

Bhartendu Pandey
Ph.D. Candidate, Yale University
bhartendu.pandey@yale.edu
Room #05, 380 Edwards Street, New Haven, CT-06511

Research Interests

Global urbanization, inequality, infrastructure, land use & environmental change, complex systems, and remote sensing science

Education

2015–	Ph.D. Candidate Yale University, School of Forestry & Environmental Studies, New Haven, CT
2018	M.Phil. (<i>en route</i>) 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

Awards

2018	Yale F&ES “ <i>Excellence as a Teaching Fellow Award</i> ”
2018	Student Research Fellowship, Hixon Center for Urban Ecology (\$7000)
2016	Yale Institute for Biospheric Studies (YIBS) Research Grant (\$4000)
2016	Yale F&ES Conference Travel Grant (\$500)
2015	Yale Doctoral Student Fellowship (\$338,500)
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

Research and Professional Experience

2015–	Freelance Geospatial Applications Consultant, Organizations Advised: <ul style="list-style-type: none">• 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 in Senegal.
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: Dr. Rajashree V. Bothale)

Peer-reviewed Publications

- Pandey, B.**, Zhang, Q., & Seto, K.C. (2018). Time series analysis of satellite data to characterize multiple land use transitions: A case study of urban growth and agricultural land loss in India. *Journal of Land Use Science*, 13, 221-237
- Román, M. O., Wang, Z., Sun, Q., Kalb, V., Miller, S. D., Molthan, A., Schultz, L., Bell J., Stokes E.C., **Pandey B.**, Seto, K. C., et al. (2018). NASA's Black Marble nighttime lights product suite. *Remote Sensing of Environment*, 210, 113-143
- 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.** (2018). Multi-Scalar Urban Inequalities in India. In, *34th FES Research Conference; New Haven, CT.*
- Zhang, Q., & **Pandey, B.** (2018). Monitoring Annual Vegetated Land Loss to Urbanization with Landsat Archive: A Case Study in Shanghai, China. In Q.Weng (Eds.), *Remote Sensing Time Series Image Processing.*
- Schwarz, B., Pestre, G., Tellman, B., Sullivan, J., Kuhn, C., Mahtta, R., **Pandey B.**, & Hammett, L. (2018). Mapping Floods and Assessing Flood Vulnerability for Disaster Decision-Making: A Case Study Remote Sensing Application in Senegal. In *Earth Observation Open Science and Innovation.*

- 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.
- 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*.

Teaching Experience

- 2018 Teaching Fellow, Course: “*Modeling Geographical Objects*”, Instructor: Prof. Charles Dana Tomlin, Yale University.
- 2018 Teaching Fellow, Course: “*Modeling Geographical Space*”, Instructor: Prof. Charles Dana Tomlin, Yale University.
- 2015 Invited talk on “*Remote Sensing and Spatial Data Processing in R*”, TERI University, New Delhi, India
- 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

Skills and Professional Services

- Computer Programming: C/C++, Matlab, Python, R
- Quantitative Analysis: Statistical modeling, agent-based modeling, geo-computation, machine learning
- Remote Sensing & GIS: ArcGIS, GRASS GIS, QGIS, ERDAS, ENVI, IDRISI, GDAL/OGR API, Google Earth Engine API
- Journal Reviewer: *Applied Geography; Cities; Environmental Research Letters; Sustainable Cities and Society; Science of the Total Environment; Sustainability; Food Policy (co-review); Journal of Land Use Science; Applied Energy; Remote Sensing; GIScience & Remote Sensing; ISPRS Journal of Photogrammetry and Remote Sensing; Remote Sensing of Environment; IEEE Sensor Letters; Science (co-review)*
- Community Service: Graduate Student Representative, Yale Graduate Student Assembly (2018-2019); Series coordinator, Yale Himalaya Initiative (2016-2018).