

SHAKIL BIN KASHEM

Department of Geography and Geographic Information Science
University of Illinois at Urbana-Champaign
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EDUCATION

PhD	University of Illinois at Urbana-Champaign, Dept. of Urban & Regional Planning Dissertation – Moving Towards Disaster: Examining the Changing Pattern of Social Vulnerability in a Multi-Hazard Urban Environment	2015
MURP	Bangladesh University of Engineering & Technology (BUET), Dhaka, Bangladesh Thesis – Simulating Urban Growth Dynamics of Dhaka Metropolitan Area: A Cellular Automata Based Approach	2008
BURP	Bangladesh University of Engineering & Technology (BUET), Dhaka, Bangladesh Thesis – Sustainability of Development Trends in the Urban Fringe: A Case Study of North-eastern Dhaka	2005

RESEARCH INTERESTS

Geospatial Analysis and Planning; Applications of Big Data for disaster risk management; Smart City and Equity; Urban social vulnerability; Community resilience and adaptation; Housing policy; Critical GIS and geoweb; Urban growth modeling.

TEACHING INTERESTS

Introductory and advanced courses on GIS and Remote Sensing; Digital Cartography; Computer Applications in Planning; Environmental Policy and Planning; Hazard Mitigation Planning; Climate change and social vulnerability; Housing Policy.

EMPLOYMENT

August 2015 – Present **Teaching Assistant Professor**
Department of Geography and Geographic Information Science,
University of Illinois at Urbana-Champaign
Taught courses on:
Introduction to GIS (GEOG 379)
Spatial Problem Solving (GEOG 380)
Digital Cartography and Map Design (GEOG 473)
GIS Professional Seminar (GEOG 595)

- 2012 – 2015 **Instructor/Graduate Assistant**
Department of Urban and Regional Planning, University of Illinois at Urbana-Champaign
Taught courses on: GIS for Planners (UP 418)
- 2010 – 2012 **Graduate Assistant (ad-hoc consulting)**
Statistics and GIS Group, Applied Technologies for Learning in the Arts and Sciences (ATLAS), University of Illinois
- 2009 – 2010 **Teaching Assistant**
Department of Economics, University of Illinois at Urbana-Champaign
Worked for course: Intermediate Microeconomic Theory (ECON 302)
- 2005 – 2009 **Lecturer**
Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Taught courses on: GIS and Remote Sensing, Project Planning, Operations Research & Systems Analysis, Site and Area Planning, Natural Hazards & Disaster Management.

STUDENT ADVISING AND MENTORSHIP

- 2015 – Present **Program Advisor**
Professional Science Master's in GIS, Department of Geography and GIS, University of Illinois at Urbana-Champaign
- 2017 – 2018 **MSc Thesis Supervisor:** Steven Oxley
2016 – 2019 **Undergraduate Senior Thesis Supervisor:**
Martha Rubin, Grace Newton
Department of Geography and GIS, University of Illinois at Urbana-Champaign

PUBLICATIONS IN PEER-REVIEWED JOURNALS

Kashem, S.B. (Forthcoming), Housing practices and livelihood challenges in the hazard-prone contested spaces of rural Bangladesh. *International Journal of Disaster Resilience in the Built Environment*, accepted on 9 September 2019 DOI: 10.1108/IJDRBE-04-2019-0019

Zhang, Z., Hu, H., Yin, D., **Kashem, S. B.**, Li, R., Cai, H., Perkin, D., and Wang, S. (2018). A CyberGIS-enabled Multi-Criteria Spatial Decision Support System: A Case Study on Flood Emergency Management, *International Journal of Digital Earth*, DOI: 10.1080/17538947.2018.1543363

Hannon, B., and **Kashem, S.B.** (2018). Taming the Wet Prairie of East Central Illinois, *Illinois Geographer*, 59 (2): 94-113

Wilson, B., and **Kashem, S.B.** (2017). Spatially concentrated renovation activity and housing appreciation in the city of Milwaukee, Wisconsin, *Journal of Urban Affairs*, 39(8): 1085-1102

Kashem, S.B., Wilson, B., and Van Zandt, S. (2016). Planning for climate adaptation: Evaluating the changing patterns of social vulnerability and adaptation challenges in three coastal cities. *Journal of Planning Education and Research* focus issue on 'Land Use Planning for Climate Change Adaptation', 36(3): 304-318

Chakraborty, A., Wilson, B., and **Kashem, S.B.** (2015). The pitfalls of regional delineations in land use modeling: Implications for Mumbai region and its planners. *Cities*, 45: 91-103

Kashem, S.B., Irawan, A., and Wilson, B. (2014), Evaluating the dynamic impacts of urban form on transportation and environmental outcomes in U.S. cities. *International Journal of Environmental Science and Technology*, 11(8): 2233-2244 DOI: 10.1007/s13762-014-0630-z

Rashid, S., Yoon, Y. and **Kashem, S.B.** (2011), Assessing the Potential Impact of Microfinance with Agent-Based Modeling. *Economic Modeling*, 28(4): 1907-13

Kashem, S.B., Chowdhury, T.A., Majumder, J. and Rahman, M.A. (2009), Quantifying Urban Form: A Case Study of Rajshahi City. *Journal of Bangladesh Institute of Planners*, 2, 39-48.

Kashem, S.B. and Hafiz, R. (2008), Sustainability of Development Trends in the Urban Fringe: A Case Study on North-Eastern Dhaka City. *Protibesh*, 12(2), 55-67

BOOK CHAPTER

Kashem, S.B., Talukdar, M.A., Morshed, M.M. (2013). Sustainability Assessment of Fringe Area Development of Dhaka City, Bangladesh, in Jahan, S. and Kalam, AKMA. (ed.) *Dhaka Metropolitan Development Area and Its Planning Problems, Issues and Policies*, Bangladesh Institute of Planners, Dhaka, Bangladesh

CONFERENCE PRESENTATIONS

Kashem, S.B. (2019), "A framework for CyberGIS-enabled multi-scale space-time index for analyzing urban social vulnerability dynamics", 2019 Association of American Geographers Annual Meeting, Washington, DC, April 3 - 7, 2019

Zhang, Z., Hu, H., Yin, D., **Kashem, S. B.**, Li, R., Cai, H., Perkin, D., and Wang, S. (2019). "A CyberGIS-enabled Multi-Criteria Spatial Decision Support System: A Case Study on Flood Emergency Management", 2019 Association of American Geographers Annual Meeting, Washington, DC, April 3 - 7, 2019

Kashem, S.B. (2017), "Social Vulnerability & Low-Income Housing Programs: Evaluating the Challenges in Multi-Hazard Environments of Rapidly Growing Metro Areas", 57th Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Denver, Colorado, October 12-15, 2017

Kashem, S.B., Chakraborty, A, and Dewan, A. (2017), "Urban Sprawl & Social Vulnerability in Developing Megacities: Evidence from Dhaka", 57th Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Denver, Colorado, October 12-15, 2017

Kashem, S.B. (2017), "Analyzing spatial and temporal context sensitivity of emotion mapping: an approach to apply human sensor data for urban planning and design", 2017 Association of American Geographers Annual Meeting, Boston, MA, April 5 - 9, 2017

Kashem, S.B. (2016), “*Location-Aware Active Citizenship: Exploring the challenges for developing an enabling geoweb*”, 2016 Association of American Geographers Annual Meeting, San Francisco, CA, March 29- April 2, 2016

Kashem, S.B. (2015), “*Changing patterns of social vulnerability in the multi-hazard environment of Houston: evaluating the role of subsidized low-income housing programs*”, 55th Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Houston, Texas, October 22-25, 2015

Kashem, S.B. (2015), “*Subsidized low-income housing in a neoliberal era: A critical review through the lens of vulnerability production and environmental justice*”, International Sociological Association Research Committee 43: Housing and the Built Environment, Chicago, September 17-19, 2015

Kashem, S.B. (2015) “*Exploring the riddle of livelihood and housing practices in a contested space: A study of hazard-prone rural Bangladesh*”, Initiative on Climate Adaptation Research and Understanding through the Social Sciences (ICARUS) 4th Global Meeting, University of Illinois, Urbana-Champaign, IL, May 7-10, 2015

Kashem, S.B. and Wilson, B. (2015), “*Locating housing subsidies: A critical review of low-income housing programs through the lens of vulnerability production and environmental justice*”, 2015 Association of American Geographers Annual Meeting, Chicago, IL, April 21-25, 2015

Kashem, S.B. and Wilson, B. (2014), “*Developing CyberGIS Pedagogy for Urban Planning Practice and Research*”, The Second International Conference on CyberGIS and Geodesign, Redlands, California, August 19-21, 2014

Kashem, S.B. and Wilson, B. (2014), “*Subsidized Low Income Housing and Social Vulnerability in a Multi-hazard Urban Area: A Case Study of Houston, Texas*”, Urban Affairs Association 44th Annual Conference, San Antonio, Texas, March 19-22, 2014.

Kashem, S.B. and Wilson, B. (2013), “*Urban Growth and Social Vulnerability Dynamics: A Comparative Analysis of Three Coastal Metropolitan Areas*”, Urban Affairs Association 43rd Annual Conference, San Francisco, California, April 3-6, 2013.

Kashem, S.B., Irawan, A., and Wilson, B. (2012), “*Examining the Impact Dynamics of Urban Sprawl on Transportation*”, 53rd Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Cincinnati, Ohio, November 1-4, 2012

Irawan, A. and **Kashem, S.B.** (2012), “*Ports and Regional Economic Performance Across US Counties*”, 53rd Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Cincinnati, Ohio, November 1-4, 2012.

GRANTS

Kashem, S.B. PI. Developing an Engaging Geospatial Learning Experience through Stories, Provost’s Faculty Retreat Grant, University of Illinois at Urbana Champaign, 2017-2018, \$4,000

Wilson, B., PI & **Kashem, S.B.**, Co-PI. Developing CyberGIS Pedagogy for Urban Planning Practice and Research, NSF CyberGIS Project, CyberGIS Center for Advanced Digital and Spatial Studies Fellow, University of Illinois at Urbana Champaign, 2014-2015, \$8,000

PROFESSIONAL EXPERIENCE AND PROJECT SUPERVISION

2015 - Present

Project Advisor

University of Illinois at Urbana-Champaign

Ongoing Projects:

- Evaluating space-time determinants of crime patterns in an urban environment, Graduate Capstone project by Busranur Cakal and Hyun Seok Moon, MS in Geographic Information Science (to be completed in December 2019)
- Determining neighborhood typology based on restaurant data and socio-economic characteristics: an application of opensource geospatial tools, Graduate Capstone project by Yang Qiu, MS in Geographic Information Science (to be completed in December 2019)
- Geo Visualization of Global Film History, Graduate Capstone project by Tianshun Deng, MS in Geographic Information Science (to be completed in December 2019)
- Report Card visualization through web application, Graduate Capstone project by Wenhao Gu, MS in Geographic Information Science (to be completed in December 2019)

Completed projects:

- Analyzing space-time geography of transit accessibility, Graduate Capstone project by Yatong Zhang, MS in Geographic Information Science (Completed in April 2019)
- Predicting road accident outcomes in Illinois State using multilevel models, Graduate Capstone project by Kixian Yang, MS in Geographic Information Science (Completed in December 2018)
- Data Governance Structure for RPC, Graduate Capstone project by King Ming Lai, MS in Geographic Information Science (Completed in December 2017)
- Creating an interactive webmap with data retrieved from database, Graduate Capstone project by Yunqi Zhang, MS in Geographic Information Science (Completed in December 2017)
- Geospatial analysis of campus emergency phone system, Graduate project by Jiandong Liu, MS in Geographic Information Science (Completed in May 2016)

2010 - 2014

Research Assistant

University of Illinois at Urbana-Champaign; Projects worked on:

- Residential energy usage and urban form, with Dr. Bev Wilson, Department of Urban and Regional Planning
- Urban growth modeling of Mumbai, with Dr. Arnab

Chakraborty, Department of Urban and Regional Planning
 - Demographic analysis of Beardstown, IL, with Dr. Faranak MirafTAB, Department of Urban and Regional Planning
 - Geospatial analysis for voting redistricting, with Dr. Jorge Chapa, Department of Sociology
 - Survey of engineers on life-long learning, joint study of National Academy of Engineers and the University of Illinois (ATLAS)
 - Survey and analysis of broadband internet users (ATLAS)

2007 – 2009

Team Leader

Feasibility study of mason training and development of IEC materials for mason training on disaster resistant house construction, Funded by Oxfam (GB), Bangladesh

2006 - 2008

Junior Consultant

Preparation of Land Use Plan of Chittagong University of Engineering & Technology, by the Dept. of Urban and Regional Planning, BUET

AWARDS AND HONORS

- 2015 Outstanding Doctoral Student Award, Department of Urban and Regional Planning, University of Illinois at Urbana-Champaign
- 2014-2016 University-wide List of Teachers Ranked as Excellent, University of Illinois at Urbana-Champaign (Spring 2014, Spring 2016, Fall 2017)
- 2013 Graduate College Conference Travel Award for Graduate Students of the University of Illinois at Urbana-Champaign
- 2012 Graduate Student Award by the ESRI Development Center at the University of Illinois at Urbana-Champaign
- 2001 – 2005 University Merit Scholarship: Obtained in eight consecutive academic terms at the undergraduate level for outstanding results.
- 2001 – 2005 Dean’s List Awards: Obtained for achieving honors marks in different academic years.

PROFESSIONAL AND COMMUNITY SERVICES

Organizing Committee Chair (2017-2018)

GIS Day at the University of Illinois at Urbana-Champaign

Organizing Committee Member (2016)

GIS Day at the University of Illinois at Urbana-Champaign

Journal Reviewer

Peer-reviewed Journals: *Journal of Planning Education and Research*, *Energy, Economic Modeling*, *International Journal of Environmental Science and Technology*, *Journal of Bangladesh Institute of Planners*

Webmaster and Seminar Coordinator (2011 – 2014)

Doctoral Students in Urban Planning (DSUP)-association of Doctoral Students at the Department of Urban and Regional Planning, University of Illinois at Urbana-Champaign

Vice-President (2011 – 2012)

Bangladeshi Students' Association (BSA) at the University of Illinois at Urbana-Champaign

Conference Organizing Committee Member

10th Pacific Regional Science Conference Organization (PRSCO) Summer Institute, Dhaka (May 2008)

Workshop Facilitator

BUET-TU Dortmund Joint Students' Workshop on *Dynamics in Urban Informal Settlements*, organized jointly by Department of Urban and Regional Planning, BUET and Department of Urban and Regional Planning, University of Technology, Dortmund, Germany (March 2008)

Assistant Editor (2006 – 2008)

BIP News Letter, Newsletter of the Bangladesh Institute of Planners (BIP)