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Rinku Mishra

SUMMARY

Highly self-motivated doctoral candidate with expertise of 5+ year in developing an analytical and computational model for the problems in Plasma Physics basically dusty plasma and Plasma Surface Wave interaction.

Open to work on any challenging topic on plasma systems; its analytical modeling and simulations including code development, and analytical theory.

Rich experience in modeling and simulation using Matlab.

Computer Skills: Linux/Windows; LaTeX; C/C++.

PERSONAL DATA

PLACE AND DATE OF BIRTH: Katihar, Bihar, India. | 02-01-1989
ADDRESS: House No - 7, Shanti Path, Mathura Nagar,
Bomotoria, Guwahati - 781036, India.
PHONE: +91 8474818908/8638661121
EMAIL: arra4723@gmail.com

RESEARCH EXPERIENCE

JAN 2014 - DEC 2016 Project Scientist at
Centre of Plasma Physics - Institute for Plasma Research, Assam, IN.
Dept : Theory and Simulation Laboratory
Title : “*Interaction of Dust Acoustic Waves with Dust Void and their Stability Analysis*”
Responsibilities:
Completed the project assigned on Dust Void.

DURING PH.D Works Accomplished:

- Developed an analytical and numerical model to study of surface waves in plasma.
- Developed analytical and numerical models to study the interaction between the dust acoustic mode and the dust void.
- Published academic manuscript in peer-reviewed journals.

EDUCATION

2014-PRESENT Doctor of Philosophy, Gauhati University, Guwahati, Assam.
Place of Work: Centre of Plasma Physics- Institute for Plasma Research, Nazirakhat, Sonapur, Assam
Field: Plasma Physics | Dept: Theory and Simulation Laboratory
Topic: “*Study on Plasma Surface Wave and Interaction of Dust Acoustic Mode with Dust Void*”
Advisor: Dr. M. Dey (Scientist-SF)
Status: Thesis Submitted

- 2010 - 2012 Master of Science, Tezpur University, Assam
First Class Honours
PHYSICAL SCIENCE | Specialization : HIGH ENERGY PHYSICS
Dissertation: “*Study on Normal and Inverted Hierarchical Mass Model of Neutrino*”
Advisor: Dr Mrinal Kumar Das
CGPA : 8.52
- 2007 - 2010 Bachelor of Science, University of Allahabad, Allahabad
Institution : C.M.P. Degree College, Allahabad.
Major : PHYSICS AND MATHEMATICS
PERCENTAGE : 56.96
- 2006 Higher Secondary Examination, CBSE Board
Institution : Government Higher Secondary School,
Bomdila, Arunachal Pradesh.
Major : Science
PERCENTAGE : 66.2
- 2004 Secondary Examination, CBSE Board
Institution : Government Higher Secondary School,
Dumporijo, Arunachal Pradesh.
PERCENTAGE : 73.2

CONFERENCES AND WORKSHOP ATTENDED

National Conference on Theoretical Physics,
Tezpur University, Tezpur, Assam, India – 8th to 12th February, 2013.

Poster Presentation at PSSI - 2014,
Mahatma Gandhi University, Kottayam, Kerala, India – 8th to 11th
December, 2014

Poster Presentation at NSNCP - 2015,
Second National Symposium on Nonlinear and Complex Phenomenon,
IASST, Guwahati,
26th to 28th March 2015.

Poster Presentation at PSSI - 2015,
SINP, Kolkata, India – 1st to 4th December, 2015

Poster Presentation at PSSI - 2017,
Institute for Plasma Research, Gandhinagar, India – 7th to 10th November, 2017

Poster Presentation at PSC -2018,
SMIT, Majitar, Rangpo, East Sikkim, India - 2th to 26th August, 2018

One day symposium on “Recent Trends in Basic Plasma Research”,
CPP-IPR campus, Nazirakhat, Assam, India – 8th March, 2019.

CERTIFICATIONS

Fundamentals of the Particle In Cell Method,
Particle In Cell Consulting, LLC, 4th May – 22nd June, 2015.

The Finite Element Method for Problems in Physics,
University of Michigan, July – October, 2018.

PUBLICATIONS

1. Rinku Mishra, S. Adhikari, Rupak Mukherjee, and M. Dey, *Correlation between two non-linear events in a dusty plasma system*, Physics of Plasmas **25**, 123703 (2018).
2. Rinku Mishra, and M Dey, *Dust Charging and Propagation of Dust-Acoustic Waves in a Multicomponent Thermal Dusty Plasma System*, IEEE Transactions on Plasma Science **47**(1) 784 - 794 (2019).
3. Rinku Mishra, and M Dey, *Propagation of electrostatic surface wave along the dust void boundary*, Phys. Scr. **93** 085601(2018).
4. Rinku Mishra, and M Dey, *Propagation of high frequency electrostatic surface waves along the planar interface between plasma and dusty plasma*, Phys. Scr. **93** 045601(2018).
5. M.K.Das, D.Borah, and Rinku Mishra, *Quasi-Degenerate Neutrinos in Type II Seesaw Models*, Physical Review D **86**(9):095006(2012)

LANGUAGES

HINDI: First Language
ENGLISH: Fluent
ASSAMESE: Basic Knowledge

COMPUTER SKILLS

Mathematica, Latex
Excel, Word, PowerPoint, C/C++ Programming, Matlab,
Linux, Ubuntu, Windows.

INTERESTS AND ACTIVITIES

Traveling, Startegic Games, Scientific Article Writing, Reading Article.