Presidential address: 25th IAGRG meeting

On behalf of the Indian Association of General Relativity and Gravitation, I welcome you all at the 25th Meeting at SINP in Kolkata. On this occasion it would be appropriate for me to mention some history and background of this organisation.

In 1969 it was a honour to felicitate the pioneers of relativity and gravitation in India, namely, Prof. V. V. Narlikar attaining 60 years of age - we have in this conference a session today to commomerate the birth centenary of Prof. V. V. Narlikar. Several of the dignitaries will be speaking in this session and we look forward to it. To go ahead, Prof. P. C. Vaidya, the first student of Prof. V. V. Narlikar, a stalwart in the field of General Relativity and Gravitation proposed the formation of a society of Indian relativists - and so was born the IAGRG with Prof. V. V. Narlikar as the founder president. The aim of the IAGRG is to promote interest, research and teaching in the field of general relativity and gravitation.

This conference consists of several plenary talks on a wide variety of areas in GR and now since GR has widened its horizons, many areas related to it. There are parallel sessions for research papers in several topics. As I have already mentioned we have a session to commomerate the birth centenary of Prof. V. V. Narlikar, the Vaidya-Raichaudhuri endowment lecture by Prof. Padmanabhan and the V V Narlikar best thesis competition.

In the past several decades, here in India as well as around the world, GR has widened its horizons and has developed connections with several fields. GR finds its natural home in Astronomy and Astrophysics - examples: binary neutron stars/blackholes - compact objects, cosmology. There is real data now which was not available earlier to decide on cosmological models. The real data has brought with it statistical analysis, because we are dealing with detector noise and random variables. Sophisticated tools - maximum likelihood, Fischer information matrix, hypothesis testing etc. are required. This is even truer in the field of gravitational wave detection where pure mathematics, statistics, engineering all have a major role to play. Gravitation has gone experimental: From mathematics to theoretical physics and astrophysics to experiment. Experiment, observation demand real world gravitational sources, so the emphasis must change from exact solutions to real world situations - this brings in Numerical Relativity - we lack this field in India. But I think we are best suited to this. There is also an idea of an Indian gravitational wave detector - INDIGO - either by ourselves or in collaboration with other countries like Australia which has shown interest.

We therefore look forward to exciting times ahead and at this conference. Thank you.