**GAMIT Matlab Code – version 1.1 (19 Jan 2014)**

**Caspar Addyman**

**Birkbeck, University of London**

[**c.addyman@bbk.ac.uk**](mailto:c.addyman@bbk.ac.uk)

**GAMIT.m**

timeEstimates = **GAMIT**(targetTimes, cognitiveLoad, prospectiveFlag, reproduceFlag, params, referenceCurve, referenceDeltas)

This is the main function to call the GAMIT model it generates a set of retrospective or prospective timeEstimates for a give vector of targetIntervals with or without cognitive load. Can optionally pass set of model parameters and lifetime reference curves.

Example

%50 estimates for t=600

targetTimes = 600 \* ones(1,50);

%retrospective

timeEstimates = GAMIT(targetTimes, 1.0, false)

%prospective

timeEstimates = GAMIT(targetTimes, 1.0, true)

**GAMIT\_Params.m**

myparams = **GAMIT\_Params**(matfile)

Generates or loads a set of parameters used by the model.

%default params

myparams = **GAMIT\_Params**();

%loads params from a saved binary file.

myparams = **GAMIT\_Params**(‘savedParams.mat’)

**GAMIT\_Spreading\_Activation.m**

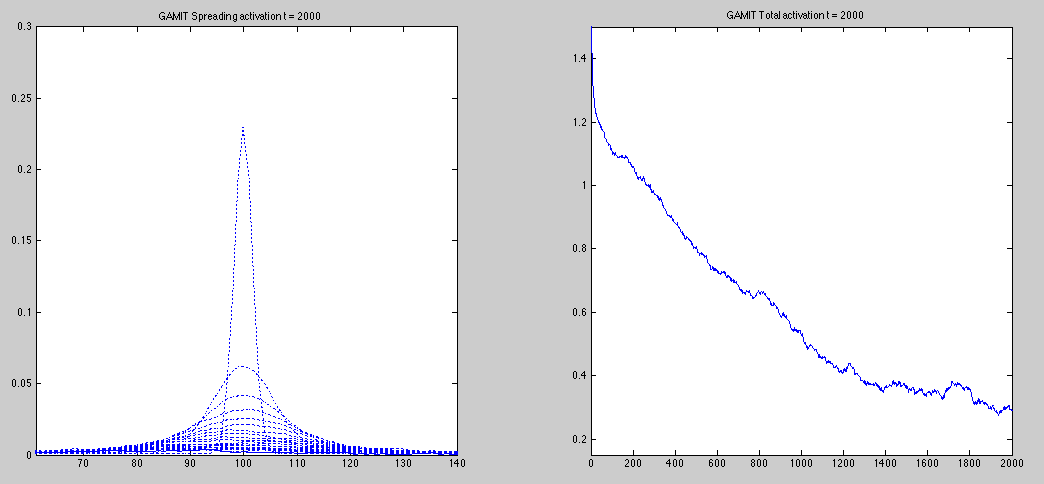
[TotalActivation, AllCurves] = **GAMIT\_Spreading\_Activation(params, showGraphics)**

Generates an single activation decay curve for the GAMIT model. Can optionally display visualisations of the activation across columns and as a total activation function.

Example

%generate and show a GAMIT curves

**GAMIT\_Spreading\_Activation (GAMIT\_Params,true);**



**GAMIT\_Lifetime.m**

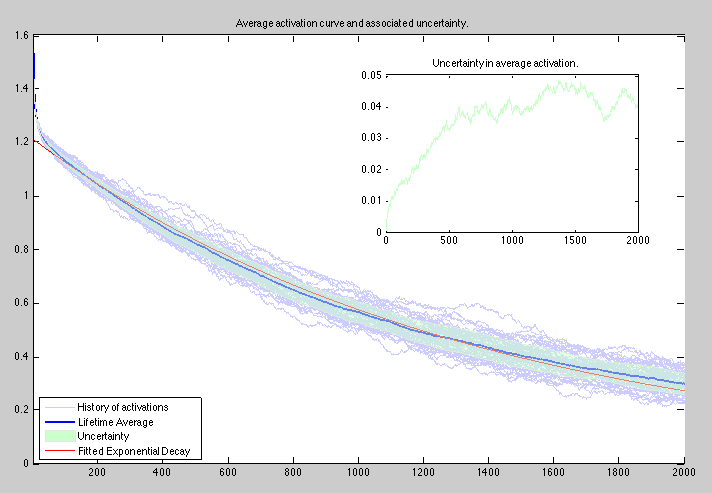
[lifetimeReferenceCurve, lifetimeDeltaCurve] = **GAMIT\_Lifetime**(params, N, showGraphics)

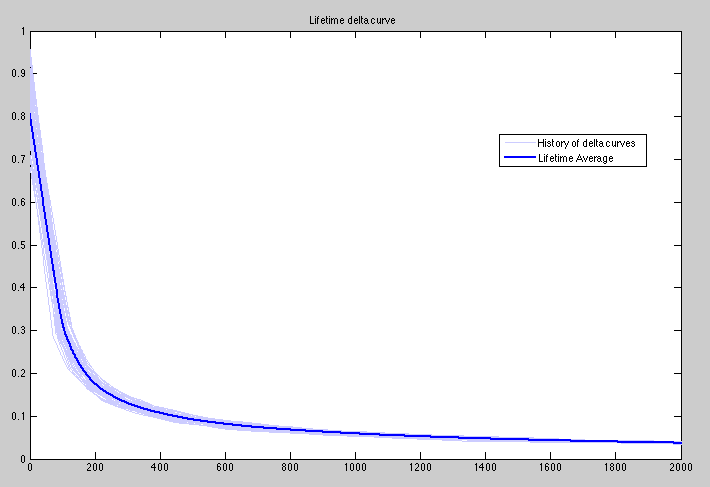
Generates an average lifetime activation decay curve for the GAMIT model and an associated delta curve for prospective timing. Can optionally display visualisations of these.

Example

%generate and show default lifetime curves

**GAMIT\_Lifetime(GAMIT\_Params,50,true);**

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**GAMIT\_Weber\_Demo.m**

**GAMIT\_Weber\_Demo**(targetTime, nSamples, prospectiveFlag,method)

Shows the relative error in the GAMIT model for targetTime and set of comparison intervals.

method = 0 compares targetTime and 1.5\*targetTime plotting histograms of actual and scaled relative estimates.

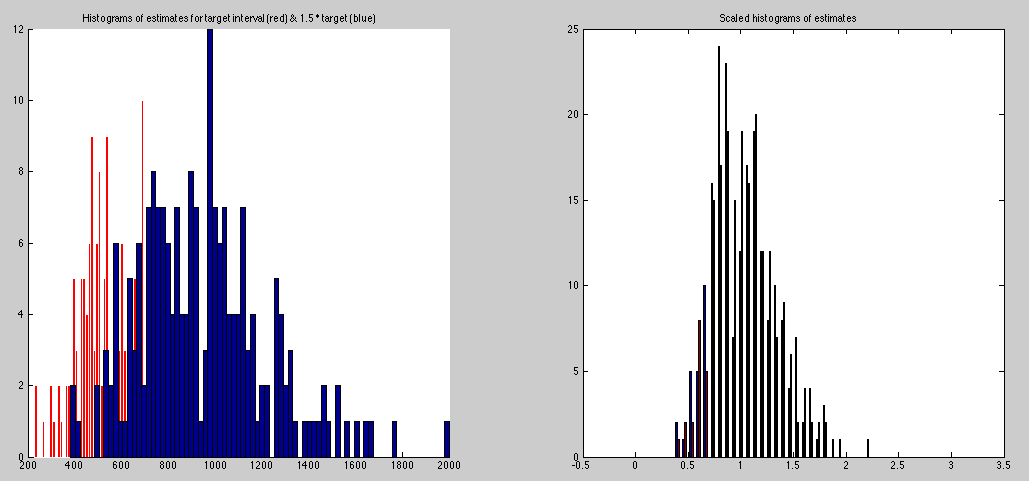
method = 1 plots graph of array of 10 targetTimes between 0.2 and 2.0 times the targetInterval together with associated 1sd error bars. These errors are also replotted

Examples

%histogram of retrospective interval estimates for t =600 & t= 900;

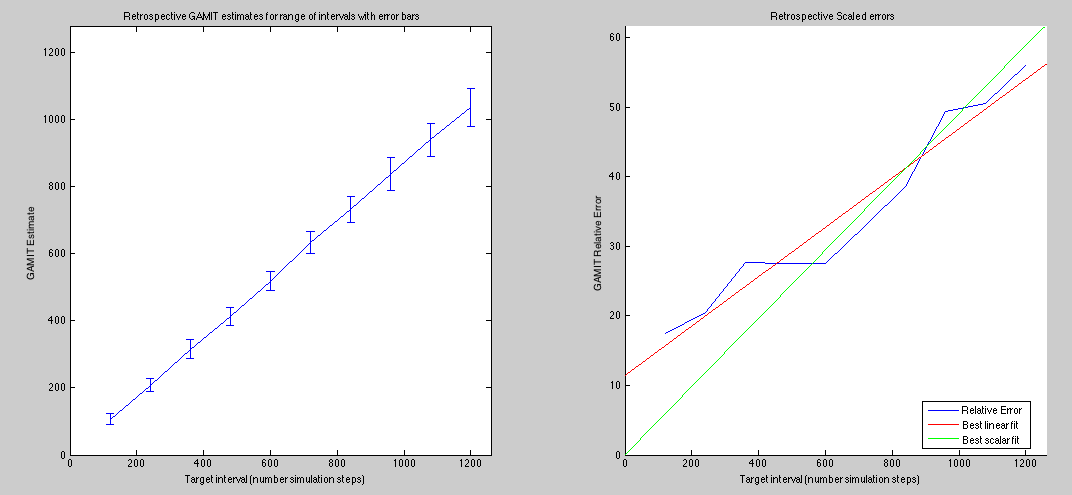
GAMIT\_Weber\_Demo(600,200,false,0);

GAMIT\_Weber\_Demo(600,200,false,0);



%error bars and relative errors for retrospective interval estimates in a range around t = 600 [120, 240, 360, 480, 600, 720, 840, 960, 1080, 1200]

GAMIT\_Weber\_Demo(600,100,false,1);



**GAMIT\_Retro\_Pro\_Interaction.m**

**GAMIT\_Retro\_Pro\_Interaction**(targetTime,nSamples,cognitiveLoad,showGraphics)

Shows the relative estimates in the GAMIT model for targetTime with and without cognitiveLoad for retrospective and prospective timing.

Example

%default example shows cognitive load of 1.0 vs 1.2

GAMIT\_Retro\_Pro\_Interaction;

