

Deepak Singh

sdeepak@umich.edu
734-680-2165

2425 Stone Rd, Northwood 5
Ann Arbor, MI 48105

EDUCATION

University of Michigan

Doctor of Philosophy, Climate & Space Sciences and Engineering

Ann Arbor, MI
Aug, 2016 (Expected)

Master of Science, Atmospheric, Oceanic and Space Sciences

Apr, 2013

GPA: 3.82/4.0

Indian School of Mines

Integrated Master of Science Technology, Applied Geophysics

Dhanbad, India

May, 2011

GPA: 7.92/10.00

EXPERIENCE

Graduate Student Instructor

Sep, 2013 – Dec, 2013

University of Michigan, Climate & Space Sciences and Engineering & Sep, 2015 – Dec, 2015

- Assisting a professor in teaching class of 240 students with office hours and tracking individual performances for an undergraduate class: Changing Atmosphere
- Taught 1/4th of total lectures in class of 274 students during second term

Current Research

University of Michigan, Climate & Space Sciences and Engineering

- Improving Martian climate model for planetary energy budget and cryosphere feedback
- Re-analysis of carbon dioxide and water ice optical properties under Martian conditions
- Generating new model for Cryospheric radiative effect and its implication on global climate

AWARDS

- Won an **Outstanding Student Paper Award** at AGU annual conference, 2015
- **Gold Medal** for being the topper of my department at ISM Dhanbad, India

COMPUTER SKILLS

Languages: MATLAB, FORTRAN, C++, Python

Applications: Microsoft Office, **Adobe Photoshop**, **Final Cut 10 Pro**

Operating Systems: Windows (Any version), Linux, Mac OS

LEADERSHIP

Department Representative

Graduate Student Advisory Committee (GSAC)

Aug, 2014 – Present

- Working closely with office of graduate studies in College of Engineering to identify and provide solutions to student concerns
- Serve as a liaison between department and graduate education office to promote collaboration between faculty, staff, and students

Co – Chair

Engineering Graduate Symposium (EGS)

Jun – Nov, 2013

- Complete supervision and full responsibility of the organization of the symposium for the College of Engineering with participation of over 300 students
- Led a team of about 30 students and worked with Graduate Education Office simultaneously to organize one of the most successful symposium, in terms of participation

Vice-President

Sep, 2012 – May, 2013

Michigan Mars Rover Team

Member since Mar, 2012

- Represented team as *Mr. Mars Rover* in Mr. Engineer Contest
- Organized the high school contest as assistant director and outreach coordinator for the team

Secretary

Sep, 2009- May, 2010

Society of Applied Geophysics

- Organized an international conference on Geophysics related field with over *500 participants* from around the globe
- Won inter – disciplinary cultural fest competition with a team of *80-100 members*

ACTIVITIES

- Basement Arts, Theater Group, Member Sep, 2011 - Present
- Graduate and Undergraduate Student Organization, CLaSP, Member Sep, 2011 - Present
- Sports: Cricket, Badminton, Squash, Table Tennis and Softball
- Media: Film Making, covering and writing stories for on-campus TV channel (WolvTV)

COURSE PROJECTS**Summer Intern**

Jun – Jul, 2010

Indian Space Research Organization (ISRO)

- Detected three minerals on Lunar surface using HySI (HyperSpectral) and TMC (Terrain Mapping Camera) data of Chandrayaan – 1 mission
- Merged mineralogical maps with elevation data to generate concentration profile with altitude

FIELD EXPERIENCES

Location & Time	Work & Experience
Matthaei Botanical Gardens, Ann Arbor, MI (Feb-Mar, 2013)	Measurements of Wind Profile, CO ₂ and water vapor concentrations, ground and atmospheric heat flux. Understanding the effect of measured profiles on local climate and determination of error in models and their rectification.
Michigan Lake, Muskegon, MI (Mar 23-24, 2012)	One night stay on a coast guard ship. Designing the cruise plan for location of target, use and application of sonic remote operated vehicle and other oceanographic instruments
Bakreshwar, WB, India (Dec, 2009)	Field survey for finding possible geological structures like fractures, faults, folds etc. using geophysical methods like gravity, magnetic, magneto- telluric, seismic and Electromagnetic methods
Dhala Crater, MP, India (Jun, 2009)	Study of one of the oldest impact crater in world. Collecting samples and studying the impact features using high-resolution microscope

PUBLICATIONS

Singh, D., Flanner, M. G., and Perket, J.: *The global land shortwave cryosphere radiative effect during the MODIS era*, The Cryosphere, 9, 2057-2070, doi:10.5194/tc-9-2057-2015, 2015.

Singh, D., Srivastava, V. K., Bhatt, J., Bhattacharya, S.: *Mineralogical Mapping of Lunar Orbits of Chandrayaan – 1 Mission using Hyper Spectral Imaging Camera (HySI) and Terrain Mapping Camera (TMC) Data*, Journal of Photogrammetric Engineering & Remote Sensing, January, vol.77, No.1, pp 6-10, 2011.

Professional membership

American Geophysical Union (AGU)

Sigma Gamma Tau (SGT) – University of Michigan Chapter