

Debaleena Majumdar
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Education

- *Arizona State University, Tempe, USA - School of Geographical Sciences and Urban Planning*, Doctor of Philosophy (Ph.D.) in Urban Planning, 2018
Ph. D. Dissertation: Planning for the Energy Transition: Solar Photovoltaics in Arizona (Advisor: Dr. Martin J. Pasqualetti)
- *University at Albany, State University of New York, USA - Department of Geography and Planning*, Masters in Regional Planning (MRP, with specialization in Environmental and Land-Use Planning), 2013
Received Graduate Certificates in 'Urban Policy' and 'Geographic Information Systems and Spatial Analysis' (2013)
M. S. Research Paper: Understanding the renewable energy potential of New York (Advisor: Dr. David A Lewis)
- *School of Planning and Architecture, New Delhi, India*, Master of Planning (M.P., with specialization in Urban Planning), 2009
M. S. Dissertation: Impact of mass rapid transit system on urban form and structure - case study: New Garia, Kolkata (Advisor: Dr. Sanjukta Bhadhuri)
- *Jawaharlal Nehru University, New Delhi, India*, Masters in Geography (M.A.), 2007
- *Presidency College, Kolkata, India*, Bachelor of Science (Honors) in Geography, 2005
Received the 'Order of Merit' from University of Calcutta
Received the University Grants Commission (UGC) - Single Girl Child Fellowship in 2005
Received the College Book Prize, Geographical Institute in 2004

Professional Experience

- University of Central Florida, Orlando, Florida, *Lecturer*, August 2024 – till date
 - Developed and taught EVR 3733: Introduction to Sustainable Design (Online)
 - Taught courses GIS 3043C: GIS for Environmental Studies (In-person) and EVR 3085: Interdisciplinary Research Methods for Environmental Studies (Mixed-mode, Research Intensive)
 - Participated as a Judge in the Amy Zeh HIP (High-Impact Educational Practices) Student Showcase

- Member of the 'Faculty Excellence Award' Committee
- Member of 'Scholarship, Awards and Professional Development' and 'Department/Office Level Curriculum' Committees
- Successfully completed IDL6543 (Asynchronous Design and Teaching credential)
- University of Massachusetts Global, *Assistant Professor*, August 2019 – July 2023
 - Lead faculty for several undergraduate courses – like SSCU 477: Geospatial Approach to Society, SSCU 383: Spatial Social Science Communications and Visualization, SSCU 380: Interpreting Data: Predictions, Patterns, and Communication and SSCU 317: Quantitative Methods and Social Statistics
 - Designed and taught courses ESCU 401: Environmental Science, Policy, and Management, ESCU 101: Introduction to Environmental Science and SSCU 494: Social Science Capstone
 - Designed several courses for Master's in 'GIS & Data Analytics' program – like GIS 663: Programming for GIS and GIS 603: Spatial Database Design
 - Designed several courses for Master's in 'Business Analytics' program – like BUSU 661: Data Analytics Toolkit and BUSU 662: Programming for Business Analytics
 - Vice President (Service Chair) of American Association of University Women (AAUW) University Branch
 - Elected Member of the Curriculum and Academic Committee (CAC)
 - Member of Office of Equity & Inclusion (OEI) Environmental Equity Advisory Group
 - Member of JEDI (Justice, Equity, Diversity, and Inclusion) Curriculum Alliance Faculty Advisory Group
 - Member of the Virtual Library Team (Technical Lead)
 - Member of the UMass Global team that hosted the TEDx Brandman event - 'Igniting Connexion' in 2021
 - Career Coach for high school immigrant students (through SPEAKHIRE)
- Arizona State University, Tempe, Arizona, *Faculty Associate (FA) / Teaching Assistant (TA) / PhD Student*, August 2014 – July 2024
 - Designed and taught courses GCU 102: Introduction Human Geography, SOS 111: Sustainable Cities and PUP 452: Ethics and Theory of Planning
 - Taught and designed several graduate and undergraduate courses focused on GIS and remote sensing – like PUP 576: GIS Workshop for Planners (graduate course), GIS 341: Introduction to Cartography and Georepresentation, GIS 322:

Programming Principles GIS, GIS 311: Geographic Information Science III and GIS 205: Geographic Information Technologies

- Assisted Dr. Martin J. Pasqualetti in teaching GCU 598: Solar Energy, GPH 405: Energy and Environment, GCU 364: Energy in the Global Arena and GCU/SOC 171 & GCU 598: Thread of Energy/Energy in our Lives
- Assisted Dr. Elizabeth Mack in teaching PUP 642: Urban and Regional Economic Analysis and PUP 571: Socio-Economic Impact Analysis
- Supervised several course projects in areas of energy planning, urban planning, environment planning, sustainability, health, public administration and policy etc.
- Conducted dissertation research on ‘Planning for the Energy Transition: Solar Photovoltaics in Arizona’
- Participated in a Department of Defense (DOD) project on best practice for siting of renewable energy projects within the central and southern Arizona corridor for Military & Energy Land Use Plan
- Performed Solar PV Potential analysis of Yaqui Valley, Mexico using geographic and remote sensing data in areas of low yield cropland
- Assessed Solar Potential of about 3000 rooftops for an area of Tucson using satellite imagery and LIDAR data. Generated DEM, DSM and nDSM surfaces from LIDAR point clouds. Slope, Aspect and Solar Potential of each rooftop was obtained.
- Conducted Excel Data Analytics Workshop for new graduate students and staff
- Received the Professor of Impact Award (2023)
- Carnegie Mellon University, Pittsburgh, Pennsylvania, *Adjunct Faculty*, January 2013 – July 2014
 - Developed, designed and taught a graduate course on applications of remote sensing data
 - Supervised several course projects on applications of remote sensing data
 - Worked with Department of Physics to find a suitable mountain-valley-mountain topography using ERDAS for design of an experiment on understanding black holes
 - Received the Jerry S. Walls Planning Professional Development Award (2013, Pennsylvania Chapter of APA)

- Department of Environmental Conservation, New York, Summer Intern, May – June 2012
 - Prepared a report by analyzing energy consumption sources in New York from renewable and non-renewable energy sources
 - Reviewed the New York state energy plan and climate action plan
 - Worked with the office of climate change to propose modifications to the Department of Environmental Conservation website on renewable energy
- University at Albany, State University of New York, *Graduate Assistant / Teaching Assistant / Graduate Student*, Jan 2011 – May 2012
 - Received Masters in Regional Planning (MRP, with specialization in Environmental and Land-Use Planning) and Graduate Certificates in ‘Urban Policy’ & ‘Geographic Information Systems and Spatial Analysis’
 - Represented University at Albany in the New York Upstate APA Annual Conference Poster Presentation 2013
 - Conducted Masters research work on ‘Understanding the renewable energy potential of New York’
 - Assisted Prof. Ray Bromley in teaching the courses on ‘Gandhi’ and ‘India Development Debates’
 - Prepared and presented on ‘Indian Culture and Traditions’ to students visiting India
 - Prepared a directory listing South Asian organizations in the capital region
 - Responded to students at ‘Hot Courses’ with information related to courses at University at Albany
- School of Planning and Architecture, New Delhi, India, *Project Associate*, Oct 2009 – May 2010
 - Worked towards proposing Alternative Approaches to Master Plans for the Ministry of Urban Development, India
 - Helped in organizing a 2-day workshop on ‘Beyond Master Plans’ at School of Planning and Architecture, New Delhi, India (March 16-17, 2010)
 - Conducted a comparative analysis of the Master Plans of four major Indian cities - Mumbai, Bangalore, Kolkata and Surat
 - Studied the strengths, weaknesses and constraints in the Master Plans with respect to their contents, process of preparation and various implementation tools and strategies

- Housing Infrastructure Development Corporation Ltd., Kolkata, India, *Summer Intern*, June – July 2008
 - Prepared a report on employment potential of Action Area 1, New Town, Rajarhat, Kolkata for West Bengal Housing Infrastructure Development Corporation Ltd. (HIDCO)
 - Received a Certificate of Excellence from General Manager of Central Planning, HIDCO

Computational Skills

- *Software*: ArcGIS (Pro, Desktop, Online), ERDAS IMAGINE, Google Earth Engine, Google Sketchup, SPSS, Microsoft Access, Microsoft Power BI, Tableau
- *Programming*: Python, R
- *Productivity Tools*: Excel, Word, Power Point

Research Publications

Google scholar profile: <https://scholar.google.com/citations?user=62EsrdMAAAAJ&hl=en>
(Citations: 301)

- Majumdar, D., & Pasqualetti, M. J. 2019. Analysis of land availability for utility-scale power plants and assessment of solar photovoltaic development in the State of Arizona, USA. *Renewable Energy*, 134, 1213-1231.
- Majumdar, D., & Pasqualetti, M. J. 2018. Dual use of agricultural land: Introducing ‘agrivoltaics’ in Phoenix Metropolitan Statistical Area, USA. *Landscape and Urban Planning*, 170, 150-168.

Conference Publications/Presentations

- Mazumdar, S., and Majumdar, D. 2023. Assessment of Agrivoltaic Development in States Across India. AgriVoltaics 2023, Daegu, South Korea.
- Majumdar, D. 2022. Analyzing socio-environmental information towards understanding environmental equity issues faced by adult learners. OEI Environmental Equity Advisory Group Presentation on JEDI Day, University of Massachusetts Global.
- Majumdar, D., & Pasqualetti, M.J. 2021. Assessment of Agrivoltaic Development in Major Metropolitan Areas across USA. International Conference on AgriVoltaics 2021 (Online Event), Freiburg, Germany.

- Pariala, M.D., Majumdar, D., Mukherjee, K., & Roy, A.D. 2021. Exploring the relationship between building height and land surface temperature in Kolkata City. International Conference on Geospatial Science for Digital Earth Observation (GSDEO) 2021 (Virtual).
- Bargar, K., & Majumdar, D. 2020. Geographic information systems (GIS) mapping of social work field practicum. CSWE's 2020 Annual Program Meeting (APM) conference.

Workshops/Guest Lectures/Presentations

- Majumdar, D. 2021. 'My journey so far: Story of an immigrant', Social Sciences Interdisciplinary Learning Community (SSILC), University of Massachusetts Global.
- Majumdar, D. 2020. 'Engagement of Students in Quantitative Content', Faculty Meeting at School of Arts and Sciences, University of Massachusetts Global.
- Majumdar, D., & Bargar, K. 2020. 'Geographic information systems (GIS) mapping of social work field practicum', Faculty Meeting at School of Arts and Sciences, University of Massachusetts Global.
- Majumdar, D. 2020. 'Professionalism in Courses', Faculty Meeting at School of Arts and Sciences, University of Massachusetts Global.
- Majumdar, D. 2018. 'Excel for Data Analysis', workshop for 1st Year Master's in Urban and Environmental Planning (MUEP) students, School of Geographical Sciences and Urban Planning, Arizona State University, Tempe.
- Majumdar, D. 2018. 'Geothermal energy: where it is and how it can contribute', GCU364: Energy in the Global Arena lecture, Arizona State University, Tempe.
- Majumdar, D. 2018. 'Hydropower: continued rise and costs', GCU364: Energy in the Global Arena lecture, Arizona State University, Tempe.
- Majumdar, D. 2018. 'The New Great Game: Blood and Oil in Central Asia and Russia', GCU364: Energy in the Global Arena course lecture, Arizona State University, Tempe.
- Majumdar, D. 2018. 'Global patterns of energy supply & demand', GCU364: Energy in the Global Arena course lecture, Arizona State University, Tempe.
- Majumdar, D. 2017. 'Coal and its legacy', GCU364: Energy in the Global Arena lecture, Arizona State University, Tempe.
- Majumdar, D. 2017. 'Africa: poverty, war, and the resource curse', GCU364: Energy in the Global Arena lecture, Arizona State University, Tempe.
- Majumdar, D. 2017. 'Oil pipeline controversies', GCU364: Energy in the Global Arena lecture, Arizona State University, Tempe.

- Majumdar, D. 2017. 'Introduction to GIS', MUEP Orientation, School of Geographical Sciences and Urban Planning, Arizona State University, Tempe.
- Majumdar, D. 2016. 'Phoenix should implement an urban growth boundary', PUP 642: Urban and Regional Economic Analysis debate, Arizona State University, Tempe.
- Majumdar, D. 2014. 'Entrepreneurship', PUP 642: Urban and Regional Economic Analysis lecture, Arizona State University, Tempe.
- Majumdar, D. 2013. 'Solar energy potential in New York state', New York Upstate APA 2013 Annual Conference, Poster Presentation, Schenectady, New York.
- Majumdar, D. 2012. 'Introduction to raster GIS', Guest Talk, Heinz College, Carnegie Mellon University, Pittsburgh.
- Majumdar, D. 2012. 'Indian culture and traditions' to students visiting India, University at Albany (SUNY), Albany, New York.
- Majumdar, D. 2010. 'Beyond Master Plans', 2-day workshop at School of Planning and Architecture, New Delhi, India.

Peer Reviewer

- Agricultural Systems, Agronomy, Applied Sciences, Applied Energy, Electronics, Energy Research & Social Science, Geographical Analysis, Geographical Review, Journal of Cleaner Production, Local Environment: The International Journal of Justice and Sustainability, One Earth, Sustainability