Curriculum Vitae

DEOVRAT PRASAD

Research Associate
Physics and Astronomy
3248 Biomedical and Physical Sciences
Michigan State University
East Lansing, MI 48824
United States

Citizenship: INDIAN
email: deovratd@msu.edu
https://deovratprasad.github.io/dp
Phone:- +1-(517) 917-9006

EDUCATION

Indian Institute of Science, Bangalore, India
PhD, Astronomy and Astrophysics, April 2018
Dissertation: " *AGN Feedabck in Galaxy Clusters - Controlling cooling flows in galaxy clusters using momentum driven AGN jets"*
Advisor: Prateek Sharma
Astronomy and Astrophysics
Department of Physics
Indian Institute of Science
Bangalore, India

UM-DAE Center For Excellence in Basic Sciences,
University of Mumbai, Santa-Cruz, Mumbai, India
Integrated M.Sc. (B.Sc.+M.Sc.) , Physics, 2012
Master's Thesis: "*Study of Resonance Particles in Quantum Mechanics by Numerical Methods*"

RESEARCH INTEREST

1. Feedback Processes in Galaxies, Groups and Clusters
2. Accretion onto Super Massive Black Holes
3. Galaxy Formation and Evolution
4. Numerical Methods

PUBLICATIONS

1. "*Cool core cycles: Cold gas and AGN jet feedback in cluster cores*"
   Deovrat Prasad, Prateek Sharma, and Arif Babul 2015, ApJ, 811, 108

2. "*AGN jets driven stochastic cold accretion in cluster cores*"
   Deovrat Prasad, Prateek Sharma, and Arif Babul 2017, MNRAS, 471, 1531

3. "*Scalable explicit implementation of anisotropic diffusion with Runge-Kutta-Legendre super-time-stepping*"
   Bhargava Vaidya, Deovrat Prasad, Andrea Mignone, Prateek Sharma, Luca Rickler 2017, MNRAS , 472, 3147

4. " *Cool-Core Clusters : Role of BCG, Star Formation & AGN-Driven Turbulence*"
   Deovrat Prasad, Prateek Sharma, and Arif Babul 2018, ApJ, 863, 62

FELLOWSHIPS

• "*INSPIRE*" fellowship for 2007-12 by Dept. Of Science and Technology, Govt. Of India.

• "*CSIR-UGC NET Fellowship***"** for 2012-2017 after achieving 24th All India Rank in National Eligibility Test (June-2012) jointly conducted by CSIR and UGC, India.

PRESENTATIONS

• " *Cool Core Cycles: Cold Gas and AGN Feedback in Cluster Cores*", Black Hole Accretion and AGN Feedback conference, Shanghai Astronomical Observatory, Shanghai, China, June 2015. (POSTER)

• "*Cold Gas and AGN Feedback in Cluster Cores",* Extra-galactic Relativistic Jets: Cause and Effects conference, ICTS Bangalore, India, October 2015. (TALK)

• *"AGN feedback in Galaxy Clusters",* Astronomical Society of India Meeting, Srinagar, India, May 2016. (TALK)

• *"AGN Feedback in Galaxy Groups",* The Physics of Groups and Galaxy Properties therein meeting, Institut d'Astrophysique de Paris (IAP) Paris, France, December 2016. (TALK)

• "*Role of BCG and AGN-driven Turbulence in Galaxy Cluster Evolution*", SnowCluster - The Physics of Galaxy Clusters, Snowbird, Utah, US, March 2018 (TALK)

WORK IN PROGRESS

• **"** *Can AGN jets change baryon fraction in galaxy groups?***"**
• (Analysis in Progress)

TEACHING EXPERIENCE

• Teaching Assistant for 'Fluids and Plasma' course at Department of Physics, IISc, taught by Prof. Prateek Sharma (August – November, 2014)

• Teaching Assistant for 'Electricity, Magnetism and Optics' course for undergraduates at IISc, taught by Prof. Tarun Deep Saini (January-April, 2015)

SOFTWARE SKILLS

• Programming – Fortran77/95, C, C++, Python, working knowledge of MPI
• Plotting Softwares – GNU, Visit, Matlab
• Grid Codes – ZEUS-MP, PLUTO

REFERENCES:

Mark Voit
Professor
Physics and Astronomy
3276 Biomedical and Physical Sciences
Michigan State University
East Lansing, MI 48824 US
voit@pa.msu.edu

Brian O'Shea
Associate Professor
Physics and Astronomy
3258 Biomedical and Physical Sciences
Michigan State University
East Lansing, MI 48824 US
oshea@msu.edu

Prateek Sharma
Associate Professor
Department of Physics
Astronomy and Astrophysics
Indian Institute of Science
Bangalore, India 560012
prateek@physics.iisc.ernet.in

Arif Babul
Distinguished University Professor
University of Victoria
Department of Physics and Astronomy
Elliot Building, 3800 Finnerty Road
Victoria, BC V8P 5C2 Canada
babul@uvic.ca