

Colóquio CIDMA / DMat

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Uncovering Regions of Maximum Dissimilarity on Random Process Data

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In this talk, I will introduce a statistical learning problem on the comparison of random processes that can be understood as a continuous set function optimization problem. The proposed method learns about regions with a certain volume, where the marginal attributes of two processes are less similar. The parameter functions underlying both stochastic processes of interest are modelled via a basis representation, and Bayesian inference is conducted via an integrated nested Laplace approximation. The numerical studies validate the proposed methods, and we showcase their application with case studies on criminology, finance, and medicine.



Short bio:

Miguel de Carvalho is Reader in Statistics at the School of Mathematics, University of Edinburgh and the former Director of the Centre for Statistics of the same University. His research interests include, inter alia, Applied Statistics, Biostatistics, Econometrics, Risk Analysis, and Statistics of Extremes. He has been an Associate Editor for a variety of top tier journals in the field of Statistics, including the Journal of the American Statistical Association, the Annals of Applied Statistics as well as the American Statistician. Miguel is the current President of the Portuguese Statistical Society (Sociedade Portuguesa de Estatística).

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