## INVITED ARTICLE: THIRD AKAIKE MEMORIAL LECTURE



## Akaike Memorial Lecture 2020: Some of the challenges of statistical applications

John Copas<sup>1,2</sup>

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## Abstract

There has always been a close link between statistical applications and the development of new statistical theory and methods. Even straightforward applications of standard methods can give rise to theoretical challenges leading to new statistical ideas. In my lecture, I will briefly review a few of the statistical developments in my own published papers and describe the applications which gave rise to them. I will then outline some current work on publication bias, one of the outstanding problems in the interpretation of literature reviews, particularly in the medical sciences.

**Keywords** Shrinkage of predictions  $\cdot$  Selectivity bias  $\cdot$  Model sensitivity  $\cdot$  Publication bias

John Copas jbc@stats.warwick.ac.uk

<sup>&</sup>lt;sup>1</sup> University College London, London, UK

<sup>&</sup>lt;sup>2</sup> Department of Statistics, University of Warwick, Coventry CV4 7AL, UK