

3.1 NWB Algorithms and Tools

Preprocessing

- [Extract Top Nodes](#)
- [Extract Nodes Above or Below Value](#)
- [Remove Node Attributes](#)
- [Delete High Degree Nodes](#)
- [Delete Random Nodes](#)
- [Delete Isolates](#)
- [Extract Top Edges](#)
- [Extract Edges Above or Below Value](#)
- [Remove Edge Attributes](#)
- [Remove Self Loops](#)
- [Trim by Degree](#)
- [MST-Pathfinder Network Scaling](#)
- [Fast Pathfinder Network Scaling](#)
- [Pathfinder Network Scaling](#)
- [Snowball Sampling \(N nodes\)](#)
- [Node Sampling](#)
- [Edge Sampling](#)
- [Symmetrize](#)
- [Dichotomize](#)
- [Multipartite Joining](#)
- [Normalize Text](#)
- [Slice Table by Time](#)

Modeling

- [Random Graph](#)
- [Watts-Strogatz Small World](#)
- [Barabási-Albert Scale-Free](#)
- [CAN](#)
- [Chord](#)
- [Hypergrid](#)
- [PRU](#)
- [TARL](#)
- [Discrete Network Dynamics](#)
- [Evolving Network \(Weighted\)](#)

Analysis Edit

- [Network Analysis Toolkit](#)

Unweighted & Undirected

- [Node Degree](#)
- [Node Distribution](#)
- [Watts Strogatz Clustering Coefficient](#)
- [Watts Strogatz Clustering Coefficient Over k](#)
- [Diameter](#)
- [Average Shortest Path](#)
- [Shortest Path Distribution](#)
- [Node Betweenness Centrality](#)
- [Global Connected Components](#)
- [HITS](#)
- [Weak Component Clustering](#)
- [Blondel Community Detection](#)
- [MST-Pathfinder Network Scaling](#)
- [Extract K-Core](#)
- [Annotate K-Core-ness](#)

Weighted & Undirected

- [Weight Distribution](#)
- [Weight versus End-point Degree](#)
- [Degree & Strength](#)
- [Strength versus Degree](#)
- [Strength Distribution](#)
- [Nearest Neighbor Degree](#)
- [Clustering Coefficient](#)
- [Randomization](#)
- [Can](#)

- [Chord](#)
- [k-Random Walk](#)
- [Random Breadth-First](#)
- [Burst Detection](#)

Unweighted & Directed

- [Node Indegree](#)
- [Node Outdegree](#)
- [Outdegree Distribution](#)
- [k-Nearest Neighbor](#)
- [Single Node In-Out Degree Correlations](#)
- [PageRank](#)
- [HITS](#)
- [Dyad Reciprocity](#)
- [Arc Reciprocity](#)
- [Adjacency Transitivity](#)
- [Weak Component Clustering](#)
- [Blondel Community Detection](#)
- [Extract and Annotate Attractors](#)
- [Extract K-Core](#)
- [Annotate K-Coreness](#)

Weighted and Directed

- [HITS](#)
- [Weighted PageRank](#)
- [Fast Pathfinder Network Scaling](#)
- [Blondel Community Detection](#)

Visualization Edit

- [GUESS](#)
- [GnuPlot](#)
- [DrL \(VxOrd\)](#)
- [Specified \(prefuse beta\)](#)
- [Circular \(JUNG\)](#)
- [Radial Tree \(prefuse alpha\)](#)
- [Radial Tree with Annotations \(prefuse beta\)](#)
- [Tree Map \(prefuse beta\)](#)
- [Tree View \(prefuse beta\)](#)
- [Balloon Graph \(prefuse alpha\)](#)
- [Force Directed with Annotation \(prefuse beta\)](#)Force Directed with Annotation (prefuse beta)
- [Kamada-Kawai \(JUNG\)](#)
- [Fruchterman-Reingold \(JUNG\)](#)
- [Fruchterman-Reingold with Annotation \(prefuse beta\)](#)
- [Spring \(JUNG\)](#)
- [Small World \(prefuse alpha\)](#)
- [Parallel Coordinates \(demo\)](#)
- [LaNet](#)
- [Circular Hierarchy](#)

Scientometrics

- [Remove ISI Duplicate Records](#)
- [Remove Rows With Multitudinous Fields](#)
- [Detect Duplicate Nodes](#)
- [Update Network by Merging Nodes](#)
- [Extract Directed Network](#)
- [Extract Paper Citation Network](#)
- [Extract Author Paper Network](#)
- [Extract Co-Occurrence Network](#)
- [Extract Word Co-Occurrence Network](#)
- [Extract Co-Author Network](#)
- [Extract Reference Co-Occurrence \(Bibliographic Coupling\) Network](#)
- [Extract Co-Citation Similarity Network](#)