REPORT ON
IEEE ComSoc Distinguished Lecturer Tour – DLT 2010
IEEE Nano-CAS 2010

Date : 17 July 2010 (Saturday)

Venue: Tata Consultancy Services (TCS)
GDC Building, Delta Park-Lords (Besides IEM & IDBI Bank)
Salt Lake Electronics Complex , Sector V, Block EP & GP, Kolkata – 700 091.

Jointly Organized By:

IEEE COMMUNICATIONS SOCIETY Calcutta Chapter

IEEE CIRCUITS AND SYSTEMS SOCIETY
CAS
Calcutta Chapter

http://ewh.ieee.org/r10/calcutta/comsoc/
http://ewh.ieee.org/r10/calcutta/cas/

Co-Sponsored By:
Tata Consultancy Services (TCS), Kolkata

PREAMBLE:

The IEEE Communications Society (ComSoc) Calcutta Chapter was formed on Oct. 13, 2003 with Prof. Debasish Saha as the Chairman and the IEEE Circuits And Systems (CAS) Society was formed on July 27, 2007 with Prof. Rabindranath Nandi as the Chairman. Since its inception, both the CAS and ComSoc Chapters have been actively organizing Educational Programs every year to cater the needs of the Local IEEE Members. The Executive Committee of ComSoc and CAS Chapters have decided to organize a Joint Educational Programs in 2010 as well, as was done in the previous years. Earlier, the ComSoc Calcutta Chapter ExeCom has decided to participate in the Distinguished Lecturer Tour, DLT – 2010 of the Region-10 IEEE Communications Society with the scheduled date as July 17. And the CAS Calcutta Chapter ExeCom has decided to organize IEEE Nano-CAS 2010 on the same day with "Nano Science & Technology" as the Theme. Thus, the Joint Program was then finalized as IEEE ComSoc DLT 2010 & IEEE Nano-CAS 2010, an One-day event on July 17, 2010 with the venue being Tata Consultancy Services (TCS), Salt Lake Electronics Complex, Kolkata.

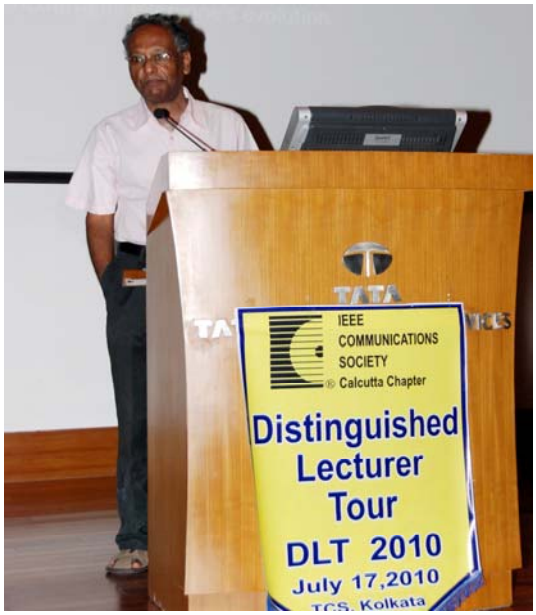
THE SCHEDULE:

Registration Confirmation at TCS (GDC Building), Salt Lake : 8.50 am – 10.30am **Inauguration : 10.30 am – 10.45 am** Tea: 11.45 am – 12.15 pm		
Time / Session	Topic	Speaker
10.45 am – 1.15 pm IEEE ComSoc DLT 2010	**Converged Services And a New Generation of Networking**	**Dr. Bhumip Khasnabish** IEEE ComSoc Distinguished Lecturer (DL)
Lunch: 1.15 pm – 2.30 pm		
2.30 pm - 4 pm IEEE Nano-CAS 2010	**Introduction to Nanoscience and Technology: Basic Ideas, Properties and Applications**	**Dr. Kalyan Kumar Chattopadhyay** Jt. Director School of Materials Sc. & Nanotech. Jadavpur University (JU), Kolkata – 700 032
4pm – 4.30 pm	**Vote of Thanks, Certificate Distribution & Tea**	

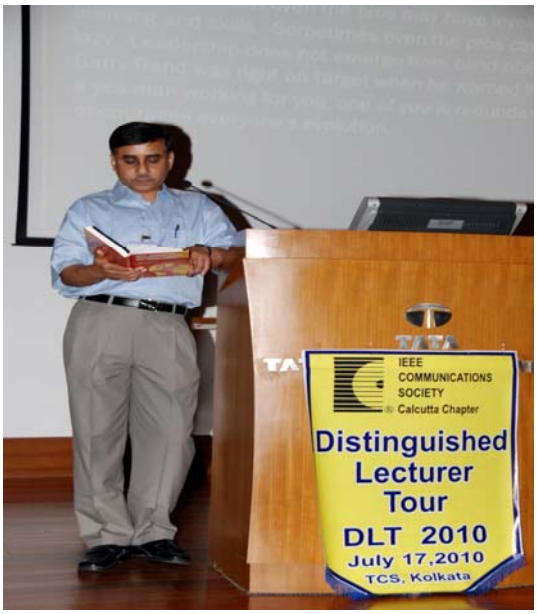
INAUGURAL SESSION:

In his Welcome Address, Dr. Swarup Mandal of Wipro Ltd., the Chairman of the IEEE ComSoc Calcutta Chapter explained the various Joint Programs being organized by the ComSoc and CAS for the benefit of the IEEE Community in the Eastern Region of India. The Program was then inaugurated by Prof. Kalyan Kumar Mallik, Chairman, IEEE Calcutta Section. Prof. Mallik appreciated this Joint initiative and he expressed the hope for such Joint Programs from ComSoc and CAS, in future also. Prof. Debasish Saha of IIM Calcutta, the Immediate Past-Chairman of the ComSoc Calcutta Chapter has introduced the Speaker, Dr. Bhumip Khasnabish, IEEE ComSoc Distinguished Lecturer to the audience. Then, Prof. D. Saha invited Dr. Khasnabish to deliver his Distinguished Lecture.

Dr. Swarup Mandal, Chairman,
IEEE ComSoc Calcutta Chapter



Prof. Kalyan Kumar Mallik, Chairman,
IEEE Calcutta Section



Prof. Debasish Saha, IIM Calcutta
Past-Chairman, IEEE ComSoc Calcutta Chapter

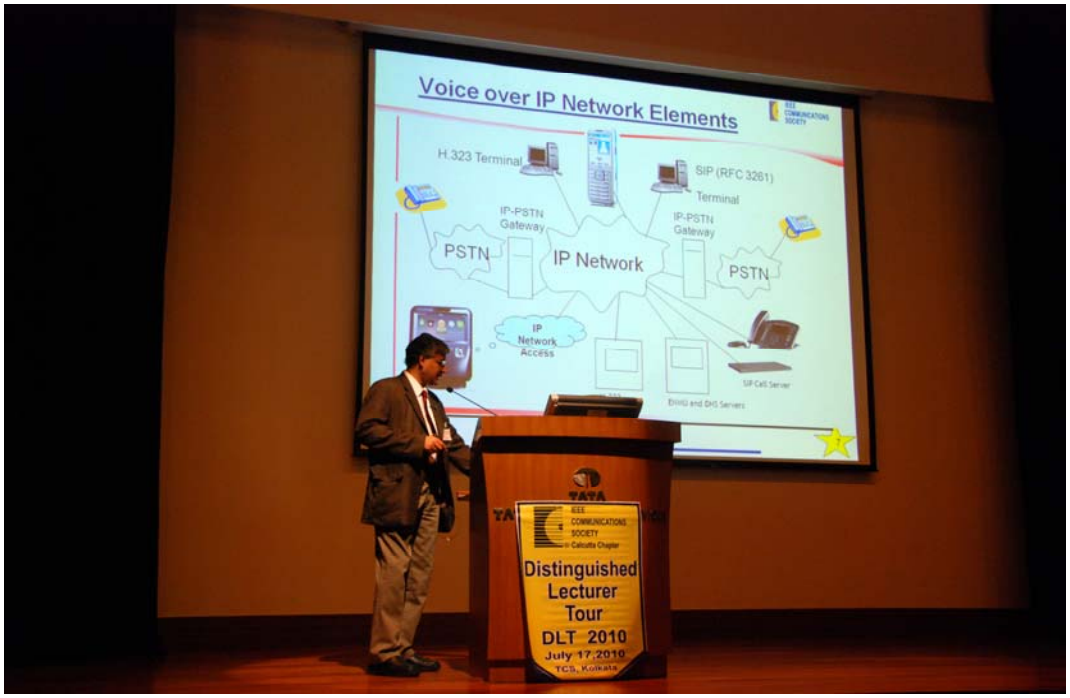
SESSION I : IEEE COMSOC DLT 2010

The following is the abstract of the Distinguished Lecture delivered by Dr. Khasnabish:

Convenience, cost-reduction, and convergence are the new mantras in the emerging Communication and Entertainment (ComEn) industry. Cost-reduction attempts are turning the industry upside down; archrivals are signing alliances, and the equipment suppliers are trying to become network/content providers. At the same time, cross-layer optimization and cognitive mechanisms are being explored for network access, traffic transmission, and Apps store development. Increasingly, many of the ComEn devices are becoming all-purpose devices. Ease of use (convenience) is driving the development of palm-top and hand-held devices to support voice calls, messaging, gaming, video conferencing/sharing, television (live or pre-recorded) program viewing, and so on. And, the support of convergence is the fierce motivating factor behind all of what are happening today! The driving force behind all of these is ultimate commoditization of device, services, network, and applications — irrespective of whether the domain is Communication or Entertainment.

Traditional voice, video, and messaging services have already been commoditized: Skype voice/video, Google voice/video, and a host of others similar services are available almost freely. Voice mail service is being replaced by the use instant messaging (for presence-announced users), Web based service-provisioning is toppling the use of Star-codes for advanced call/session feature activation, video on demand (VoD) services using over-the-top access is overthrowing the traditional movie rental business. Traditional service providers are therefore introducing value-added and differentiated services. In consumer domains, these services include any-time/anywhere IPTV, gaming, converged/blended and personalized services. And, in Enterprises, these include TeleMedicine (TeleMed), TelePresence/TruePresence (TP), healthcare data exchange service (note: TeleMed and TP are used in Enterprises today, and in near future these will find their ways to consumers' premises).

These emerging requirements impose several challenging network operations, transformation, and customer service requirements. Traditional client-server models are evolving to peer-to-peer (P2P), managed P2P, and cloud-based models for both real-time and near-real-time services. In addition, a wide range of reliability/availability (including continuity), security/privacy, mobility, multi-domain service provisioning, etc. are being demanded by the marketing and business operations. In this presentation, we will explore the current Industry activities for finding implementable and interoperable solutions to these problems — in the context of next generation networking — using the emerging IP multimedia subsystem (IMS), and service-oriented architecture/network (SOA/SON) Standards.



Dr. Bhumip Khasnabish, IEEE ComSoc Distinguished Lecturer

At the conclusion of the Distinguished Lecture by Dr. Khasnabish, Dr. Swarup Mandal invited Prof. R. Nandi, Chair, IEEE CAS Calcutta Chapter to handover the Appreciation Certificate to Dr. Khasnabish for his Distinguished Lecture.

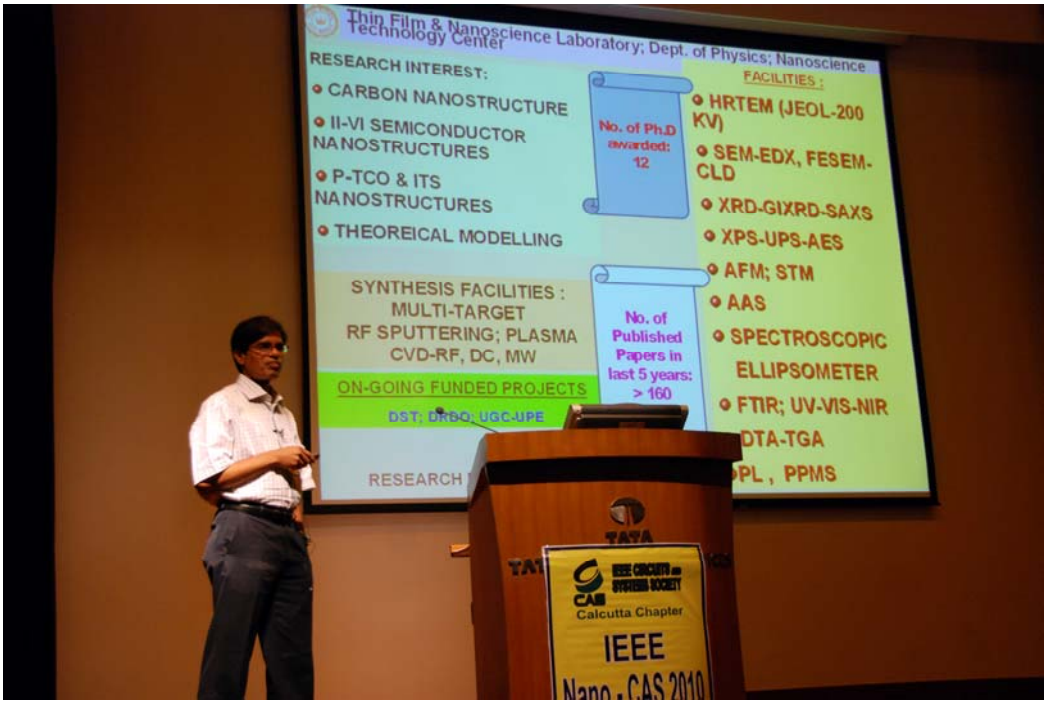
Prof. R. Nandi, Chair, IEEE CAS Calcutta Chapter hand-over the Appreciation Certificate to Dr. Khasnabish

SESSION II : IEEE Nano-CAS 2010

The Post-Lunch Session of the Program was inaugurated by Prof. R. Nandi of IEEE CAS Calcutta Chapter. Prof. Nandi introduced the Speaker, Dr. Kalyan Kumar Chattopadhyay, of Thin Film & Nano-science Lab and Joint Director, School of Materials Science & Nano-technology, Jadavpur University (JU), Kolkata – 700 032 to the audience. He then invited Dr. K. K. Chattopadhyay to deliver his Lecture.

Initially, Dr. Chattopadhyay highlighted the activities of the Thin Film & Materials Science Lab, School of Materials Science & Nano Technology of JU. The following is the abstract of the Lecture delivered by Dr. Chattopadhyay:

During the last two decades, qualitative changes have taken place in the world of materials science and related areas because of the advent of Nano-science and Technology. This is mainly because of two reasons: nano-scale materials exhibit different physical and chemical properties and these can be exploited into a number of exotic fields of applications. Many new phenomena have been discovered and utilized to develop novel technologies. Understanding the reasons for the evolution of such novel properties is really challenging and exciting from the fundamental reasons. In the materials aspects, a number of new domains have been opened up including multi-ferroic and spintronic materials. Carbon nano-tubes and related structures are one of the central materials in the area of nano-technology. Further, in this introductory talk, Dr. Chattopadhyay, had focused on some fundamental aspects of these fields, and presented some recent results.



Dr. Kalyan Kumar Chattopadhyay

At the conclusion of the Lecture, Prof. R. Nandi invited Prof. B. Gupta, Head, Dept. of Electronics & Tele-Comn. Engg., JU and Chairman – Student Activities of IEEE Calcutta Section to handover the Appreciation Certificate to Dr. Chattopadhyay for his Technical Talk.

Prof. B. Gupta hand-over the Appreciation Certificate to Dr. Chattopadhyay

CONCLUDING SESSION:

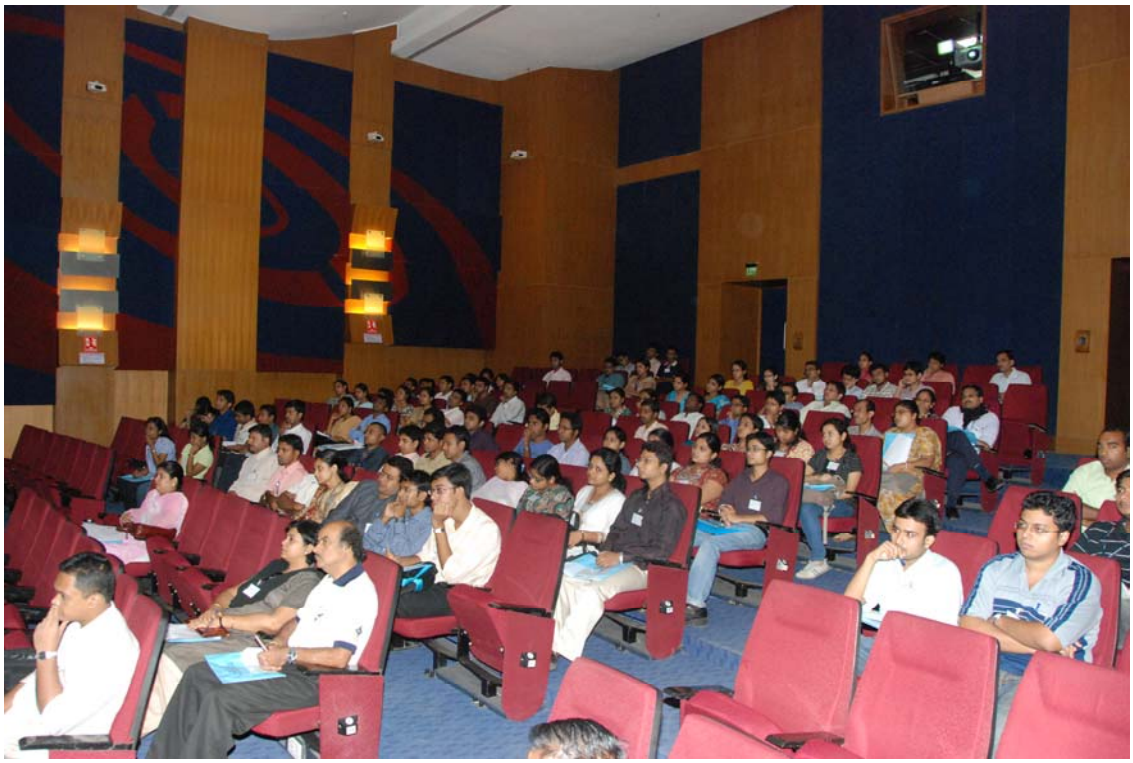
Mr. P. Venkateswaran, Secretary, IEEE CAS and ComSoc Calcutta Chapters proposed the vote of thanks. Mr. Venkateswaran thanked the speakers Dr.Bhumip Khasnabish and Dr. Kalyan Kumar Chattopadhyay for their enlightening lectures. He also thanked the IEEE ComSoc Regional Director of Asia/Pacific Region, Dr. Naoaki Yamanaka, IEEE ComSoc Director of Membership Programs Development – Dr. Shri Goyal, IEEE CAS Vice-President for Region-10, Prof. Rui Martins, for their generous financial support for this Joint Program. Further, he thanked Dr. Gargi Keeni of TCS, Kolkata for Co-sponsoring the event. Finally, he thanked all the participants for their enthusiastic participation in this Joint IEEE Program.

PARTICIPATION PROFILE:

The Joint IEEE ComSoc DLT 2010 & IEEE Nano-CAS 2010 Program had been a huge success. 115 Participants from 26 various Technology Institutes and Industrial segment in and around the Kolkata City and other Districts of West Bengal and Orissa had participated in the Program.

The following is the Participation Profile:

- IEEE Members & IEEE Student Members = 25
- IEEE Non-Members = 18
- Non-Member - Students = 72



LIST OF PARTICIPATED INSTITUTIONS / ORGANIZATIONS:

1. BSNL, Calcutta Telephones
2. Institute of Radio Physics & Electronics (IRPE), University of Calcutta (CU)
3. Indian Institute of Management - IIM Calcutta
4. Indian Statistical Institute (ISI), Kolkata
5. Jadavpur University (JU), Kolkata – 700 032
6. National Institute of Technology, NIT-Durgapur
7. Orissa Engineering College, Bhubaneswar
8. University Institute of Technology, Burdwan University
9. Govt. College of Engg. & Textile Technology, Serampore – 712 201
10. Tata Consultancy Service (TCS), Kolkata
11. Wipro Kolkata Development Centre

West Bengal University of Technology (WBUT) Affiliated Institutes:

12. Bengal College of Engineering & Technology, Durgapur – 713 212
13. Bengal Institute of Tech. & Management, Santiniketan – 731 235
14. Birbhum Institute of Engineering & Technology, Suri – 731 101
15. B. P. Poddar Institute of Management & Technology, Kolkata – 700 052
16. Calcutta Institute of Engineering & Management, Kolkata – 700 040
17. Camellia Institute of Technology, Kolkata – 700 129
18. Dumkal Institute of Engineering & Technology, PIN: 742 303
19. Haldia Institute of Technology, PIN: 721 657
20. Heritage Institute of Technology, Kolkata – 700 107
21. Hooghly Engineering & Technology College, PIN: 712 103
22. Institute of Technology And Marine Engineering, Kolkata
23. MCKV Institute of Engineering, Liluah – 711 204
24. Narula Institute of Technology, Agarpara – 700 019
25. Netaji Subhas Engineering College, Kolkata – 700 152
26. Seacom Engineering College, Howrah