

Infrastructure Development & Organization

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- **IUCAA High performance Computing facility**

The IUCAA High performance Computing (HPC) facility was co-propose by me with Profs. Ajit Kembhavi and T. Padmanabhan. This is a central facility for the Astronomy and Astrophysics community, specifically, researchers from the university. The configuration has 16 Alfa-processor, 8 node, cluster machine. The 12 Gb ram per node, 16 Mb cache size on processor and two tera-byte attached storage makes this a very versatile and powerful HPC facility.

I have spent a lot of time and effort in promoting the use the HPC facility in IUCAA. As part of a feasibility study, we proposed and set up a prototype cluster of computers in IUCAA. We organized two informal in-house workshops to familiarize potential users with parallel computing so that they can make the best use of the IUCAA facility. We set up IUCAA online discussion forums to knit together the expertise of users which now provides prompt help for general computing needs as well high end computing. Regular meetings and self-taught courses have been organized to bring everyone at level where they can harness the potential of a computing cluster.

- **Workshop on High Performance Computing (HPC)**

I organized and coordinated a training workshop on HPC held in IUCAA from Oct. 5-9, 2004. The workshop was a joint venture with members of CDAC Pune. This was the first serious joint venture between IUCAA and CDAC and appreciated by Directors of CDAC.

- **Initiating Indo-French collaboration on CMB anisotropy**

I visited IAP, Paris in Dec. 2003 to initiate collaborative activity with Prof. F. Bouchet on CMB anisotropy observations, in particular, with regard to the Planck Surveyor mission. The visit was completely funded by the French Embassy in India through its *Egide* program. Prof. F. Bouchet and I have succeeded in getting a three year CEFIPRA collaborative research program on 'Systematic effects in CMB data of ESA satellite Planck' with funds of

Rs. 86 lacs on the extremely important topic of CMB anisotropy observations.

- **SERC school on Astrophysics (June 2002, IIT Kgp)**

A SERC funded advanced school on Astrophysics on ‘Cosmological Structure Formation’ was held at IIT, Kharagpur (June-July 2002) I co-authored the DST proposal and played an important role in conducting SERC school. In addition to organization, I gave a 18-lecture Course on ‘Observations and Statistics’.

- **First Young Astronomer’s meet (YAM-1992)**

I was actively engaged with a few other IUCAA-NCRA students to conceive and organize the first Young Astronomer’s meet (YAM-92) in India in Feb. 1992 that was held at the twin campuses of IUCAA and GMRT in Pune. This meet was entirely organized by students and designed to promote interaction among students working in related areas in Astronomy and Astrophysics (A & A). We managed to gather active support for this activity from the senior members of the A & A community in India and the funding agencies (Department of Science and Technology). Over 14 years YAM continues to be a regular (nearly annual) nation wide event for the A&A research scholars and as per the set tradition it is organized entirely by students.

- **Chairperson: ICGC-04 Cosmology Workshop**

I was the chairperson of the cosmology workshop in the International conference on Gravitation and Cosmology (ICGC) held in Kochi from Jan 5-10, 2004. The cosmology workshop was, by far, the most heavily subscribed of the four workshops in the meeting. Selecting and scheduling the contributions to the workshop in the allotted time was a challenge. I also put in effort to get good speakers in Cosmology from abroad for the workshop (and plenary sessions).

- **LOC Chairman IAGRG-2002**

I was the Chairman of the Local Organizing Committee for IAGRG-2002 meeting held at IUCAA from Dec 11-14, 2002. The meetings of the Indian Association for General Relativity and Gravitation (IAGRG) are held once every 18 months. This meeting with around 100 participants was considerably larger than its recent predecessors. Apart from a broad representation from the Indian GR community, the meeting had about a dozen foreign participants. The LOC obtained sufficient external funding from the Council for Industrial Research (CSIR), New Delhi and Institute of Mathematical Sciences, Chennai.

- **Chairperson: IUCAA Public outreach Program committee**

I have been the chairman of the Public Outreach Programme (POP) committee from Sept. 2004-2005. The Mukhtangan Vigdyan Shodhika - Children's Science exploratorium set up in June 2004 marks a manifold increase in IUCAA's commitment toward POP activity. With this enhanced setup, the nature and scope of the POP activities needs to be redefined in a more ambitious terms matching IUCAA's presence on other fronts. One of the successes was to locate a young, active researcher in astrophysics with a flair who is now a permanent member of the POP team.

- **Member of SOC: IAGRG-04 in Jaipur, Dec. 2004**

I was an active member of the Scientific organizing committee for the IAGRG meeting in Jaipur in Dec. 2005. I helped in inviting good speakers for cosmology.

- **IUCAA Vacation Student program 2001**

I was the Faculty Coordinator for the Vacation Students Programme (May 21-July 7, 2001) in IUCAA. I worked to ensure that we get good applicants by writing personally to contacts in the Physics departments of the IITs and big universities, and to most IUCAA associates.