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Issue-2

# News Letter

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



**GL BAJAJ**  
Institute of Technology & Management

International Conference on medical imaging

Industry- Academia Convention 2016

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Student Corner



**FIND  
YOUR  
SPARK**



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## International Conference on medical imaging, m-Health & Emerging Communication Systems



GLBITM, Greater Noida in association with IEEE, ICEIT, K. D Medical college, ATNF (Apollo Telemedicine Networking Foundation), DST (Department of Science and Technology) & Tech Mahindra organized a two day International Conference on Medical Imaging, m-Health and Emerging Communication Systems on 7<sup>th</sup> and 8<sup>th</sup> November 2014.

The two day international conference concluded with a total of 14 technical sessions, chaired by renowned scientists and researchers from India and Abroad. Researchers and Scientists from various fields delivered invited addresses on

various themes of the conference. A total of 9 speakers shared their experiences, achievements in medical imaging and emerging communication systems.

The key note address at the inaugural function was delivered by Dr. Bill Ash, Dr. Jayadeva IIT Delhi, Ft. Lt. A. T. Kishore Dr. Elena Gaura, Dr. Shweta Sneha, Kennesaw State University, Georgia, US, Dr. James Bursey, Coventry University, UK, Dr. T V Ananthapadmanabha, Dr. N. Sriram and Dr. Angshul Majumdar, IIIT Delhi. The conference aim to address one of the most praising challenge i.e. "Making healthcare more accessible, faster, better and cheaper"

More than 200 research papers from researchers around the country and abroad were presented at the conference covering the different tracks like Communication system and Networks, Medical Imaging and bio signal processing, M-Health and E-Health, Signal processing for communication systems and Multimedia Communication and signal processing along with case studies.

In this conference, there were 20 session chairs and participants were from 9 IIT's/ IIIT's, 5 corporate groups and more than 85 other premier organizations including NIT's, state/central universities and research organizations. The conference was also followed by poster session as well.

An overwhelming response was seen for registration. A total of 300 delegates participated. Poster session was crowded with interested audience and there were enthusiastic discussion.





## Industry Academia Convention 2016 (IAC-2016)



With a view to assimilate the profound wisdom of the eminent Academia and Industry leaders to flag major issues and to identify the directions for future growth, Industry -Academia convention aimed at fostering our ever improving relations with the industry.

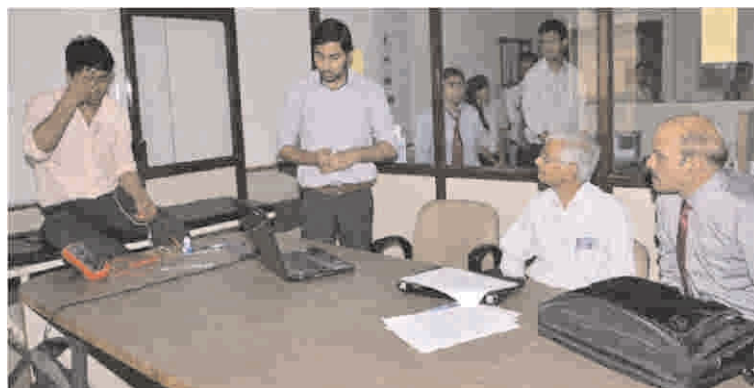
It focused on exploring research avenues between academic institutions and corporate organizations.

The convention was addressed Mr. Ashok Marwah, Director Technology, Aricent Technologies, Mr. Shubhankar Ghose, Head-HR, ABP News

Network Pvt. Ltd., Mr. Akhil Chaudhary, CEO Binary Semantics. The Academia meet was endeavored to throw light on some of the indispensable skills necessary to thrive in a corporate expectations with technical education. In his opening remark Prof. Rajeev Agarwal, Director GLBITM informed that students have to adapt rapidly evolving technology along with a focus on practical and real-time industry problems which may not be inculcated merely by a theoretically sound education.

Dr. H M Gupta, Professor Emeritus IIT Delhi, ICEIT Chair in his address at the inaugural function of the convention threw some light on the theme of the event that industry-academia meet is a unique platform that will bring together experts from the industry to discuss the most critical issues about the gap in industry and academia today and explore the scope of direct involvement of industry for technical uplift of the students through training and projects. Exposure to real time industry applications and methodologies is required through direct interaction of industry and academia.

An interactive panel discussion by industry leaders like Mr. P. K Dixit, Head HR, Autometers Alliance Ltd., Mr. Anup Gupta, Country Head, Customer Service, Autometers Alliance Ltd., Mr. Sumit Chakrovarty, Head, HR, Syscomm, Col S. Patnaik, Head Training, Tech-Mahindra, Mr. Ravikant, VP, Mothersosumi Infotech and Design Ltd. to discuss challenges faced by industry and academia as well as look for solution to any impediments that arise during the collaboration. Lecture series was delivered by the experts from industry and academia to discuss major high impact technologies and innovations prevalent in the industry. The takeaways from the convention were that the industry may provide pre-joining skill development program to aspiring or placed engineering students as per the industry needs and extend resources of the institute to design and develop test-bed, prototypes and working solutions in a cost effective manner. At the end of the session students interacted with industry professionals across multiple domains and share their thoughts for resolving technical issues through projects.





## Innovation and incubation awareness camp (INCUBE-2016)



### Get Set.....Go Start-up!

A one day workshop on “how to come up with innovative project and make a good entrepreneurial proposal” was organized by Electronics and Communication Engineering Department of GLBITM, Greater Noida on 30<sup>th</sup> July 2016.

The keynote speakers of the awareness camp i.e. INCUBE 2016 were Mr. Ankit Macchar, Manager Ecosystem Development, icreate. Mr. Swarup Pandya, Executive-Buisness Development services, icreate, Mr. Umang Agarwal, Business Development officer, NXG Ventures.

The workshop was organized within certain objectives that

- Importance of being innovative in today's technology driven world
- Technology-incubation converting ideas to project
- To understand entrepreneurship and its journey
- How to generate entrepreneurial idea(s)
- Customer validation exercise
- How to make a good business proposal

I create and NXG Venures were the resource person of the event. Students of ECE (II year and III year ) attended the workshop. Following topics were covered during the workshop

1.Understand Next Gen Innovation and Entrepreneurship  
i.e. how to generate ideas

2.Ideas pitching and team foundation, introduction to Javelin Experiment Board

3.Pivot/Learnings, case studies and solution concept were discussed

4.Exercise, business model canvas (BMC)

5.How to make best use of your college days

6.Incubation process



7.Funding stages and opportunities.

The students were briefed about the importance of being innovative in today's technology and how to come up with a idea and turn it into a business.

The workshop ended with a questioning and answering session and was quite interesting as students received a lot of knowledge about entrepreneurship and how to change your ideas into a good business proposal.



**ICEIT Student Chapter Slide Presentation Competition**  
on  
**role of Electronics and ICT in development of smart cities**



Slide presentation competition was organized on 15<sup>th</sup> October 2016 by GLBITM, ICEIT Student chapter. Dr. H.M Gupta, Emeritus Professor, IIT Delhi was the chief Guest of the event who enlighten us with their kind words of wisdom.

The program started with great enthusiasm and full participation of students from various other colleges like IIMT and G.L. BAJAJ itself. Students presented their ideas and thoughts about the topic and explained the role of electronics in development of smart cities with full enthusiasm and great confidence. Prizes were distributed to the top three presentations and were awarded with certificates.

**Technical fest - TECHBLITZ**



Techblitz – 2015 was celebrated by GLBITM college students on 15<sup>th</sup> October 2015 in association with ICEIT. Former President Dr. A.P.J. Abdul Kalam was fondly remembered today on his 84th birth anniversary through a host of programme. The technical event was segregated in different activities like-

- |                                   |                           |
|-----------------------------------|---------------------------|
| Ø Technardo ( Technical Writing ) | Ø Bizz Buzz               |
| Ø Technical Rangoli               | Ø Powerpoint Presentation |
| Ø Poster Presentation             | Ø Circuit Designing       |

The objective of the symposium was to bring the students of various streams from institution on a common platform where they were encouraged to share knowledge and innovative ideas. It also aimed to exhibit the talents and skills of the aspiring Engineers both in Technical and Non-technical ways.

Honorable Director, **Dr. Rajeev Agarwal** inaugurated the symposium by lightening the candle and made the students aware of the contribution of **Dr. A.P.J. Abdul Kalam** towards our nation as well as inspired them to do the same.

The event was successful enough to attract as many as 350 registrations for various events being held under the great supervision of ICEIT Student's Chapter Head, **Piyush Yadav**.

The fest executed with a total of 6 events planned and organized at its best of quality. Focusing on the types of events to include in the fest was decided by the fest coordinators keeping the interest and need of the engineering student into consideration, with little emphasis on the fun full events behind the scene.

## Technical fest - TECHBLITZ



### Technical Rangoli

In order to make event fun and colourful, technical rangoli was conducted and students were encouraged to show their innovative ideas on the topic “DIGITAL INDIA”. Students not only participated in bulk but also showed their perspective on the theme in very beautiful and innovative manner.

### PowerPoint Presentation

The speaking and presentation skills of the students were tested through this event and they were also encouraged to propose their business ideas through it in order to encourage entrepreneurship among the young students and provide them a path towards success.



### Technical Debate

Huge participation was seen in the event and students were too excited to put up their views and ideas on the topic provided to them and the best two speaker among the various participants were chosen as the winners.



### Technical Writing

Participation of over 100 plus students was seen in the respective event, with a great enthusiasm within the students, to show their ability in writing. Topic was provided to write upon within a limited time period and the best two papers were awarded with the amazing prizes.

### Poster Presentation

The Posters were displayed in the lobby in front of the respective judges. There were total 18 entries. Posters were judged very nicely & effectively. The poster presentation was judged mainly based on the innovative concept, interaction with the others and how to make poster effectively.

## Technical fest - TECHBLITZ



### Circuit Designing

The Models were displayed in lab by the participants according to the topic provided to them. The objective to conduct this event was bridging knowledge of theory with practical aspects by using phenomenon of science and principals of Engineering.

### Prize Distribution

Winners and Runner-ups of all the events were awarded with the cash prize and certificates by HOD of electronics and communication department, **Dr. Amit Sehgal**



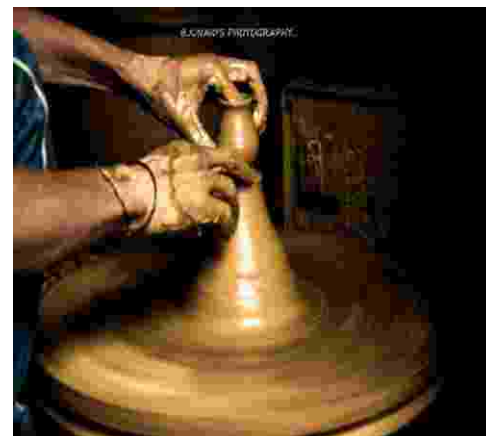
## Student Corner



**Atul Narayan**  
B.Tech (1st year)  
Department of ECE



**Junaid Akhtar**  
B.Tech (IVth year)  
Department of ECE







## **MEMS Technology**

Micro-Electro-Mechanical Systems, or MEMS, is a technology that in its most general form can be defined as miniaturized mechanical and electro-mechanical elements that are made using the techniques of micro fabrication. The critical physical dimensions of MEMS devices can vary from well below one micron on the lower end of the dimensional spectrum, all the way to several millimeters.

The term used to define MEMS varies in different parts of the world. In the United States they are predominantly called MEMS, while in some other parts of the world they are called “Microsystems Technology” or “Micro Machined Devices”. While the functional elements of MEMS are miniaturized structures, sensors, actuators, and microelectronics, the most notable elements are the micro sensors and micro actuators. Micro sensors and micro actuators are appropriately categorized as “transducers”, which are defined as devices that convert energy from one form to another. In the case of micro sensors, the device typically converts a measured mechanical signal into an electrical signal.

The more complex levels of integration are the future trend of MEMS technology. The present state-of-the-art is more modest and usually involves a single discrete micro sensor, a single discrete micro actuator, a single micro sensor integrated with electronics, a multiplicity of essentially identical micro sensors integrated with electronics and a single micro actuator integrated with electronics.

MEMS technology is sometimes cited as separate and distinct technology. In reality the distinction is not so clear-cut. The well-known Scanning Tunneling-Tip Microscope (STM) which is used to detect individual atoms and molecules on the nanometer scale is a MEMS device. Similarly the Atomic Force Microscope (AFM) which is used to manipulate the placement and position of individual atoms and molecules on the surface of a substrate is a MEMS device as well. In fact, a variety of MEMS technologies is required in order to interface with the nano-scale domain.

Thus the MEMS is a technology of encompassing highly miniaturized things that cannot be seen with the human eye. The common benefits afforded by this technology, include: increased information capabilities, miniaturization of systems, new materials resulting from new science at miniature dimensional scales, and increased functionality and autonomy for systems.

**Priya**  
**B.Tech (IVth year)**  
**Department of ECE**





## Student Corner

### Reed Switch Sensors

Reed switch sensors are electronic switches which are operated by external applied magnetic field. It consists of a pair of two low resistance slender flattened ferromagnetic metal blades. The reed metals are hermetically sealed in a glass tube filled with highly pure inert gas. Two overlapping iron blades are separated by distance of few microns. Under non overlapping condition (when no magnetic field is applied) two blades do not touch, this condition is known as off state.

When external magnetic field is applied, north & south poles are created around the blades & the blades attracted to each other & switch closes, this condition is known as on state . REED SWITCHES are reliable, quick, long service life, fast switching time & wide working temperature range. Their hermetical sealing (air tight structure) makes them work in any atmospheric condition. They are used in REED RELAYS, MAGNETIC SENSOR (Burglar Alarms), etc.

**Garima Singh**  
**B.Tech (IInd year)**  
**Department of ECE**

### The Coffee Ring Effect

A “coffee ring” is a pattern left by a puddle of particle laden liquid after it evaporates. According to research, it is helping scientist to quickly & cheaply identify the mineral contents of tap water. The intrication of tap water is measured by comparing the “coffee ring “with the patterns produced by the residues left behind when tap water evaporates. This technique could be effective ways to engage people in examining their own tap water.

**Akansha Joshi**  
**B.Tech (IInd year)**  
**Department of ECE**

## Editorial Board

<b>Convener</b>	: Dr. Amit Seghal HOD
<b>Editor</b>	: Dr. Dinesh Singh - Associate Professor
<b>Student Editor</b>	: Garima Singh - II year Akansha Joshi - II year



## VISION

To become a department of repute and prepare globally competent and socially responsible professionals with holistic knowledge and technical skills.

## MISSION

- ✓ To provide a supportive environment for effective knowledge transfer and nurturing ideas.
- ✓ To equip students with technical and leadership skills, and abilities to face the global challenges.
- ✓ To create an environment conducive for research and development with continuous involvement of industry.
- ✓ To inculcate professional and moral values in the students.

## Program Educational objectives (PEO)

On completion of this course, our graduates will be able to

1. Exhibit multi-disciplinary technical and leadership skills for better employability, higher education and entrepreneurship.
2. Possess strong knowledge in the field of Electronics and Communication Engineering to develop solutions for real life problems.
3. Undertake professional responsibilities through strong team-work, communication skills and life-long learning.
4. Become socially responsible professionals with moral values and ethics.

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