



**Department of Electronics and Communication Engineering  
University College of Engineering (A), Osmania University, Hyderabad-500 007**

**Prof. KK Nair Commemoration Committee  
Cordially invites you and your friends**



**33<sup>rd</sup> Prof. KK Nair Commemoration lecture**

**by**

**Prof. Kumpati S. Narendra**

Harold W. Cheel Professor of Electrical Engineering  
Director of the Center for Systems Science at Yale University USA

**Brains and Machines - Who will be in control ?  
A Look Into The Crystal Ball**

**on Tuesday, the 27<sup>th</sup> December, 2016 at 5:00pm**

**Venue: ECE Auditorium, University College of Engineering  
Osmania University, Hyderabad – 500 007**

**All are welcome**



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**33<sup>rd</sup> Prof. KK Nair Commemoration Lecture**  
**Tuesday, 27<sup>th</sup> December, 2016**



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

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

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

He had over 30 papers in journals of repute, participated and organized several conferences and guided students for Ph.D. His interests were in Communication Systems, Solid state devices and Circuit theory.

Prof. Nair succumbed to cardiac arrest on 9 Feb 1978.

### **Abstract of the 33<sup>rd</sup> Commemoration Lecture**

Ever since 1997, when IBM's computer, Deep Blue, defeated the world chess champion, Gary Kasparov, machines have been steadily taking over tasks that we thought were our exclusive preserve. In the past ten years, the field of artificial intelligence has enjoyed rapid progress, and at the present time is suffused with enormous optimism. Several impressive demonstrations are to be found in IBM's Watson, Apple's Siri and Google's self-driving car.

However, the optimism is not shared by numerous eminent scientists and technologists. The philosopher, Nick Bolstrom, considers artificial intelligence to be an "existential risk", the entrepreneur, Elon Mush, recently described it as "summoning the demon", and Stephen Hawking of Cambridge University has warned that artificial intelligence could end mankind.

All these imply that autonomous technology (technology equipped with artificial intelligence) will, in the next few decades result in fundamental transformations in the structure of society and our role in it. Regulating the design and use of human-friendly machines will require cooperation between all members of society.

The lecture will provide the background of some of the principles involved, as well as related developments, to encourage discussion among members of the audience.



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**Prof. BL Deekshatulu**

Distinguished Fellow, IDRBT

has kindly agreed to preside

**Prof. S. Ramachandram**

Vice - Chancellor, Osmania University

has kindly consented to be the Chief Guest and give away the awards  
on Tuesday, the 27<sup>th</sup> December, 2016 at 5:00pm

**Venue: ECE Auditorium, University College of Engineering  
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**Dr.B Rajendra Naik**  
Secretary

**Prof. KK Nair Commemoration Committee**

Programme

5.00 PM Tea | 5:30 PM to 6:00 PM Introductions and Awards | 6:00 PM to 7:00 PM Lecture



**Kumpati S. Narendra**

**Kumpati S. Narendra** is currently the Harold W. Cheel Professor of Electrical Engineering and the Director of the Center for Systems Science at Yale University.

Professor Narendra came to the United States from India in 1954, after receiving the B. E. (Hons) degree from the University of Madras. He received his S. M. and Ph.D. degrees in Applied Physics from Harvard University in 1955 and 1959 respectively, and was then an Assistant Professor at Harvard. In 1965, he came to Yale University and was made a full professor in 1968.

Professor Narendra was the Chairman of the Electrical Engineering Department from 1984 to 1987, Director of the Neuro-Engineering and Neuro-Science Center at Yale from 1995 to 1996 and he has been the Director of the Center for Systems Science since the creation of the Center in 1981. He received an honorary Doctor of Science degree from his alma mater, the University of Madras (now Anna University) in 1995, and one from the National University of Ireland (Maynooth) in 2007.

Professor Narendra has lectured in over forty universities around the world, has delivered over hundred plenary and invited lectures, and has been a consultant to over 15 corporations in the country, including Sikorsky Aircraft (1967-73), AT&T (1975-1980), General Motors (1984-1985), and Sandia National Laboratories (1996-1999). He was a Distinguished Visiting Scientist at the Jet Propulsion Laboratories in 1994-1995.

Professor Narendra has had 47 doctoral students, and over forty post-doctoral and visiting fellows have worked with him over a fifty-year period. He is the author of more than 250 technical articles and three books, and the editor of four books in the areas of stability, adaptive control, and learning automata. He has served on various international technical committees, several editorial boards of technical journals, and has been on the advisory committees of academic institutions in India, Ireland, Korea and Singapore.

Professor Narendra is the recipient of numerous awards. These include the Franklin V. Taylor Memorial Award (IEEE SMC Society, 1972), the George Axelby Best Paper Award (IEEE Control Systems Society, 1988), The John R. Ragazzini Education Award (ACC, 1994), The Outstanding Paper Award of the Neural Networks Council (1991), The Neural Network Leadership Award (1994), The Bode Prize/Lecture (IEEE Control Systems Society, 1995), the Walton Visitor Award of the Science Foundation of Ireland (2007), and the Neural Network Pioneer Award/Medal of the IEEE Computational Intelligence Society (2008).

In 2003, he received the Richard E. Bellman Control Heritage Award, the highest award of the American Automatic Control Council (AACC) "for pioneering contributions to Stability theory and Adaptive and Learning theory...".

Professor Narendra is a member of Sigma Xi and the Connecticut Academy of Science and Engineering, a Fellow of IEE (U. K.) and the American Association for the Advancement of Science (AAAS), and a Life Fellow of the IEEE.