

Alexander Abuabara, Ph.D.

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Education

- Ph.D. in Urban and Regional Science, Texas A&M University, College Station (2022)
Dissertation: Applications of Causal Bayesian Networks in Urban Planning
- Master of Science in Production Engineering, Federal University of São Carlos, Brazil (2006)
Thesis: A Mixed Integer Programming Approach Applied to Multi-Period Industrial Planning (original in Portuguese)
- Bachelor of Science in Civil Engineering, University of São Paulo, Brazil (2001)

Academic positions

Wm Michael Barnes '64 Department of Industrial and Systems Engineering, Texas A&M University

- Instructional Assistant Professor (Fall 2025–present)

Department of Landscape Architecture and Urban Planning, Texas A&M University

- Instructional Assistant Professor (2024–2025)
- Postdoctoral Research Associate (2022–2024)

Teaching

Courses Taught (average teaching evaluation 4.54)

Wm Michael Barnes '64 Department of Industrial and Systems Engineering, Texas A&M University

- DAEN 300 Data Engineering Coding Experience I (Fall 2025)
- DAEN 301 Data Engineering Coding Experience II (Spring 2026)
- DAEN 427/ISEN 427 Decision and Risk Analysis (Fall 2025, Spring 2026)
- DAEN 459 Capstone Senior Design Planning (Fall 2025)
- DAEN 460 Capstone Senior Design (Spring 2026)

Department of Landscape Architecture and Urban Planning, Texas A&M University

- URPN 201 Evolving Cities (Fall 2021, Spring 2024)
- URPN 210 Urban Analytical Methods I (Fall and Spring 2019, 2020, 2021, 2022, 2023, 2024)
- URPN 310 Urban Analytical Methods II (Fall 2024)
- URPN 325 Introduction to GIS in Urban and Regional Planning (Fall 2024, Spring 2025)
- URPN 326/PLAN 626 Advanced GIS in Urban and Regional Planning (graduate-level; Spring 2025)
- PLAN 604 Planning Methods I (graduate-level; Fall 2023, 2024)
- URSC 642 Analytical Methods II (graduate-level; Spring 2024)
- FYEX 101 First Year Experience (Fall 2022)

Guest Lecturer

Department of Landscape Architecture and Urban Planning, Texas A&M University

- URPN 361 Urban Issues (Madhavi Dixit), presenting *GIS in Planning Communities* (Fall 2022)
- PLAN 610 Structure and Function of Urban Settlements (Han Park), presenting *Urban Sprawl* (Fall 2016)
- URSC 631 Foundations of Planning (Sinan Zhong), presenting *Natural Hazards Research* (Spring 2025)

Teaching Assistant

Department of Landscape Architecture and Urban Planning, Texas A&M University

- URPN 201 Evolving Cities (Yu Xiao; Spring 2017)
- URSC 642 Analytic Methods II (Walter G. Peacock; Spring 2017)

Department of Production Engineering, Federal University of Sao Carlos, Brazil

- Coding, Introduction to Production Engineering (Spring 2006)
- Operations Research Applied to Management (Reinaldo Morabito; Fall 2005)
- Operations Research Applied to Logistics (Reinaldo Morabito; Fall 2005)

Research

Peer Reviewed Journals

(Google Scholar: <https://scholar.google.com/citations?hl=en&user=r7vp11AAAAAJ>)

1. Blanks, J., Abuabara, A., Roberts, A., Semien, J. (2021). Preservation at the Intersections: Patterns of Disproportionate Multihazard Risk and Vulnerability in Louisiana's Historic African American Cemeteries. *Environmental Justice*, 14 (1), 1-14.
2. Horney, J., Karaye, I., Abuabara, A., Gearhart, S., Grabich, S., Perez-Patron, M. (2020). The Impact of Natural Disasters on Suicide in the United States. *Crisis*, 42 (5), 328-334.
3. Abuabara, A., Abuabara, A., Tonchuk, C. (2017). Comparative analysis of death by suicide in Brazil and in the United States: descriptive, cross-sectional time series study. *Sao Paulo Medical Journal*, 135, 150-156.
4. Abuabara, A., Morabito, R. (2009). Cutting optimization of structural tubes to build agricultural light aircrafts. *Annals of Operations Research*, 169 (1), 149-165.
5. Abuabara, A., Morabito, R. (2008). Modelos de programação inteira mista para o planejamento do corte unidimensional de tubos metálicos na indústria aeronáutica agrícola. *Gestão & Produção*, 15 (3), 605-617.

Reports

- Lee, R. J., Day, W., Abuabara, A., Newman, G. Peacock, W. G. (2023). The effect of flood buyouts on nearby property values. Working paper for the *Lincoln Institute of Land Policy*.
- Rosenheim, N., Lane, G., Katare, A., Watson, M., Williams, A., Peacock, W. G., Abuabara, A., Perez, M., Sullivan, E., Kastor, H. (2021). Food Retailer Data, in *Food Access Impact Survey for Harris County and Southeast Texas after Hurricane Harvey in 2017*.
- Peacock, W. G., Abuabara, A., Wunneburger, D., Bierling, D., Mullins, J. A., Borchardt, D. (2020). Coastal Bend Hurricane Evacuation Study: Evacuation Zone Development Report.
- Peacock, W. G., Wunneburger, D., Abuabara, A., Bierling, D., Mullins, J. A., Borchardt, D. (2020). Coastal Bend Hurricane Evacuation Study: Vulnerability Analysis Report.
- Bierling, D., Lindell, M., Peacock, W. G., Abuabara, A., Moore, R., Wunneburger, D., Mullins, J. A., Borchardt, D. (2020). Coastal Bend Hurricane Evacuation Study: Hurricane Harvey Evacuation Behavior Survey Outcomes and Findings.
- Mullins, J. A., Borchardt, D., Bierling, D., Peacock, W. G., Wunneburger, D., Abuabara, A. (2020). Coastal Bend Hurricane Evacuation Study: Transportation Analysis Report.
- Peacock, W. G., Wunneburger, D., Abuabara, A., Park, H., Van Zandt, S. (2016). Rio Grande Valley Hurricane Evacuation Study: Vulnerability Analysis Report.

Data

- Lane, G., Rosenheim, N., Williams, A., Watson, M., Abuabara, A., Maher, D., Rathburn, A., Peacock, W. G. (2024). Food Aid Agency Data, in *Food Access Impact Survey for Harris County and Southeast Texas after Hurricane Harvey in 2017*. DesignSafe-CI.

Conferences with Peer Reviewed Abstracts

(underlined name indicates the presenter)

- Day, W., Abuabara, A., Peacock, W. G., Wade, H. FEMA's Financial Housing Assistance to Owners and Renters After Hurricane Harvey. *49th Natural Hazards Workshop*. Broomfield (Jul 2024)
- Blanks, J., Abuabara, A. Did You Check on the Cemetery? A Geospatial Risk Assessment of Cemeteries in Southeast Louisiana. *PRIMR Conference at PVAMU*. Prairie View Mar 2023)
- Abuabara, A., Day, W., Peacock, W. G., Wade, H. An Analysis of FEMA's Individual Assistance After Hurricane Harvey. *Natural Hazards Research Summit*. Washington DC (Oct 2022)
- Abuabara, A., Peacock, W. G., Bierling, D., Lindell, M. A Statistical Analysis of Household Evacuation in Response to Hurricane Harvey. *Society for Risk Analysis Annual Meeting*. Austin (Dec 2020)
- Abuabara, A., Medina-Cetina, Z., Peacock, W. G. Application of Bayesian Networks to Hurricane Risk Assessment. *Society for Risk Analysis Annual Meeting*. Arlington (Dec 2019)
- Horney, J., Karaye, I., Gearhart, S., Abuabara, A., Perez-Patron, M. Impact of Natural Disasters on Suicide Risk in the United States. *American Public Health Association Annual Meeting*. Philadelphia (Nov 2019)
- Abuabara, A., Peacock, W. G. Importance of Mobile Homes to Determine Natural Hazard Evacuation Boundaries. *46th Natural Hazards Workshop*. Broomfield (Jul 2017)
- Abuabara, A., Considerations for Modeling Natural Hazard Evacuation of Mobile Neighborhoods and Mobile Parks in the Texas Valley Region. *42nd Urban Affairs Assoc. Conference*. San Diego (Mar 2016)
- Abuabara, A., Morabito, R. Modelo de otimização de corte unidimensional aplicado a fabricação de aeronaves agrícolas, *Annals of XXXIX Simpósio Brasileiro de Pesquisa Operacional*. Fortaleza, Brazil (Aug 2007)
- Morabito, R., Abuabara, A. A one-dimensional cutting stock problem in the production of agricultural light aircrafts", *XXII European Conference on Operational Research*, Prague, Czech Republic (Jul 2007)
- Abuabara, A., Morabito, R. Pipe Cutting Optimization: Application to the Aeronautics Industry. *Latin-Iberoamerican Conference on Operations Research CLAIO*. Montevideo, Uruguay (Nov 2006)

Workshops, Conferences, and Seminars

- Problem Structuring, Data, and My Teaching Journey, and Why My Students Still Ask for Extra Credit. Industrial and Systems Engineering Spring Seminar (2025)
- Hurricane Evacuation Studies: Zone Planning for Coastal Texas. CoA Research Symposium (2024)
- Application of Bayesian Networks to Hurricane Risk Assessment. CoA Research Symposium (2024)
- Modeling Individual Assistance to Households in Texas After Hurricane Harvey. CoA Research Symposium (2024)
- Hurricane Evacuation Studies: Zone Planning for Coastal Texas. CoA Research Symposium (2024)
- Modeling Individual Assistance to Households in Texas After Hurricane Harvey. CoA Research Symposium (2023)
- A Web-Based GIS Platform and Applications for Evacuation, Preparedness, Response, Mitigation, and Recovery Planning: The Texas Hazard Resilience Atlases. Texas Emergency Management Conference (2023)
- FEMA Individual Assistance Program for Housing. IN-CORE Summer Research Meeting (2022)
- Hurricane Evacuation Studies. TAMU/GEOSAT Seminar (2018)
- Texas GIS Day (2018, 2018, 2019, 2020, 2021)
 - Introduction to QGIS
 - Spatial Analysis in R

Research projects collaboration

- Hurricane Evacuation Studies: (i) Southeastern Texas (2024-2025), (ii) Texas Coastal Bend (2018-2019), and (iii) Texas Valley (2014-2016). *US Army Corps of Engineers*.
- Risk-Based Community Resilience Planning (2022-2024). *National Institute of Standards and Technology*.
- The Adoption and Utilization of Hazard Mitigation Practices by Jurisdictions along Gulf and Atlantic Coasts (2016-2018). *National Science Foundation*.

Service

- Faculty Senator, College of Architecture (2024-2025)

Honors and Awards

- *Travel Award for Natural Hazards Research Summit*, NSF Washington, DC (Oct 2022)
- *Summer Institute for Early-Career Faculty Award*, NSF/NHERI, San Antonio, TX (Jun 2022)
- *Open-Source GIS Developers Summer School*, IBOT/GEOSTAT, Prague, Czech (Aug 2018)
- *Coastal Flood Risk Reduction Research*, NSF/PIRE, Amsterdam, Netherlands (May 2018)
- *Full Tuition Assistantship*, TAMU/HRRC (2015-2022)
- *Graduate Program Scholarship*, TAMU/LAUP (2014-2015)

Professional Affiliations and Memberships

- Faculty Affairs Third-Party Conflict Resolution Mediator, TAMU (2024-present)
- Graduate Graduate Mentoring Academy Fellow, TAMU (2024-present)
- Center for Geospatial Sciences, Applications and Technology Fellow, TAMU (2020-present)
- Stochastic Geo-mechanics Laboratory Fellow, TAMU (2018-present)
- Hazard Reduction and Recovery Center Fellow, TAMU (2015-present)
- Society for Risk Analysis (2018-present)
- Tau Sigma Delta Honor Society (2015-present)
- Regional Council of Engineering and Agronomy of São Paulo, Brazil (2002-2005)