



## Invitation to Seminar Talk

# Parameter estimation for linear Gaussian covariance models

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**Host: Laszlo Erdős**

Linear Gaussian covariance models are Gaussian models with linear constraints on the covariance matrix. Such models arise in many applications, such as stochastic processes from repeated time series data, Brownian motion tree models used for phylogenetic analyses and network tomography models used for analyzing the connections in the Internet. Maximum likelihood estimation in this model class leads to a non-convex optimization problem that typically has many local maxima. However, I will explain that the log-likelihood function is in fact concave over a large region of the positive definite cone. Using recent results on the asymptotic distribution of extreme eigenvalues of the Wishart distribution I will show that running any hill-climbing method in this region leads to the global maximum with high probability.

**Thursday, 4 December 2014, 4:00pm**

**Mondi2, Central Building, 1<sup>st</sup> floor**



2014-12-04

This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage (note that the IST Shuttle times are highlighted in dark green):

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