

An Accidental Statistician

David J. Thomson
Department of Mathematics and Statistics
Queen's University

Abstract

This talk is about statistics and my evolution from physics, to mathematics, to electrical engineering, to statistics. Information about many processes, from those created by man to those at the core of earth's existence, appear as time series. A statistician attempting to analyze one of these time series, however, is faced with a bewildering array of what are often ad-hoc methods cobbled together from different fields. Many of these do not extract information from real data efficiently. Multitaper methods for analyzing time series have improved this situation in several ways. There is theory explaining data tapers; multitaper estimates of spectra and autocovariances generally outperform standard estimates, and they allow estimates of quantities that were previously indeterminate. These will be illustrated with climate and related data.