Robert Chung, PhD

1735 Chestnut St.   510.644.2153
Berkeley CA 94702   chung@demog.berkeley.edu

Robert Chung is a mathematical and statistical demographer, with expertise in formal demographic methods and analyzing imperfect data. He is a visiting associate professor in the Denography Department at UC Berkeley, and an adjunct professor at Sciences Po in Paris, where he teaches demographic methods, health policy, and methods in public policy with a particular emphasis on quantitative visualization. He is also a consultant in Health Services Research at UC San Francisco. He was principal investigator for what is still the largest-ever public-private program to examine comparative risk-adjusted outcomes of quality of care, and has devised innovative graphical analyses of complex data.

Selected Work Experience

Consultant in Health Services and Policy Research. 1999-present. Specializing in risk-adjusted hospital outcomes reports, recent projects include: continuity of cardiac care in California hospitals, outcomes of coronary bypass graft surgery (for the California State Office of Statewide Health Planning and Development), Cesearean sections (for the California Perinatal Quality Care Collaborative), neonatal and adult hospital admissions to intensive care units (for the University of California, San Francisco), and distributions of dose from CT scans. I have unique experience in the design of outcomes projects, management, recruitment of hospitals for voluntary efforts, design and collection of data elements, statistical analysis, production of final reports, and plans for dissemination and use of the information both in printed and electronic form. I have taught health policy at the Institut d'etudes politiques de Paris ("Sciences Po"), focusing on the comparative strengths, weaknesses, and challenges facing the American health system.

Senior Researcher in Health Policy and Medical Care Epidemiologist, 1996-9. Office of Statewide Health Planning and Development, Sacramento. As principal investigator and co-director of the California Coronary Artery Bypass Graft Mortality Reporting Program (CCMRP), designed and implemented a voluntary program that has enrolled over 85 hospitals in a risk-adjusted investigation of coronary bypass surgery. My analysis for the CCMRP was the first in health services research to bring together generalized linear models, generalized additive models, and recursive partitioning techniques. Primary staff author for the final report of the California Health Information Committee of the California Health Policy and Data Advisory Commission, on plans for the State's future role in health information.

Researcher in Economic Demography, 1994-6. Department of Demography, University of California, Berkeley. Analyzed intergenerational household transfers using Consumer Expenditure Surveys. Research also included projects on robustness, resampling with time-series, smoothing in generalized additive models, and survival and hazard analysis, among others. Generalized additive models are an extension of the generalized linear models used to investigate binary outcome problems, such as measuring medical outcomes. Expert in demographic standardization, the basis for models of risk-adjustment, and in visualization of multivariate data.

Demographic consultant, 1992-present. Small area projections of population, housing, and employment. My projections are state-of-the-art, and I pioneered the use of robust non-parametric techniques to analyze housing turnover, a technique that formed the core of a proposal that was awarded a Small Business Innovation Research grant.

Teaching experience

Special Lecturer in Formal Demographic Methods, 2015-2016. Formal Demography Workshop, University of California. This is a concentrated one-week workshop in formal demographic methods, sponsored by the UC Berkeley Population Center, drawing graduate students, recent post-docs, and early career faculty and researchers from fields outside of Demography.

Visiting Associate Professor, 2006 - . Department of Demography, University of California, Berkeley. Taught Introductory (undergraduate) and Advanced (graduate) Demographic Methods, including life tables and survival methods, fertility and growth models, matrix population models, and stable theory. Also: modern graphical techniques for data analysis. I received excellent reviews for the clarity of my presentations and command of the material.

Maître de conférence, Program in Public Affairs, Sciences Po, Paris, 2004-6. Courses taught include: Introduction to Health Policy, Topics in American Health Policy, and Quantitative Methods for Public Policy. The latter course can be thought of as a "second" class in statistcal methods with an emphasis on quantitative visualization.

Lecturer, 1993-5. Departments of Sociology at San Jose State University, and University of California, Davis. Graduate-level research design, and intermediate multivariate statistical models. Designed lectures, problems sets, and exams for up to 70 students per class, and coordinated and supervised activities of teaching assistants. Also, taught demographic methods at University of California, Berkeley (1986), and co-taught a course focusing on hazard models (University of California, Los Angeles, 1992). I have received excellent reviews from all the classes I have taught.

Publications and Papers

Bonneuil, Noel; and Robert Chung. 2007. "Review: 'Applied Mathematical Demography, Third Edition' by Nathan Keyfitz and Hal Caswell." Mathematical Population Studies.

Chung, Robert; and Charles H. Franklin. "House effects in the 2004 Presidential opinion polls." Manuscript.

Damberg, Cheryl; Robert Chung, and Anthony Steimle. 2001. "The Californnia Coronary Artery Bypass Graft Reporting Program: Technical Report." San Francisco: Pacific Business Group on Health.

Chung, Robert; et al. 1998. "Report to the California Health Policy and Data Advisory Commission: Recommendations by the California Helath Information Committee." California State Office of Statewide Health Planning and Development.

Education and training

Post-doctoral fellowship, Economic and statistical demography. RAND Corporation, Santa Monica. 1990-1992. Focused on aging, modern regression techniques, data visualization, and methods for handling flawed data.

PhD, Demography. University of California, Berkeley. 1990.

MA, Economics. University of California, Berkeley. 1986.

Professional Affiliations

Member of Executive Board, California Perinatal Quality Care Collaborative; and Chair, Risk-Adjustment Committee. The CPQCC is a public/private effort to enroll California hospitals with neonatal ICUs into a voluntary program with both public reporting of risk-adjusted outcomes and detailed feedback into improving the quality of care.

Member, Committee on Advancement of Patient Privacy and Care, which makes recommendations on secure collection, storage, transmission, and analysis of health data that enhances both patient privacy and quality of care.

Patents

Froncioni, Andy, and Robert Chung. Determining angular dependence of aerodynamic drag area for a vehicle. US Patent 8,612,165 B2, filed 7 March 2011 and issued 17 December 2013.

Citizenship and languages

U.S. citizen. My native tongue is English. Reading and comprehension of French is good; speaking skill is adequate.