

**Discover a New  
World of Knowledge with  
Advanced Research & Project Labs  
@ Sahyadri**



... we are always ahead in advance technology



**SAHYADRI**  
**PROJECTS & RESEARCH CENTRE**  
Sahyadri College of Engineering & Management  
Mangaluru

# Preamble

Vision of the institutions is to become a globally recognized centre striving continuously for excellence in Education, Research and Technological. Sahyadri College of Engineering & Management developed a multidisciplinary research center to fulfill emerging needs of the society and to promote effective learning and research.

The motto of the institution is to provide excellence in quality education driven by advanced research in areas of scientific, technical and management studies with the involvement of various departments. With a research team, the institute is committed to make Sahyadri a strong research centre along with project labs. Dynamic and well-experienced faculties will drive the R&D effort, so that technology is taken to the doorstep of corporate world through students by involving them in various research activities and funded projects.

The initiated research and project labs in various interdisciplinary areas such as smart materials and technologies for emerging electronics including nano-science & technology. To facilitate this effort the institute has allocated a significant lab space of around 25000 sq.ft. with all required facilities.

Sahyadri Research centre is a centralized facility initiated by the college for all the VTU recognized departmental research activities of the institute. Faculties, PG students and UG students are encouraged to propose projects for carrying out advanced research and also to associate with the centre to do internship and research. The Centre will support PhD courses and create facilities to boost research by involving all engineering and basic science departments of the institute.

## Vision

To create an in-house R&D laboratory to carryout projects and advanced research and to generate a high quality of scientific and technological output contributing to society.

## Mission

- To generate new knowledge with advanced research and development to promote academic growth by offering state-of-art undergraduate, postgraduate and doctoral programmes.
- To carryout collaborative interdisciplinary projects which offer opportunities for long-term interaction with academia and industry.
- To promote human resource with scientific and technological expertise spanning diverse areas.

## Objectives

- To develop advanced research laboratories for basic, applied and engineering sciences.
- To carryout advanced innovative research and development and to bridge the gap between academia and industry through research consultancy services and projects.
- To collaborate with national and international laboratories in advanced fields of science and technology.
- To organize seminars and conferences to facilitate knowledge sharing.

“ The only Institute in Karnataka to have the Government Research Centre, Incubation Centre, Placement & Training Center. ”

# SAHYADRI

## College of Engineering & Management, Mangalore

The College was established in the year 2007. The Institute is affiliated to Visvesvaraya Technological University, Belagavi and is approved by the Government of Karnataka, All India Council of Technical Education - AICTE, New Delhi, Ministry of HRD, Govt. of India. To a great extent, the success of the College must be credited to the excellent academic results year after year. The institute constantly strives to adopt and improve the teaching methods which vary from the mundane.

Motto of the College is Project & Research based learning, grooming Entrepreneurial culture fostering holistic development of students contributing to society getting them exposed through weekly invited talks from renowned Scientists, CEO's, COO's, industrialists, Internships, value added courses. These are augmented by strong Human Resource with wide range of rich experience from renowned institutes, strong management support aiding project based learning through more than a crore of investment every year, facilitating funded research. The TQM culture can be seen in every facet of activity at Sahyadri from top management commitment by financial support, adequate empowerment, decentralization of power, employee involvement, continuous improvement with apt deliverables for all stakeholders.

The College is Ranked 83rd in Top Private Engineering Colleges in India research survey by The Week Magazine and Hansa 2015. The College is unique and is one among the few who can take pride in having a dedicated department for research, analyzing and developing effective methods of imparting quality education.



“ Ranked  
**83rd**  
in All India level  
Amongst top Private  
Engineering Colleges ”



## Founding Directors



**Dr. Timothy G Lenihan** was Founding Director - Research at Sahyadri College of Engineering & Management. He has done his Ph.D. in Electrical Engineering, from University of Arkansa, Fayetteville and M.Sc. (Solid State Physics) from De Paul University, Chicago. He has got more than 6 years of teaching experience, 33 years of Industry experience and 10 years of Research Experience. He has got an outstanding paper award at the International Conference on "Multichip Modules." He has two patents in his credit.

**Dr. C. Ranganathaiah** was Director - Research for the year 2014-2015. He did his Post-doctoratral at Univ. of Western Australia. He worked in NASA-NRC, LaRC, Virginia, USA, as fellow of Indo-Hungarian Exchange, Visiting Scientist to CNRS, IReS, Strasbourg, France. He has guided 18 Ph.D. students, with more than 262 Research papers in International and National Journals. He has authored books in Brill Publishers (2009), Netherlands, Wiley publishers (2014), USA. He also serves as an Expert Referee to more than 23 International Research Journals. He was involved in numerous research project including 1500 Cr worth INO-DST project



## Research Directors



**Dr. Manjappa Sarathy** is the Director - Research at Sahyadri College of Engineering & Management. He obtained Ph.D. from Mysore University in 1982. He is a distinguished scientist and professor with more than 34 years of Research, consultancy and teaching experience. He has guided 15 Ph.D. students and numerous M. Tech students. He has published more than 44 journal papers. He has served in several government bodies such as State Pollution control Board. He has won several awards including the State Environment Award in 2009. His specialization is Environmental Chemistry and Environmental consultancy. He has been granted funded projects worth more than Rs. 4 Crores in total.

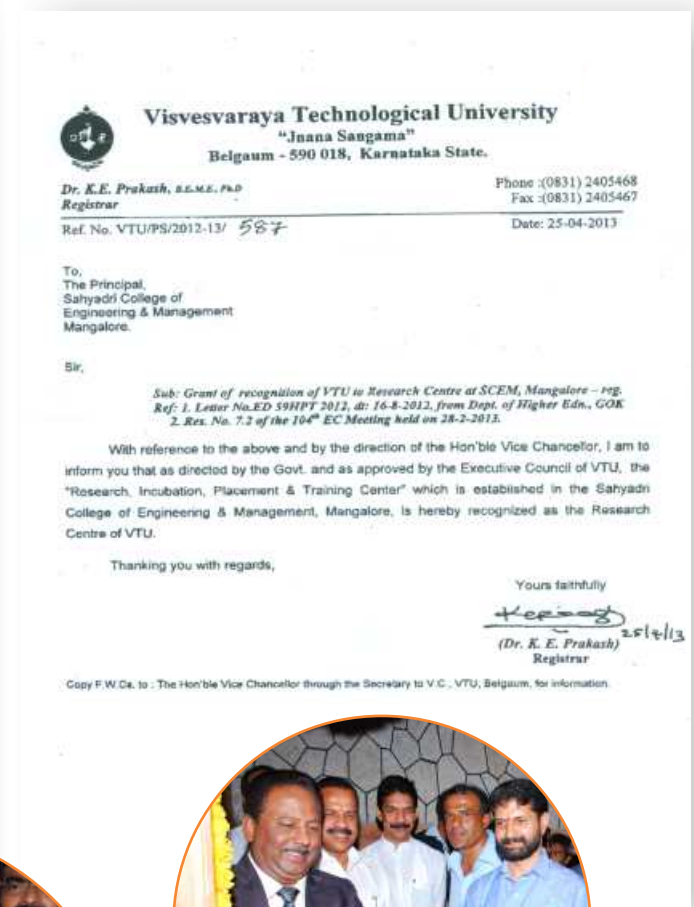
**Dr. Richard Pinto** is the Director - Centre for Excellence in Nano Technology (CENT). He was former scientist at Tata Institute of Fundamental Research (TIFR). He led many research program on growth and study of high quality thin films of high Tc superconductors by pulsed laser deposition (PLD), and built a state-of-the-art high Tc superconductor thin film laboratory at TIFR. He is also an adjunct professor at IIT Bombay and was a key member of the team which established the Centre of Excellence in Nano electronics. He has published more than 200 research papers and 2 patents. He was involved building IIT Bombay nano centre worth more than 200 cores rupees



“ Sahyadri builds more than just teams  
It provides platforms for excellence...”

# Karnataka Government Research Centre

Karnataka Government Research Centre was established in year 2012. The College is honored to have the only Government Research Center, Incubation Center and Placement & Training Center, in the state, Inaugurated by Hon'ble Chief Minister of Karnataka Mr. D.V. Sadanada Gowda in the presence of the Higher education Minister Mr. C. T. Ravi, Dr. Maheshappa, Vice-Chancellor, Visveswaraya Technological University (VTU), Dr. M.D. Tiwari Director, IIIT- Allahabad and Mr. Manjunath Bhandary, President, Bhandary Foundation. In accordance with the academic MoU with IIIT- Allahabad, a Centre of Excellence and an Innovation Lab has been established at Sahyadri campus. Sahyadri associate Partner of the India Platform at Ghent University for research activities and also has a MoU with Mangalore University for collaborative Research & Development, Education & Training. The management supports aiding project based learning through more than a crore rupee of investment every year, facilitating funded research.



## Research Advisors

1. Dr. D L Prabhakar - Director, SCEM
2. Dr. U M Bhushi - Principal, SCEM
3. Dr. Abhishek Vaish - IIIT - Allahabad, UP
4. Prof. B N Karkera - SCEM, NIT-K, Surathkal, DK, Karnataka
5. Dr. Timothy G Lenihan - M.Sc., Ph.D., IMAPS Fellow, USA
6. Prof. C Ranganathaiah, Director (Academic & Administration) JSS Mahavidyapeetha, Mysuru

## List of Achievements of Research Team

- AICTE sanctioned three year research project worth 4.46 Lakhs to Dr. K. Vidyavathi
- NOPL sanctioned project worth 8.2 Lakhs
- Vision Group of Science and Technology, GoK, sanctioned four research projects worth 58 Lakhs
- Two faculty (Dr. Savitha BM, chemistry and Mr. Steve LF, E&CE) received Young Scientist award
- A research project sanctioned by Institute of Engineering worth 1.5 lakhs
- Numerous prizes were won at National and international platform for the projects carried out at research centre
- Dedicated advanced research laboratories for different branches of Engineers
- Dr. Tenzin Pasang was awarded Syikong award for his PhD work in year 2015
- More than 20 faculties are currently persuading PhD.
- Overall more than 1 crore worth funded projects are ongoing in the Institute.





## Academic and research MoU with different institute and industry

1. ISRO for EDUSAT Programme
2. Indian Institution of Information Technology - IIIT, Allahabad
3. University of St. Louis, US
4. Ghent University
5. University of Pardubice
6. The institution is privileged to be the first college in Karnataka to get the Microsoft's Platinum Ed-vantage Academic Alliance
7. INTEL- Intelligent Systems Laboratory set up by FICE
8. National Entrepreneurship Network (NEN) to develop new entrepreneurs
9. SAP University Alliances - 2014
10. Federation of Karnataka Chambers of Commerce & Industries (FKCCI), Bangalore
11. iWave Systems Technologies, Bangalore
12. Environmental Health and Safety Research & Development Centre (EHSRDC), Bangalore
13. Mangalore University for collaborative Research & Development, Education & Training.



IIIT, Allahabad



Mangalore University



Ghent University



University of Pardubice

“ The first Engineering Institution in the state of Karnataka to sign an academic Memorandum of Understanding with the prestigious Indian Institute of Information Technology (IIIT) - Allahabad. ”

# Research Laboratories and Areas

## Advanced Research Laboratory in Electronics & Communication Engineering

The Department of Electronics and Communication Engineering is one of the core branches started with the inception of the institute and subsequently supported by the Department's modern laboratories and facilities in major areas of Electronics and Communication. The main vision of the laboratory is to initiate R&D Framework for enabling innovation and product engineering in emerging areas of Electronics & Communication. The mission of the laboratory is to generate and disseminate knowledge and technologies essential to the local & global needs and to engage in interdisciplinary research approaches to produce creative solutions to the societal needs including publication and dissemination of knowledge in conferences and peer reviewed journals.

The major research focus is in the areas of Digital Image Processing, Pattern Recognition, Machine Learning, Artificial Intelligence, Digital Signal processing, Computer Vision & Soft Computing. The work will also include incorporation of theories, principles, techniques, and applications of research in collaboration with industry. The broader goal of this laboratory is to eventually become a center of research and education, generating the knowledge and technologies which lay the ground work in shaping the future in the fields of Electronics and Communication engineering.

## Ongoing Projects

1. Underground water detection, replenishment & mapping using arial infra-Red application to enhance the drinking water resources
2. Development of New technology for identification of most wanted criminals across age groups and age progression using composite sketches on a digital signal processor.

## Faculty incharge

1. Mr. Ashwath Rao
2. Mr. Bharath Bhushan
3. Mr. Steven L Fernandes





## Advanced Research Laboratory in Chemistry and Environmental Engineering

Advanced Research Laboratory in chemistry and Environmental Engineering have vibrant community of researchers, with expertise in chemical and environmental engineering. The laboratory has four full time faculty members who lead research efforts in nanomaterials, soft matter / complex fluids, interfacial phenomena, Bio-Polymer Gels, bio-molecular engineering, energy, water, and sustainability.

### Ongoing Project

Studies on sorption properties of some selected Bio-Polymer Gels and Modified Bio-Polymer Gels for Water Treatment Applications

### Faculty incharge

1. Dr. S Manjappa
2. Dr. Manoj Kumar
3. Mr. Umesh S S
4. Ms. Ramayashree



## Advanced Research Laboratory in Computer Science Engineering

The department of Computer Science and Engineering is dedicated for imparting state of the art undergraduate and post graduate program and preparing its students for real world challenges currently prevailing in the industry. The Advanced Research Laboratory in the department of Computer Science and Engineering has a cohesive team of well experienced faculty members with wide experience in recent technologies as Computer Vision, machine Learning, Cloud computing, Grid Computing, High performance computing, Multimedia etc. The undergraduate curriculum provides a strong foundation in all areas of Computer Science and Engineering. The department provides state of the art computing facilities to the students. It has different computer labs like Data Structure lab, Operating System lab, Multimedia lab, Web Technology lab, Research & Development lab. It also promotes active industry-institute collaboration by identifying areas of interest.

The basic aim of the department is to maintain excellence in academics as well as research. The students are given opportunities to obtain sound understanding of the concepts. Their foundation in computer science will be such that they would be preferred by the industries and service sector to meet the global requirements. The department focuses on the study of theoretical foundation of information and computation and of practical techniques for their implementations. The department resources act as the nurturing ground for young professionals who can make their mark and create a talent pool for various industries.

Ongoing Project Title: Creating the facility for advancing research in area of computer vision and allied areas. (Multi Stage detection System for violent activities in Crowd through Visual, gesture and Cognitive modeling)

### Faculty incharge

1. Dr. Sarvesh Vishwakarma
2. Mr. Prashant D
3. Mr. Harisha

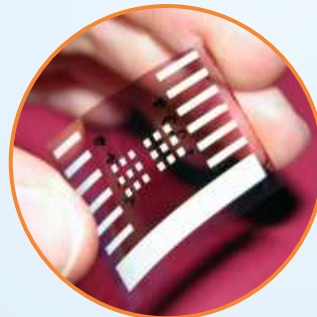


## Centre for Nano-technology - CENT

Center of Excellence in Nano-science and Technology (CENT) has been established with a vision to create, establish and sustain advanced research in device technologies for emerging electronics. The centre will be multidisciplinary involving departments of Physics, Chemistry, Mathematics, Civil Engg., ECE, CSE/ISE and Mechanical Engg. for R&D in both novel and nano-materials, thin films and devices. This will be achieved through an in-house experimental infrastructure having equipments for thin film growth, XRD and FESEM for structural characterization and some important measurement systems for electrical characterization. Faculties across the departments will contribute for the advancement and growth of the centre. Sahyadri is the first institution in the creation of such a centre in the undivided Dakshina Kannada district of Karnataka State.

### Faculty incharge

1. Dr. Jayaram A
2. Dr. Niraj Joshi
3. Dr. Rathishchandra R Gatti





## Research Team



Prof. B.N Karkera is a research scientist and is the Chief Research guide at Sahyadri. He went on to pursue a BARC Officer's training in Reactor Physics and Engineering. He is an IAEA Fellow in the University of Birmingham.



Mr. Ashwath Rao has submitted his Ph.D. thesis to IIIT-Allahabad. His research area is high K dielectric films for advanced integrated circuits. He has published 4 research papers in peer reviewed journals.



Dr. Gautham P. Jeppu obtained his B.E. degree in Chemical Engineering from N.I.T.K., Surathkal, Master of Civil Engineering and Ph.D. in Environmental Engineering from Auburn University, AL, USA. His areas of interest are Biodiesel, waste management and water purification.



Mr. Shamantha Rai. B submitted his Ph.D. thesis to IIIT Allahabad in IT - Wireless Sensor Networks. He has 6 years teaching and 2 years research experience. His areas of interest are research on "Performance Evaluation of Localization and Topology Control in Wireless Sensor Networks using Rigid Graphs".



Dr. Sarvesh Vishwakarma obtained Ph.D. in Information Technology, from IIIT-Allahabad. His research interests include computer vision, image processing, pattern recognition, and artificial intelligence applied to unusual activity analysis and surveillance application. He has more than 10 research articles in international journals. He has 13 years of teaching experience. He is a member of the IEEE and ACM Computer Society.



Dr. Rathishchandra R Gatti obtained Ph.D. from Curtin University, Australia. He has 4 years teaching experience and 4 years of R&D product development experience in electro-mechanical distribution products at GE Energy. He has two peer reviewed journal publications and has a US Patent/ Canadian Patent for a smart design of electrical distribution board.



Dr. A P Manu obtained Ph.D. from IIIT-Allahabad. He carried out his research work in collaboration with G-Lab, Kaiserslautern, Germany and IIIT-Allahabad. He has published more than 15 journals in reputed journals. His area of research interests are next generation networks, future internet and cloud computing.



Dr. Manoj Kumar A.P obtained Ph.D. from NITK Surathkal. He has served MNC's including General Electric Jhon F Welch Technological Centre, Bangalore, AVL Gurgaon, and Geneva Finepunch enclosures Ltd, Bangalore. He received Steam@212 award for the outstanding project "Execution of Design For Reliability plan for Turning gear in IWPP,G13 &D12" at GE, Bangalore. He has published more than 6 research publications.



Mr. Steven Lawrence Fernandes has submitted his Ph.D. thesis to Karunya University, Coimbatore. His areas of interest are pattern recognition and DSP & ARM implementation of computer vision algorithms. He has published 12 papers in peer-reviewed international Journals, 18 papers in IEEE and Springer International Conferences. He has received Young Scientist Award by Vision Group on Science and Technology, Government of Karnataka.



Dr. K K Poornesh obtained M.Tech. and a Ph.D. in Solid Mechanics & Manufacturing from INHA University. His area of specialization is Clean Energy Technologies & Hydrogen Fuel Cells. Experience: He has 3 years in Teaching, 1 year Industry and 5 years in Research Experience.



Dr. Jose Alex Mathew, Ph.D. in Digital Image Processing and System Development from Mangalore University He has 20 years Teaching, 3 years of Industry and 6 years of Research Experience. He has presented 5 National Journals Publications and Recieved Two International Awards for excellent paper and best Presentation.



Dr. Savitha M B Obtained Ph.D. from Mangalore University in 2007 and has 10 years of teaching and research experience. She has published 10 research publications in peer reviewed journals. Her area of interest is Molecular and Bio-molecular Spectroscopy, polymers and gels.



Dr. Jayarama A. has obtained Ph.D. from Mangalore University. He has got 15 years of research & teaching experience. His area of interest is Nonlinear Optics, flexible solar cells, thin film transistors, fuel cells and Energy Harvesters. He has published 28 research papers in refereed journals and has presented 40 papers in conferences. Currently 7 research scholars are pursuing Ph.D. program under his guidance.



Dr. Navin N. Bappalige Obtained Ph.D. from Mangalore University and was a member of Academic Council during 2014-15. He has also obtained M.S degree in Psychotherapy and Counselling From IPMS, Mumbai. He has 12 years of research and 19 years of teaching experience and has published 21 research papers.. His area of interest is nonlinear optics, multiferroics and Gas sensors such as alcohol sensors.



Dr. Niraj Joshi obtained Ph.D. from BARC and he worked as a research scientist at EMPA, & University of Basel in Switzerland for 7 years. He also worked at University of Karlsruhe - KIT, Germany. He has published 2 Book chapter, 21 publications in peer-reviewed International journals and 36 conferences (7 talks). His area of interest is fabrication of metallic/magnetic thin films and magnetic force microscopy.



Dr. Tenzin Pasang obtained Ph.D. from University of Mysore. His research areas are Positron Annihilation Spectroscopy, polymers, composites and nanotechnology. He has authored more than 16 peer reviewed research papers in international journals. He received Syikong award for PhD work in year 2015. Recently he was awarded Prestigious Endeavour Research Fellowship by Australian Government for the year 2016.



Dr. Ananthapadhma Achar obtained Ph.D. from Manipal University and has 27 years of experience in teaching, training and consultancy in Management. He has presented more than 30 research papers in national and international conferences. Currently, he is the director of department of business administration.



Dr. K. Vidyavathi obtained Ph.D. from Bangalore University and has 20 years of experience in research and 15 years of Postgraduate teaching. She has published 22 research papers in international and national journals. Currently she is a Ph.D guide in Management.



Mr. Bharath Bhushan S.N is pursuing PhD from VTU in the area of text-mining and information retrieval. He has published 6 papers in peer reviewed journals and presented 4 papers in international conferences. His areas of interest are image processing, pattern recognition and text-mining.

“Ranked **AA+**  
in  
Best Engineering College  
survey by Career 360”

## Research Publications in Last four Years

| Department             | 2012      | 2013      | 2014      | 2015       | Total      |
|------------------------|-----------|-----------|-----------|------------|------------|
| CS& Engineering        | 4         | 4         | 6         | 24         | 38         |
| E&C Engineering        | 8         | 10        | 22        | 64         | 104        |
| IS & Engineering       | 1         | 7         | 5         | 6          | 19         |
| Mechanical Engineering | 6         | 10        | 13        | 20         | 43         |
| Chemistry              | 5         | 3         | 6         | 3          | 17         |
| Mathematics            | 0         | 1         | 0         | 1          | 2          |
| Physics                | 15        | 3         | 15        | 28         | 61         |
| MBA                    | 4         | 12        | 20        | 20         | 56         |
| <b>Total</b>           | <b>43</b> | <b>40</b> | <b>87</b> | <b>166</b> | <b>340</b> |



“ Sahyadri Center for  
Social innovation  
and  
Entrepreneurship Cell ”



# Ongoing R&D Funded Projects

(Rupees in Lakhs)

| Sl.No | Funding Agency                                | Project Title  | Principal Investigator        | Co-Principal Investigator  | Sanctioned Amount |
|-------|---|--|-------------------------------|--|-------------------|
| 1     | AICTE, New Delhi                              | A Study on Lapsation of Life Insurance Policies in India,  | Dr. K. Vidyavathi             | -  | 4.46              |
| 2     | NPOL  | Body Phone-Aid-Concept-Deployment for Sonar Applications, being a Technology demonstrator project  | Prof. S Karkera               | -  | 9.85              |
| 3     | Kirlokskar Electricals                        | Study on Business process re-engineering   | Dr. A. P. Achar               | Mr. Karthik  | 5.00              |
| 4     | VGST  | Underground water detection, replenishment & mapping using arial infra-Red application to enhance the drinking water resources   | Mr. Ashwath Rao               | Mr. Bharath Bhushan  | 30.0              |
| 5     | VGST  | Creating the facility for advancing research in area of computer vision and allied areas - (Multi Stage detection System for violent activities in Crowd through Visual, gesture and Cognitive modeling) | Dr. Sarvesh Vishwakarma       | Dr. Abishek Vias, IIIT-A   | 20.0              |
| 6     | VGST  | Development of New technology for identification of most wanted criminals across age groups and age progression using composite sketches on a digital signal processor                                   | Mr. Steven Lawrence Fernandes | -  | 4.0               |
| 7     | VGST  | Studies on sorption properties of some selected Bio-Polymer Gels and Modified Bio-Polymer Gels for Water Treatment Applications  | Dr. Savitha M B               |  | 4.0               |
| 8     | INUP  | Design, Simulation, Fabrication and characterization of cantilever based in-vitro body energy harvester using piezoelectric composites   | Dr. Rathishchandra R Gatti    | Dr. Jayarama A Mrs. Rashmi K. R  | 1.5               |
| 9     | INUP PHASE II                                 | Fabrication and Evaluation of Prototype Ethanol Sensor Device Based on PLD grown BiFeO3 Thin Films   | Dr. Niraj Joshi               | Dr. Navin N Bappalige Mrs. Sandyashree R.                                | 1.5               |
| 10    | DST   | Design, Fabrication and Characterization of Whispering Gallery Mode (WGM) resonators in Planar Waveguides for Detection of Bio- Molecules Using Terahertz Radiation                                      | Dr. Niraj Joshi               | Prof. S. Prabhu, TIFR<br>Prof. A. Gopal, TIFR<br>Prof. S.Dattagupta,IITB | 53.0              |
| 11    | The Institution of Engineers (India), Kolkata | Developing a Novel Technique for Identification of victims/criminals of sexual exploitation on women and children  | Mr. Steven Lawrence Fernandes | Mrs. Ankitha Mrs. Naz Mufida Mrs. Sadana                                 | 0.8               |
| 12    | INUP  | Development of micro Methanol fuel cells with tunable conductance membranes for wearable devices   | Dr. Tenzin Pasang             | Dr. Jayarama A Ms. Swathi Rai  | 1.5               |

Project funding by Management to facilitate  
"Project based Learning"

## Project proposed to Government funding agencies

| Sl.No | Funding Agency                    | Project Title   | Principal Investigator     | Co-Principal Investigator  | Amount (Rupees in Lakhs) |
|-------|-----------------------------------|---|----------------------------|--|--------------------------|
| 1     | DST-Nano Mission                  | Design, Fabrication, Characterization and Development of Prototype WGM Plasmonic Resonators Coupled to Rectangular Waveguides for Detection of Biomolecules Using Terahertz Radiation in Bio-photonics  | Dr. Niraj Joshi            | Dr. Tenzin Pasang<br>Dr. Achantavenu Gopal, TIFR<br>Dr. Shriganesh Prabhu, TIFR<br>Dr. Richard Pinto | 264.0                    |
| 2     | DST-SERB EMR                      | Design, Fabrication and characterization of cantilever based in-vitro body energy harvester using piezoelectric composites  | Dr. JayaramaA.             | Dr. Rathishchandra R Gatti<br>Dr. Siddharth P Dutthguptha, IITB                                      | 68.2                     |
| 3.    | DST-Nano Mission                  | Development of prototype piezoelectric cantilever based body energy harvester devices for in-vitro applications   | Dr. Jayarama A.            | Dr. Rathishchandra R Gatti<br>Dr. Siddharth P Dutthguptha<br>Prof. Dr. Richard Pinto                 | 297.0                    |
| 4     | Ministry of Environment & Forests | Development of a process for extraction of omega 3 fatty acids from fish oil and production of biodiesel from waste fish oil  | Dr. Manjappa Sarathy,      | Dr. Manojkumar A. P.<br>Dr. Gangadhara Gowda<br>College of Fisheries, Mangalore                      | 60.0                     |
| 5     | DST-SERB EMR                      | Development of PLD Grown BiFeO <sub>3</sub> Thin Film Ethanol Sensor Devices  | Dr. Navin N Bappalige      | Dr. Siddharth P Dutthguptha, IITB<br>Dr. Richard Pinto   | 63.0                     |
| 6     | Ministry o Environment & Forests  | A low cost water filter unit for removal of arsenic and fluoride from drinking water in rural north Karnataka district  | Dr. S. Manjappa            | Dr. Gautham P. Jeppu<br>Dr. G. P. Desai<br>Ms. Rashmi K. N.<br>Dr. Vinod Kumar                       | 50.0                     |
| 7     | CPRI                              | Development of Smart Wireless Sensor for Monitoring Boilers in Thermal Power Plants and Design of a Suitable Thermally Insulating Enclosure for the Sensor.   | Dr. Rathishchandra R Gatti | Dr. Tenzin Pasang<br>Mr. Sharathchandra N<br>Dr. Dibakar Rakshit                                     | 17.5                     |
| 8     | DRDO                              | Design, Development and Characterization of Whispering Gallery Mode Resonator Devices Coupled to CW-Terahertz Waveguides for Detection of Explosives and Bio-molecules in Trace Quantity.   | Dr. Niraj Joshi            | Dr. Tenzin Pasang<br>Dr. Richard Pinto   | 58.0                     |
| 9     | TSDP-DST                          | Development of Lab-on-chip based on Electro-chemical micro-Cantilever Sensor for Bio/Chemical Sensing Applications  | Dr. Jayarama A             | Dr. Jayarama A<br>Dr. Savitha M.B<br>Dr. Richard Pinto<br>Dr. Siddhartha P. Duttgupta, IITB          | 153.0                    |
| 10    | TSDP-DST                          | Design, Fabrication, Characterization and Development of Whispering Gallery Mode (WGM) Plasmonic Resonator Devices Coupled to Waveguides for Detection of Biomolecules Using CW-Terahertz (THz)/optical Radiation in the field of Bio-photonics | Dr. Navin N. Bappalige     | Dr. Niraj Joshi<br>Dr. Richard Pinto<br>Prof. Dr. Achanta Venugopal, TIFR                            | 86.0                     |
| 11    | DST-SERB EMR                      | Development of micro methanol fuel cells with tunable conductance membranes for wearable/portable devices   | Dr. Savitha M.B            | Dr. Jayarama A.<br>Dr. Richard.Pinto<br>Prof. Dr. S.P. Dattagupta, IITB                              | 58.0                     |

\*14 project proposals were submitted to VGST, GoK for year 2015-2016 \* 3 project proposals were submitted to Institute of Engineers (IE)

| Industry                         | year    | Project supported   | Amount |
|----------------------------------|---------|---|--------|
| M/S MJR Builders Private Limited | 2014-15 | Fuzzy Logic Based Assessment of the Periodic Variation of Water Quality of Nethravathi River. | 0.5    |

# External Funded Student Projects

(Rupees in Lakhs)

| Sl.No | Funding Agency                                    | Project Year  | Project Name   | Name of Group Leader   | Name of Guide / Mentor                            | Project Fund |
|-------|---|---|--|--|---|--------------|
| 1     | KSCST<br>B'lore                                   | 2010-11   | Pseudo Eye   | Mr. Supreetha Rao<br>for the Blind   | Dr. Ravikumar                                     | 0.07         |
| 2     |   |   | Oceovisio  | Mr. Mohammed Musthaq   | Mr. Ashwath Rao                                   | 0.07         |
| 3     |   |   | Clinical<br>e-Incinerators   | Ms. Raksha   | Prof. Dayanand Shetty                             | 0.07         |
| 4     |   | 2011-12   | Machine Vision System<br>for Automatic Plant<br>Recognition and<br>Maintenance   | Ms. Vindhya. C   | Prof. Dayanand Shetty                             | 0.05         |
| 5     |   |   | Virtual basket   | Ms. Rishika Shetty   | Mr. Shruthi Ramdas                                | 0.04         |
| 6     |   | 2012-13   | Implementation of cloud<br>computing technology in<br>Indian railway   | Ms. Alsaba   | Ms. Chaithrika S. V.                              | 0.04         |
| 7     |   |   | Smart accident messenger   | Ms. Pooja  | Prof. Dayananda Shetty                            | 0.05         |
| 8     |   |   | Automatic gas<br>booking system  | Ms. Saliyan Kiran Gopal  | Prof. Dayananda Shetty                            | 0.07         |
| 9     |   |   | Design and Fabrication<br>of Dual<br>Purpose Spiral Wheel  | Mr. Karthik S. Damodaran   | Mr. Ashwath Kumar                                 | 0.06         |
| 10    |   |   | Performance Test of Four<br>Stroke Diesel Engine using<br>Biodiesel Extracted from<br>Cotton Seed Oil Blending<br>with Petroleum | Mr. Jimson John  | Mr. Raja Yateesh<br>Yadav                         | 0.11         |
| 11    |   | Maximizing of Lifetime of<br>Wireless Sensor Networks<br>using Virtual Backbone<br>Scheduling | Ms. Pallavi K  | Ms. Impa B H   | 0.035   |              |
| 12    | VGST  | TRIP<br>2012-13   | Low Cost Manual Operated<br>Climber Unit with remote<br>operated Robo Cutter &<br>Sprayer for high-rise<br>Areca Trees           | Mr. Asheesh V. Rao<br>Mr. Praveen K. P. Rao<br>Mr. Shrihari K<br>Mr. Siddharth S | Mr. Ashwath Kumar                                 | 0.40         |
| 13    | Institution of<br>Engineers<br>(India)<br>Kolkata | 2013-14   | Autonomous Navigation<br>of UAV  | Ms. Supreetha Rao  | Prof. Dayananda Shetty                            | 0.50         |
| 14    | M/S MJR<br>Builders<br>Private<br>Limited         | 2014-15   | Fuzzy Logic Based<br>Assessment of the Periodic<br>Variation of Water Quality<br>of Nethravathi River                            | Mr. Shelton Rainer Pinto<br>Ms. Vardhana M                                       | Dr. Abdul Kareem                                  | 0.50         |
| 15    | KSCST<br>B'lore                                   | 2015-2016   | Feasibility study and<br>prototype design for<br>bio-gas production in<br>an engineering college<br>from canteen food waste      | Mr. Shelton Rainer Pinto   | Dr. Gautham Jeppu<br>Ms Ramyashree<br>Mr. Umesh S | 0.12         |



## Student Project Support Scheme – SPSS

SPSS for students is to motivate the students to do the projects while they are studying and also to get the experience. In the first year it self motivate students to find out the social problems and try to find out the solutions. The each and every students group will get the seed money for their projects and among them selected projects will get the fund. SPSS is to convert the enormous reservoir of talent and creativity of students into projects. it has a major impact in improving the quality of technical education.

The main motto of the SPSS is students should have hands on experience, while they are are studying engineering and also make them industry ready, more than that they should develop the confidence and to get the idea to create their own startups.

The management has earmarked nearly one crore Rupee every year for student projects through the SPSS. It is made mandatory for each and every student; faculty members closely monitor each and every step of the project



## Sahyadri Science Talent Hunt – SSTH for PU/+2 Students

Sahyadri Science Talent Hunt - SSTH is to provide a platform for exhibiting innovative ideas and the under creative work of young talents pursuing their studies in Pre University colleges. To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science. This will instill curiosity towards science, engineering and latest technologies along with exchange of views and ideas. The eminent national and international scientists provide a platform for free interaction to young students and teachers in order to showcase the excitement of scientific works and investigations which will in turn motivate them to take up the study of science.

About 15,000 students from 200 colleges showcase nearly 1000 projects and models designed and developed by the students during the initial round. Later, the best among these are qualified for the final round, held at the Sahyadri campus where 2000 students participate along with 250 projects and models. They experience several brain storming sessions, meet angel investors, subject matter experts and branding gurus which will give them an experience of a lifetime to realize their long cherished dream into reality.

“ National Level Awards for Sahyadri students’  
Projects - IIT’s, IIIT’s and ISc ”







“Engineering College of the Year 2015  
across India by Higher Education Review”



Sahyadri campus holds Five lakh sqft. of built-up space, aesthetically constructed, in the courtyard style. Spacious classrooms with good ventilation, and audio-visual facility is provided. The multi-storey college library with the courtyard in the middle provides natural light and ventilation, creates a conducive study atmosphere for the students. The Campus boasts of seminar halls and auditorium, a beautifully designed hygienic food court and a well developed sports ground with athletic track; all in 30 acres of land and with nature's fascinating beauty.

**DREAM BIG  
AND REALIZE  
YOUR DREAMS...**



**SAHYADRI**  
**COLLEGE OF ENGINEERING & MANAGEMENT**  
(Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)  
Sahyadri Campus, Adyar, Mangaluru - 575 007



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