



Leadership Journey

Michael R. Kosorok, PhD

W.R. Kenan, Jr. Distinguished Professor of Biostatistics

Professor of Statistics and Operations Research

Director, Gillings Center for Artificial Intelligence and Public Health

Finding Statistics

- Bachelors (BMu) in music composition (1988, BYU)
 - Original career plan
- Masters (MS) in Statistics (1988, BYU)
 - Backup career plan
 - Also took pre-med courses
- MS and PhD in Biostatistics (1991, U. Wash.)
 - combining two strong interests
- Postdoc (1992, U. Wash.)
- Assistant, Associate, Full Professor (1992-2006, UW-Madison)
 - Departments of Statistics, Biostatistics and Pediatrics
- Masters (MMu) in music composition (1999)

Leadership in Statistics

- Move to University of North Carolina at Chapel Hill (2006)
 - Chair of Biostatistics Department (2006-2016, 2017-2020)
 - Professor of Biostatistics (2006-present)
 - Professor of Statistics and Operations Research (2007-present)
 - W.R. Kenan, Jr. Distinguished Professor of Biostatistics (2013-present)
 - Director, Gillings School Center for AI and Public Health (2024-present)
- Professional society leadership experience
 - Associate Editor for Annals of Statistics (2004-21), Journal of the American Statistical Association Theory & Methods Section (JASA T&M) (2011-22), JRSSB (2015-19), others
 - Guest Editor for JASA T&M Special Issue on “Precision Medicine”
 - Many meeting organization committees and awards committees
 - President-elect, President and past-President of IMS (2022-25)

Teaching and Advising

- Advising PhD students: 55 graduated, 8 current
- Postdoc mentoring: 8 completed, 1 current
- Mentoring junior faculty: many, in professional and chair settings
- Teaching
 - Many theory courses
 - Taught introductory and practice (collaboration) courses

Scholarship

- Books:
 - Introduction to Empirical Processes and Semiparametric Inference (2008, Springer)
 - Adaptive Treatment Strategies in Practice: Planning Trials and Analyzing Data for Personalized Medicine (Co-edited with Erica E.M. Moodie, 2016, ASA-SIAM)
- Publication areas:
 - Foundational theory
 - Statistical methods
 - Collaborative research in biomedicine
- Biomedical research areas:
 - Reproductive management of dairy cattle
 - Cellular, human and population level health research in: cancer, cystic fibrosis, pediatrics, nutrition, diabetes, arthritis, chronic pain, asthma, and others

Leadership in Health Applications

- Data Safety Monitoring Committee (DSMC) Membership:
 - U.S. Cystic Fibrosis Foundation (DSMB=DSMC) (1999-2006)
 - GlaxoSmithKline Study CKA20001 (2004-2005)
 - UNC-Chapel Hill Quantitation and Spatial Registration of Airways Dysfunction with Dynamic ¹⁹F MRI in Cystic Fibrosis (2020-present)
- DSMB Chair:
 - U.S. National Institute of Child Health and Human Development, DSMC (2001-2006)
 - University of Wisconsin Postpartum Depression Treatment Study (2003-2009)

Philosophy

- Theory, methods, and applications are all important
- Applications can inspire theory and vice-versa
- It's good to be driven by curiosity
- Just because something is hard, doesn't mean you can't be excellent at it
- Imposter's syndrome is a healthy, normal part of being a successful researcher and leader