

HASSAN MOHAMMED YAKUBU

PhD Candidate, City and Regional Planning, Cornell University

Ithaca, NY / Tamale, Ghana

hy597@cornell.edu | hassanykb@gmail.com | +1 607 262 9227 | www.hassanykb.com

Research Profile

I examine how urban form and infrastructure systems shape household energy outcomes in rapidly urbanizing African cities. My work combines spatial analysis, mixed methods, and planning theory to generate policy-relevant evidence on the energy trilemma (affordability, reliability, and sustainability).

Research Areas

Urban form and energy transitions; sociospatial inequality; climate urbanism; planning in African cities; spatial and mixed-methods urban research.

Education

Cornell University, Ithaca, NY, USA

PhD Candidate, City and Regional Planning, 2023-present

Dissertation: *Urban Form and Residential Energy Dynamics: Exploring Sociospatial Patterns of the Energy Trilemma in Accra's Urban Landscape*

Committee: Stephan Schmidt (Chair), Nancy Brooks, Chuan Liao

University of Cambridge (Wolfson College), Cambridge, UK

MPhil, Planning, Growth and Regeneration, 2015-2016

Ecole Nationale d'Architecture, Rabat, Morocco

Diplome d'Architecte (M.Arch equivalent), 2008-2014

Working Papers

1. **Yakubu, H.**, Liao, C., & Schmidt, S. (2025). *Spatial Heterogeneity in Residential Energy Cultures: Evidence from Accra, Ghana*. SSRN. <http://dx.doi.org/10.2139/ssrn.5954376>
2. **Yakubu, H.** (2026). *Bounded Energy Cultures: The Structural Role of Urban Form in Accra, Ghana*. SSRN. <https://dx.doi.org/10.2139/ssrn.6070086>

Peer-Reviewed Publications

1. Mrani, R., Chenal, J., Radoine, H., & Yakubu, H. (2025). The Quiet Architecture of Informality: Negotiating Space Through Agency. *Buildings*.
2. Mrani, R., Chenal, J., Radoine, H., & Yakubu, H. (2025). Housing Informalities Between Formal Designs and Informal Reality. *Architecture*, 5(1), 18.

3. Radoine, H., Bajja, S., Dakyaga, F., Celik, A., Kamana, A., Yakubu, H., & Chenal, J. (2024). Modelling the dynamics of urbanization for urban sustainability in West Africa. *Journal of Urban Management*, 13(4), 580-595.
4. Mharzi Alaoui, H., Radoine, H., Chenal, J., Hajji, H., & Yakubu, H. (2022). Deep building footprint extraction for urban risk assessment: Remote sensing and deep learning based approach. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 48, 83-86.
5. Mharzi Alaoui, H., Radoine, H., Chenal, J., Yakubu, H., & Bajja, S. (2022). Understanding the urban middle-class and its housing characteristics: Case study of Casablanca, Morocco. *Urban Science*, 6(2), 32.
<https://doi.org/10.3390/urbansci6020032>

Research Funding

Individual Awards

- Cornell Global Hubs Seed Grant, Cornell University (2024-2025): USD 5,000
- Einaudi Travel Grant for Graduate Students, Cornell University (2023-2024): USD 2,000

Collaborative Grants (Total Project Budget)

- Promoting Digital Inclusion in Education in African Cities and Regions, ITU Connect2Recover (2021-2022), total budget USD 42,000. Role: local coordination, data collection/analysis, and report drafting.
- Urban Structure and COVID-19 Spread: Urban Health Performance Index, Social Innovation Lab UM6P (2022), total budget USD 50,000. Role: proposal and work package development.
- Sustainable, Resilient and Smart African Cities Project, Mazagan Urban Development Agency (2020-2023), total budget USD 700,000. Role: project coordination support.

Academic and Research Appointments

- Lead, Pedagogical Development and Innovation Unit, School of Architecture, Planning and Design, Mohammed VI Polytechnic University, 2022-2023
- Architect / Research Analyst, School of Architecture, Planning and Design, Mohammed VI Polytechnic University, 2018-2022

Teaching Experience

Cornell University

- Graduate Teaching Assistant, CRP 5530: Land Use and Spatial Planning Methods (Spring 2026), Cornell University
- Graduate Teaching Assistant, CRP 5130: Introduction to Planning Practice and History (Fall 2025), Cornell University

- Graduate Teaching Assistant, CRP 2200: Community Engagement in the City: Qualitative Methods (Spring 2025), Cornell University
- Graduate Teaching Assistant, CRP 5080: Introduction to GIS for Planners (Fall 2024), Cornell University

Mohammed VI Polytechnic University

- Assistant Instructor, ARCH 220: Year 2 Architecture Studio (Spring 2023), Main Instructor: Arc. Driss Kettani, School of Architecture, Planning and Design, Mohammed VI Polytechnic University
- Assistant Instructor, ARCH 210: Year 2 Architecture Studio (Fall 2022), Main Instructor: Arc. Driss Kettani, School of Architecture, Planning and Design, Mohammed VI Polytechnic University
- Instructor, Year 4 African Urban Planning and Contemporary Challenges: Social Housing in African Cities (Fall 2022), School of Industrial Management (EMINES), Mohammed VI Polytechnic University
- Assistant Instructor, Seminar in Specialized Master in Advanced Public Policy, Urban Planning and Housing in Evolving Cities (Spring 2022), Africa Business School, Mohammed VI Polytechnic University
- Assistant Instructor, ARCH 220: Year 2 Architecture Studio (Spring 2022), Main Instructor: Arc. Driss Kettani, School of Architecture, Planning and Design, Mohammed VI Polytechnic University
- Assistant Instructor, ARCH 210: Year 2 Architecture Studio (Fall 2021), Main Instructor: Arc. Driss Kettani, School of Architecture, Planning and Design, Mohammed VI Polytechnic University
- Instructor, Year 4 African Urban Planning and Contemporary Challenges: Energy Planning in African Cities (Fall 2021), School of Industrial Management (EMINES), Mohammed VI Polytechnic University
- Assistant Instructor, ARCH 220: Year 2 Architecture Studio (Spring 2021), Main Instructor: Arc. Driss Kettani, School of Architecture, Planning and Design, Mohammed VI Polytechnic University
- Assistant Instructor, ARCH 210: Year 2 Architecture Studio (Fall 2020), Main Instructor: Arc. Driss Kettani, School of Architecture, Planning and Design, Mohammed VI Polytechnic University

Awards and Fellowships

- Sage Fellowship and Graduate School Dean's Scholar, Cornell University, 2023-2027
- Cambridge Commonwealth Shared Scholarship, University of Cambridge, 2015-2016
- Ghana-Morocco Joint Government Scholarship, 2007-2014

Methods

Spatial analysis (ArcGIS/QGIS), quantitative analysis (Stata, SPSS, Python), survey and field data systems (Kobo Toolbox), and urban design representation tools (Revit, ArchiCad, SketchUp).

Languages

English (IELTS 8.5, 2022), French, Dagbani.