

## **Coloured equilibrium stresses and maximum likelihood thresholds**

Alison La Porta

In this talk, we consider the space of equilibrium stresses that act on a bar-joint framework in arbitrary dimension. The question that we aim to answer is the following: when does a generic framework admit a non-trivial equilibrium stress which has the same value on certain edges?

The main motivation of this research derives from an application to statistics. Specifically, such stresses arise naturally when studying structured dependencies in graphical models, where edge constraints encode correlations between variables. In this setting, the stress-equality conditions correspond to symmetries in the underlying statistical structure.

This is work in collaboration with Tony Nixon and Louis Theran.