**Shrobona Karkun Sen**

 Ph.D. Candidate, Geography and Urban Studies, College of Liberal Arts, Temple University

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**Career Highlights**

* Ph.D. candidate with interdisciplinary education and experience in Urban Geography, Remote Sensing, GIS methods, Construction and Architecture.
* Professional experience working with government agencies, construction, architecture and planning firms.
* Over 5 years of experience teaching undergraduate level courses in Geography, Environmental and Urban Studies in multiple formats (online, in-person and hybrid)
* Experience as Instructor of record since 2017 for General Education courses in Human geography, sustainability, and urban studies.

**Education**

**Temple University,** Philadelphia, USA **2016 – 2023 (expected)**

Ph.D. in Geography and Urban Studies, College of Liberal Arts,

Thesis: “From Underground to Overground: How Delhi Metro is shaping land use”

Advisor: Prof. Sanjoy Chakravorty

**University of Pennsylvania**, Weitzman School of Design, Philadelphia, USA **2014**

Master’s in Urban Spatial Analysis (Conc: Community and Economic Development)

Capstone Thesis: “Mapping Gender Inequality in India”

Advisor: Prof. Amy Hillier

**Maulana Azad National Institute of Technology (MANIT),** Bhopal, India **2011**

Bachelor of Architecture, 1st class, GPA: 8.3/10

Design thesis: “Center for performing arts at Lavasa, Maharashtra”

Thesis advisor: Prof. Jagdish Singh

**Work Experience**

Data Analytics Fellow, Philadelphia Land Bank 2015- 2016

GIS Analyst, Interface Studio LLC, Philadelphia       2014- 2015

Senior Architect, Larsen & Toubro Construction, Mumbai, India        2011-2013

Architectural Intern, Karan Grover & Associates, Vadodara, India May–September 2010

**Research Experience**

**Graduate student, Temple University 2016-Present**

*Dissertation: “From Underground to Overground: How the Delhi Metro is Shaping Land Use” (Summer 2021-),*  Committee: Professors Sanjoy Chakravorty (chair), Victor H. Gutierrez-Velez, and Jacob Shell

*Project#1: Urbanization in India (2017),* Advisor: Prof. Sanjoy Chakravorty

* Exploratory spatial and demographic study on growth of Delhi National Capital Region.

*Project #2: How does transportation infrastructure shape equity in urban-rural gradient? (Spring and Summer 2020),* Advisors: Professors Hamil Pearsall, Victor H. Gutierrez-Velez, and Melissa Gilbert, Center for Sustainable Communities.

* Investigated the effect of multiple infrastructure systems on equity indicators in Philadelphia region.

**Data Analytics Fellow, Philadelphia Land Bank 2015- 2016**

*Project: Land price and vacancy modeling in Philadelphia,* Supervisor: Guy Thigpen

**Research Assistant, University of Pennsylvania 2014-2016**

*Project #1:* *“Philadelphia’s Historic Sacred Places” (2016),* Advisor: Prof. Randolph Mason,Penn Praxis

* Co-designed the GIS inventory of Historic Sacred Places in Philadelphia and conducted location analysis of the inventory with socio-economic neighborhood characteristics.

*Project#2: “Reading Recovery: An Evaluation of the Four-Year i3 Scale-Up” (2015)*

Advisor: Prof. Amy Hillier, Penn Design and Penn School of Policy and Practice

* Mapped location the spatial distribution of schools participating in Reading Recovery Program and explored the socio-economic variables with the distribution of student success.

*Project#3: Food & Activity Landscapes (2014)*

Advisor: Prof. Amy Hillier, Penn Design and Penn School of Policy and Practice

* Analyzed clusters of food stores in West Philadelphia with socio-economic indicators.

*Capstone Project: Mapping Gender Inequality in India (2014)*

* Utilized Census data to map sex ratios, labor participation, and gender inequality in Indian districts.

**Publications**

*Peer-reviewed articles, book chapters, and reports*

**Karkun Sen, S**. and Gutierrez-Velez, V.H. Supervised Classification of High-Density Urban Areas Using Sentinel 1 and Sentinel 2 Data*.* (Manuscript in preparation)

**Karkun Sen, S.,** Pearsall, H., Gutierrez-Velez, V.H., Gilbert, M.R. (2021). Measuring equity through spatial variability of infrastructure systems across the urban-rural gradient. *Land*, *10*(11), 1202. doi: 10.3390/land10111202.

**Karkun, S.** (2021). Geography and Demography: Mapping the Metropolis*.* In S. Chakravorty, S. & N. Sircar (Eds.) *Colossus: The Anatomy of Delhi* (33-58). New York: Cambridge University Press. <https://doi.org/10.1017/9781108935654.003>.

Kinsey, D., Croog, R., Dickinson, S., **Karkun, S.**, Rodriguez, J., Gilbert, M., Gutierrez-Velez, V.H., Pearsall, H., Rosan, T., Toran, L., and Valletta, R.(2019). *How does infrastructure shape equity and well-being Across the Urban-Rural Gradient?.* Philadelphia: Center for Sustainable Communities. <https://drive.google.com/file/d/1yZfBqFTSi6-KWA60W57qnr2kupdbS9Tf/view> (accessed: March 31, 2021).

*Cartography*

**Karkun, S.** (Cartographer). (2017). Report on *Philadelphia’s Historic Sacred Places.* Philadelphia: The PEW charitable trusts. <https://www.pewtrusts.org/-/media/assets/2017/10/pri_philadelphias_historic_sacred_places_final.pdf> (accessed: November 2, 2018).

**Karkun, S.** (Cartographer). (2016). Report on *Reading Recovery: An Evaluation of the Four-Year i3 Scale-Up.* Philadelphia: Consortium for Policy Research in Education. <http://www.cpre.org/reading-recovery-evaluation-four-year-i3-scale> (Accessed: January 25, 2018)

**Karkun, S.** (2015). “Mapping Urbanization in Dubai”. *ESRI Map Book,* *30*, 28-29. Redlands, California: ESRI Press. <https://media.esri.com/mapbook/volume30.pdf> (accessed: November 2, 2018)

**Karkun, S**. (Cartographer). (2014). “*2014 Strategic Plan*”. Philadelphia Land Bank. <http://interface-studio.com/projects/land-bank> (accessed: October 3, 2021)

**Workshops, oral and poster presentations**

* Oral presentation, “How do roads and parks matter? Understanding the effect of infrastructure(s) on spatial inequalities and well-being across the urban-rural gradient”, UCGIS Symposium, June 2021.
* Oral presentation, “Utilizing Sentinel 1 and 2 data for researching high-density urban areas”, Virtual Annual Meeting, American Association of Geographers, April 2021.
* Guest lecture, “Data Visualization for Urban Research”, Undergraduate Urban Research Colloquium, Penn Institute of Urban Research, April 2021.
* Invited participant, “From Underground to Overground—How the Delhi Metro is shaping the lands”, AAS-SSRC Dissertation Virtual Workshop, March 2021.
* Invited participant, “The impact of Delhi Metro on the urban development of the Central National Capital Region, India”, AAS-SSRC Dissertation Workshop, Denver, March 2019.
* Guest lecture, “Politics of congested city”, Global Cities, Temple University, November 2018.
* Oral presentation, “Geography of Colossus: Space, place, and people of Delhi NCR”, AAS-in-Asia, Association for Asian Studies, July 2018.
* Invited participant, “Mapping the Colossus: Space, place, and people of Delhi NCR”, Urbanization (A CASI 25th Anniversary Workshop), Center of Advanced Studies in India, University of Pennsylvania, November 2017.
* Oral presentation, “Urban Growth and Green Spaces: Using remote sensing to visualize a challenging relationship in Delhi Metropolitan region”, Annual Meeting at Boston, Association of American Geographers, April 2017.
* Oral Presentation, “Mapping the *Divine Comedy*”, GIS day celebrations, Temple University, Philadelphia, November 2016.
* Poster presentation on “Mapping Urbanization in Dubai” and “Mapping Gender Inequality in India”, ESRI User Conference, Environmental Systems Research Institute, San Diego, July 2014**.**

**Teaching Experience**

**Instructor of Record, Temple University 2017 - present**

Instructor of Record for in-person, online, and hybrid format classes with 30-60 students in the following General Education courses that fulfill quantitative reasoning, critical thinking, and information literacy competencies.

* Global Cities, GUS 0841 (Spring 2022)
* World regions and Cultures, GUS 0867 (Fall 2021)
* Sustainable Environments, GUS/ENST 0842; (Summer & Fall 2018, Fall 2020, Summer 2021, Fall 2021)
* Digital Mapping, GUS 0821 (Summer & Fall 2017, Summer 2018, Spring 2019)

**Graduate Teaching and Grading Assistant, Temple University 2016 - 2019**

I have assisted Instructor of records with lab instruction, grading (for up to 100 students), Canvas management, and transition to online format.

* Digital Mapping, GUS 0821 (Fall 2016, 2017, Spring 2017, 2018 & 2019)
* Sustainable Environments, GUS/ENST 0842 (Fall 2017 & 2018)
* Global Cities, GUS 0831 (Fall 2018)

**Jefferson University Hospitals, Strategic & Business development team May-July 2015**

Instructor for workshop on introduction to GIS and implementation in health administration.

**Fellowships and Awards**

* Harris-Weber Fellowship for Dissertation research in Urban Policy, 2021: Semester-long support to conduct dissertation research, $10,000.
* Temple University Global Studies Grant, 2019: Financial support to students pursuing research outside the United States, $3,000.
* Grantee, AAS-SSRC Dissertation Workshop Competition, 2019: Awarded to twelve doctoral students from humanities and social sciences in early phases of dissertation research in Asia.
* Temple University Assistantship for Graduate Study, 2016-2022: Tuition and financial support awarded for doctoral studies and research.
* University of Pennsylvania Conference Travel Award, 2014: Support for travel and hotel awarded to top 3 GIS applicants to support conference travel and stay for ESRI User Conference at San Diego.
* Penn Design Scholarship for Graduate Study, 2013: Partial support towards tuition expenses for graduate study awarded to top applicants of MUSA program, $3000.
* Winner (West Zone) and National finalist, Saint Gobain Transparence Architectural Design Competition, 2009:Awarded to top 2 architectural design entries from the Western Region Architecture schools in India, ₹18,000.

**Professional Service & Leadership Experience**

* Peer-review for the following journals and edited volumes
* Land Use Policy, Elsevier, 2019-present
* Urban Planning, Cogitatio Press, 2020-present
* Advances in Science, Technology & Innovation(ASTI) Series, IEREK Press and Springer, 2021-present
* See verified profile at <https://publons.com/researcher/3527090/shrobona-karkun-sen/>
* Workshop Moderator, “The future of the learning series for graduate students”, AAG (virtual), September 2021.
* Workshop Organizing Committee, “How Does Infrastructure Shape Equity and Well-being across the Urban-Rural Gradient?”, Temple University, September 2019.
* Volunteer, Symposium on Transdisciplinary Sustainability Research, Temple University, March 2018.
* Co-President, Temple University Graduate Student Association, 2017-2018.
* Graduate Student Professional Development Committee, Temple Geography and Urban Studies, 2016.
* Volunteer instructor and teaching assistant, TechGirlz, 2016-present.
* Represented MUSA program (1 of 3 chosen) for ESRI Annual User Conference, 2014.

**Media coverage**

* Featured article on ‘Mapping block parties in Philadelphia’ Plan Philly, August 2016 <http://planphilly.com/articles/2016/08/12/mapping10-years-of-philadelphia-block-parties>
* <http://www.citylab.com/housing/2016/08/here-are-tenyears-of-philly-block-parties-mapped/495692/>
* <https://www.planetizen.com/node/87967/friday-fun-mapping-decade-philadelphia-block-parties>
* ‘The Future of Urbanization: What Can We Learn from Asian Cities?’, Penn IUR, February 2015 <https://penniur.upenn.edu/press-room/announcements/musa-grad-shrobona-karkuns-work-showcased-in-esri-map-book>

**Professional Affiliations**

Association of American Geographers 2016-present

Association for Asian Studies 2018-present

National Association of Students of Architecture, India (SAARC-NASA) 2007-2011

**Languages**

Advanced and native fluency: English and Bengali

Intermediate: Hindi

Beginner: French