

A Report on the Golden Jubilee IETE Mid-Term Symposium (MTS) 2019

Golden Jubilee IETE Mid Term Symposium on 'Startup India Initiatives: IT & IoT Based Ventures' was held at Netaji Subhas University of Technology (NSUT), New Delhi on 5th April 2019. It was organized by IETE Delhi Centre and IETE Noida Centre and supported by IETE HQ and NSUT. Deliberations started with the formal welcome of the Chief Guest **Dr. Sudhir Kamath**, Director General, Microelectronic Devices & Computational Systems, DRDO and other dignitaries on the dais by **Prof (Dr) KTV Reddy**, President, IETE with floral bouquets and IETE Mementos. This was followed by lighting of lamp by dignitaries and Sarasvati vandana by students of the Music Society of NSUT. In his welcome address and opening remarks, **Shri R S Chauhan**, Chairman, IETE Delhi Centre extended deepest gratitude to the Chief Guest and other dignitaries and welcomed all for their presence to grace the occasion. **Prof M S Hoda**, Chairman, IETE Technical Programs & Publicity Committee gave an elaborate overview of the Symposium and emphasized on the need of Startups in India and urged for the passion to take up these projects. **Shri V K Gupta**, IETE Zonal Mentor (North) highlighted the activities of the IETE Centres and Sub-Centres in the Northern region and informed that NSUT had become the Organizational & ISF Member of IETE. **Prof (Dr) KTV Reddy**, President IETE highlighted the activities of IETE in his address and informed about opening of one PAC of IETE in Dubai.



Dignitaries on the Dias

He informed that Impact Factor of IETE Journals was increasing continuously and expressed his desire that the participants must interact with the learned speakers and get maximum benefits from this Symposium. The Chief Guest **Dr. Sudhir Kamath** then released the Symposium Souvenir and delivered his address which was followed by the addresses of the Guests of Honour **Dr. KPS Rana**, Prof at NSUT; **Lt General (Dr) Rajesh Pant**, PVSM, AVSM, VSM (Retd.), National Cyber Security Coordinator, PMO Office; **Shri Vipin Tyagi**, executive Director, C-DOT and **Shri Puneet Chawla**, Chairman & Managing Director, RailTel Corporation of India Ltd. **Dr. Anand Gupta**, Associate Prof and Coordinator of the Event from NSUT expressed his views about the Symposium and hoped that it would have good knowledge gaining and interactive technical sessions. An integral element of the IETE Mid Term Symposium was the **46th Vikram Sarabhai Memorial Lecture** which was delivered by the Chief Guest **Dr Sudhir Kamath**.



Chief Guest delivering the 46th Vikram Sarabhai Memorial Lecture

In his lecture, **Dr Kamath** highlighted the use of IT and IoTs and covered the progress made in these ecosystems finally finding their ways in setting up Startups in India and abroad. Challenges faced by service providers, safety and privacy of data, big data management, team work were some issues which were discussed besides highlighting DRDO efforts to support young entrepreneurs for setting up a successful

Startup. At the end of the Inaugural session, **Lt Col Dipankar Sen**, Secretary General, IETE passed the formal vote of thanks followed by National Anthem recitation by students of NSUT.

During Tea break, delegates visited the **Exhibition** on products and services offered by IT & IoT based Startup Ventures arranged near the Symposium venue. The Exhibitors included M/s Quantum Research And Centre of Excellence, M/s Eduvance, M/s Redefine Dimensions Convergence Pvt. Ltd., M/s Aricent, M/s Astra Products Pvt. Ltd., Group, M/s Aalfa Network, M/s Narda Safety Test Solutions.

Inaugural Session was followed by **Technical Session – I** which covered presentations on Information Technology (IT). There were a total of 7 Invited Speakers and the Session was chaired by **Prof Prerna Gaur**, Prof & Head, Instrumentation & Control Division NSUT, Director & Member Secretary, NSUT-IIF. In her brief introduction to the Technical Session, the Session Chairperson welcomed the audience and told that the session contained presentations on variety of topics ranging from technical to research to inspiration and to legal aspects concerned with Startups. She hoped that the presentation would impart knowledge in this area. Speaking on the Foundations and Challenges of Quantum Computing, the first Speaker **Dr Debajyoti Bera**, Assistant Prof, IIT, Delhi talked about some key ingredients that were used to design disruptive quantum algorithms and protocols. He also discussed the key concepts employed by Quantum Computers emphasizing on knowledge of quantum mechanics and quantum computation. In her presentation, **Dr Aparajita Bhatt**, Associate Prof, National Law University, New Delhi emphasized on the legal aspects of Cyber Security and discussed various threats to the Information Security. She elaborated on the National Cyber Security Policy 2013 and stressed that there was a need to build a better and strong technological and legal matrix which could effectively prevent any risk of breach to the Information Security.



Technical Session - I in progress

The third Speaker **Ms. Vartika Aggarwal**, B.E. in IT from NSUT and MBA from IIM Indore, Gold Medalist, is the owner of her own Startup, “Jewels by Vaga”. She emphasized that starting a Startup needed lot of thinking and self analysis of one’s capabilities, market pressure and facing uncertainties. She said that she never looked back once she decided to start her own venture. The Speaker summarized her talk by saying that one must always keep in mind that journey is more important than the destination. The next Speaker **Shri Prashant Chugh**, Group Leader, C-DOT, New Delhi spoke on Cryptography in a Post-Quantum World and focused his talk on the potential threats from Quantum Computing on the current Cryptography-based Systems. He explained the ways to counter these threats by adapting new paradigms called Post-Quantum Cryptography (PQC) Paradigms. He concluded the Talk by summarizing the efforts being put up by C-DOT in this regard. ‘User-centric problem solving as a growth lever for Startups’ was the topic of the next Speaker, **Shri Rohit Raghav**, VP at OYO. Being associated with various Startups, Shri Raghav emphasized on the understanding of the user needs and their potential response to solutions. This is a significant challenge for every Startup. He stressed that such problems could be tackled by right thinking and 360 Degree approach focused on specific outcomes. Next Speaker **Shri Swarandeeep Singh Kambo**, Lead – Investment and Community at UNLEASH spoke on ‘Art of Fundraising for Early Stage Startup’. He shared the thought process that goes in an Investor’s mind before he decides to (or not to) invest. He opined that investing in a Startup is very risky, most of them fail, some prosper but only a few make a 20 to 1 jackpot return. The last Invited Talk of Technical Session – 1 was delivered by **Prof Sandeep Mann** - a multitalented professional on ‘Beyond

App Design – Life is a big game’. Prof Mann illustrated six elements that need to be incorporated to make an App that belong to super successful league. He opined that customers and users value those propositions which carry equality of expertise across numerous disciplines. All the Invited Speakers and the Chairperson were given IETE Mementos.

Technical Session – II contained Invited Talks on the broad topic Internet of Things (IoT). This Session was chaired by **Shri Vimal Wakhlu**, Former Chairman & Managing Director, TCIL. In his opening remarks, Shri Wakhlu stressed on various challenges being faced by Indian people even after so much progress in technologies. He urged the younger generation to be prepared to meet these challenges by leveraging technology and utilize the benefits of entering into entrepreneurship. The first Invited Talk of the Session was delivered by **Dr Girish Mishra**, Scientist E, DRDO on ‘Blockchain Technology’ which aimed at basic understanding of the technology and exploring its applications in diverse areas. After Bitcoin, this technology found numerous fascinating uses. He informed that applications of this technology in areas such as healthcare, supply chain management, IPR, anti-counterfeiting and fraud detection have already been started. **Prof D V Gadre**, Associate Prof, NSUT talked on ‘System design Guidelines for IoT Leaf Node with Examples’ wherein he illustrated an IoT Node as part of a hierarchical system consisting of data collection, reduction and internet connectivity with the help of a few case studies.



Technical Session - II in progress

Next Speaker **Dr. S R N Reddy**, Prof in Computer Science & Engg., IGDTUW delivered the Invited Talk on ‘Research to Entrepreneurship – A journey of ETI Labs Pvt. Ltd. In which he elaborated the formation of ETI Labs as a result of project based R&D approach at IGDTUW. He also discussed transformation of the research outcome in different areas of IoT into end user products. **Shri Anil Pathak**, Director - Engineering, Harman Connected Services discussed ‘IoT Use Cases – Home/Office Automation, Wearable Devices and Connected Car’ and stressed that IoT is no more a buzz word. He attempted to discuss features of a connected car and shared the accomplishments, challenges and future potential areas of R&D/POC/Pilots. Next Speaker **Dr P C Dave**, Founder & Director, IP Moment Services talked on ‘Importance of Intellectual Property Rights (IPR) for Startups’. He stressed that many Startups forget to protect their IPRs in spite of spending time, energy and finances on commercializing their innovative ideas and elaborated on how to identify and protect IPRs by discussing different types of IP Rights and how effectively and efficiently a Startup can protect it. **Shri Sumit Monga**, Head, Govt Affairs, UNLIMIT talked on ‘Usage Based Insurance’. He stressed that many latest IoT based devices are available now-a-days but IoT based tailor made insurance premium for each individual is not available. Unlimit has taken the initiative to implement usage based insurance for optimal rationalization of the vehicles’ insurance premium. The last Speaker, **Shri Manusheel Gupta**, Founder & Chairman, SEETA and Co-founder & Director, Aspiring Investments Corp., focused on ‘IT Learning and Engineering with Open Source Software’. He elaborately shared his experiences of setting up a Startup, achievements, challenges and prospective. He also introduced the work done by his physically challenged colleague, **Shri Vibhor** to share his experience of developing the App giving information about Govt. of India’s various schemes for disabled persons. All the Invited Speakers and the Chairperson of this Session were also given IETE Mementos.

After the Technical Sessions, **Lal C Verman Award Lecture** was delivered by **Shri A K Lal**, Head, Systems Reliability Group at SAC, Ahmedabad on 'The Systematic Space Qualification of Indigenous Semiconductor and Substrate Technology'.



Shri A K Lal delivering the Lal C. Verman Award Lecture

Shri Lal deliberated on the need to optimize the electronic systems for space payloads so as to ensure the best possible performance in the smallest form factor and with highest power efficiency. He stressed the need of establishing cutting edge semiconductor technology facilities to undertake the design, fabrication, characterization and Space Qualification of such devices.

For the **Valedictory Session**, the Panel consisted of **Prof (Dr) KTV Reddy, President IETE; Shri Vimal Wakhlu; Dr (Mrs.) Smriti Dagur; Dr. J W Bakal; Prof M N Hoda and Shri V K Gupta**. The Panel Members discussed the contents of all the presentations and unanimously agreed to the fact that there is a huge potential of IT and IoT applications for the growth of technology in India. Future requirements are usage based insurance as well as connected cars. From the ecosystem perspective, almost all facets were covered in deliberations. Indigenous development of sensors and transducers is the basic need which may be looked into by prospective Startups. It was also opined that IETE should have an Incubation Centre also to help budding entrepreneurs. Giving example of successful Indian Startups like Ola & PayTM, it was emphasized that within every challenge, there is an opportunity so in spite of all Govt. regulations & other teething problems, our young generation must go for setting up their Startups and help India achieve self sufficiency in the IT & IoT areas. Members appreciated the efforts put up by all concerned with the Symposium for its success.



Valedictory Session in progress

Lt Col Dipankar Sen, Secretary General, IETE thanked the Penal Members and all the Invited Speakers. Valedictory Session came to an end with the concluding remarks shared by **Dr. KTV Reddy, President IETE**. At the end, IETE Mementos were presented to the Exhibitors and NSUT key members for their whole-hearted support in all activities concerned with Symposium. The program concluded with the vote of thanks by **Col Manoj Pande** (Veteran), Chairman, IETE Noida Centre who thanked for all the dignitaries, participants, delegates, organizers and exhibitors and all those who helped make the Symposium a grand success.



President, IETE giving IETE Memento



A view of the Cultural program

In the evening, a **Cultural Program** was held by the students of NSUT. Students of **Ashwamedh** – the Dramatic Society, **Crescendo** – the Music Society, **Mirage** – the Western Dance Crew and **Capella** – the Choreography Society of NSUT took part in presenting a memorable cultural evening.