

## Keynote Speaker



**Nicholas P. Jewell, Ph.D.**, Chair in Biostatistics and Epidemiology at the London School of Hygiene and Tropical Medicine. Previously he was Professor of Biostatistics and Statistics at the University of California, Berkeley (1981-2018) where he was Vice Provost for six years. Jewell received his PhD in Mathematics from the University of Edinburgh, and was Assistant Professor of Statistics at Princeton University before moving to Berkeley. He has also held visiting appointments at Oxford University, the Karolinska Institutet, and the University of Kyoto. Jewell was elected to the National Academy of Medicine in 2017. He is a Fellow of the American Statistical Association, the Institute of

Mathematical Statistics, and the American Association for the Advancement of Science. He received the 2005 Snedecor Award, the Harvard University 2012 Marvin Zelen Leadership Award in Statistical Science, the 2018 Cupples Award for Excellence in Teaching, Research, and Service in Biostatistics from Boston University, and the 2021 Nathan Mantel Award from the ASA for lifetime contributions to the development and application of statistical science to problems and issues in epidemiology. Jewell has published over 200 articles in statistics, mathematics, epidemiology, medicine, and history. He is the author of *Statistics in Epidemiology*, and *Causal Inference in Statistics: A Primer*, with Judea Pearl and Madelyn Glymour.

**Time: September 15 (Wednesday): 9:00-10:00AM (Eastern Time)**

**Host:** Colin Wu, Ph.D., ICSA President and Mathematical Statistician, National Heart, Lung, and Blood Institute, National Institutes of Health

**Title:** Test-negative designs: From Dengue and Ebola to COVID-19

**Abstract:** Test-negative designs are a relatively recent addition to observational study tool boxes, originally largely used for assessment of the seasonal influenza vaccination program. I will review the rationale and development of the original test-negative design and discuss extension to cover randomized exposures, and various kinds of clustering with illustrations from both dengue fever and ebola virus diseases. Recent interest has focused on uses of the test-negative design to estimate and compare effectiveness of COVID-19 vaccines. The presentation will highlight statistical issues associated with the design and analysis of resulting data.