

# IEEE Lecture Meeting on the occasion of NATIONAL SCIENCE DAY, 2023

*Organized by*

**IEEE Photonics Kolkata Chapter & IEEE AP/MTTs Kolkata  
Chapter**

*In association with*

**IEEE Student Branch of Calcutta University and its  
Photonics, AP, and MTT-S Student Branch Chapters  
(SBCs)**

**Event:** Lecture Meeting

**Speaker 1: Prof. Prasanta Kumar Basu**, Former Professor, Institute of Radio Physics and Electronics, CU, Kolkata

**Title of talk:** Raman Effect and its application to Computers and Communication

**Speaker 2: Dr. Chinmoy Saha**, Associate Professor, Indian Institute of Space Science and Technology, Thiruvananthapuram, Kerala

**Title of talk:** Trends, Techniques and Future Challenges in Antennas Engineering for Ground, Space and Versatile Applications

**Speaker 3: Mr. Somnath Maity**, Ex-Chief General Manager, Calcutta Telephones (BSNL), Dept. of Telecom (DOT), Govt. of India

**Title of talk:** Evolution of Communication Technology

**Date:** Feb 28, 2023 (Tuesday)

**Time:** 2:00 PM (IST)

**Venue:** B. R. Nag Auditorium, 3<sup>rd</sup> floor, Institute of Radio Physics and Electronics, University of Calcutta (CU)

At the onset, the audience was greeted by a warm welcome address by Prof. Ashik Paul, Head of the Department, Radio Physics and Electronics, CU, followed by a welcome note by Prof. Debatosh Guha, Fellow IEEE, which marked the beginning of the event. The first speaker **Prof. Prasanta Kumar Basu** elaborated on the Raman Effect, The working principle of Si Raman Laser and its application in Si Photonics, and the Si Raman Amplifier as a replacement for Er Doped Fibre Amplifier in long haul communication systems. Next, our second speaker **Dr. Chinmoy Saha** highlighted the recent trends and future challenges in antenna engineering from a generic perspective. He emphasized the growing demands of wireless communication for application in various sectors like space, ground, defense, civilian, and industrial, and gave a comprehensive overview of the different aspects of an antenna and overall system design. Our third speaker **Mr. Somnath Maity** illustrated the evolution of communication technology and explained the working of modern generation mobile communication (3G, 4G, 5G). He also gave a brief idea about the high cost involved in the spectrum auction. These informative lectures were followed by interactive question-answer sessions. Three speakers were introduced by Dr. Bratati Mukhopadhyay, Assistant Professor, IRPE, Dr. Kaushik Mandal, Secretary, IEEE AP-MTTs Kolkata Chapter, and Ms. Shampa Guin,

Chair, IEEE Photonics Society Kolkata Chapter, respectively. All the speakers were felicitated with a small token of appreciation by the senior professors of the Institute of Radio Physics and Electronics, CU. Finally, in the valedictory session the Vice-Chair of IEEE Photonics Society SBC, CU delivered the vote of thanks. The event was concluded with a group photo.

The event was graced by 67 attendees (36 IEEE members, 31 Non-IEEE participants) from different colleges and Universities like the Institute of Radio Physics and Electronics, Calcutta University (IRPE, CU), Swami Vivekananda University (SVU), Institute of Engineering and Management (IEM), Heritage Institute of Technology (HIT), NIT Arunachal Pradesh, IIST Trivandrum. There were also attendees from Prasar Bharati and DDHL.

