

Network Analysis and Sex Prediction based on a full Human Brain Connectome

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Abstract : we conduct a network analysis and predict the sex of 1000 participants based on "connectome" - pairwise Pearson's correlation across 436 brain parcels. We solve the non-smooth convex optimization problem, known under the name of Graphical Lasso, where the solution includes a low-rank component. With this solution and machine learning model for a sex prediction, we explain the brain parcels-sex connectivity patterns.

Keywords : network analysis, neuroscience, machine learning, optimization

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