

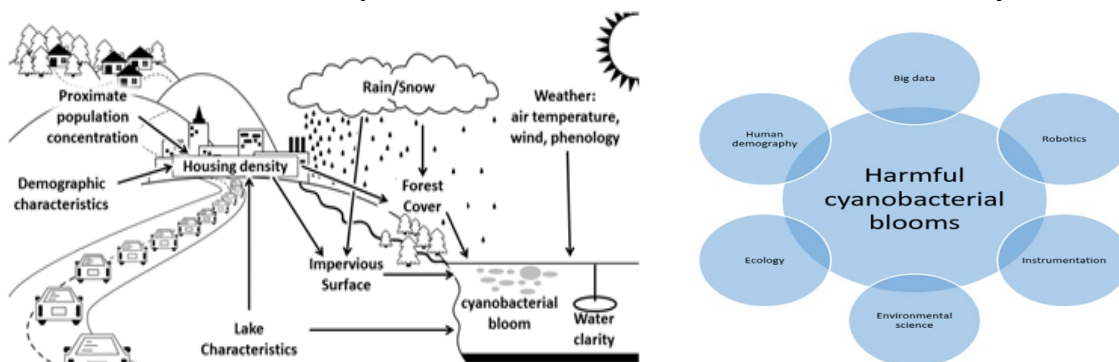


Background

- Senior demographer at the Carsey School of Public Policy, professor of sociology at the University of New Hampshire, and an Andrew Carnegie Fellow.
- Received NSF and NIH traineeships in graduate school at the UNC-Chapel Hill.
- Past ten years, research has been funded by the National Institutes of Health (NICHD), National Science Foundation (EPSCOR), U.S. Department of Agriculture (NIFA and ERS), U.S. Forest Service (NRS), National Aeronautics and Space Administration (Interdisciplinary Sciences) and the Andrew Carnegie Fellows Program.
- Research focuses on U.S. population redistribution, rural demography, the growing diversity of the U.S. population, the relationship between demographic and environmental change and the implications of demographic change for public policy.

Current Research Activities

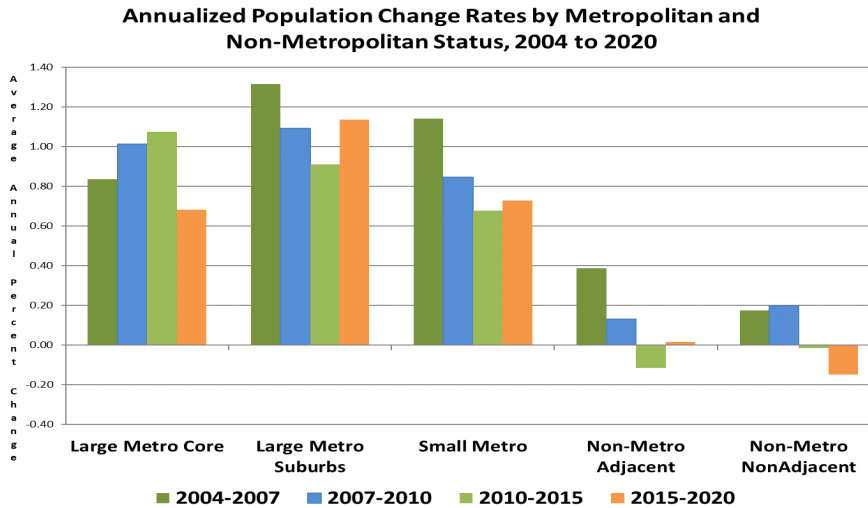
Incorporation of Demographic and Land Cover Data into Modeling Harmful Cyanobacterial Blooms with Advanced Computational Methods and Autonomous Robotic Systems



- Purpose: Combine data from multiple sources using advanced computational modeling to estimate impact of demographic, landscape, and aquatic factors on the incidence, spread and risk of harmful cyanobacterial on inland lakes.
- Funded by NSF (EPSCOR) and NASA (Interdisciplinary Sciences).
- Data: Decennial census block level population and housing data.

- Findings: Incorporating Census micro data on the proximate human population improves landcover modeling of inland lakes. Currently integrating demographic data with that from drones, remote sensing, and in-situ to model bloom occurrence and risks.

Demographic Change Along the Urban-Rural Continuum: Causes and Implications



- Purpose: Examine demographic trends along the rural-urban continuum. Analyze factors causing demographic change including diversity, migration, fertility, and mortality, as well as its implications for people, communities and institutions. Consider rural demographic trends, which are often overlooked in a policy environment dominated by urban interests.
- Funded by: NIH (NICHD), USDA (NIFA, ERS), Andrew Carnegie Fellows Program.
- Data: Decennial Census, American Community Survey (ACS), Census Population Estimates, NCHS Fertility and Mortality data, and age-race specific net migration estimates.
- Findings: Research documents varied patterns of demographic change along the rural-urban continuum due to fertility, mortality and migration differentials and impact of the growing diversity of U.S. population. Population gains were greatest in suburban areas and least in remote rural communities. COVID had an impact on mortality and fertility.

Key Funding and Data Concerns

- Funding for decennial census, ACS, Population Estimates, NCHS Fertility and Mortality Data.
- Implications of 2020 Census Differential Privacy Initiative for small areas data quality.
- Funding for NIH and NSF to facilitate more interdisciplinary research needed to address complex demographic, economic, social, and epidemiological issues facing the U.S. and to support graduate students.