## VISION AND MISSION OF THE INSTITUTE

**Vision**

To be one of the premier Institutes of Engineering and Management education in the country.

**Mission**

• To provide Engineering and Management education that meets the needs of human resources in the country.

• To develop leadership qualities, team spirit and concern for environment in students.

## VISION AND MISSION OF THE DEPARTMENT

**Vision**

To be a premier department of learning in Information Science and Engineering in the state of Karnataka, molding students into professional Engineers.

**Mission**

• Provide teaching-learning process that develops core competencies in Information Science and Engineering to meet the needs of the industry and higher education.

• Create an environment for innovative thinking and self learning to address the challenges of changing technology.

• Provide an environment to build team spirit and leadership qualities to succeed in professional career.

• Empathize with the societal needs and environmental concerns in Information Science and Engineering practices.

**Aparna B. V**
**(B.E in ISE 2011-2015)**
**6th rank**
**in the**
**VTU examinations 2015**

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# MESSAGE FROM THE EDITORIAL TEAM

We present to you, the second edition of the the ISE newsletter, created completely by the students. We have taken the opportunity to express ourselves, our ideas, be creative and design our very own newsletter.

We hope you get to learn about, experience and share your thoughts about the new technologies explored by the writers and editors of this edition and that you enjoy what we've put together as much as we did. :)

## PROGRAM EDUCATIONAL OBJECTIVES (PEO)

Graduates of BE program in ISE will be able to

1. Analyze, design and implement solutions in the field of Information Science and Engineering and adapt to changes in technology by self learning.
2. Work effectively as an individual and in a team, exhibiting leadership qualities to meet the goals of the organization.
3. Keep abreast with the technology and pursue higher education.
4. Work with professionalism to meet societal needs along with concern for environment.

## PROGRAM SPECIFIC OUTCOMES (PSO)

Graduates of BE program in ISE will be able to

1. Analyze, design, develop and test software solutions using structured and object oriented approach.
2. Design, develop and optimize solutions for information systems employing fundamentals of system hardware & software, graph theory, finite automata, data storage and communication networks.

## PROGRAMME OUTCOMES (PO)

Engineering Graduates will be able to

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

# ROLLTOP LAPTOP!

Notebooks and tablets already offer convenient on-the-go solutions, but Germany's Orkin Design proposes rolling up both devices into one ultra-portable package. Rather than carrying around a notebook in a laptop bag, full to the brim with all manner of cables, the RollTop concept brings everything together in a flat panel display that's wrapped around a central cylinder. When folded, this compact device takes the size of a water carrier and can easily be hung over the shoulder with the hanging belt.

The RollTop Laptop takes the advantage of flexible OLED and touch screen technologies to create a cylinder-shaped laptop computer whose display can be rolled out like a mat or can be left flat as a 17-inch tablet or can be raised up to use it as a notebook.

The top of the column detaches and acts as a power plug while the carry strap doubles as a power cord. The central column also contains speakers, a camera, USB ports, and a LAN port. The various technologies used in dual-screen notebooks, all-in-one computers and cutting edge tablets are being incorporated into the RollTop. Convertible as a notebook, the lower part of the screen is used for keying on a virtual onscreen keyboard while the upper part becomes a 13-inch display for viewing content. A stylus pen has also been incorporated into the body of the panel.

**Manasa Gopikrishnan**
**8th sem, ISE**

## Toppers Corner

'Dream is not what you see in sleep. Dream is something that does not let you sleep'
- Dr. APJ Abdul Kalam

"I am very delighted and satisfied for spending my 4 memorable years at BNMIT and being the first in getting a VTU rank in our department. From the first year of my enginering life, I have dreamt of getting a university rank. All the so-called 'secrets of success' will not work unless you do. I followed 'Work hard in silence, let success be your voice'.

Our college has imbibed in us the courage, strength and the right ideas to take up all the challenges with confidence and climb to greater heights. It is not an exaggeration, each and every faculty member in our department helped me and supported me each and everyday at BNMIT. The faculty have always been a good guides to me. My parents' and brother's support are the foundation of my success. I advise all my juniors to never give up your dreams and hopes."

**Aparna B.V**
**Software engineer**
**Juniper Networks, Inc.**

"Any sufficiently advanced technology is equivalent to magic"
- Arthur C. Clarke

Tatva is the annual technical fest of BNMIT, first organized in the year 2009. It has progressed and evolved over the last five years, and is now an eagerly awaited event not just at BNMIT but also at colleges across Bengaluru. Tatva 2016, coordinated mainly by the department of Information Science and Enginering was an endeavor towards reaching a new milestone. It was held on the 26th and 27th February, 2016. The Inaugural event was held at the auditorium with the Youth Icon Mr. Javagal Srinath as Chief Guest. Tatva 2016 has attracted the best technical talent amongst engineering students in Bengaluru and has become a platform for the best minds to compete among the peers and prove their competence. The event was unique and stood high for the reason that the challenges put forth to the participants were unlike any other simulation event. The participants were pushed to solve problems using out of the box thinking, the solution to which lies within their sight but just outside their reach. Tatva 2016 inculcated a factor of innovation and freshness in all the events.

Team Tatva greeting Mr. Javagal Srinath



Lighting of the lamp at the Inaugural event



Invocation song being rendered at the Inaugural event



Tatva organizers at the Helpdesk

"Just because something doesn't do what you planned it to do doesn't mean it's useless" - Thomas Edison

The Raghu Dixit Project performing live in the BNMIT auditorium
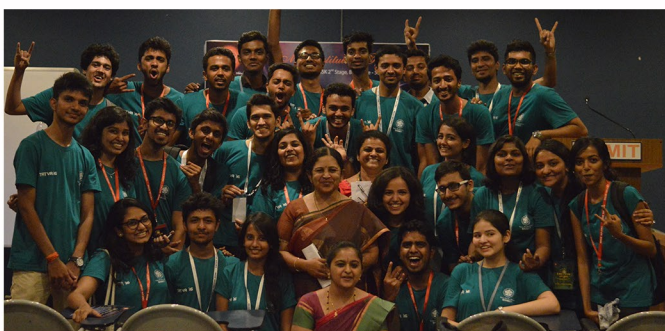

Team Tatva with Mr.Raghu Dixit

# 2016


The Raghu Dixit Project after the performance




Tatva 2016 Events in progress


Core organizing committee of Tatva 2016

Day one of TATVA (26th Feb) hosted the intra and inter college events and day two of Tatva (27th Feb) hosted the inter college events. It has had an overwhelming success with more than 6000 budding engineering participants from the age group of 17 to 22 years from 72 reputed colleges in Bengaluru. For the first time in BNMIT a musical concert by a popular artist Mr. Raghu Dixit, a contemporary Indian folk musician, was conducted which was a huge success. Tatva 2016 was covered by many well-known, Bengaluru newspapers and Electronic media. As is the the endeavor of every Tatva team member to do better this TATVA 2016 has delivered a bigger, better and a more fun filled Tatva fest of higher technological order.

"Technology is the best when it brings people together"
- Matt Mullenweg

# CULTURAL ACHIEVERS



BNMIT cultural team Kalabhagerathi the second runners up over-all trophy in the VTU Annual Cultural State Level Youth Festival 2016 "Chakravyuh" held in Alva's Institute Of Engineering & Technology, Moodbidri, Mangaluru in May 2016. The team won prizes across all categories including Music, Fine arts, Dance, Drama and Literary activities emerging victorious among 90 colleges that participated. The winners of the annual cultural festival of BNMIT - "Kalabhageerathi fest" were selected to participate in this event. Among those from the ISE department were (in the picture-rows numbered 1-5 from front to back): Row 1: Sunidhi Gurudutt (2nd sem-2nd from R-Dance), Row 2: Shreeramya Anand(2nd from R), Row 5 L-R: Sumukh Venugopal (2nd sem-Music), Namrata Simha (8th sem-Music), Akshay Anand(2nd sem-Music), Abhiram (6th sem-Drama).

# ACADEMIC ACHIEVERS



L: Mr. Mahendra Pratap during the technical talk.
Below: Students receiving trophies

Mr. Mahendra Pratap, Chief Technical Officer, Kenworth Solutions Pvt, Ltd. Bangalore, with industrial experience of 20 years and expert in the 22 emerging areas (Program-Project Management, Operational Management, Change Management, etc..) was invited to present a Technical Talk on "Software Project management and Financing" as a part of the ACSIS FCD Function held on 22nd April 2016 at BNMIT. The programme aimed at improving knowledge in Project management and financing. It was attended by FCD holders and all the staff and students of the ISE department.

The presentation by Mr. Pratap covered various aspects of Project management and financing, such as project life-cycle, attributes of projects that aid organizational growth, survival and finance factors for efficient risk management. This was ilustrated with a focus on the roles of a project manager, organizational needs and stakeholder expectations for developing quality projects in a timely manner.

He then distributed trophies to the students who secured a First clas with distinction result in the Dec 2015 VTU examinations.

"Technology is a word that describes something that doesn't work yet"
- Douglas Adams

# OUTSTANDING PROJECTS

## Prize Winners in IPL Summer Competition 2016 - Department of ISE



< Varun, Pratham R Adiga, Akshay kumar K.M, Anil Kumar, 6th sem
**"Future of Medicine"**

J Shesha Shankar, 4th sem >
**"Novel Mario"**



## Best final year Projects for the academic year 2015-16
## Department of ISE



< Varshini B N, Supriya R P, G Harshita Rao, Kriti Goyal
**"Cost effective touch pad based on video processing"**

Dheeraj D Bhat, Vishwas Manohar, >
Namrata Simha, Sudarshan Suresh M
**"SanTrans:Recognition & Translation of printed sanskrit text"**



## Top 3 Presentations of Final year project for the  academic year 2015-16

**Anuradha J**: "Big Data & SP Theory of intelligence"
**Rahul N**: "Classification of news articles and images by transductive multilabel learning"
**Akanksha C Acharya**: "Touchless fingerprint authentication system"

# THE UNIVERSALITY OF ENGINEERING

When one chooses engineering as a career choice, it's mostly with a pre-detemined perspective. Most think that engineering is wholesomely attached to the IT sector and just the IT sector. Which is not quite true.

Do you know that just doing your engineering undergraduation will not make you an engineer? The BE is something that teaches you the numerous tools, rules and applications that exists in engineering.You truly become an engineer when you put to test the practical knowledge you have received in BE.

I truly realised the significance of those words above at BNMIT. BNMIT is a college which constantly encourages it's students to be innovative and experiment as much as possible. The college upholds an unspoken policy of teaching students not just education but also humility and the importance of being a human.

This was the same reason, that I chose biological and medical field oriented projects during my final year. During the research for my final project,I, having studied engineering for over more than three and a half years, was still amazed at how much I had yet to learn. When I chose Lung Cancer as a topic for my technical seminar, I realized that us engineers being just novices in the field could contribute so much to a cause such as Cancer. I realized that how a simple algorithm we learn in our engineering classes could actually save a life.

On a concluding note, as engineers it is up to us, no, it is our duty to use the knowledge we receive to help those in need. BNM taught me this over my stay here and I hope you all take this lesson away from here too!

Chaithra M. T.
8th semester, ISE

"The science of today is the technology of tomorrow"
- Edward Teller

# COMPUTER CROSSWORD
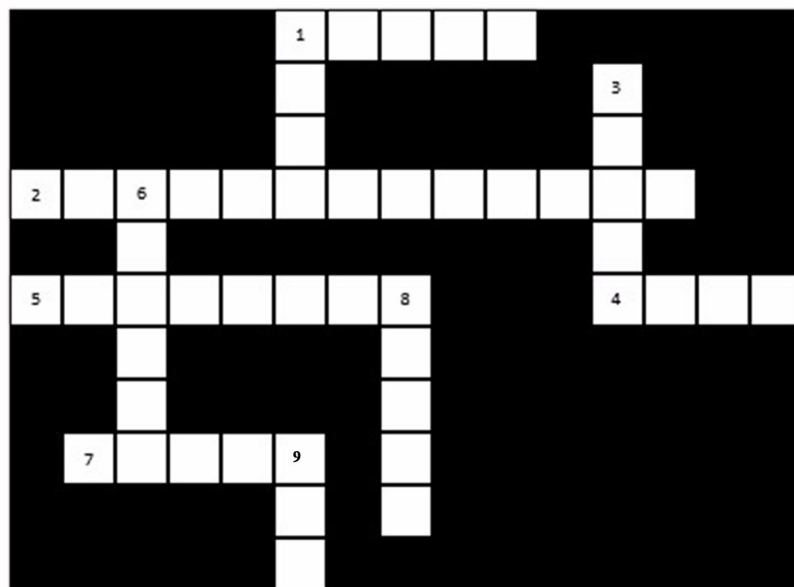


**Across**
1. Program-ming language mainly used for business.
2. One input many outputs.
4. 2nd stage of compiler design.
5. Data about data.
7. Structure with only one end.

**Down**
1. <<
6. I get killed if I differ from original program.
3. Used to access data from a database.

**Down**
8. A -> 65.
9. Identify a record with this.

# The Editorial Team
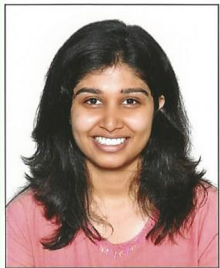
**Namrata Simha**
8th semester

**Manasa Gopikrishnan**
8th semester

**Nikhil S.V.**
6th semester

**Samhitha K.**
6th semester

**Prathyusha A.**
6th semester

**Shrey Arora**
6th semester

**Vidya Murthy**
6th semester

**Kailasa Aravinda**
4th semester

**Bhavana**
4th semester

**Mayur L.S.**
4th semester

*You can email us your queries and opinions at: inspire.bnmit@gmail.com*

*"Technology connects us. Technology unites us. Technology amplifies our power."*
*-Vivienne Harr*