

Statistical modelling with missing data: challenges and practical solutions

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Abstract:

Missing data are ubiquitous in social and medical research, yet there is still uncertainty over when restricting to the complete records is likely to be acceptable, when more complex methods (e.g. multiple imputation, the EM algorithm and Bayesian methods) should be used, how they relate to each other and the role of sensitivity analysis. In this course we will present a framework for thinking about the issues raised by missing data, review and relate current methodologies, and describe practical approaches for applied statisticians. We will illustrate the ideas with a range of social and medical examples.