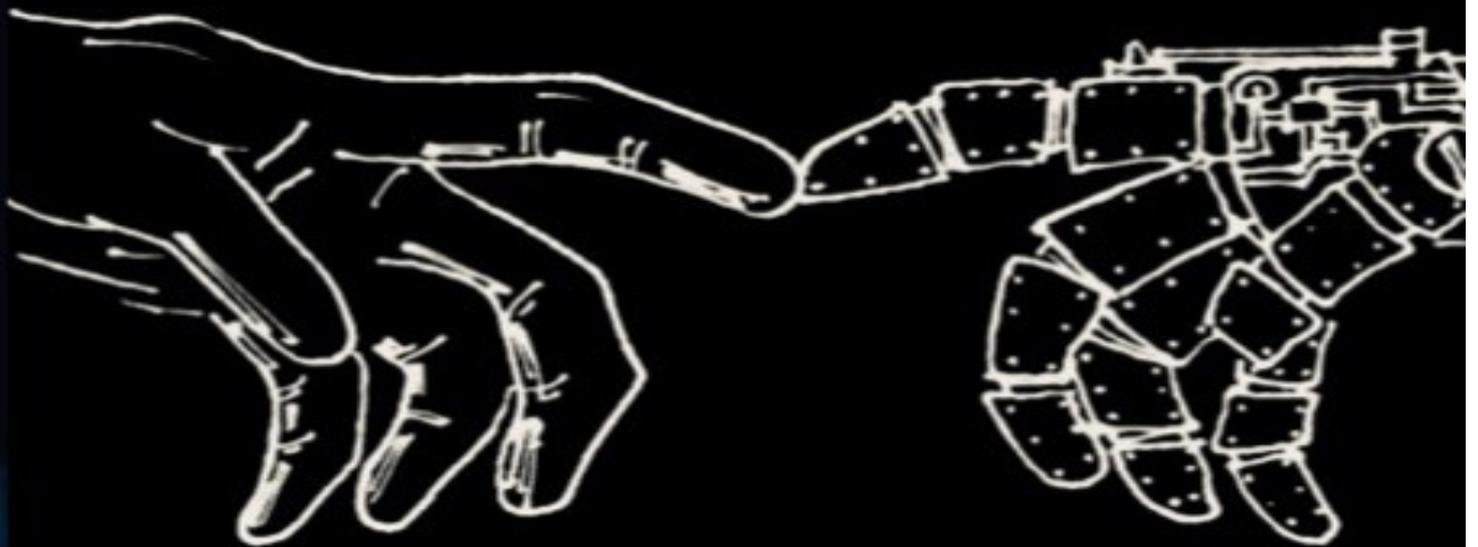


# DEPARTMENT OF BIOMEDICAL ENGINEERING



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**SSN**

## ABOUT SSN

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ALUMNI ACHIEVEMENTS

ALUMNI TALK

SSN Institutions, founded by Dr. Shiv Nadar, Chairman, HCL Technologies, stands out as a premier centre of higher learning with a mission of pursuing excellence in education and research. The institutions, with their diverse and dynamic community of students offer a distinctive combination of some of the finest graduate, undergraduate and research programs, accomplished faculty, world class facilities and a residential campus set on a sprawling 250 acres of sylvan surroundings.

SSN College of Engineering has been ranked 27th by the National Institutional Ranking Framework 2017 released by the Ministry of Human Resources and Development, among all engineering colleges in India. SSN is ranked number one private engineering institution in Teaching, Learning & Resources and 17th among all engineering institutions in the category. SSN is ranked number five among all private engineering institutions in India. SSN College of Engineering has also been accredited by the NAAC with an A+ grade and also by NBA for 5 consecutive years



## ABOUT THE FOUNDER

### EDITORIAL TEAM

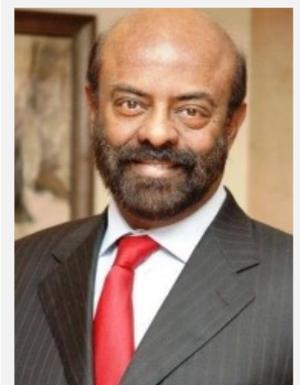
**Dr A KAVITA**, Head of the Department of Biomedical Engineering

**Ms M Dhanalakshmi**, Assistant Professor, Department of Biomedical Engineering

**T Akshara Reddy**, III year, Biomedical Engineering

**M Bhuvana Devi**, III year, Biomedical Engineering

SSN Institutions was found by Padma Bhushan Dr. Shiv Nadar, Chairman of HCL Technologies. In 1994, Nadar established what he believed was closest to his heart – the philanthropic Shiv Nadar Foundation and created its first initiative in Chennai, the SSN Institutions, that is a top ranked engineering college. Today the Foundation is a significant driver of social change and transformational education through its landmark institutions spanning the entire education spectrum from schools to universities. A young and a unique research led interdisciplinary



## ABOUT THE DEPARTMENT

The Department of Biomedical engineering reflects the interdisciplinary ideas and offers world class education and research opportunities to students. It was started in the year 2005 offering B.E degree in Biomedical Engineering. The department has been recognised as a research centre in 2011 and offers Ph.D. degree in Biomedical Engineering. It also offers Master of Engineering degree in Medical Electronics, since 2014.

### VISION

The Vision of Biomedical Department is to become a Centre of Excellence in biomedical engineering for the prosperity of the country, ensuring quality health service delivery, education and research.

### MISSION

- To educate students to understand the human body as an integrated system through quantitative engineering analysis and to use that understanding to design better therapeutic strategies, devices, and diagnostics
- To serve society by conducting research that develops quantitative linkages across scales in the human body and uses that development to build new tools to improve human health
- To catalyze interactions between biologists, physical scientists, and engineers to benefit medicine and human health
- To create enabling technologies through innovative and evidence based interventions and practices for the improvement of human health and health care

### FROM THE HOD'S DESK

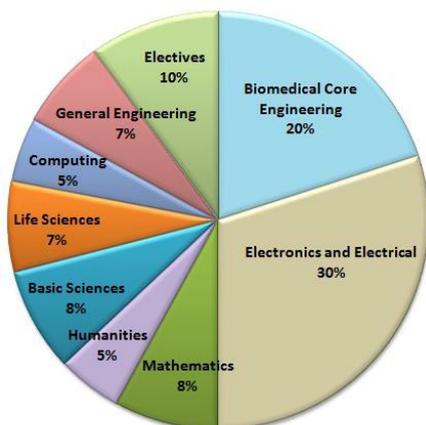


On behalf of the Department of Biomedical Engineering, it is my pleasure to invite you to our beautiful academic campus for conducting campus selection programmes for our students. It is my privilege to mention that this department was established in the year 2005 and over the years it has earned great recognition not only in India but all over the globe. The students of this department are occupying enviable positions in various institutions for higher studies and organizations at home and abroad. The department has earned fame not only for its excellent academic and extracurricular activities, but also for its research and development activities.

A rigorous academic regimen has equipped students with the professional and personal skills to excel in which-ever domain sector they choose to work. All the students recruited from Biomedical Department of SSNCE have proved to be great asset to all organizations they have joined. I am certain that the present graduates would maintain the same level of performance. I wish the on-campus recruitment programme a great success and shall always look forward for mutually beneficial relationship with the recruiters of our graduates.

## CURRICULUM

- Sensors and Measurements
- Object Oriented Programming and Data Structures
- Statistics, Transforms, Random Processes
- Anatomy and Human Physiology
- Analog and Digital ICs
- Pathology and Microbiology
- Analog and Digital Communication
- Bio Control Systems
- Diagnostic and Therapeutic Equipment
- Bio Materials and Artificial Organs
- Biomedical Instrumentation
- Microprocessor and Microcontroller
- Medical Physics & Radiological Equipment
- Biomechanics & Biofluids
- Digital Signal Processing & Image Processing
- Pattern Recognition and Neural Networks
- Medical Informatics
- Rehabilitation Engineering and Assist Devices
- Physiological Modelling
- Biometrics
- Soft Computing
- Computer Networks; Hardware and Interfacing



## INFRASTRUCTURE

The Department of Biomedical Engineering is equipped with:

- ◆ Bioelectronics Lab
- ◆ Biochemistry Lab
- ◆ Biomedical Instrumentation Lab
- ◆ Medical Software Lab
- ◆ Diagnostic and Therapeutic Lab
- ◆ Pathology and Microbiology Lab
- ◆ Data acquisition Lab
- ◆ Clinic
- ◆ Library

**HACKATHON 2018 (Hardware Edition)**

In order to work towards our Prime Minister’s vision, MHRD, All India Council for Technical Education (AICTE), Inter Institutional Inclusive Innovation Center (i4C), and Persistent Systems organized Smart India Hackathon 2018 which is the world’s largest nation building digital initiative to harness the creativity of bright young students for the development of our nation. This year’s initiative, for the first time, launched hardware edition for which 68 problem statements on various themes received from 27 central ministries and 17 state governments were posted on my gov platform. For these 68 problem statements, around 7500 ideas from 752+ technical institutes were submitted. Submitted ideas went through four rounds of selection. 300 independent experts from industry and institutions participated in selection process. After initial selection of ideas, students were asked to build a working prototype which had undergone further scrutinisation by veterans in various fields and finally 106 teams, each consisting of six team members under 11 themes were selected for Smart India Hackathon Hardware Edition 2018 Grand Finale, conducted from 18th to 22nd July at 10 nodal centres all over India. Three of 14 teams selected for SIHH2018 Grand Finale under the theme “Hardware Medical Devices”, held at Central Scientific Instruments Organisation, Chandigarh, were from our college, in which team illuminati was from Biomedical Department. Team Illuminati formed by Sreeja Prabakar, Ancy Carshia S, Arun Kumar K, Sucharitha S Prakash, Viswath Narayanan R, Swetha K.V proposed a project idea titled “To put forward an early non invasive approach for diagnosis of Retinal Ischaemia”. Five days of technical hackathon held at CSIO Chandigarh gave us a lot of exposure regarding medical product development. We were assigned three mentors, Mr. Mohammed Pota, Technology mentor, Mr. Prakash Khanzonde, Design mentor and Mr. Yogesh Borhade, entrepreneur to guide us in various aspects during five days at Chandigarh. We gained a great experience by working long hours for five days in designing and developing a final medical product which would be introduced into the market. We had got a great opportunity to interact with scientists, technologists and entrepreneurs and got insights on what the exact demand is in the market, what already exists and how our idea could be converted into a final product which would be launched into the market. We learnt various steps involved in product development such as CADD modelling, PCB layout, Soldering, Networking, Mobile App Development, 3D printing, mass production and Rapid Prototyping by associating with our mentors. There were three judging rounds before the final round where we presented our idea, need for our product in the market, our innovation, our each day work in developing our idea into a product, our future design model, further technology development, cost effectiveness of our model and business class model. Overall, it was a very educative and enjoyable journey!. We would also like to congratulate the winner and the runner up team from ECE and EEE department respectively.



## ACHIEVEMENTS

The department has seen avid participation in various Hackathons and has always been working towards the development of Healthcare and for the betterment of the society. Days pass by with the students working on projects from diverse domains and prospering like never before.



### National Research Development Corporation

R.Abirami, N.Megala and S.Thamizhamuthan "Mass Screening Device for Osteoarthritis" guided by Ms Delpha.J won the first prize with a cash award of Rs 50000 in collaboration with National Scientific and Industrial Research (NSIR), Ministry of Science and Technology, Government of India.



The Hindu published an article on a research project on Prosthetic Limb carried out by the faculty and the students of Biomedical Department. Dr. A. Kavitha, Professor and Head/BME, and Ms.R.Nithya, AP/BME, along with their students have developed a Prosthetic Limb that will help amputees regain normal movement more readily. The project was funded by RECYCL3D, a Canadian social enterprise, to provide 3D-printed prosthetic limbs to those in need.

### Design and Development of Bio signal Controlled Prosthetic Hand

Prosthesis is an artificial device to replace or augment a missing or impaired part of the body. The proposed prosthetic arm will be designed such that the initial control signal for it will be derived from EMG from the hand and Accelerometer sensors for controlling the movements of the motors in the arm. The prosthetic hand will be designed till wrist. The optimized prosthetic hand design will be 3D printed. The 3d model will be created using a modelling software. Analysis is done which includes feature extraction from EMG signals. Thus this project aims at delivering the design of lightweight assistive, low cost prosthetic hand up to wrist with load bearing capabilities controlled by the electrophysiological signals of the user. This is a granted consortium project (biomedical and mechanical departments) which is being funded primarily by the SSN college of engineering with an amount of 9 lakhs and is also funded by an external agency named R3D, Calgary, Canada with a sanctioned amount of 8 lakhs. Thus this project is sanctioned with a wholesome funding of 17 lakhs.

## SOCIALLY RELEVANT PROJECTS

### Cerebral Palsy Head Support

- ◆ Project by Vishwanath S and Praveen Kumar (2019)
- ◆ Under the guidance of Ms M Dhanalakshmi Assistant Professor, Department of Biomedical Engineering



### Orthopedic belt using sodium acetate crystals

- ◆ Project by Vishwanath S and Apurva (2019)
- ◆ Under the guidance of Dr R Subashini, Assistant Professor, Department of Biomedical Engineering

### Prosthetic limbs

- ◆ Project by Vaishali, M.E (2015)
- ◆ Under the guidance of Dr A Kavitha, Head of the Department of Biomedical Engineering and Ms R Nithya, Assistant Professor, Department of Biomedical Engineering



## SOCIALLY RELEVANT PROJECTS

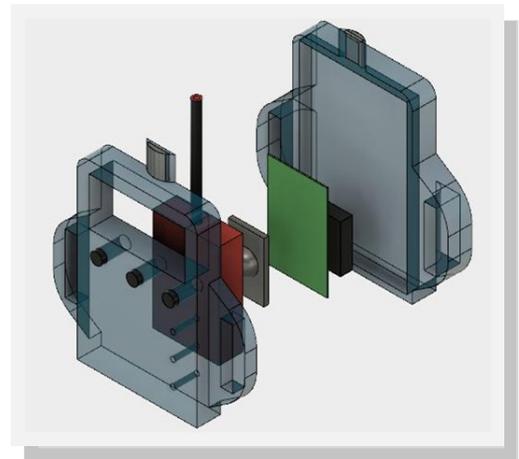


### Mass screening device for osteoarthritis

- ◆ Project by R Abirami, N Meghala and S Tamizhamudham, (2018)
- ◆ Under the guidance of Ms J Delpha, Assistant Professor, Department of Biomedical Engineering

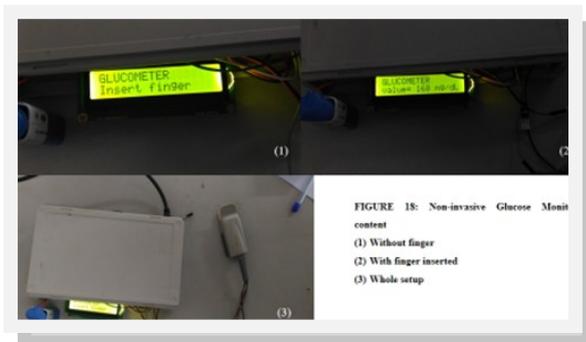
### Electronic Nose for Diagnosis of Tuberculosis

- ◆ Project by Manuj R, Divya Rajagopal and Meghna Murali (2019)
- ◆ Under the guidance of Ms R Nithya, Assistant Professor, Department of Biomedical Engineering



### Non invasive glucose measurement

- ◆ Project by Haripriya and Nagavarshini (2018)
- ◆ Under the guidance of Dr L Suganthi, Assistant Professor, Department of Biomedical Engineering



### Indian Sign language converter using sEMG

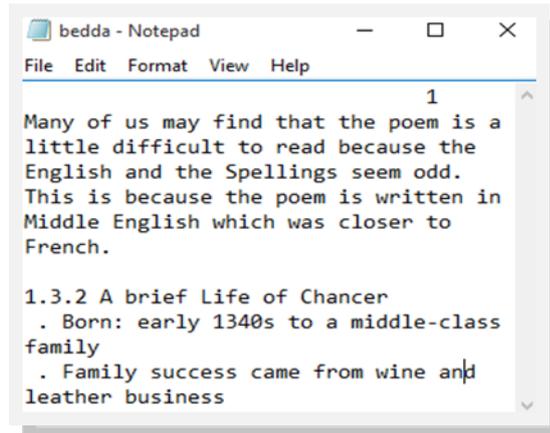
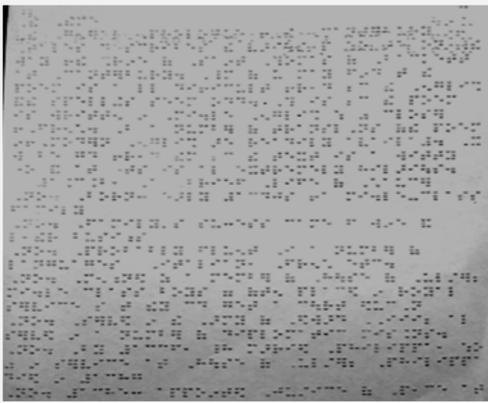
- ◆ Currently being worked on by B Sangeetha (2019)
- ◆ Under the guidance of Ms B Divya, Assistant Professor, Department of Biomedical Engineering



# SOCIALLY RELEVANT PROJECTS

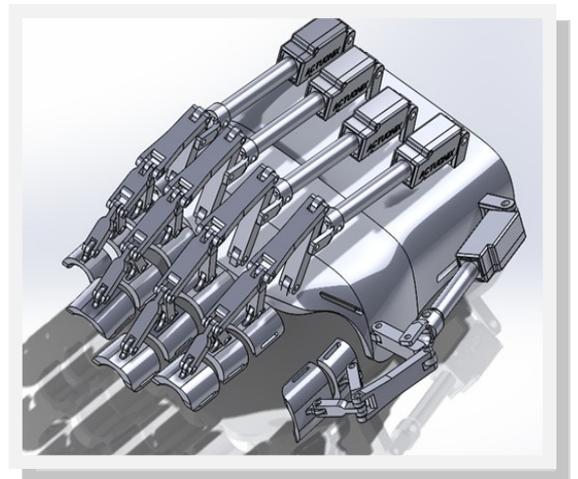
## Braille transliteration for visually impaired

- ◆ Project by Sugirtha, M.E (2015)
- ◆ Under the guidance of Ms M Dhanalakshmi, Assistant Professor, Department of Biomedical Engineering



## Exoskeleton

- ◆ Project by Rathi Adharshi, Shuruthi Sree.R and Santhana Lakshmi.A (2018)
- ◆ Under the guidance of Dr A Kavitha, Head of the Department of Biomedical Engineering



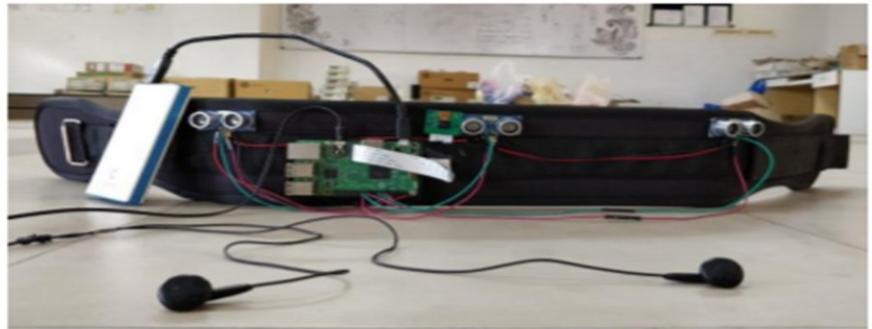
## Low cost dialysis machine

- ◆ Project by Surya Prakash, R Gopichandran and M Vaibhav (2017)
- ◆ Under the guidance of Dr V Mahesh, Associate Professor, Department of Biomedical Engineering

## SOCIALLY RELEVANT PROJECTS

### Outdoor Obstacle Detection Module to Assist Visually Challenged

- ◆ Project by the Gayathri Devi, Anuradha V and Meena Nisha, IV year, BME (2018)
- ◆ Under the guidance of Ms M Dhanalakshmi, Assistant Professor, Department of Biomedical Engineering

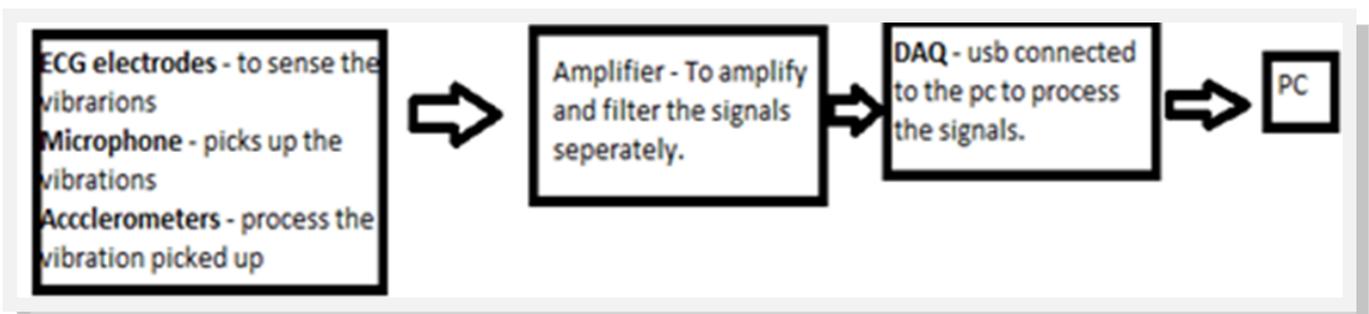


### Virtual Reality for ASD

- ◆ Project initially handled by Deepika and team (2014) and currently being handled by Yaamini D and Vishwath Narayanan (2019)
- ◆ Under the guidance of Dr A Kavitha, Head of the Department of Biomedical Engineering

### Non invasive JVP measurement

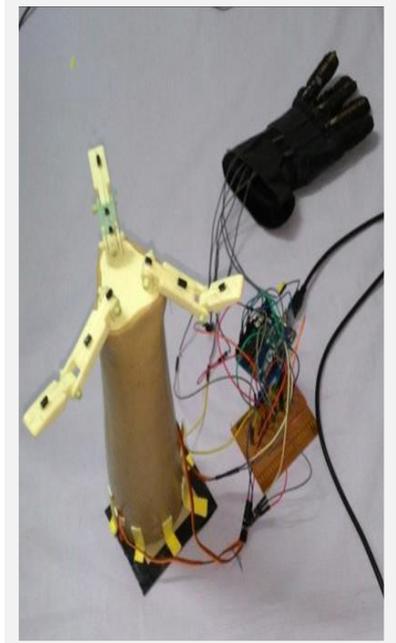
- ◆ Project by Kavya Vijaya Kumar, and S Suhashine , III year, BME
- ◆ Under the guidance of Dr S Bagyaraj, Associate Professor, Department of Biomedical Engineering



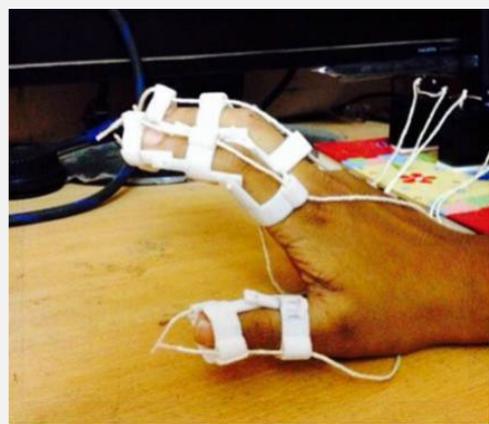
## INNOVATIVE DESIGN CONTRIBUTIONS TO HEALTHCARE



Assist device for visually impaired



Design and Development of Hand Gesture Controlled Robotic Upper Limb Prosthesis



Design of Orthotic Assistive Exoskeleton for Human Hand



Design of Exoskeleton for Lower Extremities



Design of Quasi-passive Orthotic Exoskeleton for Lower Extremity

The IEEE, Fourth International Conference on Biosignals, image processing and instrumentation, was organized by the Department of Biomedical Engineering and Centre for Healthcare technologies between 22nd and 24th March, 2017 which brought together scientists, engineers and researchers from various domains to interact and exchange ideas in the biomedical field. The organizers of the conference were Dr. A. Kavitha Professor and Head of the Department of BME, Dr. S. Bagyaraj Associate Professor/BME, Dr. V. Mahesh Associate Professor/BME and Ms. M. Dhanalakshmi Assistant Professor/BME.

Dr. Paul W-Brandt-Rauf, Distinguished professor and Dean, School of Biomedical Engineering, Drexel University, Philadelphia, USA graced the event as chief guest along with Dr. Sriram Balasubramanian, Professor, Drexel University and Dr. Dinesh Bhatia, Professor, North-Eastern Hill University, Shillong, the guests of honor.

The expert keynote speakers for the event, Dr. Sudhir Ganesan, Ortho spine Surgeon, Sri Ramachandra Medical Centre, Chennai, Mr. S. Nagarajan, Scientist-D, DEBEL (DRDO), Bangalore, Dr. Dinesh Bhatia, Professor, North-Eastern Hill University, Shillong, Dr. G. Saraswathy, Scientist, CLRI, Chennai, Dr. Minimol, Professor, Govt. Model engineering college, Cochin and Dr. C. J. Ravishankar, Managing director, Sagitec healthcare and life sciences invited talks on wide range of topics.

Research papers were received from diverse areas such as Physiological Modeling, Medical Imaging, Medical Robotics, Biomechanics, Biomedical Instrumentation and Nano-materials and post rigorous review process, of the many, selected 29 papers were presented at the Conference.



# ACADEMIC COLLABORATIONS

3-Day  
Short Course on  
**BIOMECHANICS**



Offered by Experts from :  
Drexel University, USA and Nanyang Technological University, Singapore

Jointly Organised by :  
Department of Biomedical & Mechanical Engineering,  
SSN College of Engineering

DATE : 19 - 21 March 2018

VENUE : SSN College of Engineering, Chennai, India

The 3 day International Short Course on Bio-mechanics sponsored by DRDO was organised, between the 19th– 21st March, 2018 by the Department of Biomedical and Mechanical Engineering. 83 participants had enrolled for the course. Some of the experts present were Dr Sriram Balasubramanian, Drexel University, USA

Dr Paul Brandt-Rauf, Dean, Drexel University, USA, Dr Teo Ee Chon, Associate Professor, School of Mechanical and Aerospace Engineering, Nanyang Technological University (NTU), Singapore

Dr G Sudhir, Spine Surgeon, SRMC

Dr Dinesh Bhatia, Associate Professor and Head /BME, North Eastern Hill University, Shillong

The program was coordinated by Dr A Kavitha (Head of the Department of Biomedical Engineering),

Dr M S Alphin (Associate Professor, Department of Mechanical Engineering) and

Dr S Bagyaraj (Associate Professor, Department of Biomedical Engineering)



**DR. TEO EE CHON,**  
PROF. NTU, SINGAPORE



**DR. SRIRAM BALASUBRAMANIAN**  
PROF, DREXEL UNIVERSITY, USA



## SPORTS

SSN College of Engineering organized the **19th Annual Sports day** on *29th March 2018* at its International Football stadium. Shri. Raman Vijayan, Former Indian Footballer was the chief guest for the function. The 2nd year girls and the 2nd year boys won the Overall Games Championship and the Overall Athletics Championship captained by C Kezia Sharon and R P Subramanian of 2nd year respectively.

**C Kezia Sharon** (III year) has represented Anna University in the All India Inter University Table Tennis tournament held at Solan, Himachal Pradesh. Not only has she represented Anna University for the last 3 years, She was also a part of the team that won the Anna university Inter zonal tournament consecutively for the past two years. A silver medalist in the South Zone Inter University tournament held at Kongu Nadu college, she has also won various accolades in different National level Inter college tournaments including those conducted by KL University, Vijayawada, GEC FEST by Gudlavaleru college of engineering, Andhra Pradesh, PSG Tech, Sastra University, MOP, IIT Madras and our own Sports Fest The SSN Trophy.

**Aniruddh Balaji** (IV year) was part of the table tennis team which won Breeze 2018 conducted by SNC Noida, Spree 2018 conducted by BITS Goa, and also part of the team Anna University Inter zonal tournament.

**Anjana K R** (IV year) was part of the tennis team which won the Anna University South zone and All india for the third time.

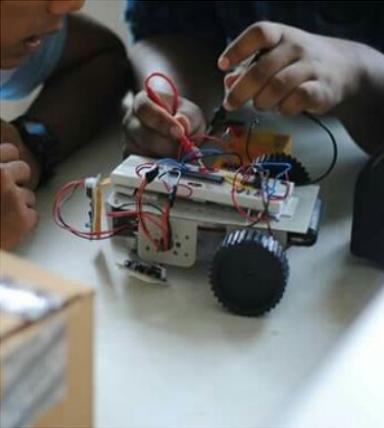
They placed fourth in as part of Anna University south and were quarter finalists as part of All India. They won the Anna University Inter zonal tournament consecutively twice. They placed first in Tamil Nadu Inter University tournament, winners in VNRVIJET doubles and SASTRA singles. She was also awarded a cash prize of Rs 10,000/-



**R P Subramanian** (III year) represented the college in the Anna University Inter zonal Chess tournament and came 4th. He was a part of the Senior SN team that played the Tamil Nadu state level Chess tournament and came 5th. He has participated in various under 25 state level chess tournaments. He has represented the college in numerous national level Inter college Chess tournaments including those conducted by KL University, IIT Madras, and Loyola.



## TECHNICAL ACTIVITIES



## INVENTE

This is the National level Tech fest organised by the SSN College of Engineering. With the caption 'IMAGINATION UNLIMITED', all the eight departments forged camaraderie for the second time to instill life into INVENTE 2.0, the college's National level Tech-Fest. Invente witnessed conduction of myriad of events and was a concoction of fun and entertainment. Nail biting events like Scintelligence, Biogonize and Brainiacs were conducted as part of our Department's SYNAPSE.

## VIDHAAN

This is an Intra college Symposium organised by the Department of Biomedical Engineering , a one day event held on the of August, with the students of all years coming together and putting up a show of Technical and Non Technical events with a partial Biomedical background for students of the various years and departments of the college.



### INSTINCTS

This is the cultural fest of the college, a three day extravaganza of fun and froly in the month of March. The event has varying themes every year and all the students come together as volunteers, organisers and participants as well. This is one of the biggest Cultural Fests happening in colleges all over India! The theme for the 13th version in March 2018, was ‘Around the World’ and for the 14th version during March 2019, was ‘Relive the 90’s!’



### OTHER ACTIVITIES

Apart from organising the various events, the students of the department are part of various clubs of the college including the Youth Red Cross (YRC), National Service Scheme (NSS), SSN Music Club, Dance club (N2K), English Literary Club,, Entrepreneurship Development Cell Tamil Saral Mandram, Classical Dance Club, SSN Photography club and So on.



S NO	FACULTY IN-CHARGE	STUDENTS	TITLE OF THE PROJECT	AMOUNT
1.	Dr. A. Kavitha Ms. S. Vidhusha	R. Viswath Narayanan(III Year) D. Yaamini (III Year)	Development of VR environment for autistic children	0.25L
2.	Dr. L. Suganthi Ms. B. Divya	G. Praveen Kumar (III Year) R. Asha (III Year) B. Sangeetha (III Year) S. Om Prakash (III Year)	Six-lead EGG procurement belt for gastric oddities	0.23L
3.	Dr. R. Subashini	[. Viswanath (III Year) S. Apurva (III Year)]	Orthopedic belt using sodium acetate crystals	0.20L
4.	Dr. S. Bagyaraj	V.K. Kavya (II Year) Suhashine Sukumar (II Year)	Jugular venous pressure measuring device	0.20L
5.	Ms. M. Dhanalakshmi	R. Abarna (III Year) M. Kirthana (III Year)	Ultrasonic belt with voice playback for visually challenged	0.20L
6.	Dr. S. Arun Karthick	R.P. Subramanian (II Year) R. Yohanya (II Year) S. Sathis Kumar (II Year)	Biocompatibility of astaxanthin on the structural, optical, antimicrobial and anti-cancer properties of ZnO and CeO <sub>2</sub> nanoparticles prepared by green method	0.20L
7.	Dr. R. Subashini Ms. K. Nirmala	S.Ishaa Samyuktha (II Year) T. Akshara Reddy (II Year)	An automated pre transfusion test based on image processing	0.15L
8.	Dr. S. Bagyaraj	[K. Arun Kumar (III Year) P.G. Pavithran (III Year)]	Development and testing of command prompt assist device for locked in syndrome patients	0.25L
9.	Dr. J. Vijay	K.R. Anjana (III Year) K. Anuharshini (III Year) M. Sivaranjani (III Year) M. Sowmiya (III Year)	An indigenous pulse diagnosis system for siddha medicine	0.15L

## INTERNALLY FUNDED PROJECTS (2016– 2017)

S NO	FACULTY IN-CHARGE	STUDENTS	TITLE OF THE PROJECT	AMOUNT
10.	Dr.V.Mahesh	Abinaya-III Yearr, Deepika- IIIyear, Kertana - III Year	Attention enhancement system using VR for adhd patients	0.13L
11.	Dr. Sachin GS	S. Abinaya, - III year N. Divya Raghavi, - III year S. Manasvi, S. - III year Pushpika - III year	Temperature measurement for hypoglycemic condition	0.18L
12.	Dr. R. Subashini	N. Abinaya, - III year	Investigation and designing of dielectric resonator antenna	0.25L
13.	Mrs. Dhanalakshmi.M	S. Viswanath (II-Year) G. Praveen Kumar (II-Year)]	External aid for amyotrophic lateral sclerosis (ALS) patients.	0.25L
14.	Ms. Nithya.R	Rathi Adarshi.R (IIIYear), Shuruthi Sree.R (III Year) Santhana Lakshmi.A(III Year) Jerome Jayakar.S.A (II Year)	Development Of Lower Ex-tremity Exoskeleton	0.18L
15.	Ms. Nithya.R	R Divya(II Year), K T Meghna Murali,(II Year) K Manuj(II Year)	Development of Electronic Nose for Diagnosis of Tuberculosis	0.25L
16.	Mrs. Delpha.J Mrs. Divya B	M.Annamalai (III year) K. Deepa (III year) A.Dhanuja (III year)	Indian Sign language converter using sEMG	0.25L
17.	Dr.V.Mahesh	S.Bhargavi (III year) R. Haripriya (III year) V. Sandhya (III year)	EOG controlled motorized wheelchair for the disabled	0.25L

# PATENTED PROJECTS



Dr Pravin Kumar and Saravana Prakash. S – final year have filled a patent titled “Multi-stance smartphone support for microscope”

INTELLECTUAL PROPERTY INDIA  
PATENTS | DESIGNS | TRADE MARKS | GEOGRAPHICAL INDICATIONS

GOVERNMENT OF INDIA

Controller General of Patents, Designs and Trademark  
Department of Industrial Policy and Promotion  
Ministry of Commerce and Industries

Welcome to IPAIRS Version 2.0

Granted Patents | Published Applications | **Application Status** | Agent Register | Patent Registrar

Detail

APPLICATION NUMBER	6299/CHE/2015
APPLICANT NAME	SRI SIVASUBRAMANIYA NADAR (SSN) COLLEGE OF ENGINEERING
DATE OF FILING	24/11/2015 10:43:57
PRIORITY DATE	NA
TITLE OF INVENTION	MULTI-STANCE SMARTPHONE SUPPORT FOR MICROSCOPE
PUBLICATION DATE (I/S 11A)	25/03/2016

Application Status

Request For Examination Date	24/11/2015 10:43:59
Status	Application Awaiting Examination

View | Track Report | View Complete Specification | View E-register | View Examination Reports | Orders/Decisions | View Documents

PATENT OFFICE  
INTELLECTUAL PROPERTY BUILDING  
G.S.T. Road, Guindy, Chennai-600032  
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E-mail : Chennai-ipatent@nic.in  
Web Site : www.ipindia.gov.in

CHALLAN : TR-5  
DOCKET NO :21295

To,  
THE PRINCIPAL  
SRI SIVASUBRAMANIYA NADAR COLLEGE OF ENGINEERING, OLD MAHALIPURAM ROAD, KALAVAKKAM,  
TAMIL NADU - 603 110. dhanalakshimim@ssn.edu.in

INTELLECTUAL PROPERTY INDIA  
MINISTRY OF COMMERCE AND PROMOTION  
GOVERNMENT OF INDIA

Date/Time : 21/03/2018 03:03:01

Agent Number:

Sr. No.	CBR No.	Reference Number /Application Type	Application Number	Title/Remarks	Amount Paid
1	7819	ORDINARY APPLICATION	201841010368	AN EXTERNAL AID FOR AMYOTROPHIC LATERAL SCLEROSIS PATIENTS	8800
2		E-2/866/2018-CHE	201841010368	Form2	0
3		E-3/7013/2018-CHE	201841010368	Form3	0
4		E-5/447/2018-CHE	201841010368	Form5	0
<b>Total :</b>					<b>8800</b>

Received a sum of Rs. 8800 (Rupees Eight Thousand Eight Hundred only) through

Payment Mode	Bank Name	Cheque/Draft Number	Cheque/Draft Date	Amount in Rs
Cash	---	---	---	8800

Note: This is electronically generated receipt hence no signature required.



Ms. M. Dhanalakshmi M.E, Viswanath.S, and Praveen kumar.G have filled a patent titled “ AN EXTERNAL AID FOR AMYOTROPHIC LATERAL SCLEROSIS ”



Dr.Subashini.R, Viswanath.S and Apurva.S have applied a patent titled “ ORTHOPAEDIC BELT USING SODIUM CRYSTALS”

FORM 3  
THE PATENTS ACT, 1970  
(39 of 1970)  
&  
The Patents Rules, 2003  
STATEMENT AND UNDERTAKING UNDER SECTION 8  
(see section 8, rule 12)

1. Name of the Applicants

We, Sri Sivasubramaniya Nadar College of Engineering, Indian Organization having our communication address at, OMR, Kalavakkam, Tamil Nadu – 603110, India hereby declare

2. Name, address and Nationality of Joint applicant

(i) that We have not made any application for the same/substantially the same invention outside India.

Name of the Country	Date of Application	Application No.	Status of the Application	Date of Publication	Date of Grant
NIL					

Dated this 6<sup>th</sup> day of August 2018

S. Sarini  
For Sri Sivasubramaniya Nadar College of Engineering

To,  
The Controller of Patents  
The Patent Office, Chennai.

## MOUs



## HIGHER STUDIES

### USA



### SINGAPORE



### AUSTIN

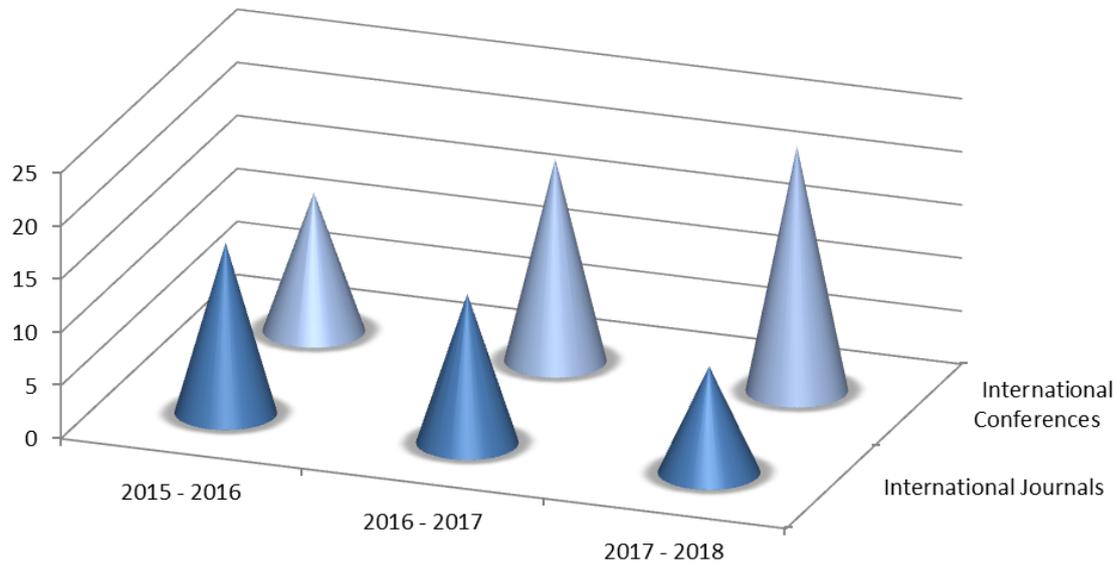


### EUROPE



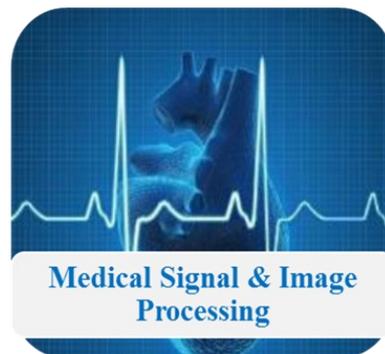
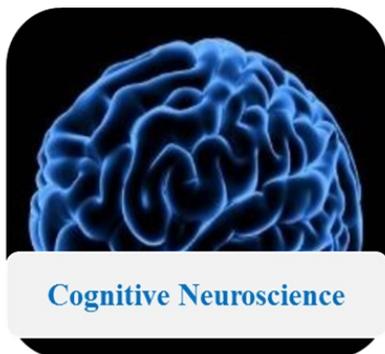
## PUBLICATIONS

### JOURNAL PUBLICATIONS

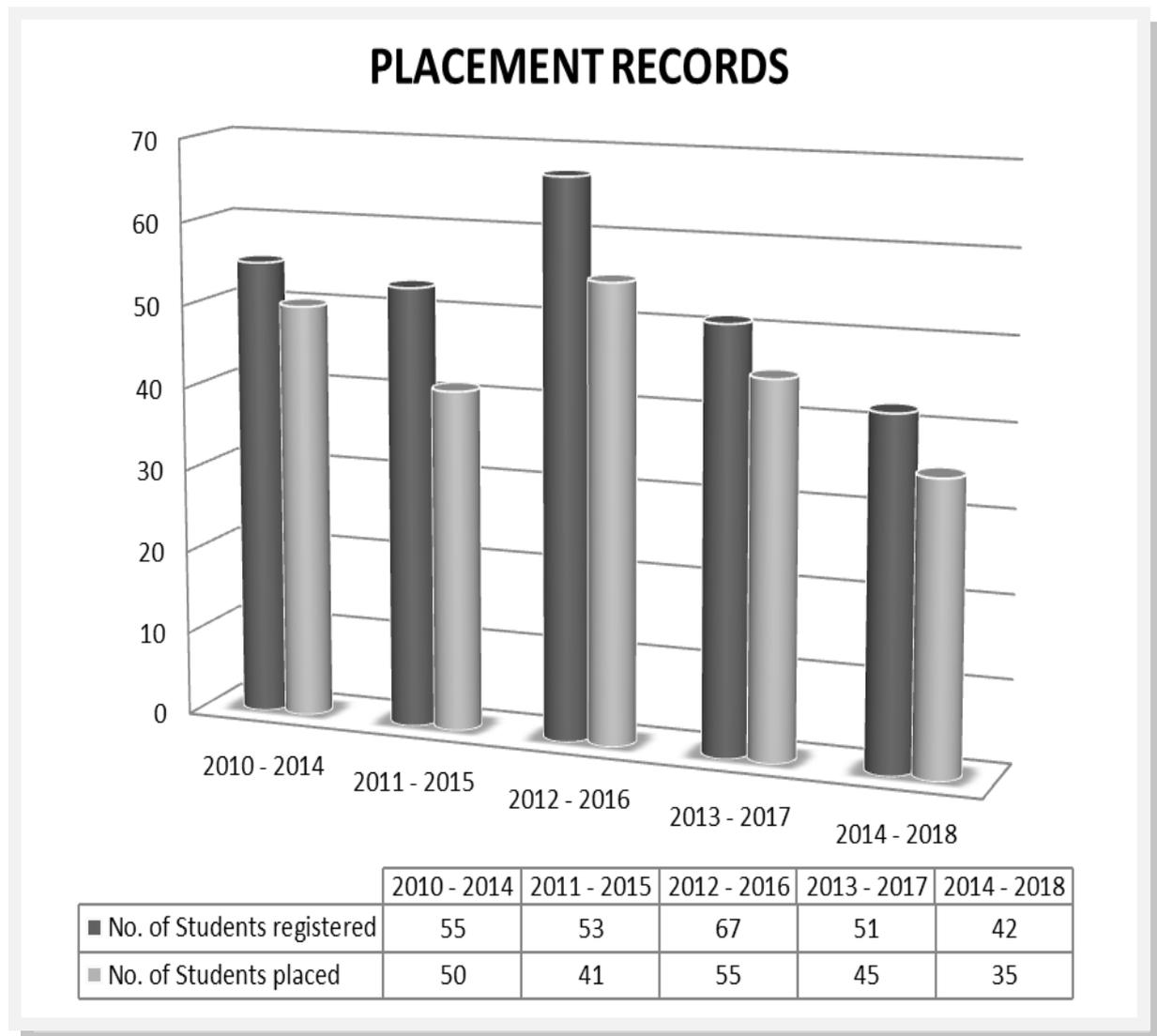


	2015 - 2016	2016 - 2017	2017 - 2018
International Journals	16	14	10
International Conferences	13	19	23

## RESEARCH GROUPS



## PLACEMENTS AND HIGHER STUDIES



**Students of SSN College of Engineering, have been placed into core companies like Philips and HCL Medical devices for nearly 5 years now.**

## DISTINGUISHED ALUMNI AWARD



From the year 2018 SSN has instituted the Distinguished Alumnus Award which will be awarded to an alumni of SSN who has displayed significant achievements in his chosen profession and displayed commitment towards the mission of SSN. Sivakumar Palanisamy, co-founder of healthcare startup, Neolight in the United States was presented the distinguished alumni award SSN College of Engineering in Chennai. His startup as featured in the Forbes list of innovative startups in 2016. He has also invented a socially relevant product- Smart Walking Cane for visually challenged

My journey towards an interest in Biomedical Instrumentation incepted on the ground floor laboratory of our biomedical department. I thoroughly enjoyed my four years at SSN from 2007-2011 and graduated with an opportunity as an R&D engineer. Empathy and continuous support for students was in abundance from the faculty members and created the drive for students. It is the key factor that shaped my life as they supported through different facets of my life, even today. After experiencing science overseas, I am confident that SSN's Biomedical Department has an infrastructure designed to prepare opportunistic individuals with the amenities of world-class resources not limited to faculty members, laboratories, multi-dimensional research, exposure to modern technologies, industry support, recognition, and fun. I'm currently one of the founders of Neolight, a multi-million \$ enterprise manufacturing empathy driven medical products in the neonatal field located in USA.

Looking back seven years, our beloved Biomedical department reminds me of challenging and happy memories. I wish the best for everyone in all their endeavours and utilize the alumni group to experience continued support.

Best Regards,  
Sivakumar Palaniswamy  
Co-founder & CTO, Neolight LLC



## ALUMNI TALK

Hi Everyone,

The Department of BME in SSNCE has given me a lot of fruitful memories. Regarding my experiences, the department has shaped me from no one to what I am now. When I entered my second year I realized this field is different and thanks a lot to my evergreen mentor Dr. S. Pravin Kumar, who is my constant supporter, encourager and advisor till date. The department gave me a powerful tool called the 'IEEE EMBS' which helped me to network and communicate to relevant big shots. The department was behind me during three Internally funded projects and an institutional patent. Words cannot describe the benefits and experiences. I enjoyed working in the labs, the staffs and the lab assistants were helpful like staying extra time if I said I had to work. They surprised me with an award the 'Best student of the department 2016' during the annual meeting of Association of Biomedical Engineers which I will never forget forever. On the whole, I personally thank each and every single staff and student for such lovely memories. I will always remain grateful to BME SSNCE and I am happy to help my fellow juniors in future.



With sincere regards,  
Saravana Prakash Shanmugasundaram  
Student intern –Globalfoundries GmbH,  
Research Assistant– Leibniz Institute for

I would describe the Biomedical Development of SSN as exciting, dynamic and innovative. It has been a great contributor towards the development of my personality. By motivating and providing me opportunities to participating in various National Level Events and Innovation Challenges, I have established my leadership, time management and team skills and have also been able to advance these skills to whole new augment level which eventually inspired me to become successful entrepreneur.

The infrastructure of the department is one of the finest and is what stands out the most. Our HOD and faculties make the biomedical department what it is today. With an attitude of being ever ready to help, not only delivering classroom teachings, but also providing the students with real-time case studies and hands on industry experience with field project works, they are the pillars of the learning gained from this esteemed college and this is a treasure for our student's life.



I feel the best thing about being a student here is the number of additional opportunities that are available. I was initially attracted here by the department's reputation, and my career goals, but I realized the best thing about this department is having the freedom to think of an idea and test its practical application. I feel extremely lucky to be in an environment that allows me to conduct research on what interests me the most, so in all my time I have never felt bored.

To any new student coming to this department, I would say this: Throw yourself at every opportunity that comes your way, those opportunities can make all the difference between getting what you want and having to settle for what you get.

BEST WISHES,  
DEEPAK



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