

# Bayesian Model Comparison applied to COVID 19

*Friday, 28 May 2021 15:00 (20 minutes)*

Bayesian parameter estimation and model comparison are widely used in cosmology. This has led to the development of very efficient and user-friendly codes that perform these complex calculations. In this presentation, we will demonstrate the wider applicability of these algorithms, by applying them to study the COVID pandemic. We will perform Bayesian parameter estimation and model comparison using MCMC and Nested Sampling on different variations of the SIR model. This serves not only to learn which models of the pandemic are favored by the data but also to illustrate the usefulness of these algorithms outside of cosmology.

**Primary author:** LEMOS, Pablo (University of Sussex)

**Co-authors:** Prof. OFER, Lahav (University College London); Mrs CONSTANTINA, Nicolaou (University College London); Mr BEN, Henghes (University College London)

**Presenter:** LEMOS, Pablo (University of Sussex)

**Session Classification:** Afternoon 2

**Track Classification:** Models and Inference