

**IEEE MTT/AP/EMC- Society
Joint Chapter, Hyderabad
&
IEEE Hyderabad Section**

**Cordially invite you
to**

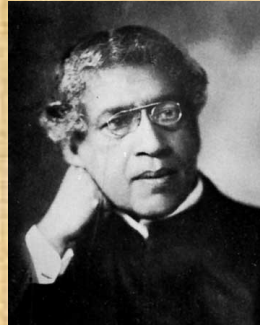
Date:

**30 Nov, 2019
(Saturday)**

Venue:

**Hotel – The Plaza,
Tourism Plaza,
Begumpet, Hyderabad**

Registration free



**Entry by
registration only**

9th Sir JC Bose Memorial Lecture

On

**Phased Arrays and Related RF Technologies
for mm wave 5G Communication**

By

**Professor K J Vinoy, Fellow INAE
IISc, Bangalore**

Program

- 11:00 – 11:30 : Registration & tea**
- 11:30 – 13:00 : Sir J C Bose Memorial Lecture**
- 13:00 – 13:15 : Discussions & vote of thanks**
- 13:15 – onwards : Lunch**

Limited seats

No spot registration

For registrations, please send e-mail (Pls mention IEEE Membership no. without fail) :

sandeepm.satav@rcilab.in ---- not later than 29 Nov, 2200 Hrs

Sir Jagdish Chandra Bose



Sir J C Bose with
MMW Experiment setup

Acharya / Sir Jagdish Chandra Bose, (30 Nov 1858 – 23 Nov 1937) was a polymath, physicist, biologist, biophysicist, botanist and archaeologist, and an early writer of science fiction. He pioneered the investigation of radio and microwave optics, made significant contributions to plant science, and laid the foundations of experimental science in the Indian subcontinent. IEEE named him one of the fathers of radio science. He also invented the Crescograph, a device for measuring the growth of plants. A crater on the moon has been named in his honour. He is also first Indian to own a US patent. Sir J.C Bose is credited with the invention of the first wireless detection device and the discovery of millimeter length EM waves and is considered a pioneer in the field of biophysics and his contributions to the field of science made the country proud.

Sir Jagdish Chandra Bose Memorial Lecture

Title: Phased Arrays and Related RF Technologies for mm wave 5G Communication

Abstract: Acharya Jagadis Chandra Bose is well recognized as a pioneer in millimeterwave (mmw) technologies, among several other impactful contributions. His mmw experiments are now regarded nearly a century ahead of the other comparable developments in the area. Commercial technologies has only recently begun to scratch the surface of the possibilities awaiting at millimetre wave and beyond. In this talk, some of his recent research efforts towards mm-wave beam steering antennas and related RF technologies will be discussed. Due to the high free space loss, communication links at mm waves require high gain, beam steering antennas. As part of his activities towards an indigenous 5G test-bed, the group led by him has developed a beam steering antenna prototype working at 26 GHz, the likely band identified for mm wave 5G communications in India. Several interesting array design challenges have come up based on unique aspects of this system, and many of these are being addressed in his research. Towards, device technologies at mm waves, a highly reliable microelectromechanical switch with a low actuation voltage has also been fabricated and characterized in IISc.

The Speaker : Professor K J Vinoy, IISc Bangalore



Professor K J Vinoy
Electrical
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K.J. Vinoy, obtained Ph.D. from Pennsylvania State University, USA and joined the Indian Institute of Science Bangalore as an Assistant Professor where he is currently a Professor at the Electrical Communication Engineering Department. His research interests cover several aspects of RF and microwave engineering including, microwave and millimeter-wave antennas, microwave circuits, and computational electromagnetics. As part of an ongoing project for indigenous 5G test bed development, he has demonstrated a beam steering antenna array at 26GHz band for the Indian requirements. Prof Vinoy has published over 250 papers in technical journals and conferences; holds two US patents and has filed three other patents in India. He is the series editor of *Springer Briefs on Computational Electromagnetics* and is currently serving in the editorial boards of two journals. In addition, he has authored four books. He is a senior member of IETE, IEEE and URSI. During 2005-08 he served as a member of the executive committee of IEEE Bangalore Section, and was the founding Chair of the IEEE MTT-APS Bangalore Chapter from 2009 to 2012. He has been elected as a Fellow of the Indian National Academy of Engineering in 2011.