

## ASET Colloquium

ASSISTECH: Technology Solutions for Independent Mobility and Education of Visually Impaired

by Prof. Balakrishnan M (Dy. Director, IIT Delhi)

Friday, 10 March 2017 from 16:00 to 17:00 at AG-66

**Abstract:** Inclusion of marginalized communities is considered a major developmental objective for all societies in this millennium. Inclusion of people with disabilities, born or acquired later, constitutes a very different challenge as it cannot be handled just by policies and political will. It requires major technology intervention. In this talk we present the work of ASSISTECH, IIT Delhi in developing solutions aimed at independent mobility and education of visually impaired in India and other low income countries. First, we would focus on uniqueness of our context and how these solutions innovatively address our needs. Finally based on our experience, I would also emphasize the potential in this domain to contribute towards initiatives like “Make in India” as well as “Start up India” but policy bottlenecks that need to be addressed.

**Resume:** M. Balakrishnan is a Professor in the Department of Computer Science & Engineering and currently Deputy Director (Strategy & Planning) at IIT Delhi. He obtained his B.E.(Hons.) in Electronics & Electrical Engg. from BITS Pilani in 1977 and Ph.D. from EE Dept. IIT Delhi in 1985. He worked as a Scientist in CARE, IIT Delhi from 1977 to 1985 where he was involved in designing and implementing real-time DSP systems. For the last 29 years, he is involved in teaching and research in the areas of digital systems design, electronic design automation and embedded systems. He has supervised 12 Ph.D. students, 3 MSR students, 173 M.Tech/B.Tech projects and published nearly 110 conference and journal papers. Further, he has held visiting positions in universities in Canada, USA and Germany. At IIT Delhi, he has been the Philips Chair Professor, Head of the Department of Computer Science & Engineering, Dean of Post Graduate Studies & Research, Deputy Director (Faculty) and is currently Deputy Director (Strategy & Planning). At IIT Delhi, he has initiated a number of programmes/activities to promote research, start-ups as well as outreach to the community.

ASSISTECH, a laboratory and research group founded by him along with Prof. P.V.M. Rao (Mech Engg), is involved in developing a number of assistive devices targeted towards mobility and education of the visually impaired. He has been a recipient of two National awards for his work in the disability space. SmartCane™ is a mobility aid for visually impaired developed by his group and currently it is used by thousands of users in India and other low-income countries.