

# The Generalized FITC Approximation

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- Sparse GP classification
  - extend SPGP/FITC (Snelson and Ghahramani, 2005) to non-Gaussian likelihoods: *diagonal plus low-rank* approximation to covariance
  - expectation propagation to refine Gaussian approximation:  $\mathcal{O}(NM^2)$
  - locate basis functions by optimizing the evidence
  - remarkable sparsity achieved for some old benchmark problems

