

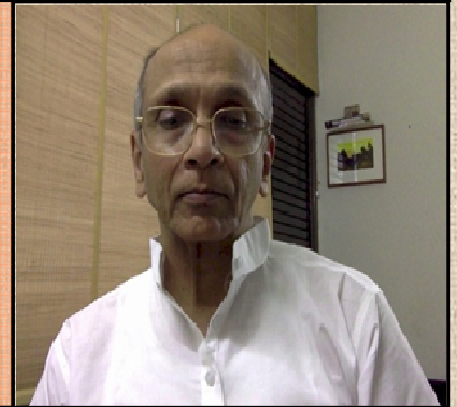
Colloquim # 244

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Title: The Art and Science of Computational Plasma Physics

Author: A Thyagaraja

Affiliation: : Culham Centre for Fusion Energy and Bristol University



About the speaker:

Anantanarayanan ["Chippy"] Thyagaraja was educated at Loyola College, Madras [BSc Maths with Physics and Statistics], IIT Madras [MSc Maths, 1967-69] and at CalTech [Applied Maths and Theoretical Physics, 1969-72]. After a year as post doc at CalTech, he returned to India (1973) and taught as Assistant Professor in IIT Madras, Maths Dept. under Prof. S.D. Nigam. In 1975 he moved to work in UK with Prof D.B. Spalding in CHAM Ltd and Imperial College where he worked on turbomachine hydrodynamics and hypersonic flows. In 1975 he moved to UKAEA Culham Lab., Abingdon to work on Plasma Turbulence Theory and Computational Plasma Physics until he retired in 2010. Since about 2003 he has taught plasma physics in Bristol University where he has a Visiting appointment. He is an emeritus researcher at Culham at present. Thyagaraja is a Fellow of the Institute of Physics [London]. Presently he is working with Prof. Abhijit Sen and Dr Debasis Chandra with many topics in plasma theory of mutual interest.

Abstract: A great physicist said "The only general methods are numerical methods". In this talk, I shall present some principles and tools of this enormously powerful way of solving the very complicated problems of plasma physics. It is a rather superficial "grand tour" of a still unconquered promised land. There are great rewards, but the pitfalls are many and dangerous! To some extent, I shall follow Zermelo's injunction to all lecturers: "Insist on the obvious and glide nimbly over the essentials!" I shall try to present examples from my own experience of some 30 or so years of computational analyses of "hard" nonlinear problems. There are exercises/problems attached to this lecture, should the "interested students" among you want to sharpen your skills and learn more about some wonderful inventions in this fascinating field of knowledge.

Schedule:

Date: 12th January 2015

Time: 3:30 PM

Venue: IPR, Seminar Hall