

MARK HAYES CHILTON

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EDUCATION

University of North Carolina at Chapel Hill *Fall 2026 – present*

Ph.D. student, Geography Department; Advisor: Professor Javier Arce-Nazario

Dissertation research on the spatial organization of enslavement in the North Carolina Piedmont.

University of North Carolina at Chapel Hill *Fall 2023 – Fall 2025*

Graduate Certificate in Geographic Information Science (27 credit hours)

University of North Carolina at Chapel Hill *1993*

Bachelor of Arts in Geography

North Carolina Central University School of Law *1997*

Juris Doctor; concentration in Real Estate Law

PROFESSIONAL EXPERIENCE

Teaching Assistant, GEOG 121 (Geographies of Globalization) *Fall 2026*

University of North Carolina at Chapel Hill, Geography Department

Register of Deeds, Orange County, North Carolina *2014 – 2026*

Custodian of county records spanning from the colonial era to the present, including deed books, grant records, estate documents, and vital records. Responsible for preservation, digitization, and public access to historical property and genealogical records. Resigned August 2026 to pursue the Ph.D. full time.

Supervising Broker & Counsel, Community Realty, Inc. *2004 – 2013*

Carrboro, NC

Provided legal counsel and brokerage services with a focus on residential real estate transactions, title examination, and property law. Supervised real estate agents and managed complex conveyancing matters.

Mayor, Town of Carrboro, North Carolina *2005 – 2013*

Chief elected official responsible for municipal administration, land use planning, and community development policy.

Executive Director, EmPOWERment, Inc. *2000 – 2004*

Chapel Hill, NC

Led nonprofit community development corporation focused on affordable housing and economic development in the Northside neighborhood. Oversaw housing rehabilitation, homeownership programs, and community organizing initiatives.

Member, Carrboro Board of Aldermen *2003 – 2005*

Member, Chapel Hill Town Council *1991 – 1997*

Elected to local governing body as an undergraduate student (first undergraduate ever elected to local office at UNC-Chapel Hill). Served on committees addressing housing, planning, and community development.

RESEARCH & SCHOLARLY WORK

Dissertation: Spatial Organization of Enslavement in the North Carolina Piedmont *in progress*

Developing a methodology for locating unmarked enslaved burial grounds using LiDAR geomorphon analysis and viewshed modeling, with proof-of-concept confirmed at the Holden plantation site in Eno River State Park.

Historical Cadastral Mapping Projects *2009 – 2015*

Manually reconstructed cadastral maps of Orange, Durham, and Alamance Counties showing antebellum property boundaries from original deed books and colonial grant records.

Chapel Hill's "Color Line": Environmental Racism, Housing Segregation, and the Northside Neighborhood

Interactive digital mapping project (ArcGIS StoryMaps) documenting environmental racism, housing segregation, and community resilience in the historically Black neighborhood where I reside.

Scientific Altimeter (iOS application)

Combines GPS positioning with barometric pressure sensors and USGS ground-truth data calibration to achieve sub-meter elevation accuracy. Approved and available on the Apple App Store; demonstrates integration of spatial analysis, sensor fusion, and atmospheric correction methodologies.

PUBLICATIONS

The Land Grant Atlas of Old Orange County. Carrboro, NC: Hand Made Books, 2012–present.

Farewell Forever, Old Road to Durham: Lessons from the History of Transportation Planning in the North Carolina Piedmont. Carrboro, NC: Hand Made Books, 2012.

An Historical Atlas of the Haw River. Bynum, NC: Haw River Assembly, 2008.

“Faith, Rape and Charity: Harmon Husband, Rachel Wright and the Division at Cane Creek.” North Carolina Historical Review, forthcoming October 2026. Winner, 2020 Herbert L. Poole Prize in Southern Quaker History.

AWARDS & HONORS

Award for Excellence in an Online Resource (Website), North Carolina Genealogical Society, 2026 — for Chilton Maps (chiltonmaps.com)

Winner, UNC GIS Day Map Contest (Web Map Division), November 2024 — for “Chapel Hill's ‘Color Line’: Environmental Racism, Housing Segregation, and the Northside Neighborhood”

Herbert L. Poole Prize in Southern Quaker History, 2020 — Guilford College and North Carolina Friends Historical Society, for “Faith, Rape & Charity: Feminism, Patriarchy and the Division at Cane Creek”

Chapel Hill Historical Society Public History Award, 2020 — inaugural recipient, recognizing contributions to making historical records accessible to the public

Order of the Golden Fleece, 1992 — University of North Carolina at Chapel Hill's highest honorary society

H. M. Mickey Michaux Award for Public Service — North Carolina Central University School of Law

TEACHING & PROFESSIONAL DEVELOPMENT

Teaching Assistant, GEOG 121 (Geographies of Globalization), UNC-Chapel Hill, Fall 2026

Pursuing CIRTl Associate certification; completed TA Training Foundations Course (digital badge) and PCEP Python certification (Credly badge)

Guest Lecturer, Historical & Genealogical Societies, 2015 – present — regular presenter (6+ engagements annually) at regional historical societies, genealogical groups, and historic sites including Alamance Battleground State Historic Site

Presenter, Festival of Legal Learning, 2017 — continuing legal education program, UNC School of Law

Teaching Assistant, Torts, North Carolina Central University School of Law

Herpetology Instructor, Nature Camp, Virginia, 1988 – 1991 — taught field biology and herpetology to youth campers over four summer seasons

TECHNICAL SKILLS

Geographic Information Systems: ArcGIS Pro, QGIS, GeoDa, spatial statistics, cartography, web mapping (ArcGIS StoryMaps), historical GIS methods, LiDAR analysis (geomorphon classification, viewshed modeling)

Programming & Development: Python (geospatial analysis, data processing; PCEP certified), JavaScript (web mapping applications), Swift (iOS development), Kotlin (Android development)

Spatial Analysis Methods: Cadastral reconstruction, metes and bounds interpretation, spatial autocorrelation analysis, differential GPS correction, sensor fusion algorithms

Legal & Archival: Legal document analysis, deed interpretation, title examination, paleography, archival research methods

PUBLIC ENGAGEMENT

Chilton Maps (chiltonmaps.com) — portfolio of historical GIS and cartographic research projects on the NC Piedmont, including a public land grants database and deed abstracts viewer covering multiple Piedmont counties; winner, 2026 NCGS Award for Excellence in an Online Resource

Slavery & Free People of Color Records Database — created and maintain a freely accessible online database of Orange County records relating to enslaved people and Free People of Color, drawn from approximately 20,000 pages of handwritten deed-book records, enabling genealogical research without archival access barriers

Public Records Access Initiatives — expanded digitization and online availability of Orange County historical records, with a focus on documents relevant to African American history, property records, and genealogical research