TITLE: Robust high-dimensional regression with t-errors

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This project will consider comparison of Bayesian and frequentist methods on robust regression. It will involve a mix of theoretical analysis and simulations, with an emphasis on high-dimensional regression with regularization.

Comparing Bayesian and frequentist approaches is of interest both for the foundations of inference and for the practical assessment of the reliability of Bayesian approaches; the latter is closely related to the asymptotic theory of likelihood-based inference. Robust regression methods are an important technique for ensuring that statistical conclusions remain valid even when the model used for inference differs from the model generating the data. New methods and theory for high-dimensional regression is an area of active development, and robustness is this setting is of particular interest.