**Information content analysis reveals desirable aspects of in vivo experiments of a synthetic circuit**

Here the data presented in the paper are made available.

The data is organised in the following subfolders:

* ExperimentalDataLugagneCSV
  + PDF file specifying the link to the GitHub repository from which the *in vivo* data has been extracted ([1]) and the relation between the identifiers used in this work and the ones used in [1].
* Stan\_Results
  + 11 Stan files with the results of the inferences performed in RStan using the selected datasets in [1]. All\_Long represents the inference result using the pooled dataset.
* PriorsCSV
  + CSV file containing the priors generated in the script ExtractingInitialPriorsLugagneLog (10 log normal and 4 normal priors).
* InformativeContent
  + Covariance, CSV file containing the results of the determinant of the covariance matrix computed from the rstan results contained in Stan\_Results. Nomenclature of the results follows the one used in [1].
  + Entropy, 11 CSV files containing all the results from the entropy calculation (Entropy of the prior, Upper and Lower bounds for the posterior Entropy, Posterior Entropy and Relative Entropy). Nomenclature of the results follows the one used in [1].
* ModelPredictions
  + Prediction results from all the MCMC samples obtained on the RStan inference for all the datasets considered in the study is not included due to the large size of the files. These can be made available upon request or generated using the script PostPredCheckSimul.R.
  + nRMSE, 200 files with the nRMSE distributions computed from all the prediction files (but the multiexperimental inference results) from the folder Predictions. Parameters indicate which parameter samples are used (from which stanfit object come from) and SimulationVar which experimental profile is being simulated

References:

[1] Jean-Baptiste Lugagne, Sebastián Sosa Carrillo, Melanie Kirch, Agnes Köhler, Gregory Batt & Pascal Hersen, 2017. Balancing a genetic toggle switch by real-time feedback control and periodic forcing. Nature Communications, 8 (1671), pp. 1-7.