DEPARTMENT
OF
INFORMATION
TECHNOLOGY
PRESENTS

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Half Yearly Issue

June '18

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INDEX

Autonomous Status to SSN College of Engineering

Eight institutions in the State, including one engineering college, have been granted autonomy by the University Grants Commission.
This includes Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Tamil Nadu affiliated to Anna University.

The autonomy is based on the scores the Institutions have been given by the National Assessment and Accreditation Council (NAAC).

The institutions can start new courses, off campus centers, skill development courses, research parks and new academic programmes. They can also hire foreign faculty, enroll foreign students, give incentive based emoluments to the faculty and enter academic collaborations and run open distance learning programmes.

IEEE 2nd International Conference on Computer, Communication, and Signal Processing (ICCCSP 2018)

The 2nd IEEE International Conference on Computer, Communication, and Signal Processing with a special focus on "Technology and Innovation for Smart Environment", was organized by the Department of Information Technology on February 22-23, 2018. The organizers of the conference were Dr. S. Mohanavalli, ASP, Dr. N. Sripriya, ASP, Dr. S. Poornima, ASP and Ms. Srividya, AP.

ICCCSP - 2018 organizing team received the kind consent from the International speaker Dr. Mohammed Faizal Ahmad Fauzi, Associate Professor, Faculty of Engineering, Multimedia University, Malaysia and the National Speakers Dr. Senthilnathan P, Vertical Head, Renault Nissan, Dr. Subramhanya Rao, AVP Technology, Cognizant Technology Solutions, Mr. Sathya Narayanan, General Manager, Ford Motor Co, Dr. M. S. Sricharan, Senior Consultant, Wipro Technologies, and Dr. Saravanan M, Principal Researcher, Ericsson Co., for sharing their expertise relevant to the theme of the conference.

"I'm strong because I know my weaknesses. I'm wise because I've been foolish. I laugh because I've known sadness."

The conference received 90 paper submissions from various countries like Bangladesh, China, and Sri Lanka and from various states like Kerala, Maharashtra, Andhra Pradesh, Karnataka etc. The ICCCSP review committee had accepted 54 submissions based on the reviewers' comments and the similarity check reports. We are happy to share that 41 participants showed keen interest in the conference and had registered for oral presentation.

"Once you've accepted your flaws no one can use them against you."

An interesting session hosted during the conference was the poster session where the students were invited to present their innovative ideas/demonstrate their projects relevant to the conference theme. 43 students participated in the event and two teams were selected by the panel comprising industry expert and academic experts for awarding cash prizes.

ICCCSP 2018 was well received and a grand success.

"Not everything that is faced can be changed, but nothing can be changed until it is faced."

-Lucille Ball

Organizers, ICCCSP 2018

Rank List for Anna University Examinations

SSN College Of Engineering has secured a total of **107** ranks across all the departments in the overall Anna University examinations.

Several students from the Department of Information Technology have achieved high ranks in the Anna University examinations conducted throughout the academic years.

The rank list of our department students is as follows:

Rank	Name
3	Vaikkunth M
15	Sri Vishnu K
18	Janani R
21	Srinidhi S
24	Jayashree C
28	Sophia Josephine Abraham
34	Shivani N
36	Pragalbha L
46	Priyadarsani S
47	Madhumitha R
50	Durga Harika M

"To think is easy. To act is hard. But the hardest thing in the world is to act in accordance with your thinking. "

- Johann von Goethe

VIVID 2018

CTS-sponsored National Level Project Competition VIVID 2018 was convened by Dr. T. Nagarajan, Prof. & Head, IT and coordinated by Dr. I. Joe Louis Paul, ASP, Dr. S. Sasirekha, ASP and Ms. R. Swathika, AP, for the students of B.E/B. Tech/M.E/M. Tech of IT , CSE and ECE from various institutions, to explore, enhance and exhibit their talents.

The event was conducted on three tracks, Track-I (IoT & Networking) at IT Seminar Hall, Track-II (Web/Android/Data Analytics) at IT Conference Hall and Track-III (Image/Video/Speech/AI/Machine Learning/Bio Informatics) at PG Lab. Around 50 teams (approximately 150 students) from different engineering colleges were called for oral presentations cum demo to explain their projects.

Panel Members

- Dr. R. Srinivasan, Prof., Dr. S. Chithra, ASP, Dr. N. Bhalaji, ASP and Mr. R. Vinob chander, AP, were the panel of judges for Track-I.

"The world breaks everyone, and afterward, some are strong at the broken places."

-Ernest Hemingway

- Dr. S. Karthika, ASP, Dr. S. Mohanavalli, ASP, Dr. K. R. Uthayan, ASP, were the panel of judges for Track-II.

- Dr. A. Shahina, Prof., Dr. T. Sree Sharmila, ASP, and Dr. V. Thanikachalam, ASP, were the panel of judges for Track-III.

Chief Guest

- Mr. Srikanth C, AVP, Life Sciences Practice, Global Delivery Partner, Cognizant was the chief guest for the valedictory function and distributed the cash awards to the prize winners.

Winner Details:

- **First Prize** - The project titled "Aayush - Ingestible Battery-Less Electronic Health Pill", presented by Nihal Konan U, Shamanth K L, Pujari Kiran Sai from Sir M Visvesvaraya Institute of Technology, Bengaluru (cash award of Rs.30, 000/-).

- **Second Prize I** - The project titled "Thwart Shoulder Sniffing in an ATM using Random Number Generation Algorithm", presented by Kanimozhi S, Kauvya Krishna Kumar, A. Haritha from Panimalar Institute of Technology, Chennai (cash award of Rs.7,500/-).

- **Second Prize II** - The project titled "Plantronic", presented by Monica Zavier, Sadiq Ahmed, Sirisha P from AMC Engineering College, Bengaluru (cash award of Rs.7, 500/-).

- **Third Prize** - The project titled "Voice Automated Cross-Platform PC Control and Home Automation using Google Assistant", presented by Vishnu Rudhva K S, Mohammed Kabir S, Mohammed Talha S from C. Abdul Hakeem College of Engineering and Technology, Vellore (cash award of Rs. 5,000/-).

- **Consolation Prize I** - The project titled "Patient Monitoring System", presented by Yoganathan P, Vignesh S, Vishal Raj A from St. Joseph's College of Engineering, Chennai (cash award of Rs. 2,000/-).

- **Consolation Prize II** - The project titled "HEX-VISION (An Extended Reality android application that makes tourism and shopping easier)", presented by Infant Sam Christian M, Smriti Porwal, Mahesh Sanjay Shedge from MNM Jain Engineering College, Chennai (cash award of Rs. 2, 000/-).

The Smart India Hackathon 2018

10 teams from B.Tech IT participated in the Smart India Hackathon competition conducted in the centres Guwahati, Kolkatta, Varanasi, Indore, Pune, Noida, Udaipur, Coimbatore and Chennai. Two teams (Guwahati and Indore) were shortlisted as finalists. The faculty members Dr. N. Sripriya, Ms. S. Uma Maheshwari, Mr. V. Arul Kumar, Mr. A. Sandanakaruppan, Ms. R. Swathika, Ms. N. Radha, Ms. Sasirekha accompanied the students as mentors.

"The power of imagination makes us infinite"

-John Muir

Hear it from the Participants

The Smart India Hackathon 2018 - An experience to cherish

As team Callistos, we submitted our proposal to the Council of Scientific and Industrial research illustrating our solution to their problem statement and were selected for the final round at the National Chemical Laboratory, Pune.

Our department assigned us two mentors - Mr. V. Arul Kumar, AP and an Alumni mentor Nijin Vinodan for the final feat.

Prep mode ON

As sophomores, we bubbled with an exploding but misty dictionary of new technical terms and concepts! We had a bad time trying to figure out the perfect tools and languages. However, as soon as our mentors were assigned, we became a team of not 6, but 8.

Our team leader Jacindha split us into two groups- the Server, taken up by Anvitha, Sowmika and Pranusha and the Front End taken up by Anto Silviya, Jacindha and me. I was also appointed the presentation manager for Callistos.

The App - Medistos

We decided to work on Ionic Framework, so Medistos could run on both, iOS and Android. We used JavaScript, HTML-CSS and Angular JS for the Front end and FireBase with Node JS for the Sever.

Most of these languages were new to us so, we all had to burn the midnight oil learning them, for our mentors were supportive but demanding.

The Grand Finale

After the inaugural, all set, we worked to give life to Medistos which would locate all the nearby pharmacies, but displayed only those

which had the medicine stock ready. We never concentrated on getting the generic alternates of the medicines as in the problem statement.

However, at our first review, our Ministry mentor stressed on the main idea of medicine substitutes. So we had to virtually plan an on-the-spot change of priorities and incorporate the feature in a very short span!

Arul Sir helped me with the slides and both the mentors coached me for presenting our idea. So, at 3 o'clock, in the 1st round of evaluation (20% of the final), well presented, we impressed our Ministry mentor who gave us some suggestions too.

The Zumba dance hour and Redbull hour were as exciting and refreshing as they sound! The 2nd round, with nearly 85% of the back end and 30% of the front end complete was another feather for the Callistos cap!

The Alumni Connect

Our Alumni mentor Nijin helped us with all the coding and design. Experienced with 7 Hackathons earlier, he shared his Mantras for Hackathons - 55% implementation and design, 45% presentation and marketing of our product and another 5% for attractive, cool features of the product.

The 3rd round, though a smooth glide, didn't fetch us into the power judging round for the top 10. However, our mentors encouraged us by reminding us that, for sophomores, Medistos was a real big thing! Team spirit instilled!

Thanks and kudos to Arul Kumar Sir, our alumni Nijin and Team Callistos for this Mini-Odyssey!

Well, this is just the trickle, the Avalanche is yet to come!

"Educating The Mind without educating the heart is no education at all"

- Aristotle
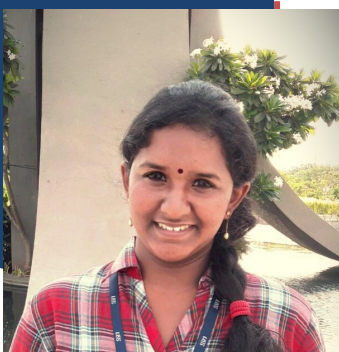
Jananie R.Balaji IT-A, II Year

Founder of WWW - at SSN

The 18th of May, 2018 was a rather very special day at SSN College of Engineering. Students and Faculty alike were extremely eager and excited for the exclusive talk by one of the foremost authorities in Computer Science domain, globally.

SSN College of Engineering was immensely graced by the presence of the Founder of the World Wide Web (WWW). He delivered a lecture to SSN Faculty, Students & selective Academic and Industry Guests at the Justice Pratap Singh Auditorium in the SSNCE Campus.

Sir Timothy John Berners-Lee, who is also a Turing Award Winner, is currently a Professor of Computer Science at Oxford University. He is the Director of the World Wide Web Consortium (W3C) which oversees the continued development of the web. He is also the founding chair at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL).

"A truly strong person does not need the approval of others any more than a lion needs the approval of sheep."

-Vernon Howard

During his talk, he spoke at length about the History of the Internet. He explained how he always believed that the web was more of a social creation, designed for social effect; rather than a technical one. The Auditorium was swarmed with enthusiastic educationalists, who thanked their stars for the amazing opportunity. He was truly a legendary speaker, who exhumed confidence and charisma. He had the audience hooked to his every word.

The event was an incredible success. It inspired and enlightened the Academic and Industrial Community of Tamil Nadu.

Sir Tim John Berners-Lee is a role model to all dreamers, teaching them to dream big, and work humbly to make it come true.

"Nothing is more beautiful than the smile that has struggled through the tears."

-Demi Lovato

Instincts'18 - Around the World in 3 Days

As for any SSNite , March 8 , 9 , 10 are the most awaited days of the year. From the inauguration to the Choreo and DJ night , they make up for the rest of the days we loathe college. This year was special. The crowd echoed and shouted as the Makkal Neetham Maiyam Thalaivar , alias Aandavar took the stage.

The Tamil Saaral Mandram inauguration happened with the presence of "Kavingar" Snehan , who pretty much tested the acoustics of the stage, along with our very own Mayilaatam, Silambattam, etc.

The usual bike stunts took our breaths away with their heart-stopping stunts , that would have thought were never possible. Chimayee and Diwakar soothed our ears with their hits, making us ask for more and more. Instincts is never complete without N2K smashing the dance floor.

"Don't wait until you reach your goal to be proud of yourself be proud of every step you take"

The inner child in us came out with fun events in arts, painting, crosswords, and much more!

The lanterns created a sense of warmth and happiness, almost recreating the scene from Tangled. Except our lanterns started of from the iconic Clock Tower.

 Pattimandram to Potpourri, everything was covered so as to let students express themselves in all ways, and so the wait begins for Instincts'19.
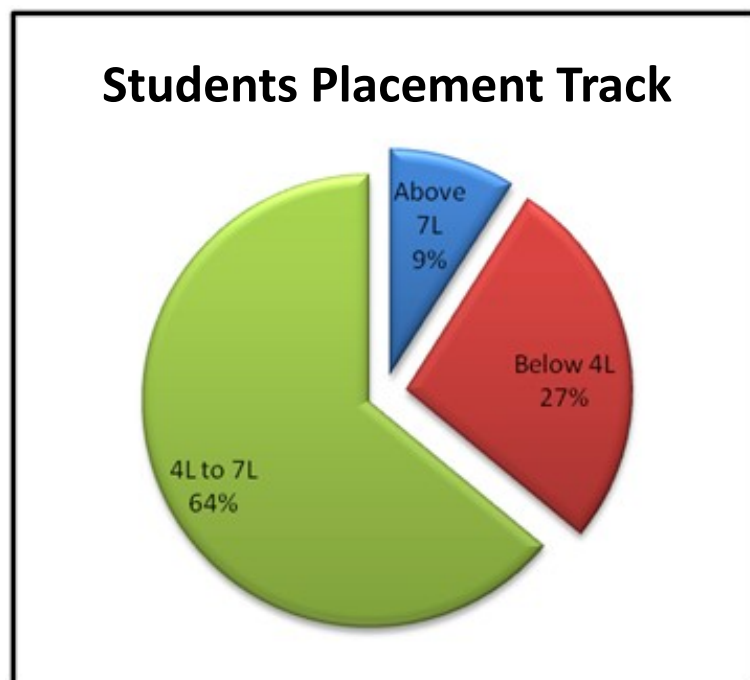
Placements Insights
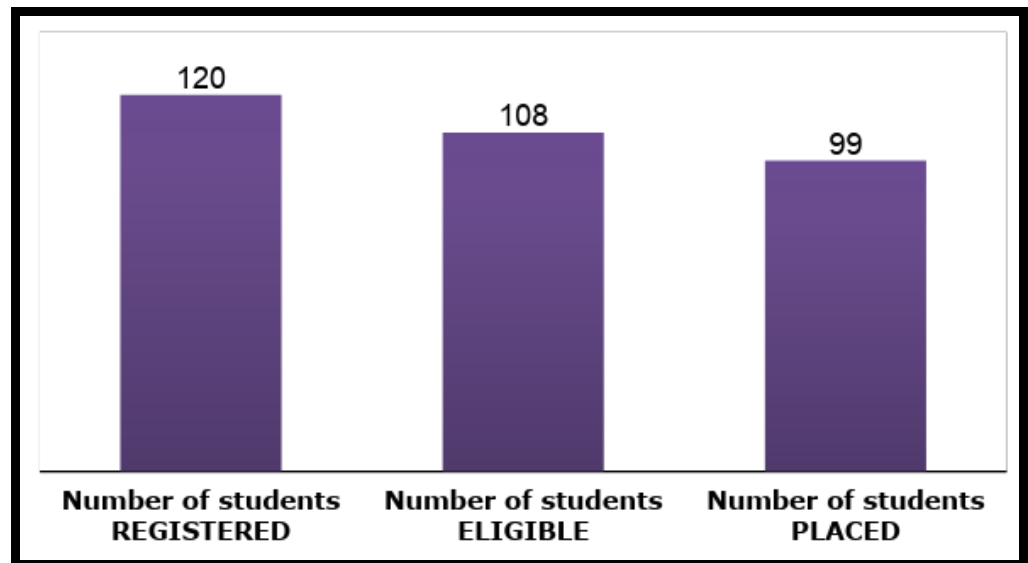
The competition for jobs in IT sector is increasing year by year. Yet the skills and knowledge of our department students has motivated as well as supported them to set their career on the right path. The graphs clearly show the fact that **92% of the students** who registered **were placed in reputed companies.**

Sanctioned Internally funded projects

1st year B.Tech & M.Tech Student Projects

TITLE : Steganography and anamorphic Illusions

Project Guide : R. SRINIVASAN

Students : BOBBYSTEFYCHRIS of 1st year

Budget : Rs.20000

TITLE : Smart workload assistance using voice command (ALPI)

Project Guide : Dr. N. BHALAJI

Student : RIMI CHOWDHURY of 1st year.

Budget : Rs.18000

TITLE : Alert system for car hacking

Project Guide : Dr. S. CHITHRA

Students : N. G. DEVANATHAN, MAYANK SINGH and N. RONAK AGARWAL of 1st year

Budget : Rs.10000

TITLE : Solar charger for mobile phones

Project Guide : Dr. S. CHITHRA

Students : S. NEVEIN KUMAR and L. GOURAV KUMAR of 1st year

Budget : Rs.7000

TITLE : Transforming "College" into "Smart College"- Exploring SIoT

Project Guide : Dr. S. KARTHIKA & Dr. N. BHALAJI

Students : M. PRUTHVI of 1st year

Budget : Rs.20000

TITLE : Interactive and entertaining Tamil website

Project Guide : Dr. P. VASUKI

Students : B. JAMAL MOHAMED, A. R. AKSHAY SOORIA & B. NAVEEN of 1st year

Budget : Rs.8000
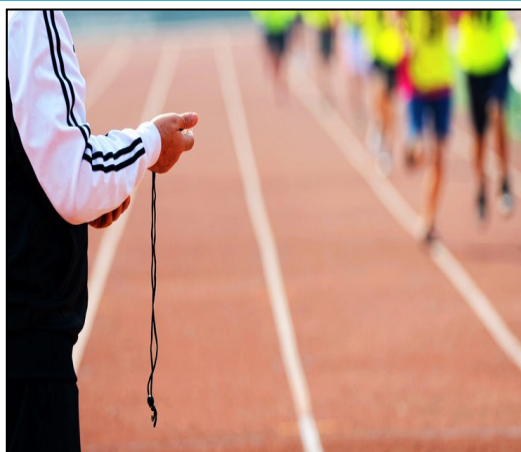
TITLE : iCoach: WIRELESS Alerting and monitoring of athletes

Project Guide : S. SASIREKHA & T. SHANMUGAPRIYA

Students : S. ABHINAV, HANSEL S. CHRISTOPHER, V. HARI PRASATH & ISHWARYA of 1st year

Budget : Rs.5000

Publications

- N. Bhalaji, M. V. Ranjith kumar (PT- Research Scholar) article titled "An Augmented approach for Pseudo-Free Groups in Smart Cyber-Physical System" accepted to be published in Cluster Computing Special issue "Future technology and applications for cloud IoT"

- Sundhara Kumar K.B, Krishna G , Bhalaji N , Chithra S Published article titled "BCI cinematics –A pre-release analyzer for movies using H 2 O deep learning platform" in Computer and Electrical Engineering, Elsevier (IF=1.570)

- S. Manisha, T. Sree Sharmila, published the paper titled "A two-level secure data hiding algorithm for video steganography" in Multimedia Systems and Signal Processing, Springer

- A. Beulah, T. Sree Sharmila, V. K. Pramod, published the paper titled "Disc bulge diagnostic model in axial lumbar MR images using intervertebral disc descriptor (IdD), in Multimedia Tools and Applications, Springer

- R. Geetha & S. Karthika, "Analysis of machine learning algorithm for identifying key players in covert networks" in Disaster advances, Vol 11(2), February 2018 (SJR=0.152)

- Ms. Srividya, AP, Dr. S. Mohanavalli, ASP, and Dr. N. Bhalaji, ASP, published a journal paper titled "Behavioral Modeling for Mental Health using Machine Learning Algorithms" in the Journal of Medical Systems. Vol 42:88, (IF=2.456).

Publications

- S. Karthika & S. Bose, "MutatedSocioAgentSim (MSAS): semisupervised modelling of multi-agent simulation to predict and detect the mutation in a camouflaged social network" in Turkish journal of electrical engineering and computer sciences, 26: 961-973, doi:10.3906/elk-1711-228 (IF=0.766)

- Joe Louis Paul, S. Sasirekha, D. Naveen Kumar D, P. S. Revanth, "Wireless Power Transmission (WPT) System for Mobile Charging", in the Proceedings of National Conference on Current Trends in Smart and Modernization Techniques (NCCSMT 2018) organized by Department of CSE & IT, Saveetha School of Engineering, Chennai on April 20, 2018.

- Ms. E. M. Malathy, AP, & Vijayalakshmi Muthuswamy published an article titled "State of Art: Vertical Handover Decision Schemes in Next-Generation Wireless Network in springer Journal of Communications and Information Network March (2018).

- Ms. E.M. Malathy, AP, presented a paper titled, "A Comparative Evaluation of QoS based Network Selection between TOPSIS and VIKOR" at Springer-International Conference on Innovative Computing and Communication (ICICC-2018) New Delhi.

- Ms. N. Radha, AP, has published the following papers in the Proceedings of the International Conference on Advancements in Computing and Technology (ICACT 2018) organized by St. Maris college, Chennai, India.

  ◇ N. Radha, E. M. Malathy, J. Jeyaaishwarya, "Automated gender recognition using ANFIS (BEST PAPER AWARD)"

  ◇ N. Radha, Nikita V, "ECA based control for Home Automation System"

  ◇ N. Radha, Neharika S, " Text to speech conversion of documents using concatenative speech synthesis"

Publications

- N. Radha, A. Shahina, A. Nayeemulla Khan, "Improving Recognition of Speech System using Multimodal Approach", in the proceedings of International Conference on Innovative Computing and Communication(ICICC-2018), Gurunanak Institute of management, New Delhi, India, May 5-6, 2018. (Springer Publication)

- The following papers were presented by final year B.Tech IT students in the National Conference on Current trends in Smart and Modernization Techniques – NCCSMT 2018, hosted by Department of CSE & IT, Saveetha School of Engineering, Chennai.

  ◊ S. Mohanavalli, S. Karthika, Srividya, N. Sandya, M. Pavithra, "Categorisation of Tweets using Ensemble Classification Methods".

  ◊ K.R. Uthayan, S. Mohanavalli, Srividya, B. Nivetha, Pradipta Chandra, "Optimised Feature Selection for Early Detection of Cancer".

  ◊ V. Ranjini, R. Soundarya, S. Karthika, S. Mohanavalli, Srividhya, "Identification of Trending Topics in Twitter".

External Proposal Submissions

- Dr. A. Shahina, Prof., has submitted a project proposal to Ministry of Electronics and Information Technology (MeitY) on the topic of Speech based aid for the visually challenged.

- Dr. S. Mohanavalli, ASP, as Co-PI, has submitted a project proposal to DST, NRDMS & NSDI Division on Geo Spatio-Temporal Image Analysis for Monitoring Unmanned Road Segments.

"Open your mind before your mouth"

Faculty Achievements

- **Dr. T. Sree Sharmila,** ASP was recognized for outstanding support of the SSN IEEE Student Branch as Student Branch Counselor for the year 2017 by IEEE Madras Section during Annual Meeting at Hotel Palmgrove, Nungambakkam.

- **Dr. T. Sree Sharmila**, ASP, organized a workshop on Image Processing under SSN IEEE Student Branch in the department of Information Technology, SSNCE.

- **Dr. T. Sree Sharmila**, ASP, organized a workshop on Web Development under SSN IEEE Student Branch in association with IEEE Computer Society in the department of Information Technology, SSNCE.

- **Mr. R. Vinob Chander**, AP, attended the HPE-USAM Business event on HCI and Nimble storage at Hotel Crown Plaza Adyar Gate Chennai.

- **Dr. N. Bhalaji**, ASP, chaired a session during a National Conference on Recent Advances in Science, Engineering and Management (NCRASEM-2018) held at Tagore Engineering College, Chennai.

- **Dr. S. Mohanavalli** and **Dr. S. Sasirekha** have been recognized as supervisor under the faculty of Information and Communication, Anna University.

- **Dr. S. Sasirekha** and **Mr. R. Vinob Chander** are responsible for the development, implementation and deployment of SSN-ERP.

- **Dr. S.Chithra** has authored the book titled "Bank of the Future, Minimise Technology Risk, Maximise Business Return" to be published by Wolters Kluwer (India) private Limited. (In Press)

Student Achievements

'Zhagaram' is a Tamil literary live program conducted by DD Podhigai specially for students and employees. The program mainly concentrates on Tamil literature, culture and lifestyle presented as interesting puzzles, games, impromptu acting and speech. There were two teams—Kurunji (from CEG, Anna University, Chennai) and Mullai from (SSN College of Engineering). A team of 6 members including R. Geetha and L.. K. Pavithra (Research Scholars from Department of Information Technology) participated in the live show on 10th Feb, 2018. They won the event with a total cash prize of 10,000 INR which was contributed to the Saaral Tamizh Mandram Tamizh Thiruvizha - 2018.

Student Achievements

- **Muthu Palaniyappan**, IV Year B.Tech. IT received '**The Best Ougoing Student**' of the department of Information Technology award given during the College Day function.

- The students of the Department of Information Technology participated in the **Sports Day Celebration** that took place at SSN College of Engineering, Kalavakkam. The students actively took part in the March Past event and several other events during the function.

- Students from our department took part in summer (2018) internships in the following companies:

Altius Technology Solution	AshGen Enterprises, Delhi
BeeBox Studios Pvt Ltd	DoodleBlue Innovations
Eg Innovations	Global Analytics
Gobikes	Goldman Sachs, Bangalore
IIM - Lucknow - Remote internship	IIT - Madras - Reseach Interns
Infokore, Bangalore	Kumolus India Pvt. Ltd
Mad Street Den Technologies	Microsoft, Hyderabad
Qmax Test Equipment	Ramco Systems
Renovite Technologies	Sigaram Technology
SLN Technolgies	Sports mechanics
Tata Consultancy Services Ltd.	Tournament OS
Zentropy Tech Pvt. Ltd.	Zoho Corporation

Student Achievements

Adeeb Tahir R and **Adithya R Ganesh**, (3rd year IT) under the guidance of Dr. S. Sasirekha, ASP, demonstrated the project titled "Quick Basket" in the 7th Project Innovation Contest 2018 Contest during 11-13 January 2018 (An sister concern activity of 14th ICDCIT 2018), organized by Kalinga Institute of Industrial Technology (Deemed to be University)

M.S. Vignesh, III Year B. Tech. IT 'A' student, under the guidance of Dr. I. Joe Louis Paul, ASP, has presented a project titled "Spotting a Person within a Given Range" in the Smart Project Contest held during the National Conference on Smart Solutions for Research in Energy, Agriculture and Challenges in Health Informatics organized by Department of Computer Science and Engineering, at SSN College of Engineering. His presentation was awarded the First Prize.

Industry Interaction

- Dr. S. Chithra and Dr. N. Bhalaji, ASP, visited National Institute of Wind Energy for Research Collaborations and Knowledge sharing on emerging trends

- Dr. R. Srinivasan, Dr. N. Bhalaji and Dr. S. Karthika, visited Cognizant Technology Solutions (R&D) office located at IIT Research Park for Research Collaborations and Knowledge sharing.

- Dr. Rao, Head Research and Development, CTS also visited the department on 9-2-2018 and had an active discussion in the research areas of Speech Technology, Image Processing, Quantum computing and adversial machine learning.

- Dr. Karthikeyan Vaiapuri, PhD, Scientist, TCS Research and Innovation Labs at Tata Consultancy Services had an interaction with the students and faculty of the IT department in the research area of Image Processing.

Awareness Tech Talk in IoT Career Path

T he event titled "AWARENESS TECH TALK IN IoT CAREER PATH" was conducted on 16th February 2018 at SSN College of Engineering. The event was organized by the faculty coordinator Dr. S. Karthika and Ms. Ranjini Vasu, Student's Chair WIE from the Department of Information Technology.

"You will see me struggle but you will never see me quit"

The event was focused on the booming career path paved by the IoT-Internet Of Things for now and future. This session was split into two parts. One focused on the technological stack of IoT and its recent advancements. The second was completely focused on the career evolution in IoT and the recent startups across the country. The audience were from diversely oriented streams like Information Technology, Computer Science Engineering Electrical and Electronic Engineering, Electronics and Communication Engineering.

The main focus of the event was to deliver the importance of the currently trending career for the future engineers. The former topic was covered by Mr. R. Vinob Chander, B.E., M.E., (Ph. D), Assistant Professor, Department of IT, SSN College of Engineering. He gave the audience insight about the human to human and human to computer interactions with examples along with the solutions to various problems using IoT. The career development session was covered by Dr. N. Bhalaji, Associate Professor, Department of Information Technology. The session was very beneficial to the students and the valedictory session included presenting mementos to the speakers. The response to the event was amazing during the feedback session.

"Change is hard at first ,Messy in the middle and gorgeous at the end"

IoT-Enabled Computer Vision and Analytics (ICVA 2018)

Computer vision, coupled with IP connectivity, advanced data analytics and artificial intelligence, will be catalysts for each other, giving rise to revolutionary leaps in Internet of Things (IoT) innovations. IoT enabled computer vision and analytical applications have found extensive use in environmental monitoring, smart cities, agriculture, security and surveillance, automotive, health care, entertainment, digitization and related domains. In this regard,

"It's okay to be scared. being scared means you are about to do something really really brave"

 A One-Day Workshop on "IoT-Enabled Computer Vision and Analytics (ICVA 2018)" was convened by Dr. T. Nagarajan, Prof. & Head, IT and coordinated by Dr. I. Joe Louis Paul, ASP, Dr. S. Sasirekha, ASP, and Ms. R. Swathika, AP, on March 02, 2018. Around 81 participants from different engineering colleges had participated in this workshop.

"Successful people never worry about what others are doing"

Topics Covered:

- 3D Visual Analytics

- Big data, Small Apps - Engineering AI Businesses on the Cloud

- Image Classification using Convolution Neural Networks

- Platform Choices and Design Methodologies for IoT-Enabled Computer Vision Systems

Resource Persons:

- Dr. Karthikeyan Vaiapury, Research Scientist, Machine Vision, Embedded Systems and Robotics Research Group, TCS Research & Innovation Labs, Tata Consultancy Services Ltd.

- Mr. Ramprakash Ramamoorthy, Member Leadership Staff, Zoho LabsMachine Learning, Zoho Corporation Ltd.

- Dr. A. Shahina, Professor, Department of IT, SSN College of Engineering.

- Dr. Swathi Gurumani, Vice President-Engineering, Inspirit IoT Inc.

Conclave on Cyber Security (CCS'18)

The event **'Conclave on Cyber Security (CCS 2018)'** was organized by Department of Information Technology, on Feb 27th and 28th 2018. The Organising Committee for CCS 2018 was headed by Dr. N. Bhalaji, Dr. S. Chithra and Dr. S. Karthika from the IT Department of SSN.

The event started with the talk by Mr. Ashok Kumar Mohan, RA, TIFAC CORE in Cyber Security, Amirtha University, Coimbatore. He focussed on Cyber Forensics and also talked about its various tools. It proved to be an eye-opener for the Cyber Security Team.

"The best thing about being a teacher is that it matters everyday"

Following this, **Mr. Pratibo, Comptia** presented his ideas as a talk, titled 'Busting the myths- Hacking vs Cyber security' & 'The Comptia Career Path'. He guided the participants on how to grow as a professional and base their career in the field. Further, he spoke about various Certification Courses available. Finishing for the first day was **Mr. Vinod Senthil from Infysec**, **Chennai** who gave a demonstration on 'Threat Management, Penetration Testing, and Cyber incident response'.

Day II of the Event was kickstarted by **Dr.Harish Ramani, from Internettechies Solutions Pvt. Ltd**. Dr. Harish Ramani, Senior Information Security Analyst, gave an inspiring lecture on 'Migration from No security to security', stressing on the different stages of importance being given to Security in the IT industry.

The next session was the 'Insight on Blockchain' given by **Dr. S. Chithra, Associate Professor, IT,** SSN College of Engineering. Blockchain is undeniably an ingenious invention, evolving into something greater, everyday. 'Insight on Blockchain', a very well presented talk, was indeed thoroughly enjoyed by the audience.

The dais was then taken over by **Ms. Mubeen Sulthana** who is a **Strategic IT Trainer & Process Coach**. She talked about the growing prevalence of Social Media in the lives of people, regardless of age. This session delicately touched upon the topics of Privacy, Security and the Cyber Risks present in Social Media.
The afternoon session was an open discussion on 'Data handling in Dark World' and 'Trending Technology in cyber security'.

Finally, the day concluded with the highly lauded demonstration of many brilliant projects on Cyber Security, in the Department of IT. This session, headed by Dr. N. Bhalaji and Dr. S. Karthika spoke volumes about the rich research culture of the Department in regard to Cyber Security. At the end of the event, the audience was heavily inspired and interested in the field of Cyber Security. The conclave was truly an incredible experience for every soul that attended it.

Workshop on Cloud Computing with AWS

"The two things in life you are in total control over are your attitude and your effort"

The One Day Workshop cum Hands-on on "Cloud Computing with *AWS* " was held on 24th January 2018 .The inauguration of the workshop was presided by Mr. Ramkumar Rathinam, Operations Manager, Monitoring tools infrastructure - HP, Chennai. He gave an overview of the new style of IT (Cloud, Mobility, Big Data, Automation etc.) with a video hands-on presentation. Approximately 120 students had participated from various engineering colleges.
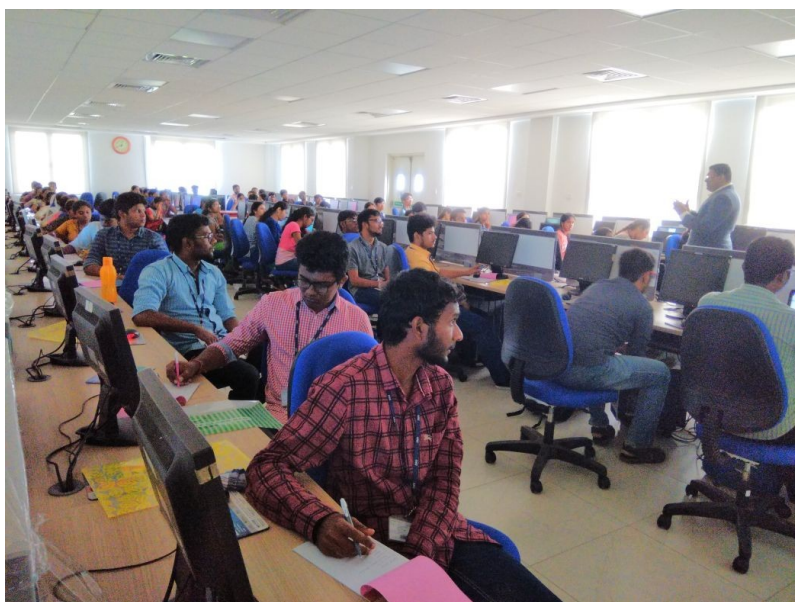
INFORTMATION TECHNOLOGY — RESEARCH COLLOQUIUM (SPECIAL FOCUS ON IoT)

"Do not let the shadows of your past darken the doorstep of your future. Forgive and forget."

The Information Technology Research Colloquium (ITRC) was conducted by the Department of Information Technology on March 23rd and 24th, 2018. The event was inaugurated and the introductory session on "IoT hardware and software" was delivered by Dr. N. Bhalaji, Department of IT. It was followed by a session by Mr. Abishek, Chief Operations Officer, Pupa Clic. He gave a talk on "2018- The year of IoT". It was informative and interesting for the audience. The next session was on another interesting exposure to "Social Internet of Things" which is the current significant topic and going to be the future of IoT. This session was handled by Dr. S. Karthika, Department of IT. During the afternoon session the IoT protocols were discussed by Dr. S. Chithra, Department of IT. There was a demo session on IoT Protocols using Contiki OS & Cooja Simulator by Dr. S. Chithra and Mr. K. Kabilan.

On the second day of the event, a lecture on "IoT in Healthcare" was given by Dr. N. Bhalaji, IT. There was a demo session on "EEG Sensor blended with H_2O Package and Libelium Health Care Kit", delivered by Mr. K.B. Sundhara Kumar and Dr. N. Bhalaji. The next session was on "Data Aggregation in IoT" delivered by Dr. S. Sasirekha, IT. During the afternoon session, a demo session on "Thingworx platform and Cayenne" was delivered by Dr. N. Bhalaji and Mr. K.B. Sundhara Kumar of Department of IT. Finally, an interesting demo of some of the IoT projects of students of IT department of our college was given. The event concluded with a formal Valedictory Session.

Guest Lectures Delivered

- Dr. R. Srinivasan, Prof., gave a guest lecture titled "Silicon Nanotube FETs" at Sri Venkateswara College of Engineering, Sriperumpudur.

- Dr. A. Shahina, Prof., delivered a talk on "CNN for Image Classification" as part of a 5 day FDP titled Advances in Medical Signal and Image Processing held in the Department of Biomedical Engineering, SSNCE.

- Dr. N. Bhalaji delivered a talk on "Role of IoT in Healthcare" in National level workshop on recent Trends of IoT in medical devices" held at Department of Software Engineering, SRM University, Kattankaluthur.

- Dr. N. Bhalaji, ASP, delivered a key note talk during an IEEE-International Conference on Emerging Devices and Smart Systems (ICEDSS2018) held at Mahendra Engineering College, Namakkal.

- Dr. I. Joe Louis Paul, ASP, has delivered an invited talk on "Error Control Coding" in Anna University Faculty Development and Training program (FDTP) on Digital Communication organized by Department of ECE, SSN College of Engineering on June 16, 2018.

Guest Lectures Organized

Ms. Swathika. R, AP, & Mr. A. SandanaKaruppan, AP, organized following guest lectures on:

- Data Science by Mr. Sridhar Sriraman, VP - Training, Gyan Data Pvt Ltd, IIT Madras Research Park, Tharamani, Chennai.

- GNMT (Google's Neural Machine Translation) by Mr. Melvin Johnson, Senior Software Engineer at Google AI, Mountain View, California, US

- Cyber Security by P. Chakrabanty and Varun, Comptia, President, India.

- Decision Sciences - Simplified by Adarsh Narayan, Decision Scientist, Mu Sigma Business Solutions Pvt Ltd, Bangalore.

"Nothing is worth more than this day."

-Johann Wolfgang von Goethe

FDPs and Seminars

Ms. J. K. Josephine Julina, AP, and **Ms. J. Sofia Jennifer,** AP, attended the One day Workshop on "IoT-Enabled Computer Vision and Analytics (ICVA 2018)" organized by the Department of Information Technology, at SSN CE.

Dr. S. Mohanavalli and **Dr. N. Bhalaji,** ASP, attended a 3 day DST SERB sponsored workshop on Computational Intelligence and Connectivity for Smart City conducted by Department of CSE, CEG, Anna University, Chennai.
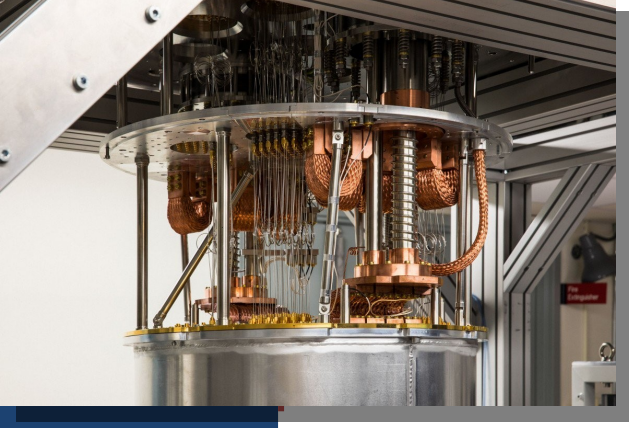
Mr V. Sivamurugan, ASP, attended a two day workshop on "Conceptual Practices of IOT & AI for Engineering Applications" at St Joseph's Institute of Technology.

இதோ வந்துவிட்டது குவாண்டம் கம்ப்யூட்டர் - எதிர்கால கணினிகளின் ராஜா.

கணினிகளின் பரிணாம வளர்ச்சி 1890-ல் பன்ச் கார்டில் தொடங்கி இன்று விண்டோஸ், ஆப்பிள் கணினிகள் என்று பல்வேறு தொழில்நுட்ப கண்டுபிடிப்புகள் நம்மை வியப்பில் ஆழித்துக்கொண்டே இருக்கின்றன. அதிவேகமாக செயல்படக்கூடிய கணினிகள் என்று அழைக்கப்படும் சூப்பர் கம்ப்யூட்டர்ஸ் இன்னும் சில காலங்கள் தான் இருக்கும் என்றால் உங்களால் நம்ப முடிகிறதா?

டிஜிட்டல் உலகின் அனைத்து விந்தைகளையும் ஒரமாக தள்ளி வைக்கக்கூடிய சக்தி, 'குவாண்டம்' என்ற புதிரும் புதுமையும் சரிசமமாய் கொண்ட கணக்கீடு முறைக்கு உள்ளது. இதுதான் இனி நிகழப்போகும் அடுத்தகட்ட பரிணாம வளர்ச்சிக்கு காரணமான அடிப்படையாக போகிறது. இன்று நாம் பயன்படுத்தும் அனைத்து விதமான கணினிகளும் எப்படி இயங்குகின்றன என்று பாப்போம். நாம் எந்த உள்ளீடு கொடுத்தாலும் 0 அல்லது 1-ஆக மட்டுமே கணினி எடுத்துக்கொள்ளும். உதாரணமாக நீங்கள் ஒரு பயணசீட்டு முன்பதிவு செய்ய கொடுக்கப்படும் உள்ளீடுகள் அனைத்துமே 0 மற்றும் 1 கொண்ட ஒரு தொகுப்பாய் எடுத்துக்கொள்ளப்படும்.

பெயிண்ட் கொண்டு நீங்கள் வரையும் ஓவியங்களும் அப்படிதான் உருவாக்கப்படுகின்றன.

குவாண்டம் என்றால் என்ன? இதை இயற்பியலில் தானே படித்துள்ளோம். அதை கொண்டு கணினிகளையும் அதன் செயல்திறனையும் எப்படி மேம்படுத்த முடியும்? தெரிந்துகொள்வோம். குவாண்டம் கோட்பாட்டின் படி இந்த உலகில் இருக்கும் அனைத்து பொருட்களுமே அணுக்களின் துகள்களால் உருவாக்கப்படுகிறது. ஒவ்வொரு அணுவிலும் (atom) அதன் மூலக்கூறு (molecules) எனப்படும் புரோட்டான் (proton), எலக்ட்ரான் (electron) மற்றும் நியூட்ரான் (neutron) இருக்கும். ஒவ்வொரு பொருளிற்கு தகுந்தவாறு அதனில் இருக்கக்கூடிய மூலக்கூறுகளின் எண்ணிக்கை மாறுபடும். மேலும், 'லைட் குவாண்டா' (light quanta) முறையானது ஒளி துகள்களின் குணங்களை ஒளி அலைகள் (light waves) மற்றும் ப்ஃபோட்டான்களின் (photon) பண்புகள் வைத்து ஒரு பொருளின் அமைப்பை தீர்மானிப்பதே ஆகும். இப்படிப்பட்ட நுண்ணிய விஷயங்களை வைத்து ஒரு பொருளின் பண்புகளை நாம் எதிர்ப்பார்ப்பது போல தெளிவாக தீர்மானித்துவிட இயலாது. நுண்ணிய புரோட்டான்ஸ், எலெக்ட்ரோன்ஸ் ஒரே சமயத்தில் இரண்டு நிலைகளை வெளிப்படுத்தும் இயல்பு பெற்றிருக்கிறது. ஆகவே அதனை 0 அல்லது 1 என்று தெளிவாக நிர்ணயம் செய்ய முடியாத பரஸ்பர நிலையை (mutually exclusive) அடைந்துவிடுகின்றன. 'எனவே இப்படி பைனரி பிட்ஸாக (binary bit) குறிக்காமல் 'கியூபிட்ஸ்'-ல் (qubit) ஒரு பொருளின் நிலைப்பாட்டினை குறிக்கலாம். 'சூப்பர்-பொசிஷன்' (Super-position) முறையை பின்பற்றி ஒரே நேரத்தில் 0 அல்லது 1 அல்லது இரண்டையுமே எடுத்துக்கொள்ளும்' என்று ஆய்வாளர் ரிச்சர்ட் ஜோசா கூறுகிறார்.

குவாண்டம் கோட்பாடுகளை அடிப்படையாக வைத்து சில விஞ்ஞானிகள் குவாண்டம் கணினிகளை உருவாக்கி இருக்கிறார்கள். நியூயார்க் நகரத்தின் வடக்கே சுமார் 50 மைல் தொலைவில் உள்ள செழிப்பான கிராமப்புறத்தில் உள்ள ஒரு சிறிய ஆய்வகத்திற்குள் குழாய்களின் மற்றும் மின்னணு உபகரணங்கள் தொங்கவிடப்பட்டு இருந்தன. இந்த அமைப்பு ஐ.பி.எம் நிறுவனத்தால் உருவாக்கப்பட்ட ஒரு கணினி ஆகும்.

குவாண்டம் கம்ப்யூட்டர்கள் சூப்பர் கம்ப்யூட்டர் அடைய முடியாத அளவுக்கு அதீத செயல்திறன் கொண்டதாக இருக்கக்கூடும். புதிய பொருட்களை அல்லது சாதனங்களை கண்டுபிடிப்பதில் காணப்படும் சவால்களை செயல்பாடுகளாக சித்தரிக்க உதவி, புரட்சியை நிகழ்த்தும். வேறுவிதமான வெல்ல முடியாத குறியீடுகளை முறைப்படுத்துவதன் மூலம் அவர்கள் குறியாக்கத்தையும் பாதுகாப்பையும் அதிகரிக்க முடியும். செயற்கை நுண்ணறிவை மேம்படுத்துவதும் அதற்கான தகவல்களையும் உள்ளீடுகளையும் சிறப்பாக வடிவமைக்க குவாண்டம் முறை உதவியாக இருக்கும்.

இனிவரும் காலங்களில் 'குவாண்டம் சுப்ரீமேசி' (Quantum Supremacy) தான் அதிக அளவில் ஐ.டி துறையில் பயன்படுத்தப்படும் சொல்லாக இருக்கக்கூடும். இப்போது ஐபிஎம், கூகுள், இன்டெல், மைக்ரோசாப்ட் போன்ற முன்னணி நிறுவனங்கள் குவாண்டம் துறையில் கால் பதிக்க தொடங்கியுள்ளனர். சார்லஸ் பென்னட் என்பவர் தான் குவாண்டம் தகவல் கோட்பாடினை கண்டுபிடித்தவர். இவர் இல்லை என்றால் ஐ.பி.எம் நிறுவனத்தால் இந்த குவாண்டம் துறையில் சாதனை படைத்தது இருக்க முடியாது. இவரது கண்டுப்பிடிப்பின்படி, ஒரு சூப்பர் கண்டக்டரில் இரு வேறு பாதையில் மின்சாரம் பாய்ந்தால், அவற்றை கியூபிட்ஸாக குறித்துவிட வேண்டும்.

இதுவே குவாண்டம் கணினிகளின் அசத்தலான வேகத்திற்கு அடிப்படையாக அமைகிறது. இப்படியாக குவாண்டம் கணினிகளை செயற்கை நுண்ணறிவு (Artificial Intelligence), மூலக்கூறு வடிவமைத்தல் (Particle Modeling), குறியாக்கம் (Cryptography), நிதி மேலாண்மை (Financial Modeling) மற்றும் வானிலை ஆராய்ச்சிகள் (Weather Forecasting) போன்ற பல்வேறு துறையில் சிறந்த சேவைகளை செய்ய வழிவகுக்கும்.

அன்று தொடங்கிய ஐன்ஸ்டீன் முதல் இன்று மறைந்த ஹாவ்கிங்ஸ் வரை குவாண்டம்களில் விளையாடாத விஞ்ஞானிகளே இல்லை. இருப்பினும் அது எளிதில் புரியாத, பரவாத, மனித பகுத்தறிவிற்கு சவாலான ஒரு ஆய்வுத்துறையாக இருக்கிறது. குவாண்டம் கணினிகளில் பணியாற்ற எல்லா நிறுவனங்களாலும் முடியாமல் போனதற்கு முக்கிய காரணம், அதன் அதிகமான விலைமதிப்பு தான். எனினும் 2030-களில் குவாண்டம் கணினிகளின் இருப்பும் இயல்புகளும் அனைவரையும் சென்று சேரும் என்று எதிர்பார்க்கலாம்.

"The happiness of your life depends on the quality of your thoughts."

இரா. கீதா

AND SHE SAID A "NO" ....

> **NO. IT IS A SELF-EXPLANATORY SENTENCE. THERE ARE NO IFs AND BUTs TO IT. AND WHEN SHE SAYS NO, YOU NEED TO STOP!!!"**

SHE came home a week ago physically and psychologically distraught. She claimed to have been assaulted by the man who calls himself her husband. The blankets that saved her from the imaginary ghosts when she was a kid, now conspired against her with her husband. With all the due courage, she opened up to her mom and her friends…

"**You chose your husband. Stop complaining and deal with it**."

"**See, *beta*, there is nothing called as rape in marriage**.", were the varied responses she received.

Wait, What?!

Is marriage a contract that makes sex legal – where a man does not ask a woman's assent?

Where he imposes himself onto her and treats her like an object of his pleasure?

What kind of wolves are we breeding under a sheep's skin?

What are we educating our society with?

What sort of society are we signing our children up for?

Dearest Men,

*A rape is a rape. "No" is a self-explanatory sentence. There are no Ifs and buts to it. And when she says no, you need to stop!!! **Nobody has a "right" to have sex** and marriage doesn't imply assent to it in perpetuity. "She is my wife" is clearly not your advocation.*

"You can easily judge the character of a man by how he treats those who can do nothing for him."

- James D. Miles

"To the man who only has a hammer, everything he encounters begins to look like a nail."

-Abraham Maslow

Since the late 20th century, most of the developed world has criminalized marital rape but India has still not. Recent surveys also state that more than 2/3rd of married women in India between the ages of 15 and 49 are being assaulted by their husbands and about 1/3rd of the perpetrators use objects of some form to commit the violent act.

*In a society like ours, where this concept is alien to many, the survivors believe (or) are made to believe that this is the "norm" or the "wifely duty". Although awareness of this issue is being raised and various forms of support are being extended for the victims, this form of intimate partner violence is being reported less and accepted widely. It occurs that a **change of perspective** is the need of the hour.*

*The general perception that spousal rape **has got less to do with sex and more to do with power** is the primary misleading factor. Being a man is almost always associated with being powerful. Even parents, since age old, make their children aware of this idea of power: Be a Man! Boys don't cry! This notion emerges from what these men learn about "being men" from the society. The mere existence of physical strength, is not enough. A display of that strength through ways of domination is more necessary- to be identified as a man. Therefore, for him to be anything other than dominant is nothing but pure shame. Sickening as it sounds, taking a 'no' gets associated with him being a 'chicken'.*

We, collectively, are responsible for what we contribute to the society and what we seed into the minds of our future generations. So, here's some thought: Why don't we stop asking our women to stop getting abused as if it were their fault and start asking our men to not ransack? Why don't we give up on stopping our boys from crying and start teaching them how not to let cry?

Mythreyi Ragothaman
IT-A III Year

The End of an Era

I took the first seat in the bus on my first day, avoiding the hawk-eyed looks from behind itching to bully the juniors. During the 30km ride, I gazed at MGM, VGP, Mayajaal and tollbooths (*yeah, really)* like it was my first. Entering the college gates on my first day set me on cloud nine.

"*Hello Class, Let's introduce ourselves*", sent chills down our spines in our first semester. Although, a drop of extrovert in me was thrilled to brag and make friends. It was the time when we celebrated birthdays of our classmates, cutting cakes and photo-shoots were mandatory. It was also the time when ragging prevailed. Carrying the drafter reveals your identity as a first year waiting to be ragged, on campus and in the bus (*proud victim :P)*. Our first year ended with a memorable Symposium and a Farewell for our Seniors.

Then came **Second year**. Bus travels turned into nap time. Our long term wish came true - We entered the IT department. By now, I realize it is practically impossible to know everyone. Sadly, I wasn't even clear with the names of my classmates (*I'm bad at remembering names)*. The idea of being friends with the whole class sounded insane. Everyone confined themselves within a circle of friends and moved in groups, including me. We weren't bothered by problems outside our happy bubble. Focusing on passing UTs and balancing classes were mastered only by a few (*lucky me*). Bunking and hanging out became a trend. We crossed paths with our IT Symposium - Converita one last time.

Third Year. Most of the third years became career focused. MS aspirants rushed to GRE classes, while the rest were fired up for placements. I was focused on taking up GRE, until Trump took over the Office.

Thank you Russians, my little hope of studying in US shattered. I would enter the class in the morning just to see diligent GRE-takers buried under Manhattan Prep or Barron's. And behind a wall of laptops hid hard-core programmers working on internships or Hackerrank.

As we neared the end of the sixth semester, we threw a farewell party for our seniors. Most of us who were involved did not know a lot of seniors but we were obliged to do it. The juniors were just as enthusiastic and hardworking as us. A week's hard work paid off, the atmosphere was filled with nostalgia that made us realize we were just a year away.

The Finale. No one could justify how time flew so fast. In a blink of an eye, we were attending interviews. Company after company. We were soon immune to rejections. Finally, everyone had that one special day on which they got placed.
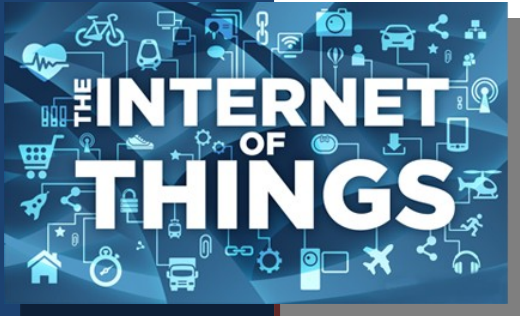
All good things come to an end - Symposium and Instincts, then came *our* Farewell. Everyone were dressed to kill. Ladies in high heals, make-up and hairstyles that said 'I-tried', while the men looked rugged in veshti and coolers. Whistling, bursting balloons, and yelling was how we inaugurated our farewell. Decorations were spot-on. Shutterbugs everywhere. Selfies and photos taken in all directions. The juniors then threw a terrific show at the mini-auditorium. End of the day, we had cake.....on our faces.

The fun we had, pranks we played, birthday cakes we destroyed, classes we bunked and the UTs we never copied will always be etched in our hearts. **Always.**

"To live is the rarest thing in the world. Most people exist, that is all."

- Oscar Wilde

Reshmitha Rajasekar

Alumni

Internet of Things

In the present day, we cannot imagine our lives without the internet. It has touched our lives in a lot of ways, so much so we are largely dependent for a variety of activities ranging from a shopping to a job search. People are finding new ways to integrate the internet into their lives every day. But what if there is a possibility of the internet automating our lives, to the extent that we can get a cup of coffee automatically at a pre-determined time? The Internet of Things is a technology which helps us doing so.

"One day, you'll be just a memory for some people. Do your best to be a good one."

What is IoT?

The **Internet of Things** (**IoT**) is a network of physical devices, vehicles, home appliance and other items embedded with electronics, software, sensors, actuators, and connectivity which enables these objects to connect and exchange data. These devices can arguably, be anything, from a coffee maker to say, a military drone. Networking these devices provides a wide range of technological uses in almost all industries.

The possibilities with IoT are endless. Not just home automation (which is called domotics), monitoring air/water quality, soil conditions, management of industrial equipment through networking, predicting our needs based on daily routines, stress levels to managing power plants, reactors, innovative faming methods by monitoring environmental conditions, the diverse nature of IoT is undeniable.

Internet of Things, ultimately, pumps in a large amount of extremely useful data about our physical surroundings which can offer a better insight as to what can be done to enhance the quality of it, not to mention the value of information in

this digital age we live in.

However, the wealth gained by information is not without a cost. Every device connected to the internet increases the number of vulnerabilities that can be exploited to access any given system through these devices, thus, raising concerns of privacy, misuse of data and of course, security.

Nevertheless, IoT is still a popular bet as the benefits tremendously outweigh, its quite repairable, drawbacks

"If it wasn't hard, everyone would do it. It's the hard that makes it great."

-Tom Hanks

Mrudula Boss

IT-A III Year

The Terrace

Terrace is one place which gave me a lot of memorable moments , as a kid . All geared up, neighborhood friends would join me to spend the entire evening there.

It all starts with a shaa-boo-three - the other alternatives being 'Oh God Please Tell Me ' and 'Inky-Pinky-Ponky' ; the chorus still echoes in my mind as I write this . There we go, we'd find the catcher of the lock-n-key game .

I distinctly remember us playing the game with the thought "Don't Get Caught" being chanted as prayers within our hearts . Then there'll be this thing called "Wait-Ease" , the time by which we'd have drained ourselves of all energy . All of us , breathing hard and shedding loads of sweat , would run down-stairs to grab the water jug - fighting for who gets to drink first .

Once done with the quench , we'd go back up for resuming the game with the same enthusiasm that we had in the beginning . As we run around playing it , the old lady residing right beneath the terrace gets damn irritated by the sounds of our feet , for it disturbs her evening nap . She then climbs all the way up with a long stick in her hand , yelling at us these exact wordings - "You children are making me feel like the Earth is shaking !!

"It does not matter how many times you get knocked down, but how many times you get up."

-Vince Lombard

Next time this happens, the stick I carry will be put to use". Pin drop silence for a while until she's gone out of sight . We pretend to play silently from then on . Sun sets thereby , leaving the noisy terrace dead silent as we bid goodbye . Now , all I'm left with is the moon .

As I sit down , clasping my knees, watching the silvery hue that the moon creates on my hands , some kind of warmth and coziness is felt . This feel clubbed with the soft hustle of surrounding tree leaves , made me find the best spot to revisit my childhood memories - THE TERRACE .

"Success isn't something that just happens - success is learned, success is practiced and then it is shared."

-Sparky Anderson

Mitra Chockkalingam

IT-A, III Year

Father Time

He stops for none, he has prejudice for none
Meddling with time is not his type of fun
Make haste, don't waste, are his wise words
Father time will not listen to anyone's hollers

Worshipped as a god, the controller of time
His mere existence considered divine
Time flies by, with a scythe in his hand
Looking down at idlers with reprimand

We are all stuck in the sands of Time's hourglass
Trying to stay near the surface, trying to outlast
Surviving the sands of time becoming the prime necessity
People existing in the fear of brevity

Dressed in robes, an elderly man, with a timekeeping device
Descends like the Grim Reaper waiting for our demise
No one races against Time and wins
He will have our souls for all our sins

Time is not a friend, Time is not a foe
Neither gives you happiness, neither gives you woe
Understanding time is a prerequisite for mankind
Because Father Time cannot rewind

"Weakness of attitude becomes weakness of character."

- Albert Einstein

Shreya Venkatesan
IT-B, IV Year

You

" If I asked you to name all the things you love, how long would it take for you to name yourself?" – Anonymous. This quote got me thinking, why are we so afraid to love ourselves?

Of all the people in this world, no one is around you more than yourself. No one knows you better than you. And if you don't, it's because you don't pay much attention to yourself. It's not very hard to love something, but it is very difficult to accept it after seeing through its flaws. (No wonder, it seems so difficult for us to accept ourselves for who we are.)

We are constantly hoping to shape ourselves in a way that would be acceptable by the society, what we don't realize is that, all of these mask(s) are not making us any prettier. We relentlessly search for someone outside to bring out the real 'you', we never take an effort to do it ourselves. Drawing a parallel to how the force from inside an egg can create life, only a force from within you can create a change, when the force is from outside, it only ends up damaging what's left.

When we take so much effort and time to find a loved one to spend our life with, why do we not realize the importance of loving ourselves? Don't be shy to be yourself. Don't be afraid that you will seem too silly or weird. Introspect, find your strengths, weaknesses, discover your true self. Embrace your flaws. Accept you for who you are.

It is when you enjoy your own company that it becomes simpler to fit in. Trust me, when you love yourself to the fullest, it becomes easier to accept another person and love them to the maximum. **You** are the most important person. Now, don't get me wrong, I'm not asking you to be selfish. But it never hurts to give yourself the first priority. You can be there for others, you can love others, but be there for **you**, love **yourself**.

So cheers to a happier life! And I sincerely hope you take back something from this.

"Opportunity follows struggle. It follows effort. It follows hard work. It doesn't come before."

Prashanthi B

IT-B, IV Year

What Matters...

Ledgers sized up on your desk,

Papers, the lifeless life takers,

Pens scattered round the table,

Missing notes,

Incomplete files,

Lines on hold,

Phew sang the soul when the clock struck 5,

For he could go home,

To see his younger devil,

Tampering with toys,

The kiddish gleam alive in his eyes,

The smile, a thousand diyas,

A million neons, flaring brighter than the northern lights.

The tumble, twist and jump,

What more to cherish?

A thousand dollar bill?

The dad from the hectic day at work,

The mom from the social sustenance,

Would consider it an abhorrence.

"Ninety-nine percent of the failures comes from people who have the habit of making excuses."

-George W. Carve

The small tread of him,

The 'thwack' when he sits,

The giggle when he does something ,

The cry when he falls,

The gleam when he finally comes home,

Into his daddy's arms,

Onto his mom's lap,

The home to his little heart,

Chubbing feet kicking the air,

When dad tickles the tummy,

When mom kisses his forehead,

Is all that matters.

Life isn't always about bills and brochures,

Is about the life of little things

"Only put off until tomorrow what you are willing to die having left undone."

- Pablo Picasso

Gautham Krishna

IT-A, III Year

The Rise of Bitcoin

The world is now moving more and more towards a digital era. Everything from record maintenance to commerce is now digitized and can be done online.

Along the lines of this digital explosion, bitcoin is a newly trending and innovative payment method. It is something that is called a "crypto currency". A crypto currency is a digital currency in which cryptography - a type of encryption technique - is used, and there is no need for a centralized bank to moderate and facilitate the fund transfer. The entire process of payment and fund transfer is done in a decentralized fashion, without the need of an administrator.

Bitcoin was founded by a group of unknown persons or person named Satoshi Nakamoto, in 2009, as a peer-to-peer electronic cash system. Since it is a peer-to-peer network, the transactions are done between users directly, and no intermediary is present. In order to verify the authenticity of the transactions, a public distributed ledger named the blockchain was invented, and each transaction involving bitcoins was recorded in the blockchain. Bitcoin transactions are considered to be one of the most secure and private transactions because of the design of blockchain. Even though it is a public ledger, the transactions recorded in the blockchain are encrypted using cryptographic algorithms and the chunk of data is divided into separate blocks and stored in different systems. This enables only the initiator and the beneficiary to look into the details of any bitcoin transaction. Moreover, the transactions are pseudonymous, that is, they are not tied down to real-world entities, but rather bitcoin addresses.

"Good instincts tell you what to do long before your head has figured it out."

- Michael Burke

Bitcoins are earned as a reward for a process known as mining. Mining is a process where we utilise our compute resources in order to facilitate record-keeping. The record-keeping mainly involves the encryption and processing of blocks in the blockchain. Miners keep the blockchain consistent, complete, and unalterable by repeatedly grouping newly broadcast transactions into a block, which is then broadcast to the network and verified by recipient nodes.
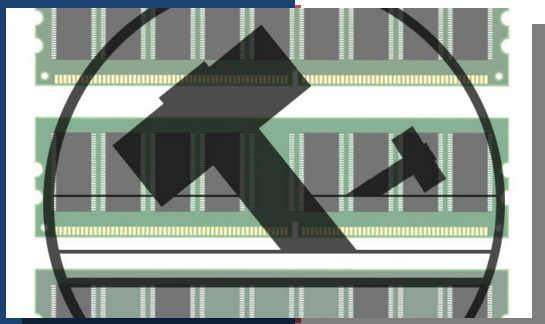
As and when a new transaction happens, it is added to the blockchain database, and the data is released as blocks. When miners discover new blocks, they start encrypting them using their computer processing power. This is called block discovery. A successful discovery may earn a certain amount of bitcoin for the miner, and the amount is based on the difficulty in encrypting the block and the amount of available blocks at the time of discovery, and other such factors. The difficulty target is adjusted based on the network's recent performance, and in that way the system automatically adapts to the network's processing power.

With such growing influence, bitcoin is now gaining massive attention as a platform for investment. This is mainly because of the constant and rapid growth in the value of bitcoin each passing day. But it does not always see a rise. The bitcoin market is very volatile, and has seen few periods of drops that are greater than its rises. This makes people vary when it comes to deciding whether to invest in bitcoin or not. The constant rise and fall in price makes it the best to invest in, albeit a risky one. The price of Bitcoin has increased because people have bought them. As hype has increased, and more people become aware of its potential to make them money, price goes up further. This feature of bitcoin will forever make it a very tempting choice when it comes to digital currency.

"Change your life today. Don't gamble on the future, act now, without delay."

-Simone de Beauvoir

S. Nitheesh Prabu

IT-B, IV Year

"GLitch": A new effective 'Rowhammer'

As we all know phones with Android operating system has been one of the most favorite operating system alongside apple phones since they come in packages of all sizes and costs for everyone, accounting for around two billion devices in the world and steadily increasing day by day with new models constantly releasing in the market. With that being said, given Android being open source and many companies responsible for the operating system port to their phones often do so in an inefficient manner leading to lots of vulnerabilities when compared to the iPhone alternative.

For the very first time since its theory inception in 2012, security researchers have discovered an effective way to exploit a technique called Rowhammer to hijack an Android phone remotely. Dubbed "GLitch", it is one of the newest vulnerabilities that seems to not have a patch that can fix this in the near future. To explain what is Rowhammer, in a few words it is found that in the recent generation, RAM chips and the exploit is basically repeatedly accessing a row of memory which can cause "bit flipping" in an adjacent row, allowing anyone to change the value of contents stored in computer memory.

Known since at least 2012, the issue was first exploited by Google's Project Zero researchers in early 2015, when they pulled off remote Rowhammer attacks on computers running Windows and Linux.

"If your ship doesn't come in, swim out to it."

- Jonathan Winters

Last year, a team of researchers in the VUSec Lab at Vrije Universiteit Amsterdam demonstrated that the Rowhammer technique could also work on Android smartphones, but with certain limitations. However, the same team of researchers have now shown how their proof-of-concept attack "GLitch," can exploit the Rowhammer attack technique simply by hosting a website running malicious JavaScript code to remotely hack an Android smartphone in under just 2 minutes, without relying on any software bug. Since the malicious code runs only within the privileges of the web browser, it can spy on the user's browsing pattern or steal their credentials.

Since the ARM processors inside Android smartphones include a type of cache that makes it difficult to access targeted rows of memory, researchers make use of GPU, whose cache can be more easily controlled, allowing hackers to hammer targeted rows without any interference.

Currently, GLitch targets smartphones running the Snapdragon 800 and 801 system on a chip—that includes both CPU and GPU—meaning the PoC works only on older Android phones like the LG Nexus 5, HTC One M8, or LG G2. The attack can be launched against Firefox and Chrome, with no reliable patches to fix the issue.
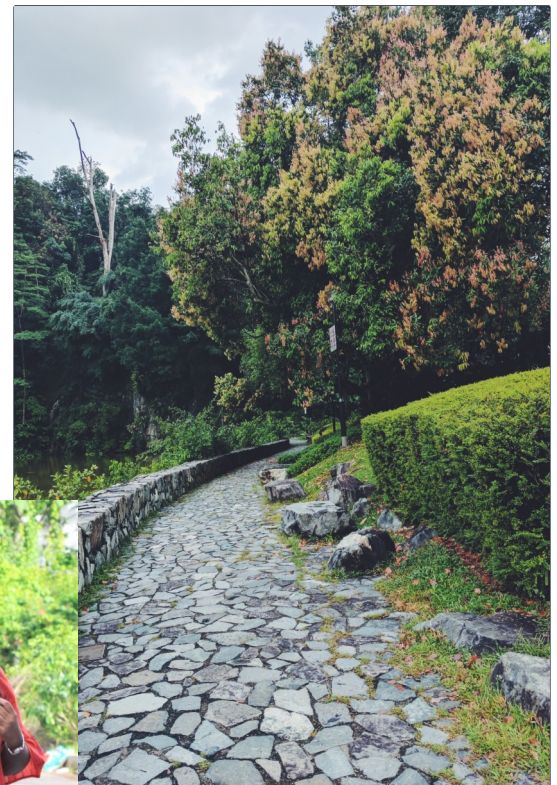
"Discipline is just choosing between what you want now and what you want most."

Sri Hari Karthick N

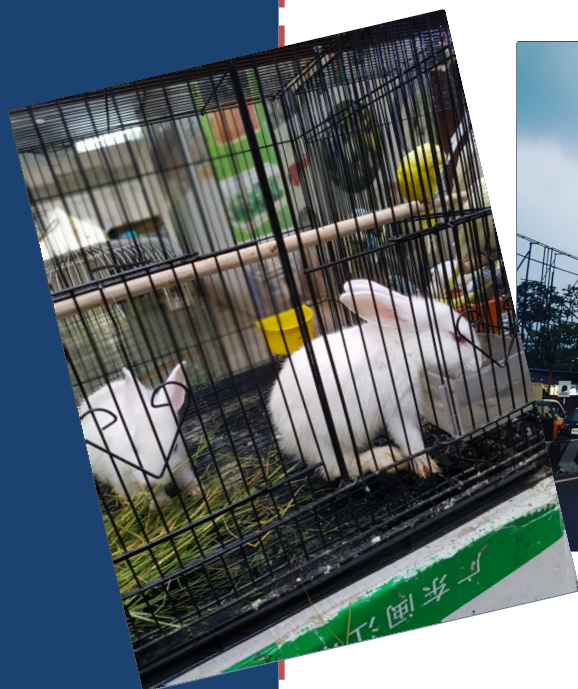## IT-A, III Year

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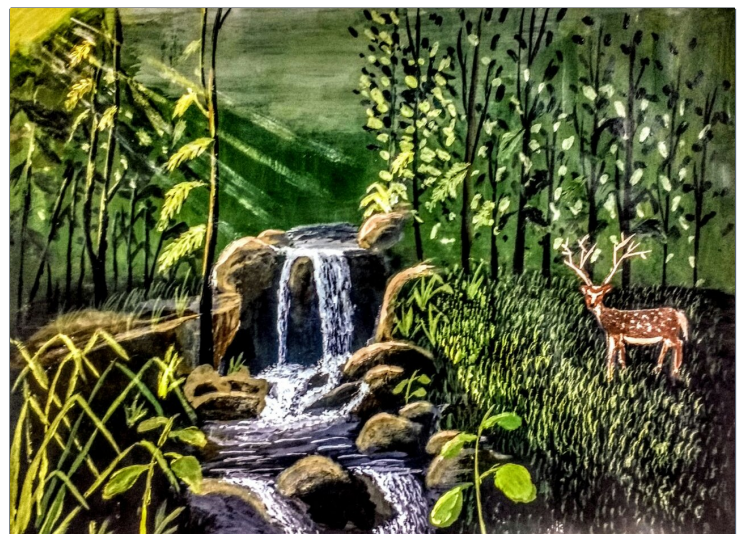IT-B, IV Year

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From the editors...

P utting a magazine together was no cake walk. I along with my editorial team members have spent sleepless nights to make this magazine stand out.

So here you have "identITy", the long awaited department magazine. This magazine gives an insight into the information technologist way of life, their creativity and activities, and is a platform that exhibits the literary skills and innovative ideas of teachers and students. I would like to thank all my editorial team members for helping me pull this through. I express my considerable appreciation to all the authors of the articles in this magazine. It is this willingness to share knowledge, concerns and special insights with fellow beings that has made this magazine possible.

Thank you all!!

"Education is and will be the most powerful tool for individual and social change, and we must do all that it takes to facilitate it."

-Shiv Nadar

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