Bhartendu Pandey

Ph.D. Student, Yale University
Room #05, 380 Edwards Street, New Haven, CT-06511

Research Interests

urban dynamics, environmental change, food security, satellite remote sensing, geospatial modeling

Education

2015–	Ph.D. Student Yale University, School of Forestry & Environmental Studies, New Haven, CT
2010–2012	M.Sc. Geoinformatics TERI University, Department of Natural Resources, New Delhi, India
2006–2009	B.Sc. Life Sciences Delhi University, Ramjas College, New Delhi, India

Research and Professional Experience

2016– **Freelance Geospatial Applications Consultant,** Organizations Advised:

- Department of Economic Affairs, Ministry of Finance, Government of India on Economic Survey 2016-17.
- Cloud To Street on Flood vulnerability assessment in Uttarakhand, India and Senegal

2016– **Series Coordinator**, Yale Himalaya Initiative, Yale University

2015 **Independent Research Consultant**, New Delhi, India

2012–2014 **Post-graduate Associate**, (NASA LCLUC Grant: NNX11AE88G), Urbanization and Global Change Group, School of Forestry & Environmental Studies, Yale University (Advisor: Prof. Karen C. Seto)

2011–2012 **Student Intern,** Department of Natural Resources, TERI University, New Delhi, India (Advisor: Prof. P. K. Joshi)

2011 **Summer Intern**, Regional Remote Sensing Center, Indian Space Research Organization, Nagpur, India (Advisor: Rajashree V. Bothale (Scientist/Engineer))

Teaching Experience

2015	Invited talk on "*Remote Sensing and Spatial Data Processing in R*", TERI University, New Delhi, India
2014	Designed a lab exercise *"Identify timing of agricultural land loss to urban growth using MODIS time-series data"*, course on "*Remote Sensing of Land-use and Land-cover change"*, School of Forestry & Environmental Studies, Yale University
2013	Workshop on *"Remote Sensing Image Analysis and Statistics using R"*, Urbanization and Global Change Group, School of Forestry & Environmental Studies, Yale University
2012	Laboratory Supervisor, Course: *"Photogrammetry"*, TERI University, New Delhi, India
2011	Workshop on *"Spatial Network Analysis"*, TERI University, New Delhi, India
2010	Teaching Assistant, Course: *"Elementary Biochemistry"* Department of Biochemistry, GBPUAT, Pantnagar, India

Awards

2016	Yale Institute for Biospheric Studies (YIBS) Research Grant ($4000)
2016	Yale FES Conference Travel Grant ($500)
2013	Gold Medal & Certificate of Academic Distinction for the Best Academic Record, TERI University, New Delhi, India
2011	Best Paper Presentation Award, Annual Convention of the Indian Society of Remote Sensing (ISRS), Bhopal, India
2010	Urban Habitat Forum Fellow, Urban Mobility India, New Delhi, India
2005	Distinct Scholar in Sanskrit, New Delhi, India

Peer-reviewed Publications

Pandey, B., Zhang, Q., & Seto, K.C. (2017). Comparative evaluation of relative calibration methods for DMSP/OLS nighttime lights. *Remote Sensing of Environment, 195,* 67-78

Zhang, Q., **Pandey, B.**, & Seto, K.C. (2016). A Robust Method to Generate a Consistent Time Series from the DMSP/OLS Nighttime Light Data. *IEEE Transactions on Geoscience and Remote Sensing, 54*, 5821-5831

Pandey, B., & Seto, K.C. (2015). Urbanization and agricultural land loss in India: Comparing satellite estimates with census data. *Journal of Environmental Management, 148*, 53-66

Pandey, B., & Joshi, P. (2015). Numerical modelling spatial patterns of urban growth in Chandigarh and surrounding region (India) using multi-agent systems. *Modeling Earth Systems and Environment, 1*, 1-14

Pandey, B., Joshi, P., & Seto, K.C. (2013). Monitoring urbanization dynamics in India using DMSP/OLS night time lights and SPOT-VGT data. *International Journal of Applied Earth Observation and Geoinformation, 23*, 49-61

Bothale, R.V., & **Pandey, B.** (2013). Evaluation and Comparison of Multi Resolution DEM Derived Through Cartosat-1 Stereo Pair–A Case Study of Damanganga Basin. *Journal of the Indian Society of Remote Sensing, 41*, 497-507

Conference Proceedings and Book Chapters

Pandey, B., & Seto, K.C. (2016). Urbanization and agricultural land loss in India. In, *Urban Transitions Global Summit*. Shanghai, China.

Pandey, B., Joshi, P.K., & Seto, K.C. (2016). Understanding urban growth inequalities in India using satellite measurements and socio-economic statistics. In, *Urban Transitions Global Summit*. Shanghai, China.

Zhang, Q., **Pandey, B.**, Seto, K.C., Chen, K., & Guo, S. (2016). Monitoring Annual Ecosystem Disturbance Caused Urbanization with Landsat on Google Earth Engine (GEE). In, *Urban Transitions Global Summit*. Shanghai, China.

Tellman, B., Schwarz, B., Kuhn, C., **Pandey, B.**, Schank, C., Sullivan, J., Mahtta, R., & Hammet, L. (2016). The Future of Risk Analysis: Operationalizing Living Vulnerability Assessments from the Cloud to the Street (and Back). In, *American Geophysical Union Conference; San Francisco, CA*

Mitra, C., **Pandey, B.**, Allen, N., & Seto, K.C. (2016). Contemporary urbanization in India. In K.C. Seto, W. Solecki, & C. Griffith (Eds.), *The Routledge Handbook of Urbanization and Global Environmental Change*

Pandey, B., Bothale, R., Sehdev, T., & Balha, A. (2011). Evaluation of Cartosat-1 DEM for hydrological applications and comparison with other applicable DEMs. In, *National Symposium of Indian Society of Remote Sensing*. Bhopal, India.

Balha, A., Bothale, R., **Pandey, B.**, & Sehdev, T. (2011). Watershed Prioritization using Cartosat-1 DEM derived parameters and multi-criteria analysis. In, *National Symposium of Indian Society of Remote Sensing*. Bhopal, India.

Sehdev, T., Bothale, R., Balha, A., & **Pandey, B.** (2011). Hypsometric analysis of Erosional topography. In, *National Symposium of Indian Society of Remote Sensing*. Bhopal, India.

Skills and Professional Services

Computer Programming:	C/C++, Matlab/Octave, Python, R
Quantitative Analysis:	Statistical analysis and modeling, Agent-based modeling, Geo-computation, Machine learning and optimization algorithms
Remote Sensing & GIS:	ArcGIS, GRASS GIS, QGIS, ERDAS, ENVI, IDRISI, GDAL/OGR API, Google Earth Engine API
Journal Reviewer:	*Applied Geography; Sustainability; Remote Sensing; GIScience & Remote Sensing; Science of the Total Environment; Environmental Research Letters; Sustainable Cities and Society*