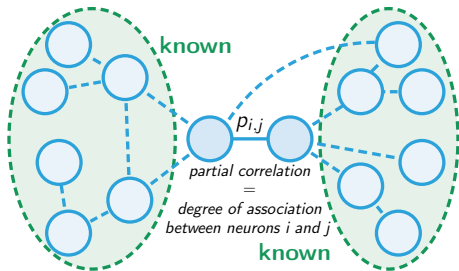


Simple connectome inference from partial correlation statistics in calcium imaging

Antonio Sutura, Arnaud Joly, Vincent François-Lavet, Zixiao Aaron Qiu, Gilles Louppe, Damien Ernst and Pierre Geurts.

Goal : From time-series of the neuron activity, **infer** the directed **connections between neurons**.

Results : Our method was the **best** performer in the recent *Neural Connectomics Challenge*.



Steps of our solution :

1. Signal processing
(deal with calcium fluorescent signals)
2. Averaged partial correlation statistics
(find the undirected network)
3. Prediction of edge orientation