

# Resource Summary Report

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## [gprege](#)

RRID:SCR\_001324

Type: Tool

### Proper Citation

gprege (RRID:SCR\_001324)

### Resource Information

**URL:** <http://www.bioconductor.org/packages/release/bioc/html/gprege.html>

**Proper Citation:** gprege (RRID:SCR\_001324)

**Description:** Software R package for Gaussian Process Ranking and Estimation of Gene Expression time-series. The software fits two Gaussian processes (GPs) with an radial basis function (RBF) (+ noise diagonal) kernel on each profile. One GP kernel is initialized with a short lengthscale hyperparameter, signal variance as the observed variance and a zero noise variance. It is optimized via scaled conjugate gradients (netlab). A second GP has fixed hyperparameters: zero inverse-width, zero signal variance and noise variance as the observed variance. The log-ratio of marginal likelihoods of the two hypotheses acts as a score of differential expression for the profile. Comparison via receiver operating characteristic curves (ROC curves) is performed against Bayesian hierarchical model for the analysis of time-series (BATS) (Angelini et.al, 2007).

**Abbreviations:** gprege

**Synonyms:** Gaussian Process Ranking and Estimation of Gene Expression time-series

**Resource Type:** software resource

**Defining Citation:** [PMID:21599902](#)

**Keywords:** differential expression, microarray, preprocessing, time course, bio.tools

**Funding:**

**Availability:** Free, Available for download, Freely available

**Resource Name:** gprege

**Resource ID:** SCR\_001324

**Alternate IDs:** OMICS\_02011, biotools:gprege

**Alternate URLs:** <https://bio.tools/gprege>

**License:** GNU Affero General Public License, v3

**Record Creation Time:** 20220129T080206+0000

**Record Last Update:** 20250410T064703+0000

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## Ratings and Alerts

No rating or validation information has been found for gprege.

No alerts have been found for gprege.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 1 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [FDI Lab - SciCrunch.org](#).

Janssens GE, et al. (2015) Protein biogenesis machinery is a driver of replicative aging in yeast. eLife, 4, e08527.