

SHORT PROFILE

of

Dr. Pavan Chakraborty

I have recently joined one of the premier IT institutions - Indian Institute of Information Technology-Allahabad, as a Lecturer, and am now actively involved with the Robotics and Artificial Intelligence lab. Before joining IIIT-Allahabad, I had been a lecturer in the department of Physics at Assam University, Silchar (A Central University) for three years.

From 2002-2004, I was a Post-Doctoral Fellow in the Instrumentation group at the Inter University Center for Astronomy and Astrophysics (IUCAA) and worked on instrumentation related to IUCAA 2m Telescope. I developed the Exposure Time Calculations (ETC) and was involved with the development of procedures and simulations for data reduction using IUCAA Faint Object Spectrometer and Camera (IFOSC) on the IUCAA 2m Telescope. Earlier from 2001-2002, I was a Post-Doctoral Fellow at IIA for the ISRO RESPOND sponsored project "Modeling the Diffuse UV Radiation Field" for the Ultraviolet Imaging Telescope (UVIT) proposed to be launch as part of ASTROSAT, a multi-wavelength astronomy satellite.

I was awarded the Best Ph.D. Thesis presentation (2002) at the XXI meeting of the Astronomical Society of India. During my Ph.D. research work at the Indian Institute of Astrophysics Bangalore. I build an Automated Dual Beam Medium resolution Spectropolarimeter and a Planetary Coronagraph for the Vainu Bappu Observatory (VBO). I was also awarded the Best M.Sc. Project of the year in Physics (1992) form I.I.T. Kanpur, for fabrication of a 200Watts CO₂ Laser.

I am a visiting associate of IUCAA since July 2004, a Life Member of the Astronomical Society of India (825/L) since 1996 and an Alumni of Vatican Observatory (1997 batch).

Specialized training received

Underwent an intensive course on "Soft Computing Techniques and Application" during May 15 to 20, 2007 at IIIT-Allahabad. Attended a school on "Image Processing and Analysis" organized by Machine Intelligence Unit, of Indian Statistical Institute, Kolkata at Assam University Silchar. Developed, Spectropolarimeter instrument controls, for the Vainu Bappu Telescope VBT. Helped in installation of the IUCAA 2m Telescope and Developed the Exposure Time Calculator for it.

List of Selective Publications

1. Nirupam Roy, P. K. Manoharan & **Pavan Chakraborty** , 2007.
"Occultation Observation to Probe the Turbulence Scale Size in the Plasma Tail of Comet Schwassmann-Wachmann 3-B" *ApJ Lett.* (in Press)
2. R. Vasundhara, **Pavan Chakraborty**, S. Muneer, G. Masi, and S. Rondi, 2007.
"Investigations of the Morphology of Dust Shells of Comet C/2001 Q4 (NEAT)"
The Astronomical Journal, **133**, 612 – 621, University of Chicago Press.
2. **Pavan Chakraborty** & R. Vasundhara, 2004.
"An Optical, Dual-Beam, Automated Medium Resolution Spectropolarimeter for the Vainu Bappu Telescope". *Experimental Astronomy* 16, 69-84, 2004. Kluwer Publication.
3. R. Vasundhara & **Pavan Chakraborty**, 2004.
"Investigation of Rotation Pole from Morphology of Dust Fans of Comet 81P/Wild 2". *ApJ* **616**, 1278-1283, University of Chicago Press.
4. R. Vasundhara & **Pavan Chakraborty**, 1999.
"Modeling of jets from Comet Hale-Bopp – Observations from the Vainu Bappu Observatory", *ICARUS.*, Vol. **140**, pp. 221-230.
5. R. Vasundhara, **Pavan Chakraborty**, Andreas Hanel & Erwin Heiser, 1997.
Modeling Dust Jets and shells from Comet Hale-Bopp Earth Moon and Planets, 78, 321.
6. **Pavan Chakraborty**, H. K. Das & S. N. Tandon, 2004.
"Exposure Time Calculator for IFOSC and Sky Background Estimation". *BASI*, **33**, 1.
7. N. V. Sujatha, **Pavan Chakraborty**, Jayant Murthy & R. C. Henry, 2004.
"A Model of Stellar Radiation Field in the UV". *BASI* **32**, 151S.