

Tyler James Frazier, PhD, AICP

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LECTURER, DATA SCIENTIST & URBAN PLANNER

Over the arc of my career, my focus has consistently been upon the behavior of individuals, families and communities as that behavior pertained to their networks of social relations, services and infrastructures as well as both their built and natural environments. The primary question I am seeking to answer is: how do we best simulate and predict global human development at scale as a spatial process in order to promote stakeholder selection of sustainable future paths?

I. EDUCATION

PHD IN GEOGRAPHY (2011)

Rheinischen Friedrich-Wilhelms-Universität Bonn

Graduated Cum Laude. Doctoral Chairs [Prof. Dr. Paul Vlek](#) and [Prof. Dr. Rheinhard Selten](#). Doctoral advisee of [Dr. Quang Bao Le](#). Dissertation: [Powering Accra: Projecting Electricity Demand for Ghana's Capital City](#)

MASTER OF SCIENCE IN CITY AND REGIONAL PLANNING (2001)

Georgia Institute of Technology

Specialization: Environmental Planning and Management. Advisee of [Dr. Michael Elliott](#). Concurrently completed coursework necessary to gain admission to the Master of Mechanical Engineering program. Preceptor for [Dr. Robert Craig's](#) undergraduate Architectural History course. Master's Thesis: Wastewater Reuse and the Residential Environment in Atlanta, Georgia

BACHELOR OF FINE ARTS IN ARCHITECTURAL HISTORY (1999)

Savannah College of Art and Design

First graduate of program. Awarded. Outstanding Achievement in Architectural History at graduation. Advisee of [Dr. David Gobel](#). Senior Thesis: [Evidence of an emerging pedagogical ideal as observed in the early public schools in Savannah, Georgia](#)

II. ACADEMIC APPOINTMENTS

William & Mary, Department of Data Science

[Lecturer of Data Science](#) (2015-present)

Williamsburg, Virginia, USA

Co-founder Data Science Minor and Program and contributor to the State approved Major.

Creator of first Data Science Course at William & Mary. Longest continuous Professor of Data Science at WM.

Courses Created and Taught. DATA 150: Human Development and Data Science, course creator with EPC approval, taught since January 2017. DATA 100: Wicked Problems, course creator with EPC approval, taught since August 2015. DATA 444: Agent-Based Modeling, course creator with EPC approval, taught since August 2020. DATA 310: Applied Machine Learning, taught since July 2020 DATA 146: Introduction to Data Science, taught since August 2020

Other contributions. Jump Start Program contributor, summers 2020 & 2021. Creator and host of Slice of Data Science weekly tutorial workshop, spring 2021 Facilitated Market Logic Data Science internship, summer 2019

University of Bonn, Center for Development Research

Senior/Junior Researcher (2006-10 & 2014-15)

Bonn, Germany

Funded by WASCAL Project 2014-2015 15,000euros. Volta River Authority (VRA) Akosombo, Electricity Company of Ghana (ECG) Accra, Ghana Statistical Service (GSS) Ministries - data coordinator. Research funded by GLOWA-Volta Project 2006-2010 72,000euros. Member of ZEF's Department of Ecology and Natural Resources Management. Speaker at Ghana National Land Forum at GIMPA, Legon. Organized Energy Modeling Workshop at ZEF, Bonn

Santa Fe Institute

Postdoctoral Fellow (2013)

Santa Fe, New Mexico, USA

Member Informal Settlements project. Associated with research team: Cities, scaling & sustainability. Coordinated with Slum Dwellers International. SDI coordination meeting Khayelitsha, Cape Town.

Technical University of Berlin, Department of Transportation System Planning and Telematics

Senior Researcher (2010-2013)

Berlin, Germany

Principal Investigator from project award in the amount of 224,500 euros. VolkswagenStiftung, Funding Initiative in Computational Sciences: New Conceptual Approaches to Modeling and Simulation of Complex Systems. Program Director: Dr. Ulrike Bischler. Title of Project: Developing an Urban Simulation System for a Major West African City.

III. PUBLICATIONS

Books

Population and Development Data Science

Frazier, Tyler James. (2021). Population and Development Data Science. Williamsburg, Virginia: William & Mary / Data Science Series IA. <https://tyler-frazier.github.io/dsbook/>

Peer Reviewed Articles and Conference Proceedings

[Generating a Close-to-Reality Synthetic Population of Ghana](#)

Frazier, Tyler and Alfons, Andreas, Generating a Close-to-Reality Synthetic Population of Ghana (2012). Available at SSRN: <https://ssrn.com/abstract=2086345> or <http://dx.doi.org/10.2139/ssrn.2086345>

[Simulating a Close-to-Reality Synthetic Population of the Greater Accra Region](#)

Frazier, Tyler and Andreas Alfons. "Simulating a Close-to-Reality Synthetic Population of the Greater Accra Region." In: 12th international conference on Computers in Urban Planning and Urban Management. July 2011. (version 1)

Powering Accra: Additional Findings, Results and Basis for further Policy Recommendations." In: ESRI International User Conference Proceedings. July 2011.

Frazier, Tyler. "Powering Accra: Additional Findings, Results and Basis for further Policy Recommendations." In: ESRI International User Conference Proceedings. July 2011." In: ESRI International User Conference Proceedings. July 2011.

[The Impact of Demographic Change on the Accessibility to Public Services for the Elderly on Children of Hannover, Germany.](#)

Lopez, Helber and Tyler Frazier. "The Impact of Demographic Change on the Accessibility to Public Services for the Elderly on Children of Hannover, Germany." In: Viewpoints (Nov. 2011).

[Transforming Accra towards a Sustainable Future: Comprehensive Land Use Planning and the Greater Accra Urban Simulation System \(GAUSS\).](#)

Frazier, Tyler. "Transforming Accra towards a Sustainable Future: Comprehensive Land Use Planning and the Greater Accra Urban Simulation System (GAUSS)." In: Viewpoints V (Apr. 2011).

The Impact of Agricultural and Hydropower Development: A Water Allocation System for the Volta Basin. Leemhuis, C., Amisigo, B., Jung, G., Agyare, W., Kasei, R., Frazier, T. and Nyarko, B., The Impact of Agricultural and Hydropower Development: A Water Allocation System for the Volta Basin. (inproceedings) Author (2008). International Conference on Global Change and Water Resources in West Africa: the German-African GLOWA projects.

Project Reports

Final Report: Developing an Urban Simulation System for a Major West African City. Tyler Frazier, Zentrum für Entwicklungsforschung Rheinische Friedrich-Wilhelms-Universität Bonn and Fachgebiet Verkehrssystemplanung und Verkehrstelematik Institut für Land- und Seeverkehr Technische Universität Berlin. VolkswagenStiftung: Funding Initiative in Computational Sciences: New Conceptual Approaches to Modeling and Simulation of Complex Systems. Report is available from the author upon request.

[GLOWA Volta. Phase III completion report](#)

GLOWA Volta. Phase III completion report. Report period: 01.06.2006 – 31.05.2009. Jens Liebe, Claudia Arntz and Paul L.G. Vlek (Eds.). Contributions pages 32-40

IV. TEACHING

[DATA 444 - Agent-Based Modeling: Simulating Human Development Processes from Neighborhood to Regional Scales](#)

[DATA 310 - Applied Machine Learning](#)

[DATA 150 - Human Development and Data Science](#)

[DATA 146 - Introduction to Data Science: Modeling Approaches and Data Applications](#)

[DATA 100 - Wicked Problems: The New Data Paradigm and Emergent Human Development Processes](#)

DATA 424 - Mentored Data Science Teaching

DATA 390 - Directed Research

V. SHORT-TERM APPOINTMENTS AND INVITED GUEST LECTURESHIPS

Technical University of Munich (2010 & 2011)

Munich, Germany

Provided Master level course module in Land-use Modeling, Methodological Basics and Spatial Disaggregation for the Fachgebiet für Siedlungsstruktur und Verkehrsplanung at the TU-Munich. In agreement with [Prof. Dr.-Ing. Gebhard Wulfhorst](#). Primary advisor and Masters Committee for [M.Sc. Helber Yesid Lopez Covalada](#).

University of Legon, Ghana (Summer 2012)

Accra, Ghana

Guest Lecturer, Department of Geography and Resource Development

Kwame Nkrumah University of Science and Technology (Summer 2011)

Kumasi, Ghana

Guest Lecturer, Department of Planning

VI. LIVE BROADCAST OR RECORDED PRESENTATIONS

Slice of Data Science

Remote Live from *Williamsburg, Virginia*

Creator and host

3/24: [Clare Heinbaugh from WM](#)

3/11: [Emilio Luz Ricca from WM](#)

2/25: [Sina Boeshaghi from Cal Tech](#)

2/18: [Mitra Menon from UC Davis](#)

2/11: [Caleb Robinson from the Microsoft AI for Good](#)

One Tribe / One Day Roundtables

Williamsburg, Virginia

[Out of Left Field: A Roundtable on Surprises and Successes in Field Research](#). Panel Discussant. April 10, 2018.

Urbansim User Meeting

Oakland, California

[An International Perspective: Accra, Ghana](#). Invited Presenter. August 22 & 23, 2013.

Already Beyond? - 40 Years Limits to Growth

Herrenhausen, Hannover

[Limits to Growth: Where shall they all go? – Demographic Challenges and Limited Space](#), with Roland Rau from the University of Rostock, Germany and David Lam from the University of Michigan. Invited Speaker. November 28 & 29, 2012

VII. ADVISING

William & Mary

Bachelor in Data Science advisees (30% black male & female; 60% female)

2019-current

Victor Green	Lydia Troup	Ninjin Gankhuleg
Justin Cross	Sasan Faraj	Peter Woo
Samuel Updike	Emilio Luz-Ricca	Anne Seekford
Zoe Metzger	Maddie Sharpe	Citiana Ali
Jack Cone	Suditi Shyamsunder	Caroline Freshcorn
Caitlin Bryant	Caroline Edwards	Alex Raposa
Jordan Landrum	Tommy Williams	Griffith Ruck

Monroe scholar advisees

summer 2021

Amanda Reeds	Ethan Nelson
Sofia Huang	Kaitlyn Crowley

summer 2020

Krishna Tejo	Alyssa Costello	Zoe Metzger
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summer 2019

Kunyang Li

VIII. PROFESSIONAL POSITIONS

- Founder and CEO [MoveFlow Technologies](#) (2021 to present)
- [CPH Engineering](#) (2005 to 2006)
 - Senior Land Use Planner
 - Lead Planner - Development of Regional Impact - [University Town Center](#), Sarasota, Florida
- Lee County, Florida, Department of Community Development (2003 to 2004)
 - Senior Planner
- Glynn County, Florida, Community Development Department (2001 to 2002)
 - Planner 2
- Zanardo French Architects, Atlanta, Georgia (1998 to 1999)
 - Draftsman 2

- Gwinnett County Children's Shelter, Buford, Georgia
- Hansen Architecture, Savannah, Georgia (1997)
Draftsman