

NeuroData SIMPLEX Report: Q1 2017

The following report documents the progress made by the labs of PI Joshua T. Vogelstein and Co-PIs Randal Burns and Carey Priebe at Johns Hopkins University towards goals set by the DARPA SIMPLEX grant.

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1 Statistical Theory and Methods

1.1 LOL @jovo

1.2 meda @JesseLP

1.3 Multiscale Generalized Correlation (MGC)

1.4 Randomer Forest (RerF)

1.5 Non-Parametric Shape Clustering

1.6 Joint Embedding

1.7 Law of Large Graphs

1.8 Robust Law of Large Graphs

1.9 Nonparametric Network Dependence Test

1.10 Batch effect removal in dimension reduction of multiway array data

1.11 Reduced Dimension Clustering

1.12 Graph-testing

2 Scalable Algorithm Implementations

2.1 FlashX

2.2 ndstore

2.3 ndviz

2.4 knor

2.5 ndreg

3 Scientific Pipelines: Infrastructure & Dataset Specific Progress

3.1 Science in the Cloud (SIC)

3.2 ndstore

- 3.3 ndmg
- 3.4 ndviz
- 3.5 MRI
- 3.6 CLARITY
- 3.7 Ophys