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**Chairman's Desk:**



Dear Member,

At the outset I thank all the committee members and all the corporate members of Institution of Engineers (India), Mysore local center, Mysore for their fullest support for all the technical activities organized for the month of January 2014.

I assure that the Institution of Engineers (India), Mysore local centre will realize the mission of IE(I), through well planned innovation programmes. A sincere attempt for the idea of transfer and dissemination of multi disciplinary expertise knowledge will be made. The present state of the art technologies and the research activities in engineering and technologies will be exploited to the best of my ability through research and knowledge innovation support so as to reach all the corners of stake holders for the benefit of engineers in particular and society at large. I appeal for your fullest cooperation in the coming days also.

# The Institution of Engineers (India)

**MYSORE LOCAL CENTRE (ESTD : 1964)**

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## NEWS LETTER

**Er. T. ANANTHAPADMANABHA, FIE**  
Chairman

**Er. P. SAMPATHU, MIE**  
Hon. Secretary

### 26<sup>th</sup> Jan 2014: 65<sup>th</sup> REPUBLIC DAY CELEBRATION



Republic day celebration at IEI, Mysore local centre

On 26/01/2014, Republic Day was Celebrated at IE(I), Mysore local centre, Mysore. The celebrations were initiated by unfurling the National Flag by Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore local centre, Mysore followed by National Anthem.

In delivering the Chairman speech, Dr. T. Ananthapadmanabha has stressed the importance of all the citizens of India in discharging their duties and responsibilities under the umbrella of constitution of India. He has opined that it is our responsibility to enable the youth by providing them with the necessary skills and opportunities. We must harness their talent through a focus on quality education, entrepreneurship, innovation, research and technology.

A health awareness programme was also organized in association with VLCC health care Ltd. for the members. Er. P. Sampathu, Honorary Secretary, IE(I), Mysore local centre, Mysore proposed the vote of thanks. The occasion was witnessed by the presence of many past chairmen, past honorary secretaries and corporate members of IE(I), Mysore local centre, Mysore.



Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore Local Centre, Mysore speaking on the occasion

### Technical lectures

#### 09<sup>th</sup> Jan 2014: Technical Lecture on "My Engineering Experiences" by Dr. B. Sureshwara, Faculty Member, Illinois Institute of Technology, Chicago, USA.

Er. P. Sampathu, Honorary Secretary, IE(I), Mysore Local Centre gave a warm welcome to the guest speaker - Dr. B. Sureshwara, Chairman - Dr. T. Ananthapadmanabha, Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), MLC, Er. A. S. Satish, Council Member IE(I) and President, Chamber of Industries and Commerce, Mysore, Er. Rathan Babu, Corporate Member, IE(I), MLC, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore presided over the session and introduced the Guest speaker.

The Guest Speaker Dr. B. Sureshwara has shared his engineering experiences of about 50 years in the field of civil and structural engineering with the members of IE(I), MLC. The details of his talk are as follows:



Guest Speaker Dr. B. Sureshwara felicitated by IE(I), Mysore Local Centre

Engineers in the field of designing, particularly in the aerospace industry, are required to evaluate their output with respect to a large number of parameters that do not provide any scope for compromising on any one of them. The wish list of their customers, such as the pilots in the complex cockpit of aircrafts, is virtually endless but limits of just two parameters namely, size and weight of innumerable components of the controls to ensure safe take-off, flight and landing pose unimaginable challenges before design engineers.

The Guest Speaker recalling the recent outbreak of fire in the air-conditioned coach of the Bangalore-Nanded train resulting in 26 passengers getting roasted alive has said that At Underwriters Laboratories (UL), a thorough system is followed for zeroing in on possible failures of industrial products due to shortcomings in safety matters. All the tests done at UL are carried out on the basis of practicality rather than on equations.

The guest speaker Dr. B. Sureshwara was felicitated by IE(I), Mysore Local Centre. Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), MLC, Mysore proposed the vote of thanks.

**10<sup>th</sup> Jan 2014: Technical Lecture on "Rural Drinking Water Management" by Er. C. N. Babu, Chief Engineer (Retired), Department of Irrigation, GOK.**

Er. P. Sampathu, Honorary Secretary, IE(I), Mysore Local Centre gave a warm welcome to the guest speaker - Er. C. N. Babu, Chairman - Dr. T. Ananthapadmanabha, Er. N. S. Mahadevaswamy, Past Honorary Secretary, IE(I), MLC, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore presided over the session and introduced the Guest speaker.

The Guest Speaker Er. C. N. Babu is a Chief Engineer (Retd.) having many years of experience in the field of water management and in irrigation department gave an excellent talk on *Rural Drinking Water Management*. The details of the presentation are as follows:

The Rural Drinking Water Supply sector started in 1972-73 with the Government of India supplementing the efforts of State



Er. C.N. Babu Past Chairman, IE(I), Mysore Local Centre speaking in the meeting

Governments by providing financial assistance under the centrally sponsored launch of Accelerated Rural Water Supply Programme (ARWSP). About Rs.70,000 crore have been invested in the Rural Water Supply Sector since independence by the Central and State Governments. At present, States generally plan, design and execute water supply schemes through their State Public Health Engineering Departments or as in the case of some states, Panchayat Raj Engineering Departments or Rural Development. At national level, the RGNDWM formulates guiding policy, sets standards, and provides funds and technical assistance to the states for rural water supply and sanitation (RWSS).

The Guest Speaker has explained about the reformations in Rural Drinking Water Supply sector, Details of Rural Water Supply, Drinking Water standards, Roles & Responsibilities of Gram Sabha in drinking water management, Role of Grama Panchayat President, Members, and Village Water & Sanitation Committee (VWSC) in drinking water management.

The guest speaker Er. C. N. Babu Mohan was felicitated by IE(I), Mysore Local Centre, Mysore for his fascinating talk. Er. N. S. Mahadevaswamy, Past Honorary Secretary, IE(I), MLC, Mysore concluded the lecture session by proposing vote of thanks.

**17<sup>th</sup> Jan 2014: Technical Lecture on "VLSI and Embedded Systems" by Dr. C. R. Venugopal, Professor and Head, Department of Electronics and Communication Engineering, SJCE, Mysore.**

Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), MLC, Mysore gave a warm welcome to the guest speaker - Dr. C. R. Venugopal, Chairman - Dr. T. Ananthapadmanabha, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore presided over the session and introduced the Guest speaker.

The Guest Speaker Dr. C. R. Venugopal is a Professor and Head of the Department of Electronics and Communication Engineering at Sri Jayachamarajendra College of Engineering (SJCE), Mysore. With many years of teaching and research experience he has gave a fascinating talk on *VLSI and Embedded System*. The details of his presentation are as follows:

An embedded system is a computer system with a dedicated function within a larger mechanical or electrical system, often with real-time computing constraints. It is embedded as part of a complete device often including hardware and mechanical parts. By contrast, a general-purpose computer, such as a personal computer (PC), is designed to be flexible and to meet a wide range of end-user needs. Physically, embedded systems range from portable devices such as digital watches and MP3 players, to large stationary installations like traffic lights, factory controllers, and largely complex systems like hybrid vehicles, MRI, and avionics.



Guest Speaker Dr. C. R. Venugopal responding for audience queries

Structured VLSI design had been popular in the early 1980s, but lost its popularity later because of the advent of placement and routing tools wasting a lot of area by routing, which is tolerated because of the progress of Moore's Law.

At one time, there was an effort to name and calibrate various levels of large-scale integration above VLSI. VLSI technology may be moving toward further radical miniaturization with introduction of NEMS technology.

The guest speaker Dr. C. R. Venugopal was felicitated by IE(I), Mysore Local Centre, Mysore. Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), Mysore Local Centre, Mysore concluded the lecture session by proposing vote of thanks.

**18<sup>th</sup> Jan 2014: Technical Lecture on "Pavement Upgrading- Jeddah International Airport" by Er. A. R. Nataraj, Pavement Consultant, NACO, Netherlands.**

Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), MLC, Mysore gave a warm welcome to the guest speaker - Er. A. R. Nataraj, Chairman - Dr. T. Ananthapadmanabha, Er. H. S. Srinivas Prasad, Committee Member, IE(I), MLC, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore presided over the session and introduced the Guest speaker.

The Guest Speaker Er. A. R. Nataraj is an independent consultant and involved in the construction of several airports in the Middle-East. The details of his presentation are as follows:

The new King Abdulaziz International Airport three-stage development started in September 2006, and is currently scheduled for completion in 2014. A capacity for up to 80



Guest Speaker Er. A. R. Nataraj felicitated by IE(I), MLC, Mysore

million passengers a year is among the targets proposed for a new airport. The central concrete runway had developed extensive cracks along the direction of the runway due to extreme variations in temperature. At some locations, there were cracks in multiple directions. Pieces of concrete flying off from the runway could even cause expensive damage to aircraft engines. When a wheel passes over a crack, there will be relative movement of the pavement on either side of the crack. This leads to reflective cracking of the asphalt layer that may be laid over the concrete sub-base. Repair and rehabilitation had to be undertaken to make the runway safe and fit for heavy traffic. The guillotine breaker was used to break up the existing pavement. This is a self propelled machine and has a guillotine weighing 6 tons.

The guest speaker Er. A. R. Nataraj was felicitated by IE(I), Mysore Local Centre, Mysore for his excellent talk. Er. H. S. Srinivas Prasad, Committee Member, IE(I), MLC, Mysore concluded the lecture session by proposing vote of thanks.

**20<sup>th</sup> Jan 2014: Technical Lecture on "Overview of Engineering Polymers" by Er. Chandresh, Professor, SJCE, Mysore.**

Er. P. Sampathu, Honorary Secretary, IE(I), Mysore Local Centre gave a warm welcome to the guest speaker - Er. Chandresh, Chairman - Dr. T. Ananthapadmanabha, Dr. S. Roopa, Professor, Dept. of Polymer Science & Technology, SJCE, Mysore, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), MLC, Mysore presided over the session and introduced the Guest speaker.

The Guest Speaker Er. Chandresh is a Professor at Department of Polymer Science & Technology, SJCE, Mysore. With multi years of teaching and research experience in the field of Polymer Science & Technology he has given an excellent talk on *Overview of Engineering Polymers*. The details of his presentation are as follows:

Engineering polymers are materials with exceptional mechanical properties such as stiffness, toughness, and low creep that make them valuable in the manufacture of structural products like gears, bearings, electronic devices, and auto parts. Each engineering plastics usually has a unique combination of properties that may make it the material of choice for some application. For example, polycarbonates are highly resistant to impact, while polyamides are highly



Guest Speaker Er. Chandresh felicitated by IE(I), MLC

resistant to abrasion. Other properties exhibited by various grades of engineering plastics include heat resistance, mechanical strength, rigidity, chemical stability and fire safety.

The guest speaker Er. Chandresh was felicitated by IE(I), Mysore Local Centre, Mysore. Er. P. Sampathu, Honorary Secretary, IE(I), Mysore Local Centre, Mysore concluded the lecture session by proposing vote of thanks.

**21<sup>st</sup> Jan 2014: Technical Lecture on "Ideas to Intellectual Property Rights for Business and Technology" by Dr. M. N. Bheemesh, Senior Advisor, Intellectual Property Rights.**

Er. P. Sampathu, Honorary Secretary, IE(I), Mysore Local Centre gave a warm welcome to the guest speaker - Dr. M. N. Bheemesh, Chairman - Dr. T. Ananthapadmanabha, Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), MLC, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore presided over the session and introduced the Guest speaker

The Guest Speaker Dr. M. N. Bheemesh is a senior advisor in Intellectual Property Rights and with multi years of experience in the field of Intellectual Property Rights he has given an excellent talk on *Ideas to Intellectual Property Rights for Business and Technology*.



Guest Speaker Dr. M. N. Bheemesh felicitated by IE(I), MLC

The session focused on the issues concerning Intellectual Property rights and briefed on patents, trademarks, trade secrets, designs, geographical indications, copyrights.

The guest speaker has highlighted a few case studies which based on Indian patent laws and its rigidity and a comparative study on Indian IP laws and foreign IP laws. The emphasis was given to IP fillings and procedure involved for the same.

He has covered all the burning issues concerning Intellectual Property in and around the world and also explained the significance on why registration of copyrights, patents, trademarks is important in today's technology driven society.

The guest speaker Dr. M. N. Bheemesh was felicitated by IE(I), Mysore Local Centre, Mysore. Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), Mysore Local Centre, Mysore concluded the lecture session by proposing vote of thanks.

**24<sup>th</sup> Jan 2014: Technical Lecture on "Valuation, its importance and Human Values" by Sri. B. K. Ranganath, Honorary Principal, Brahmakumaris, Bangalore.**

The Institution of Engineers(India), Mysore Local Centre, Mysore in association with Institution of Valuers, Mysore organized a talk on *Valuation, its importance and Human Values*.



Dr. T. Ananthapadmanabha, Chairman, IE(I), MLC, Mysore speaking in the programme

Dr. T. Ananthapadmanabha, Chairman, IE(I), MLC, Mysore gave a warm welcome to the guest speaker - Sri. B. K. Ranganath, Er. A. S. Satish, Council Member IE(I) and President, Chamber of Industries and Commerce, Mysore, Er. T. V. Chandra, Chairman, IOV, Mysore, Er. C. B. Lakshmana Rao, Vice Chairman, IOV, Mysore all the committee members, corporate members, and Press & media into the session.

The Guest Speaker Sri. B. K. Ranganath has explained about the valuation and its importance for today's society.

The guest speaker Sri. B. K. Ranganath was felicitated by IE(I), Mysore Local Centre, Mysore and IOV, Mysore. Er. A. S. Satish, Council Member IE(I) and President, Chamber of Industries and Commerce, Mysore concluded the programme by proposing vote of thanks.

**25<sup>th</sup> Jan 2014: Technical Lecture on "An Introduction to Software Defined Radio for Microwave Engineers" by Dr. Jeffrey pawlan, Pawlan Communications, San Jose, USA.**



Guest Speaker Dr. Jeffrey pawlan delivering lecture

Er. P. Sampathu, Honorary Secretary, IE(I), Mysore Local Centre gave a warm welcome to the guest speaker – Dr. Jeffrey pawlan, Chairman - Dr. T. Ananthapadmanabha, Er. A. S. Satish, Council Member IE(I) and President, Chamber of Industries and Commerce, Mysore, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore presided over the session and introduced the Guest speaker

Dr. Jeffrey has been a consultant and owner of Pawlan Communications for over 25 years. Prior to that, he had worked for many companies in California in very diverse areas of analog, RF, and microwave design and has been an engineer for 40 years. Some of his work was for NASA projects including the very successful design of the SARSAT/COSPAS search and rescue satellite ground stations.

Guest Speaker Dr. Jeffrey Pawlan has said that the Software Defined Radio (SDR) is the culmination of advances on several fronts and probably the most significant area of development in radio systems today. The entire worldwide cellular system uses SDR. NASA and the US military communications are now almost exclusively using SDR. Soon new automobile radios will be SDR to accommodate multiple modulation formats.

His lecture involves the definition, history and evolution of Software Defined Radio (SDR). The lecture programme was very useful for RF/microwave engineers because analogies were made to conventional classic radio systems and components. Dr. Pawlan has explained the concepts of oversampling and under sampling as it applies to SDR and further explains the details of correctly driving and implementing an A/D converter as this is one of the important areas that the RF/microwave engineer will be asked to do. He then showed the firmware and software portions of SDR and a live demonstration of SDR was presented.

The role of the RF/microwave engineer in this new technology was shown so that the audience can adapt and feel

that their skills are needed in the evolving field of radio communications.

The guest speaker Dr. Jeffrey pawlan was felicitated by IE(I), Mysore Local Centre, Mysore. Er. A. S. Satish, Council Member IE(I) and President, Chamber of Industries and Commerce, Mysore concluded the lecture session by proposing vote of thanks.

**28<sup>th</sup> Jan 2014: Technical Lecture on "Modern Power System Protection" by Er. S. Rangaraju, Executive Engineer (Electrical), RT- Division, KPTCL, Mysore.**



Guest Speaker Er. S. Rangaraju felicitated by IE(I), MLC

Er. P. Sampathu, Honorary Secretary, IE(I), Mysore Local Centre gave a warm welcome to the guest speaker – Er. S. Rangaraju, Chairman - Dr. T. Ananthapadmanabha, Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), MLC, Er. Sudheer, Assistant Engineer (Electrical), RT- Division, KPTCL, Mysore, all the committee members, corporate members, and Press & media into the session. Dr. T. Ananthapadmanabha, Chairman, IE(I), Mysore presided over the session and introduced the Guest speaker

The Guest Speaker Er. S. Rangaraju is an Executive Engineer (Electrical) in RT- Division of KPTCL, Mysore. With multi years of experience in the field of testing and commissioning of Power system Equipments he has given an excellent talk on *Modern Power System Protection*.

He has started his lecture explaining the basic elements of Electric Power System and subsystem of power system protection. He has briefed upon Different types of Protective relays, Need of protective relays, characteristics of protective relays, X/R Values of Generator, Transformer and Transmission Lines, Evolution of Relay Technology, Various disciplines involved in the study of Numerical Protection, Functional block diagram of Numerical Relays, benefits of Digital Relays, Hierarchical Substation Computer System, fault impedance calculation, implementation of Relay characteristics, Multiprocessor based Numerical Relay, and Protection scheme employed in KPTCL.

The Guest Speaker Er. S. Rangaraju was felicitated by IE(I), Mysore Local Centre, Mysore. Er. B. V. Ravindranath, Joint Honorary Secretary, IE(I), Mysore Local Centre, Mysore concluded the lecture session by proposing vote of thanks.

### Programmes for the month of February - 2014

Sl. No.	Date	Programme/ Technical Presentation	Speaker/Guest
1	10-02-2014, Monday 5:30pm	SWARM Intelligent based routing protocol for Mobile Adhoc Network	<b>Er. D. C. Gopalaramu,</b> Sub Divisional Engineer, BSNL-RTTC, Mysore
2	12-02-2014, Wednesday 5:30pm	Passive Optical Network	<b>Er. Niranjan B Poojary,</b> Sub Divisional Engineer, BSNL-RTTC, Mysore
3	14-02-2014, Friday 5:30pm	4G/LTE	<b>Er. A. V. Srikantan,</b> Divisional Engineer, BSNL-RTTC, Mysore
4	19-02-2014, Wednesday 5:30pm	Security in Web applications	<b>Er. Meenakshi S.,</b> Principal, Infosys Technologies Ltd.
5	21-02-2014, Friday 5:30pm	Digitization of Banking	<b>Er. Vishnu Datta,</b> Principal Consultant, Infosys Technologies Ltd.
6	25-02-2014, Tuesday 5:30pm	Need for Software testing in IT applications	<b>Er. Hanumesh V. J.,</b> Senior Lead Principal, Infosys Technologies Ltd.

- Dr. T. Ananthapadmanabha, Chairman, IE(I), MLC will preside over all the Programme.
- No separate invitations will be sent for the above scheduled programmes and unscheduled programmes will be notified in IE(I) Website as and when arranged. All the Corporate members are requested to visit [www.ieimysore.org.in](http://www.ieimysore.org.in) for details.

All the corporate members are requested to provide their E-mail Id & Mobile number (if it is not provided earlier) to the office of IE(I), Mysore local centre so as to reach them through E-mail & Mobile.

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