

# NISHTHA SACHDEVA

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## PRESENT AFFILIATION

**Post-Doctoral Research Fellow**, Climate & Space Sciences & Engineering (CLASP), University of Michigan, Ann Arbor, MI, USA. Working with Gabor Toth and Ward(Chip) B Manchester IV

## ACADEMIC QUALIFICATIONS

- **Ph.D.** Solar Astrophysics, Indian Institute of Science Education and Research (IISER), Pune, India, 2018  
**Supervisor-** Dr. Prasad Subramanian, Associate Professor (Physics), IISER Pune, India  
[p.subramanian@iiserpune.ac.in](mailto:p.subramanian@iiserpune.ac.in)  
**Thesis Title – ‘Dynamics of solar Coronal Mass Ejections: forces that impact their propagation’**
- **M.Sc. Physics** Department of Physics and Astrophysics, University of Delhi, India, 2010-2012 (79.1 %)
- **B.Sc. Physics** Hindu College, University of Delhi, India, 2007-2010 (82.66 %)
- **12<sup>th</sup> Std. ISC**, Sheiling House School, Kanpur, India, (88.6 %)

## AREA OF RESEARCH

I am a Solar physicist currently working with the Space Weather Modelling Framework(SWMF) to model the solar corona and Coronal Mass Ejections in order to study their dynamics and prediction.

## PUBLICATIONS

- 1) “CME propagation – where does aerodynamic drag “take over”? *Sachdeva, N.*, Subramanian, P., Colaninno, R., Vourlidas, A. 2015, The Astrophysical Journal, 809, 158  
(DOI: 10.1088/0004-637X/809/2/158 , arXiv:1507.05199v2) (8 citations)
- 2) “ CME dynamics using STEREO and LASCO observations: The relative importance of Lorentz Forces and Solar wind drag.” *Sachdeva, N.*, Subramanian, P., Vourlidas, A., Bothmer, V. 2017, Solar Physics, 292, 118 (DOI: 10.1007/s11207-017-1137-9 , arXiv:1705.04871v2) (6 citations)

## ORAL PRESENTATIONS

- 3rd SWMF User Meeting, 4-6 March, 2019, CLASP, Ann Arbor, Michigan, US
- 36<sup>th</sup> Astronomical Society of India Meeting, 5-9 February, 2018 at Osmania University, India
- International Study of Earth-Affecting Solar Transients Workshop, 18-22 September, 2017, Jeju, South Korea
- 14<sup>th</sup> Annual Meeting of Asia Oceania Geosciences Society, 6-11 August, 2017, Singapore
- 33<sup>rd</sup> Astronomical Society of India Meeting, 17-20 February, 2015 at NCRA, India

## POSTER PRESENTATION

- 35<sup>th</sup> Astronomical Society of India Meeting, 06-10 March, 2017, Jaipur, India
- 34<sup>th</sup> Astronomical Society of India Meeting, 11-13 May, 2016 at University of Srinagar, India
- Conference on “Coupling and Dynamics of the Solar Atmosphere”, 10-14 November, 2014 at IUCAA, Pune, India
- 32<sup>nd</sup> Astronomical Society of India Meeting, 20-22 March, 2014 at IISER, Mohali, India

## PARTICIPATION

- American geophysical Union, Fall Meeting, Washington D.C., USA, 10-14 December, 2018
- Workshop on 'The Magnetic Universe' at 33<sup>rd</sup> Astronomical Society of India Meeting, 17-20 February, 2015 at

NCRA, India

- 9<sup>th</sup> Workshop on Astroparticle Physics, 18-20 December, 2014 at CRL, TIFR, Ooty, India
- Participated in the DWIH Indo-German Winter School Astrophysics, 3-7 November, 2014 at TIFR, Mumbai, India
- Participated in the 8<sup>th</sup> Winter Workshop & School on Astroparticle Physics, 20-28 December, 2013 at Bose Institute, Darjeeling, India
- Participated in International Symposium on Solar-Terrestrial Physics, 6 -9 November, 2012 at IISER, Pune, India
- Participated in “Virtual Observatory Workshop” organised by IUCAA, Pune, 25 January, 2011 at Sri Venkateswara College, University of Delhi
- Participated in Workshop on “Gravitational Waves” organised by IUCAA-TU, 23 -27 January, 2012 at Tezpur University, India

## **AWARDS & RECOGNITION**

- Best Poster Award by Indian Academy of Sciences at 35<sup>th</sup> Astronomical Society of India Meeting 2017, Jaipur, India
- Recipient of ERASMUS-MUNDUS fellowship under the NAMASTE-EU program for six months between Sept. 2015-March 2016 at University of Goettingen, Germany in collaboration with Dr. Volker Bothmer
- CESRA Science highlight on Propagation of Coronal Mass Ejections: Aerodynamic Drag  
<http://cesra.net/?p=897>

## **PROFESSIONAL SERVICE**

- Member, European Geosciences Union
- Member, American Geophysical Union
- Abstract Judge, Engineering Graduate Symposium, University of Michigan, 2018
- Scientific Organizing Committee, Young Astronomers’ Meet, PRL, Ahmedabad, India, 2018

## **COURSE WORK**

- Specialization Subjects in M.Sc. - Plasma Physics, Astronomy and Astrophysics, General Theory of Relativity and Cosmology
- PhD Course Work – General Theory of Relativity, Classical and Quantum Optics, Advanced Statistical Mechanics, Advanced Quantum Mechanics
- CGPA in PhD course work – 9.5/10

## **TEACHING ASSISTANTSHIPS**

- World of Physics (Classical Mechanics) - BS-MS 2<sup>nd</sup> year
- Advanced Statistical Mechanics- BS-MS 3<sup>rd</sup> year
- Physics Lab 1 – BS-MS 1<sup>st</sup> year
- Interdisciplinary course on Mathematical Methods – BS-MS 1<sup>st</sup> year
- Fluid Dynamics – BS-MS 3<sup>rd</sup> year

## **SKILLS**

- SWMF, BATSRUS – ASoM model
- Good working knowledge of Mathematica, IDL, SolarSoft, TecPlot
- Worked with coronagraph data (STEREO and LASCO) for CME analysis
- Hands on experience in Operating Systems like Linux-Ubuntu, Windows and MacOS

## **PERSONAL DETAILS**

Father's Name	Late Ashok Kumar Sachdeva
Mother's Name	Raman Sachdeva
Date of Birth	1 <sup>st</sup> March, 1989