

# Inducement of population-level sparsity

*A seminar by Heather Battey*

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**Thursday 21 Nov 2024 | 2.30 p.m.**  
**Room Benvenuti**  
**Department of Statistical Sciences**

The work on parameter orthogonalisation by Cox and Reid (1987) is presented as an inducement of abstract population-level sparsity. The latter is taken as a unifying theme for the talk, in which sparsity-inducing parameterisations or data transformations are sought. Examples from some of my work are framed in this light, with emphasis on recent developments addressing the following question: for a given statistical problem, not obviously sparse in its natural formulation, can a sparsity-inducing reparametrisation be deduced? In general, the solution strategy for the problem of exact or approximate sparsity inducement appears to be context specific and may entail, for instance, solving one or more partial differential equation, or specifying a parametrised path through data-transformation or parametrisation space.



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