Shailaja Wasti

PERSONAL INFORMATION

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EDUCATION

University of Houston, Houston, Texas, USA
PhD, Earth and Atmospheric Sciences, (ongoing)
Research Area: Remote Sensing, Air Pollution, Air Quality Modeling
Grades: 3.95/4.0
Major Courses: Atmospheric Data Analysis and Statistics, Deep Learning and Big Data Analysis, Dynamic Meteorology, Atmospheric Chemistry, Atmospheric BioGeochemistry, Atmospheric Physics

Institute of Tibetan Plateau Research, Chinese Academy of Sciences (ITPCAS), Beijing, China
MS, Atmospherics Physics and Atmospheric Environment, 2017-2020
Specialization: Remote Sensing and Micro-meteorology
Grades: 3.88/4.0
Thesis: Estimation of land surface Evapotranspiration in Nepal using Landsat based METRIC model
Major Courses: Earth System Science, Physical Geography, Global Change Ecology, Climate Change, Plate Tectonics, Scientific Writing

Tribhuvan University, St. Xavier's College, Kathmandu, Nepal
Master of Science, Physics, 2014 - 2017
Grades: 3.35/4.0
Thesis: Analysis of solar wind energy and the Akasofu parameter for energy dynamics assessment during Supersubstorm
Major Courses: Mathematical Physics, Classical Mechanics, Quantum Mechanics, Electronics, Statistical Mechanics, Solid State Physics, Electrodynamics, Advanced Solid State Physics, Nuclear and Particle Physics, Computational Physics

WORK EXPERIENCE

Research Assistant, Department of Earth and Atmospheric Sciences, University of Houston, Texas, USA 2024-Present

Teaching Assistant, Department of Earth and Atmospheric Sciences, University of Houston, Texas, USA 2021-2023
- Introduction to Climate Change, Fall 2021
- Introduction to Meteorology, Spring 2022
- Introduction to Climate Change, Fall 2022
- Introduction to Meteorology, Spring 2023
- Environmental Data Analysis, Fall 2023

Research Assistant (Volunteer)/Independent Researcher, Yaoming Ma's Lab, ITPCAS, Beijing 2020-2021
- Remote sensing based precipitation estimation using TRIM dataset
- Crop yield estimation using Sentinel 2 imagery and climate variables

Research Assistant/Masters Scholar, Yaoming Ma's Lab, ITPCAS, Beijing 2018-2020
- Research on remote sensing based land surface evapotranspiration

Instructor, Navodit Vidya Kunja School, Kathmandu, Nepal 2014

- Core school faculty responsible for teaching social studies and science

Publications

- S. Wasti, Y. Wang, "Spatial and Temporal Analaysis of HCHO Response to Drought in South Korea", *Science of The Total Environment, Vol 852, 2022*
- *S. Wasti, W. Ma, Y. Ma, "Estimation of Land Surface Evapotranspiration using METRIC model in Nepal",* Atmospheric and Oceanic Science Letters 13(6), 2020
- X. Liu, Y. Wang, S. Wasti, "Impacts of anthropogenic emissions and meteorology on spring ozone differences in San Antonio, Texas between 2017 and 2021", *Science of The Total Environment, Vol 914, 2024, https://doi.org/10.1016/j.scitotenv.2023.169693*
- *X. Liu, Y. Wang, S. Wasti, "Evaluating WRF-GC v2. 0 predictions of boundary layer height and vertical ozone profile during the 2021 TRACER-AQ campaign in Houston, Texas",* Geoscientific Model Development, 16(18), 2023

Conferences

- S. Wasti, Y. Wang, X. Liu, "Impact of Local and Regional NOx and VOCs on Ozone Formation in the Corpus Christi Region", AGU Fall Meeting 2023
- X. Liu et al., "Evaluating WRF offshore meteorology simulation during TRACER-AQ 2021 in Houston, TX", AGU Fall Meeting 2022
- W. Li et al., "Evaluating WRF-CAMx offshore ozone simulation in September 2021 over Houston, TX", AGU Fall Meeting 2022

Awards and Scholarship

- Outstanding Academic Achievement Award in Atmospheric Science, 2024
- Outstanding Academic Achievement Award in Atmospheric Science, 2023
- Outstanding Academic Achievement Award in Atmospheric Science, 2022
- Graduate Tuition Fellowship, Department of Earth and Atmospheric Sciences, University of Houston, 2021-Present
- "Belt and Road" Masters Scholarship covering entirety of tuition and living expenses for Masters studies at ITPCAS
- Government of Nepal, Ministry of Science and Technology, BKMPOSDB (https://www.planeta-observatory.gov.np/) fellowship for masters thesis
- 50% tuition waiver for pursuing Bachelor of Science at Tri-chandra Multiple Campus, Kathmandu

Training, Seminars, and Summer Schools

- 2021 Asia Pacific Youth Forum on Disaster Risk Reduction and Climate Crisis, 29-30 April, 2021, Stockholm Environment Institute
- 2020 International Training Workshop on Earth Observation for Sustainable Development in Developing Countries (19-30 Oct 2020). Organized by AIRCAS (National Engineering Laboratory for Satellite Remote Sensing Applications under the Aerospace Information Research Institute (AIR), jointly sponsored by the CAS Bureau of International Cooperation and AIR, and co-organized by the International Center for Integrated Mountain Development (ICIMOD), the Asia-Oceania Group on Earth Observations (AOGEO) as well as the Committee on Data for Science and Technology (CODATA)
- 2020 IEEE Geoscience and Remote Sensing Society Summer School (GR4S) on Modeling in Microwave and Optical Remote Sensing, Beijing Normal University (China), 13th – 14th July 2020
- 2018 International workshop on Mountain Resources, Environment, and Hazards in Pan Himalayan Region Held at Chongqing University (NOV 26-29, 2018). Organized by China Committee of the International Center for Integrated Mountain Development and Chongqing University
- Week-long Seminar on "Isotopes in the Atomospheric Hydorological Cycle", organized by ITPCAS (Nov 2017)
- International School on Astronomy and Space Science (Oct 1-10 2012) Organized by Government of Nepal, Ministry of Science and Environment, Science and Technology, BP Koirala Memorial Planetarium, Observatory and Science Museum Development Board (Kathmandu Nepal)

Position of Responsibilities	• Joint Secretary, St. Xavier's Physics Council • Organizer, Yuri's Night (Yuri Gagrin Night), St. Xavier's College • Class Representative (2014-2016), St. Xavier's College • Treasurer, Nepal Student Council, Tri-chandra College
Programming Languages and Tools	QGIS, Python, R, Matlab, Tensorflow, Office packages, Linux, Photochemical Modeling (WRF, WRF-CAMx, WRF-GC, GEOSChem), LaTeX