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*Sparse models for highly multivariate  
log-Gaussian Cox processes*

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Statistical inference for highly multivariate point pattern data is very challenging due to complex models with large numbers of parameters. In this study we develop numerically stable and efficient parameter estimation methodology by introducing regularization and using convex optimization algorithms for a class of multivariate log Gaussian Cox processes. The methodology is applied to a highly multivariate point pattern data set from tropical rain forest ecology.