management system for electric vehicle	0.26
4	R. Sunitha I. Vanaja III Year EEE	Dr. S. Tamil Selvi EEE	A smart glove to convert sign to speech/text to assist deaf and dumb people	0.21
5	S. Sivaranjani A. Swarnalalitha P. Raja Dharshini S. P. Tushar Balaji II Year ECE	Dr. W. Jino Hans Dr. Vijayalakshmi, ECE	Design of a robotic arm for a smart wheelchair for elderly people and paralytic patients	0.20
6	Achanta Sree Rama Shriya K.B. Jeevaharini S. Krishna Lakshmi B. Krithika II Year ECE	Dr. R. Hemalatha ECE	An effective water quality monitoring of RO purifiers	0.15
7	S.P. Harshida V. Keerthan A. Mohith II Year CSE	Dr. T.T. Mirnalinee Dr. J. Bhuvana CSE	Vehicle sound sensing and classification system for Auditorily – Impaired drivers	0.24
8	Loganathan Sri Shalini M. Harshini II Year CSE G. Ramyalakshmi II Year EEE	Dr. B. Prabavathy Dr. K. R. Sarath Chandran Dr. K.Lekshmi Dr. M. Saritha CSE	Smart Suit: A suit for frontline mine workers	0.20

9	D. Medha J. Thenmozhi II Year ECE Karthik Vijayakumar K.H. Gopalakrishnan II Year CSE	Dr, Chitra Babu CSE	Prediction of Maternal health risk and architecture for remote monitoring of pregnant women using ML and IoT	0.21
10	M. V. Harish Kumar Heera Ethirajan II Year CSE	Dr. B. Prabavathy Dr. K. R. Sarath Chandran Dr. K.Lekshmi Dr. M. Saritha CSE	Bus assist for ophthalmologic individuals	0.21
11	J. Swetha D. Swathika II Year CSE R. Mathangi II Year IT	Dr. V. Balasubramanian CSE	Smart food ordering system using IoT	0.27
12	M. S. Mukil Aadhithian R.R. Nandhini Sree II Year CSE S.P. Raghul Prasanth II Year IT	Dr. S. Rajalakshmi Ms. S. Angel Deborah CSE	Smart chaperone for visually impaired	0.24
13	Adithi Shankar S. Gomathy Dhanya R. Dhivyaharshini	Dr. K. R. Sarath Chandran Ms. S. Angel Deborah CSE	Remote power usage monitoring and conservation system for hostels in educational institutions	0.25
14	M. Priya II Year CSE S. Anisha II Year Chemical R. Saran II Year Mechanical V.R. Anuprapaa II Year ECE	Ms. S. Lakshmi Priya Dr. N. Sujaudeen CSE	IoT enabled solar distillation system	0.22
15	R. Sujay R. Sridhar V. Vijay S. Nandhana II Year	Dr. T. Sree Sharmila IT	Pulse based diagnostic system for siddha and varma treatment	0.25

16	Pavithra Manikandan Meghana Srikanth III Year IT	Dr. S. Chithra IT	Automated protective and preventive measures of leaf diseases	0.19
17	Jovitha Sahayaraj K. Kaviyapriya II Year IT	Dr. P. Vasuki IT	Voice assist for speech impaired people using ML and IoT	0.23
18	Saairithvik V Rahul P II-year Mech.	Dr. S. Sakthivel Murugan Dr. G. Satheesh Kumar, Mech.	Amphibious water body and beach cleaning BOT	0.28
19	Dhineshkumar R Rohit Kumar Shruthi V III Mech.	Dr. Anirudh V K Mech.	Developing sustainable materials to replace plastic enclosures.	0.28
20	Pradhyumnan S Vaidheeshwaran R Shobhan Kumar P III year Mech.	Dr.A.S. Ramana Mech.	Development of solar powered heat pipe dryer for fruits and vegetables	0.30
21	K. Poornima K. Swetha P. Nitish Noel III year Chemical	Dr.P.Senthil Kumar Chemical	Biofuel from algal biomass through hydrothermal liquefaction	0.30

Research Projects

Internally Funded - Faculty

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2022	2023
No. of Projects	9	11	20	20	21	28	30	29	52	27	11
No. of Faculty involved	9	19	27	35	36	41	51	53	99	48	22
Amount (Rs. in lakh)	36.35	43.6	69.4	65.90	72.16	69.1	101.47	95.90	133.91	96.16	30.95

Research Projects

Internally Funded – Students

(STIRS: Stimuli for Technological Innovation and Research for Students)

Year	2012	2013	2014	2015	2016	2017	2018	2019	2022	2023
No. of Projects	28	50	100	135	150	197	204	199	219	186
No. of Students involved	97	151	267	372	408	531	543	596	623	550
Amount (Rs in lakh)	5.93	11.0	20.27	26.55	29.42	39.29	41.68	42.76	45.93	41.58
No. of Faculty Mentors involved	28	37	68	93	112	114	128	152	168	162

Research Projects

Internally Funded - Students (First Year UG/PG)

Year	2017	2018	2019	2022	2023
No. of Projects	45	54	44	44	63
No. of Students involved	105	141	112	131	169
Amount (Rs in lakh)	8.29	11.41	10.37	8.58	12.87
No. of Faculty Mentors involved	35	49	42	46	69

Research Projects

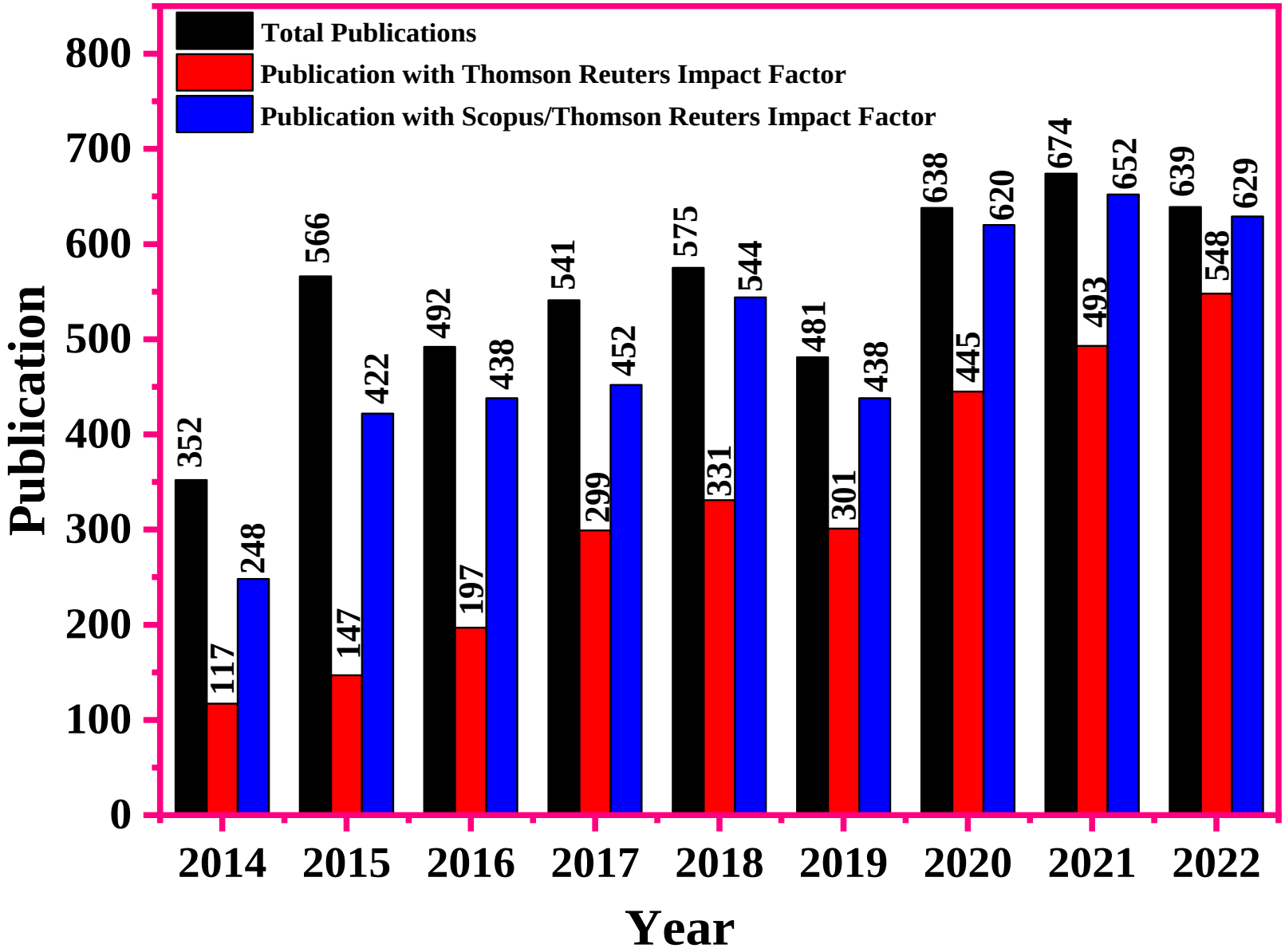
Student Consortium Projects

No	Project Guide(s) & Department(s)	Title of the Project	Duration	Budget (Rs. in lakh)
1	Dr. A. Kavitha BME Dr. S. Suresh Kumar Mechanical Ms. R. Nithya BME	Design and development of biosignal controlled prosthetic hand	2 Years	9.50
2	Dr. S. Sakthivel Murugan ECE Mr. R. Vimal Sam Singh Mechanical Dr. K. Murugesan EEE	Design and development of indigenous research based inspection class remotely operated vehicle (ROV)	27 months	9.50
			Total	**19.0**

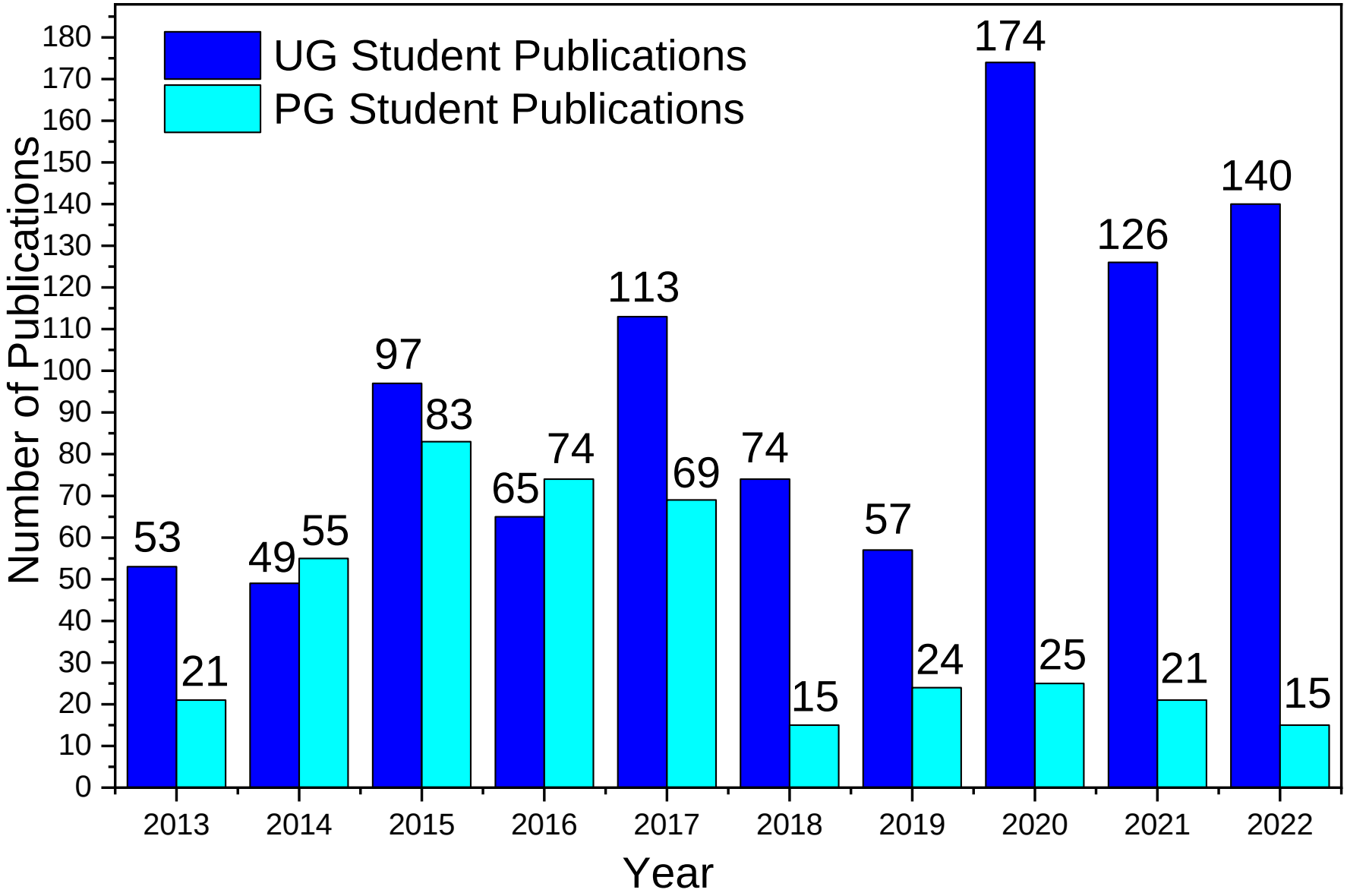
Impact of Internally Funded Faculty Projects

Duration & Date of Evaluation	Number of Projects	Total amount Sanctioned (Rs. in Lakh)	Number of External projects won	Total Amount (Rs. in Lakh)	Journal Publications	Conference Publications	Students and Research Scholars Involved		
							Ph.D.	PG	UG
(2006-2014) 26-27 November 2015	22	127.12	12	269.66	171	263	49	45	164
(2013-2017) 22 June 2017	22	70.40	6	144.0	76	111	36	49	105
(2015-2018) 10 July 2018	25	88.5	7	236.53	54	47	28	35	121
(2015-2019) 13 May 2019	17	54.96	4	66.22	22	51	19	16	61
(2017-2018) 3-5 March 2021	39	102.5	6	1325.49	64	108	39	36	180
2-3 August 2022	39	133.4	2	105.06	63	55	45	24	141

Journal Publications



UG & PG - Journal Publications



Research Groups

- Energy (37 Faculty)
- Materials (38 Faculty)
- Speech Technology (10 Faculty)
- Health Care Technology (18 Faculty)
- Smart Technology (20 Faculty)
- Machine Learning (20 Faculty)
- CREST (6 Faculty)
- Water Research (24 Faculty)