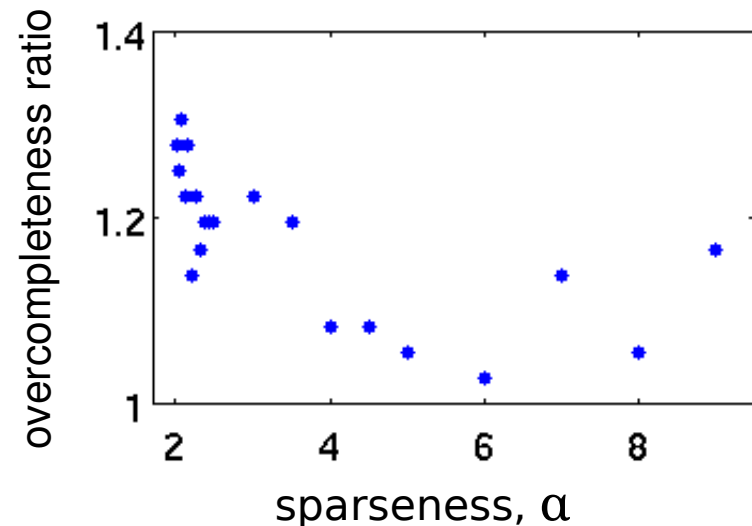
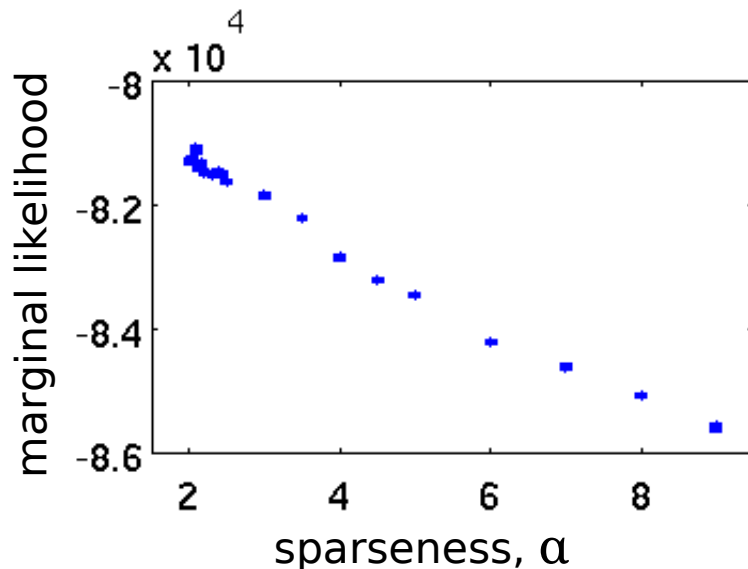


On sparsity and overcompleteness in image models

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The optimal linear model for natural images is **very sparse** but **not overcomplete***



* This result applies to models in the Student-t family. “Optimal” means that the marginal likelihood of the model is maximal. “Very sparse” refers to the optimal degrees of freedom, $\alpha=2.09$. The model is “not overcomplete” in the sense that the optimal number of dimensions lies between 1 and 1.3 times the number of input dimensions. Please visit our poster for additional details.