Network Workbench

A Workbench for Network Scientists
Goal: Develop a large-scale network analysis, modeling and visualization toolkit for physics, biomedical, and social science research.

Amount: $1,120,926, NSF IIS-0513650 award


Website: http://nwb.slis.indiana.edu
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Outline

- What is the NWB Tool and How Does it Work?
- Using the NWB Tool for Scientometrics.
- Using the NWB Tool for Discrete Network Dynamics.
What is the NWB Tool and How Does it Work?
Network Workbench.

- is built on a plugin architecture called OSGi.
- runs algorithms written in many languages.
- automatically converts data to and from formats algorithms consume and produce.
- runs on many platforms, including Windows, OS X, Linux, and Solaris.
- is Open Source.
But it doesn’t know about networks.

It works with tables and other data representations, too.

Use it to model, analyze, and visualize.

Easy to integrate small algorithms currently handled manually or with ad-hoc scripting.
Using the NWB Tool for Scientometrics.
Using the NWB Tool for Scientometrics.

Select records for output. See the sidebar for options.

1. Pastor-Satorras R, Vespignani A
   "Epidemic spreading in scale-free networks"
   PHYSICAL REVIEW LETTERS 86 (14): 3200-3203 APR 2 2001
   Times Cited: 451

2. Pastor-Satorras R, Vazquez A, Vespignani A
   "Dynamical and correlation properties of the Internet"
   PHYSICAL REVIEW LETTERS 87 (25): Art. No. 258701 DEC 17 2001
   Times Cited: 224

   "The architecture of complex weighted networks"
   Times Cited: 190

4. Pastor-Satorras R, Vespignani A
   "Epidemic dynamics and endemic states in complex networks"
   Times Cited: 164

5. Vazquez A, Pastor-Satorras R, Vespignani A
   "Large-scale topological and dynamical properties of the Internet"
   Times Cited: 123

6. Vespignani A, Zapperi S
   "How self-organized criticality works: A unified mean-field picture"
   PHYSICAL REVIEW E 57 (5): 6345-6352 JUN 1998
   Times Cited: 111
Thank you.

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