



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

University College of Engineering (A)

Osmania University, Hyderabad-500 007

36th Prof. K. K Nair Commemoration Lecture

16th April 2025





Prof. K. K Nair

Prof. K. Krishnan Nair was born in 1923 in Kerala and had his early education in Thiruvananthapuram. He was a student of the renowned Maharaja's College of Science, where he obtained his B.Sc degree in 1945 and M.Sc degree in 1947. He was awarded DIISc by the highly reputed Indian Institute of Science, Bangalore in 1950. He joined the faculty thereafter. He visited the University of Wisconsin and the Brooklyn Polytechnic in 1956.

In 1959, Professor Nair was invited to establish the Department of Telecommunication Engineering at Osmania University. In 1960, he became the founder Head of the Department of Telecommunication Engineering. The department was later renamed as the Department of Electronics and Communication Engineering in 1966. The Postgraduate programme was started in the year 1963 and the Doctoral program was started in 1972. The department organised the First International Seminar on Circuit Theory and Systems in 1972. In 1973, he established the University Computer Center to assist teaching, research and administration. Prof. Nair served Osmania University in various capacities such as Dean, Faculty of Engineering, Principal, University College of Engineering and Registrar, Osmania University.

Professor Nair was a member of various State level and National level committees in the field of Electronics and Communication Engineering. He was a member of the Board of Governors, Regional Engineering College, Warangal (presently NIT Warangal).

He published over 30 papers in reputed journals, participated and organized several conferences and guided students for Ph.D. His research interests were in Communication Systems, Solid State Devices and Circuit Theory.

Prof. Nair succumbed to cardiac arrest on 9th February 1978, leaving behind a great legacy of contributions.

**DEPARTMENT OF ELECTRONICS
AND COMMUNICATION ENGINEERING**

University College of Engineering (A)

Osmania University, Hyderabad-500 007

The Principal, Head of the Department, Faculty, Staff and Students

Cordially invites you and your friends to the

36th Prof. K. K Nair Commemoration Lecture

By

Dr. Ashish Pandharipande

Innovation Director, NXP Semiconductors, Netherlands

On

Connected Automotive Radar Systems

TIME

On Wednesday,
16th April, 2025 at 4:00pm

VENUE

Prof. K.K Nair ECE Auditorium,
University College of Engineering,
Osmania University, Hyderabad

CHIEF GUEST

Prof. Kumar Molugaram

Vice-Chancellor, OU

PRESIDED BY

Prof. P. Chandra Sekhar

Principal, UCE, OU

Prof. D. Rama Krishna

Head, Dept. of ECE, UCE, OU



Dr. Ashish Pandharipande

Innovation Director, NXP Semiconductors, Netherlands

Speaker Bio:

Ashish Pandharipande received the B.E. degree in Electronics and Communication Engineering from Osmania University, Hyderabad, India, in 1998, the M.S. degrees in Electrical and Computer Engineering, and Mathematics, and the Ph.D. degree in Electrical and Computer Engineering from the University of Iowa, Iowa City, in 2000, 2001 and 2002, respectively. Subsequently he was a post-doctoral researcher at University of Florida, senior researcher at Samsung Advanced Institute of Technology, senior scientist at Philips Research and lead R&D engineer at Signify. He has held visiting positions at AT&T Laboratories, NJ, and the Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore, India. He is currently Innovation Director at NXP Semiconductors and part-time full professor at Eindhoven University of Technology, in the Netherlands.

He is a senior member of IEEE. He is currently a senior editor of IEEE Signal Processing Letters, Topical area editor for IEEE Sensors Journal, and associate editor for IEEE Journal of Biomedical and Health Informatics. His research interests are in sensing, machine learning, data analytics, and their applications in domains like autonomous mobility, smart lighting systems, and cognitive wireless systems. He has around 200 international conference and journal publications and more than 100 patent grants/applications in these fields.

Title: Connected Automotive Radar Systems

Abstract:

An advanced driver-assistance system (ADAS) offers diverse functions like autonomous cruise control, emergency braking, and lane-change assistance to improve driving comfort and road safety. Such systems rely on reliable understanding of the driving scene, with radar being a key sensing modality employed in ADAS. Automotive radars are evolving in multiple ways. One, imaging radars are emerging to support finer scene perception. Two, automotive radars are getting connected and can be seen as a mobile sensor node within a smart Internet of Things (IoT) eco-system. Three, machine learning (ML) techniques are maturing and expected to be increasingly embedded in future automotive radars. This talk will first present state-of-the-art automotive radars and ADAS applications. Subsequently, benefits, challenges and opportunities emerging from the next generation of connected automotive radar systems to realize higher levels of safety and autonomy in mobility will be presented.