



Prof. Peter Sheridan Dodds
Director of the Vermont Complex Systems Center
Co-Director, Computational Story Lab
210 Colchester Avenue, Burlington, VT, 05401, USA
pdodds@uvm.edu • <http://www.uvm.edu/~pdodds>

To the Editors,

We are very pleased to submit our manuscript for consideration at the Journal of Computational Science:

“Connecting every bit of knowledge: The structure of Wikipedia's First Link Network”.

Our major contributions and findings are as follows:

1. We connect all 4.7 million Wikipedia articles in a directed network via the first link. The network reflects how the many inventions, places, figures, objects, and events are related and organized.
2. We develop a novel algorithm to map the structure of a directed network as a flow. Our measures quantify:
 - a. where references accumulate
 - b. groups of path-connected nodes
 - c. the influence each node exerts in shaping the network.
3. We identify a gravitation of references on Wikipedia from specific to general, which culminates disproportionately around only a few fundamental notions.

Our findings form the basis for a new network-based topic search engine with applications in natural language processing and cognitive psychology.

We look forward to hearing your decision.

Yours sincerely and on behalf of the manuscript's authors,

Mark Ibrahim