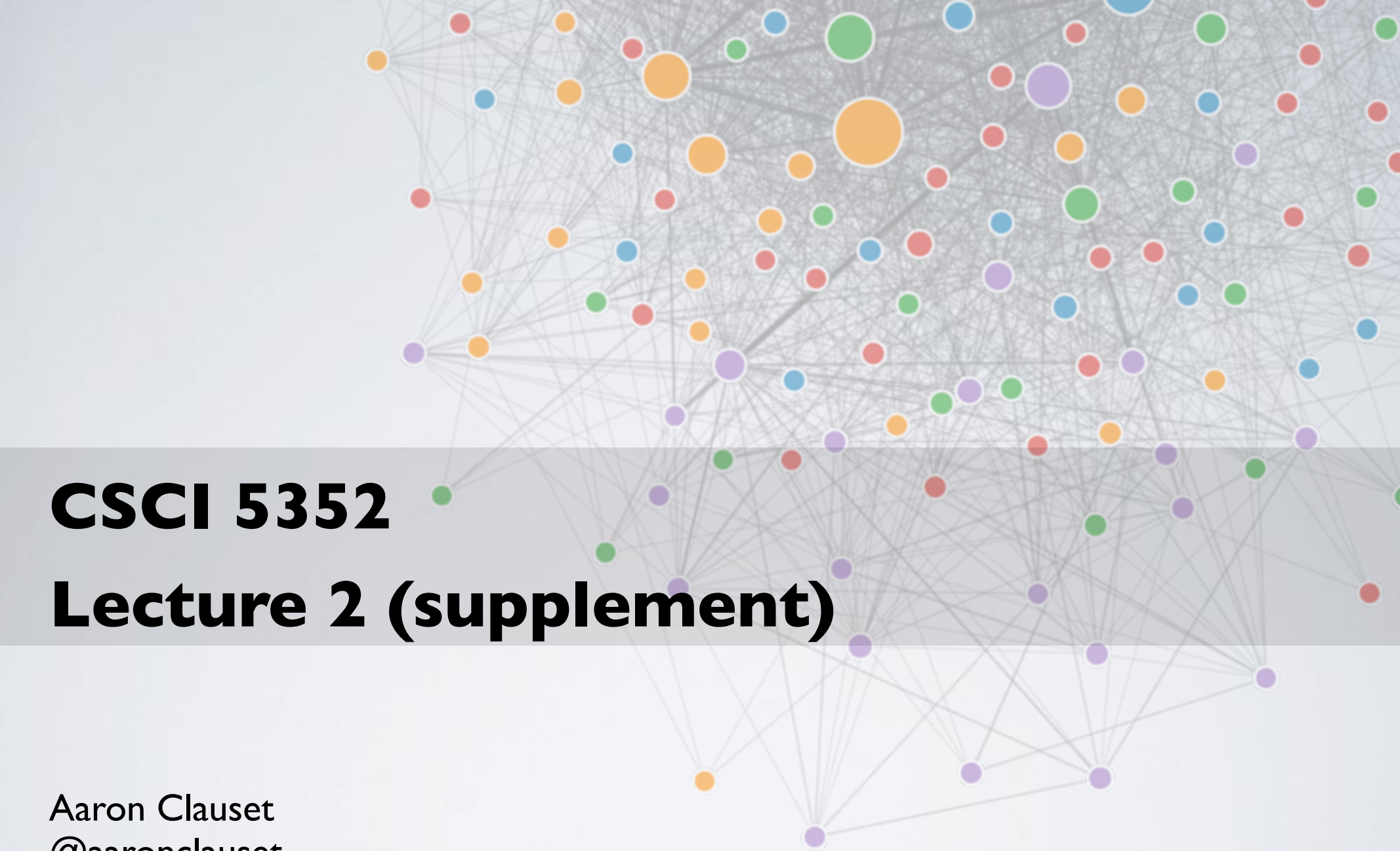

CSCI 5352

Lecture 2 (supplement)

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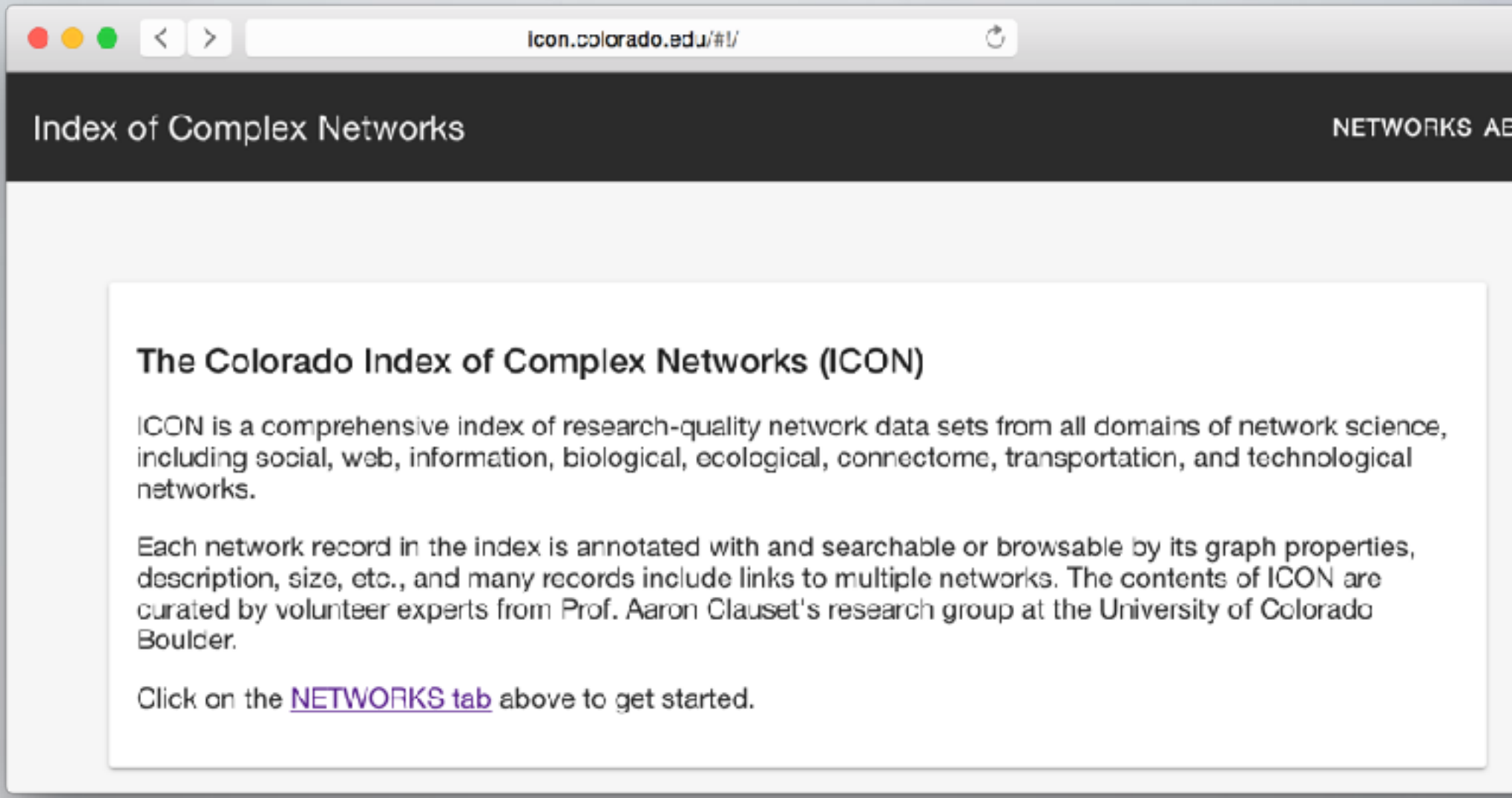
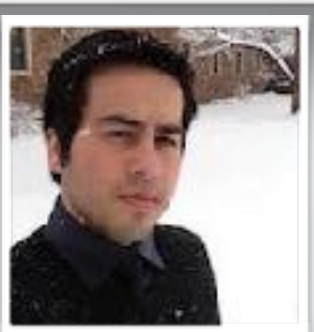
COLLECT
ALL THE DATA
memegenerator.net



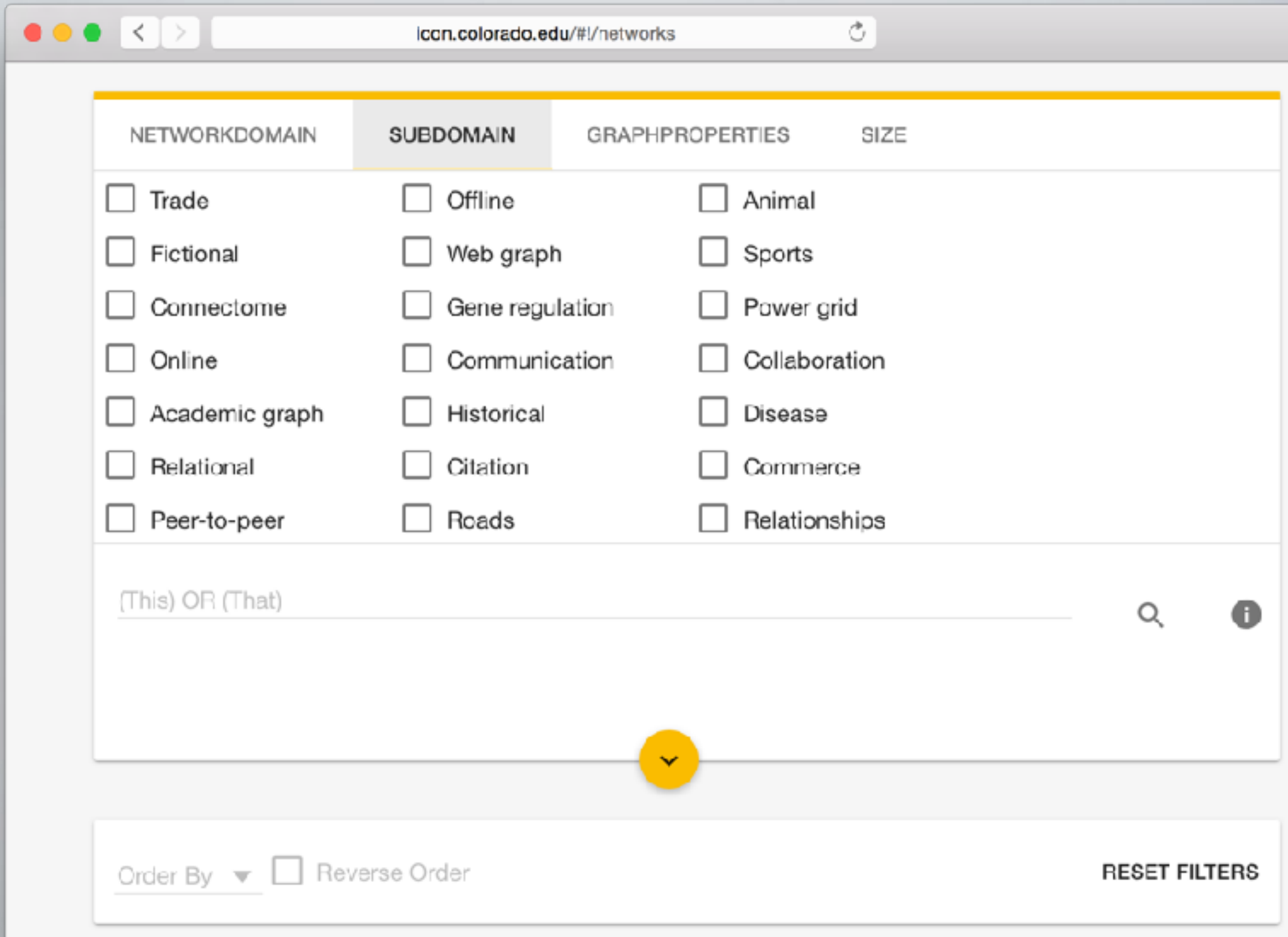
Anna Broido

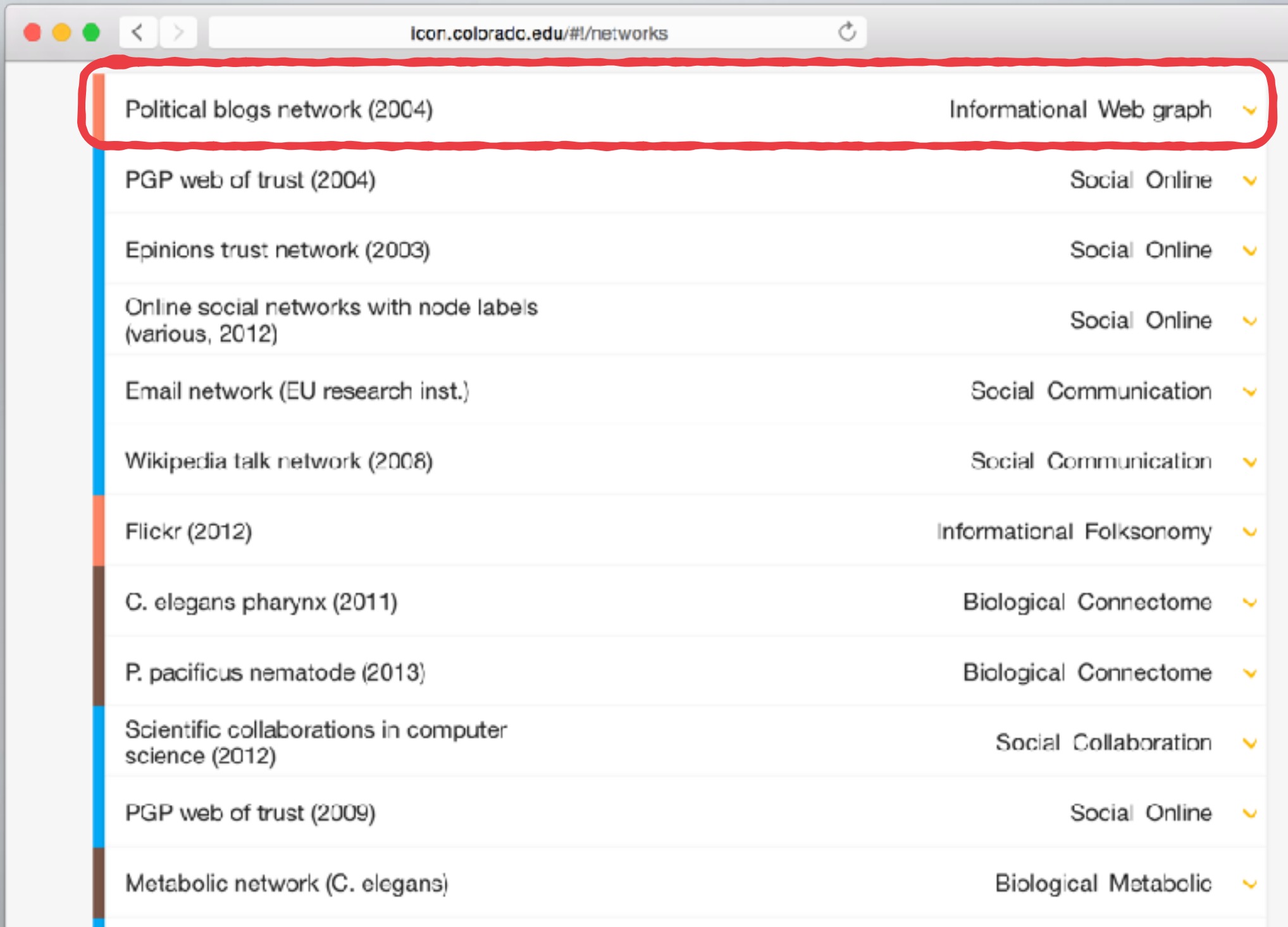
Kansuke Ikehara

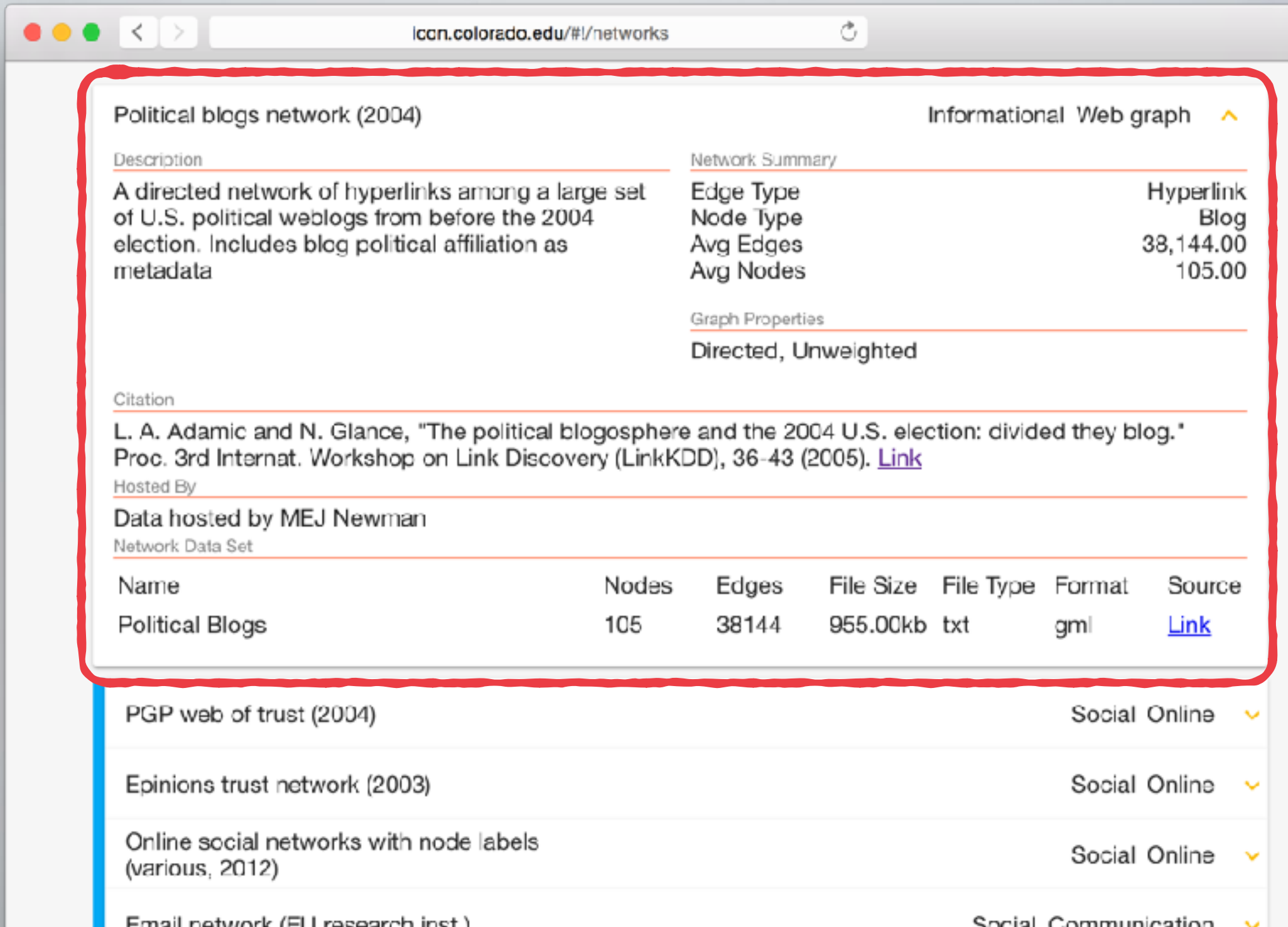
Ellen Tucker



Matthias Sainz

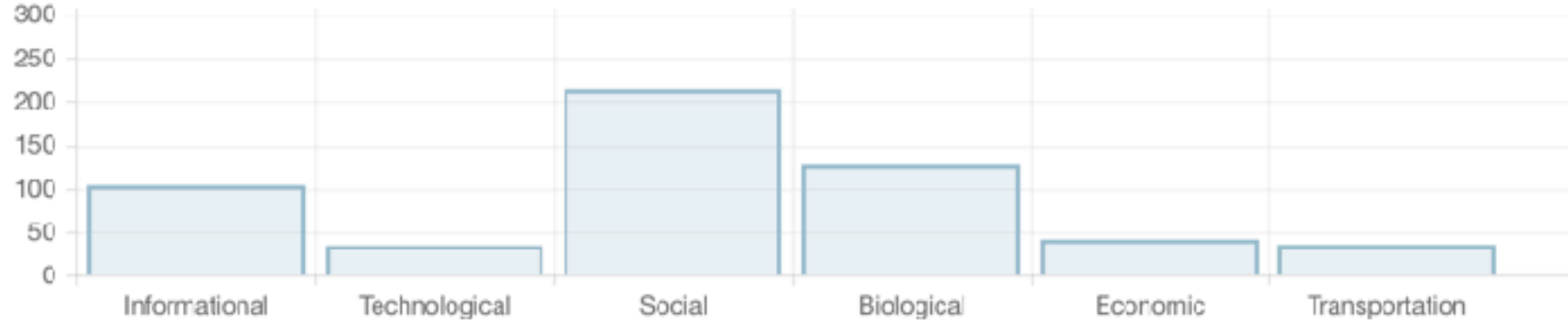

iccn.colorado.edu/#!/networks
NETWORKDOMAIN
SUBDOMAIN
GRAPHPROPERTIES
SIZE
Trade
Offline
Animal
Fictional
Web graph
Sports
Connectome
Gene regulation
Power grid
Online
Communication
Collaboration
Academic graph
Historical
Disease
Relational
Citation
Commerce
Peer-to-peer
Roads
Relationships
(This) OR (That)
Order By
Reverse Order
RESET FILTERS

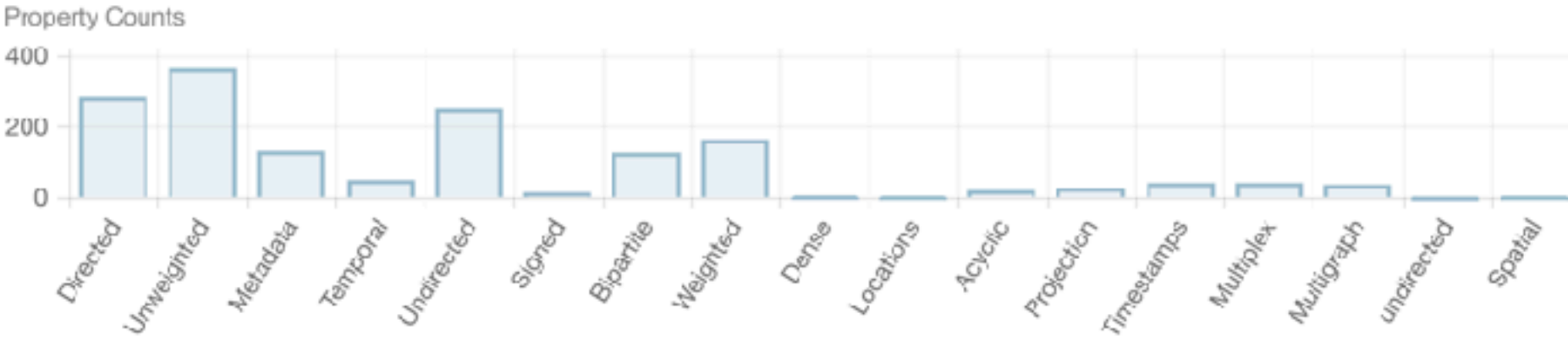

icon.colorado.edu/#!/networks
Political blogs network (2004)
Informational Web graph
PGP web of trust (2004)
Social Online
Epinions trust network (2003)
Social Online
Online social networks with node labels (various, 2012)
Social Online
Email network (EU research inst.)
Social Communication
Wikipedia talk network (2008)
Social Communication
Flickr (2012)
Informational Folksonomy
C. elegans pharynx (2011)
Biological Connectome
P. pacificus nematode (2013)
Biological Connectome
Scientific collaborations in computer science (2012)
Social Collaboration
PGP web of trust (2009)
Social Online
Metabolic network (C. elegans)
Biological Metabolic

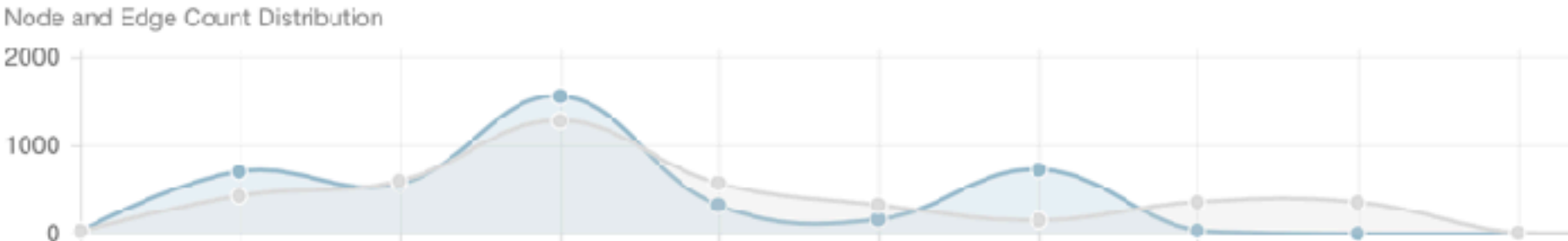

iccn.colorado.edu/#!/networks
Political blogs network (2004)
Informational Web graph
Description
A directed network of hyperlinks among a large set of U.S. political weblogs from before the 2004 election. Includes blog political affiliation as metadata
Network Summary
Edge Type Hyperlink
Node Type Blog
Avg Edges 38,144.00
Avg Nodes 105.00
Graph Properties
Directed, Unweighted
Citation
L. A. Adamic and N. Glance, "The political blogosphere and the 2004 U.S. election: divided they blog." Proc. 3rd Internat. Workshop on Link Discovery (LinkKDD), 36-43 (2005). Link
Hosted By
Data hosted by MEJ Newman
Network Data Set
Name Nodes Edges File Size File Type Format Source
Political Blogs 105 38144 955.00kb txt gml Link
PGP web of trust (2004)
Social Online
Epinions trust network (2003)
Social Online
Online social networks with node labels (various, 2012)
Social Online
Email network (EU research inst.)
Social Communication

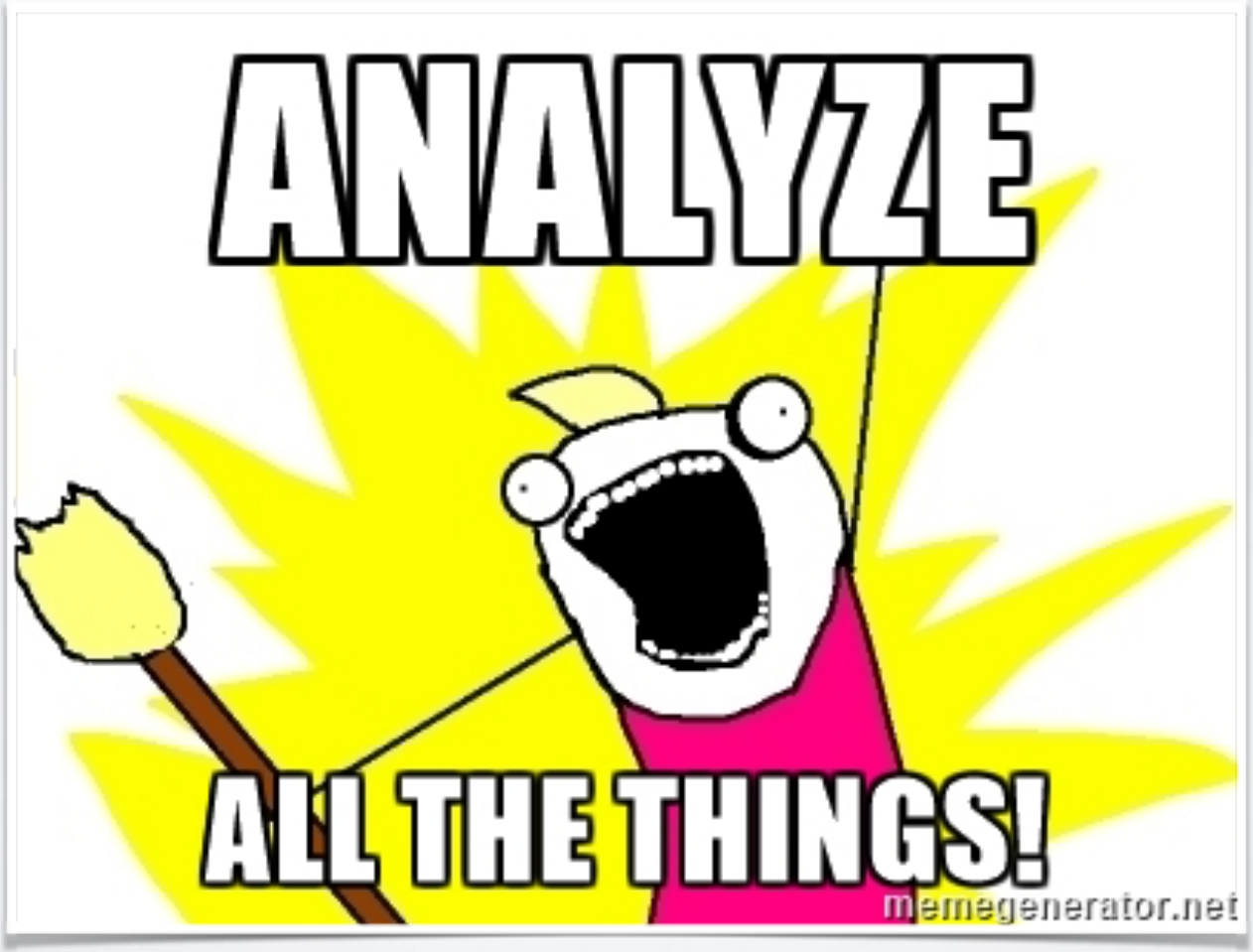
icon.colorado.edu/#!/

Entries found: 553 Networks found: 4096





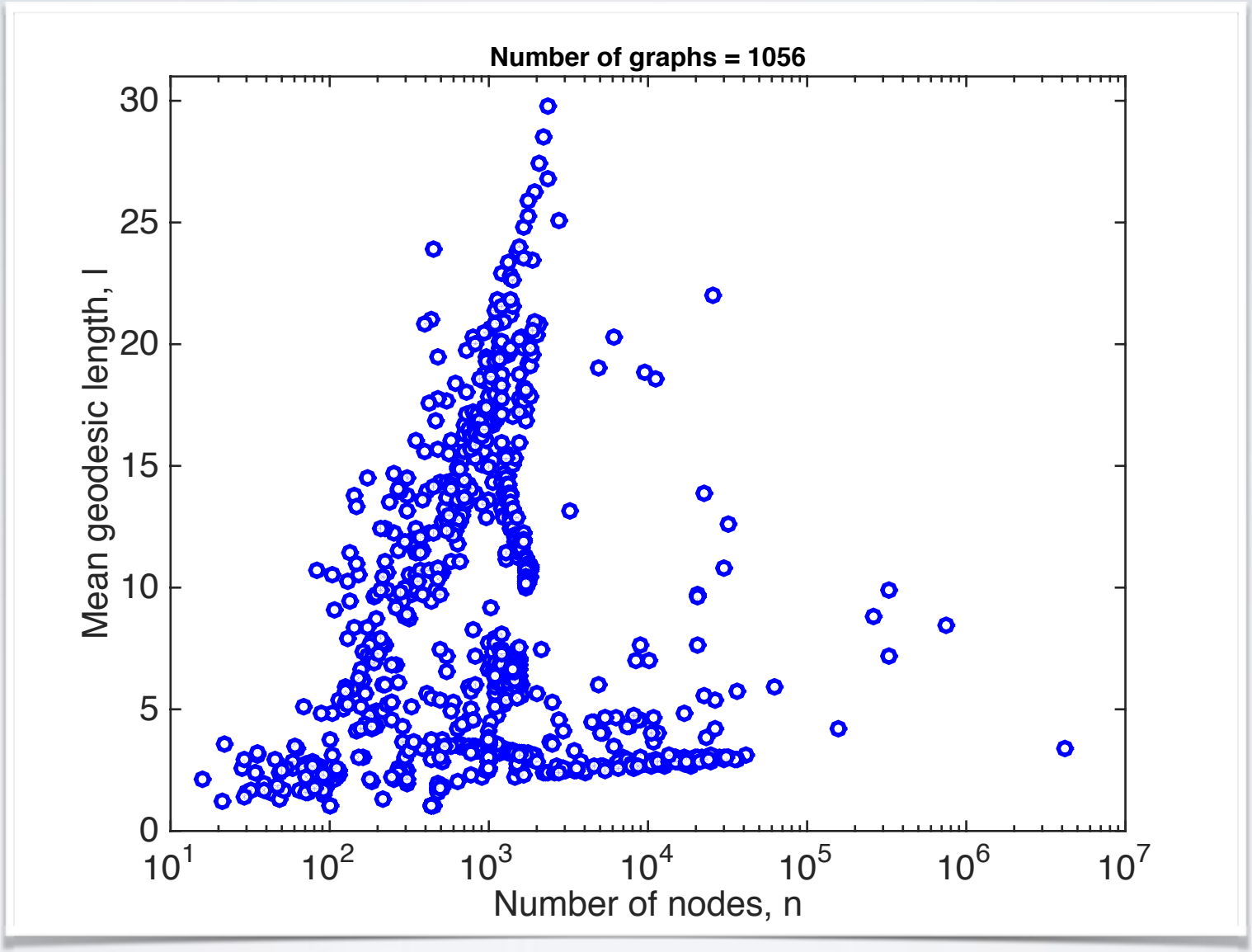



ANALYZE
ALL THE THINGS!
memegenerator.net

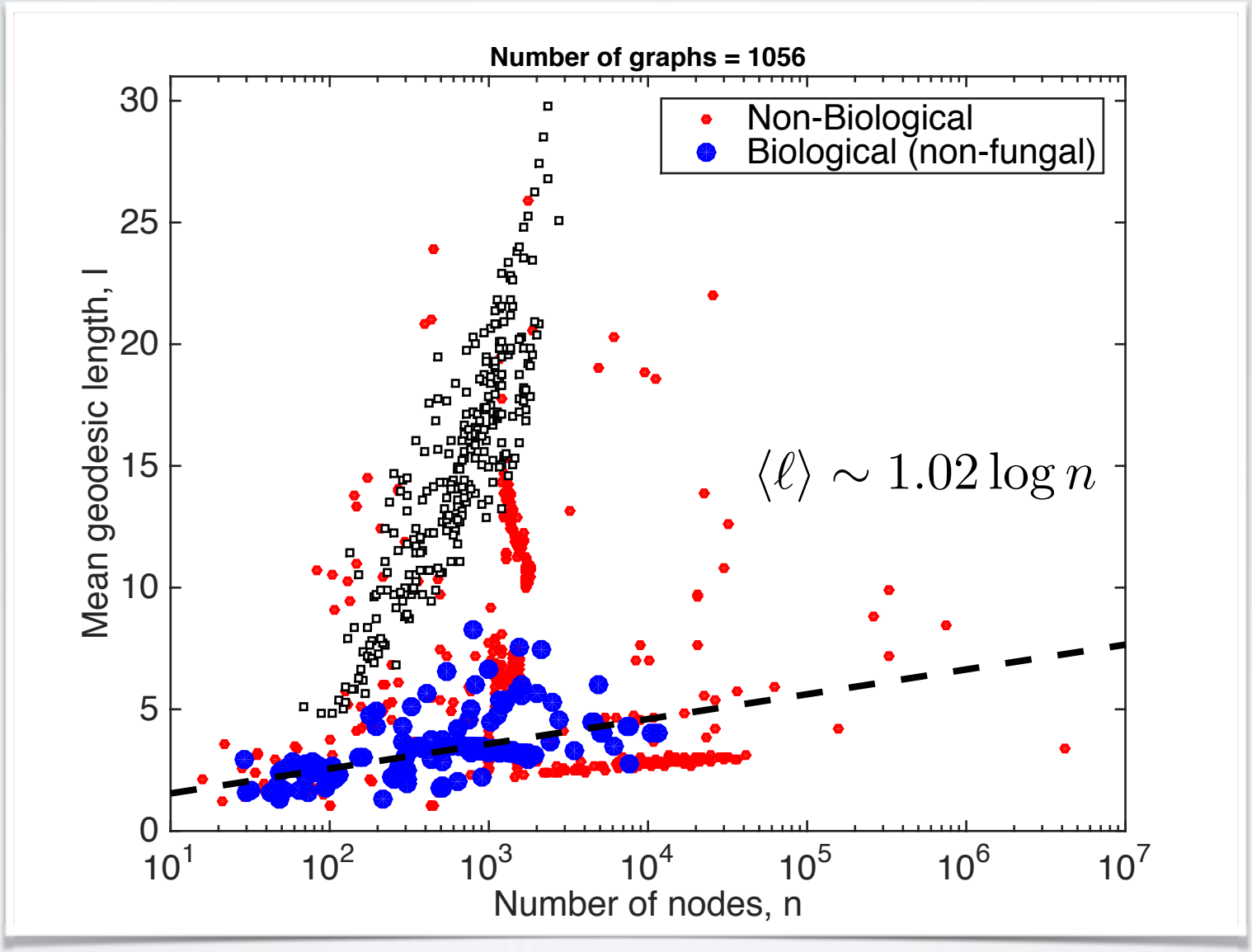
mean path length

$$\langle \ell \rangle \sim O(\log n)$$

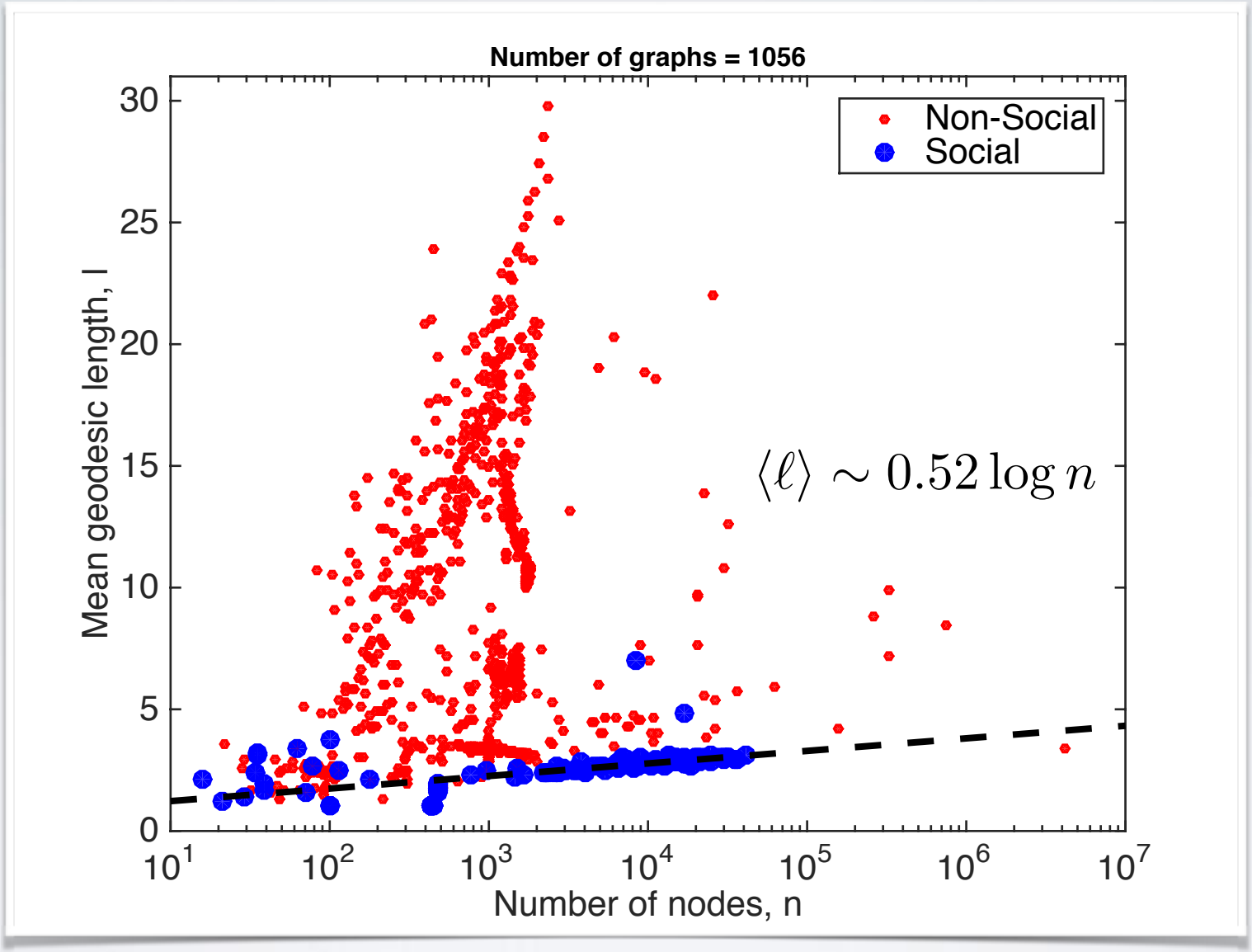
mean path length



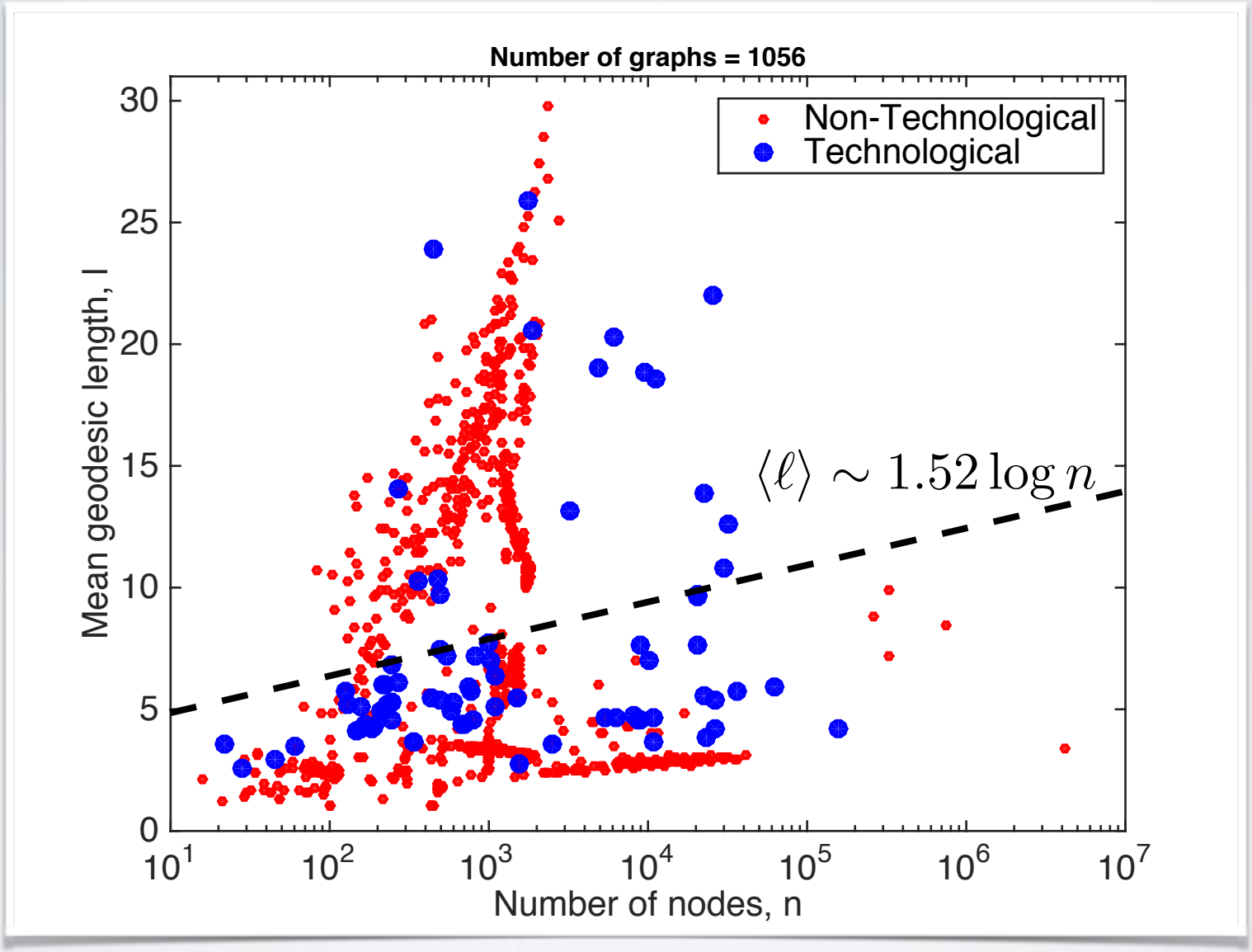
mean path length



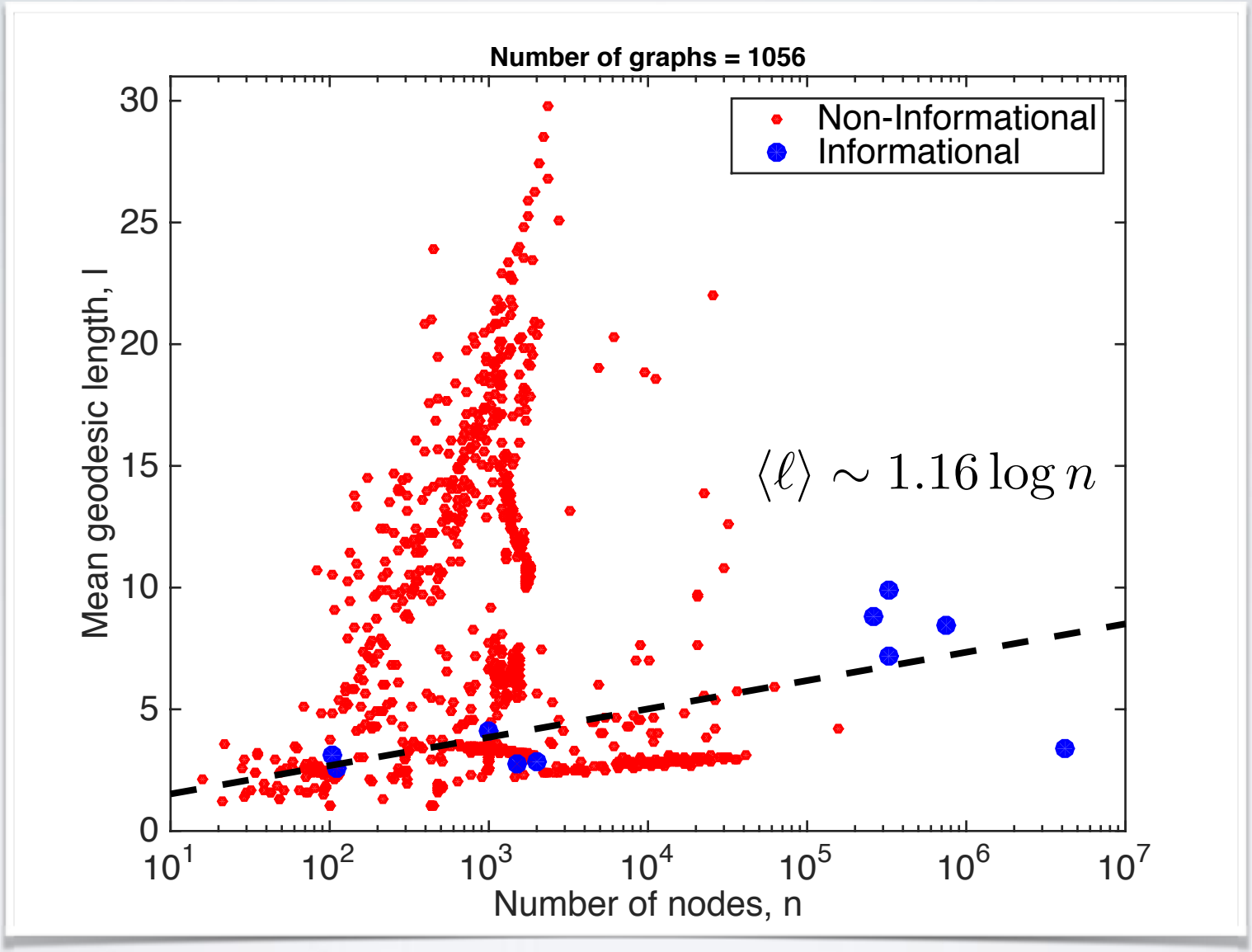
mean path length



mean path length



mean path length



mean path length

social $\langle \ell \rangle \sim 1.02 \log n$

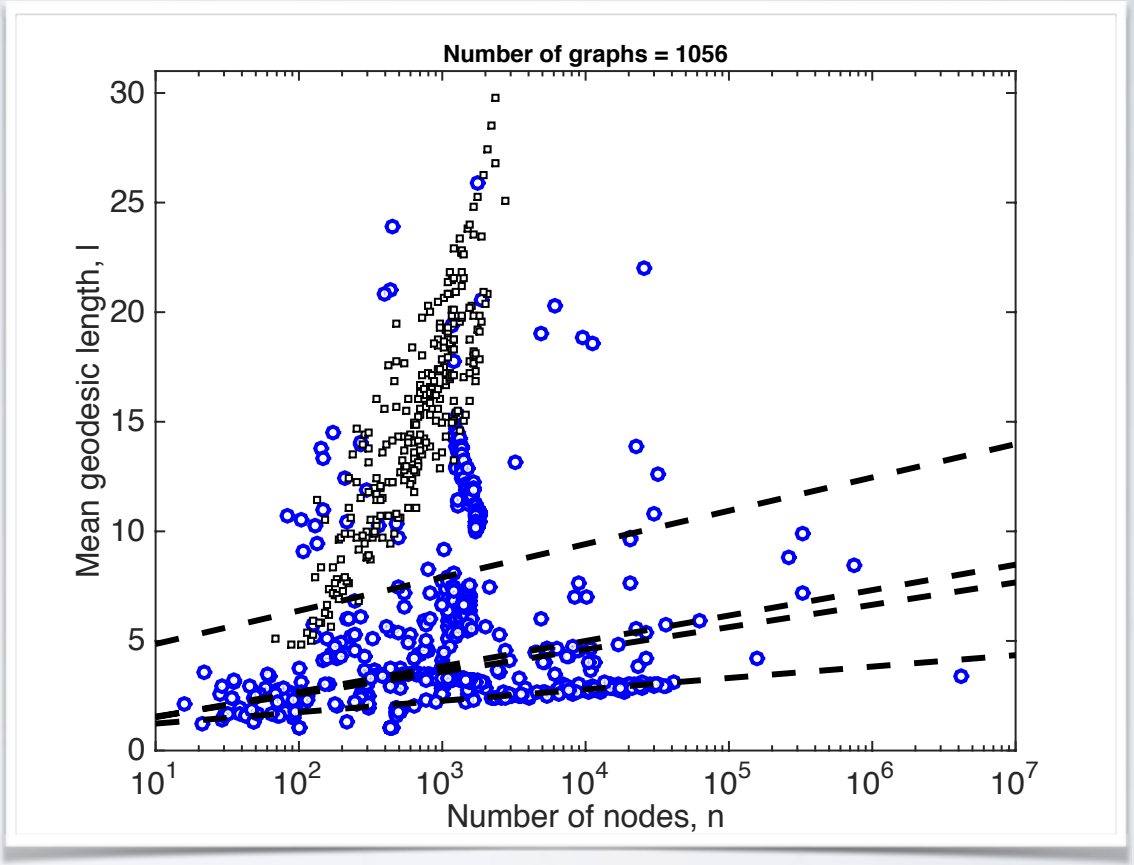
biological $\langle \ell \rangle \sim 0.52 \log n$

technological $\langle \ell \rangle \sim 1.52 \log n$

information $\langle \ell \rangle \sim 1.16 \log n$

random graph theory

$O(\log n)$



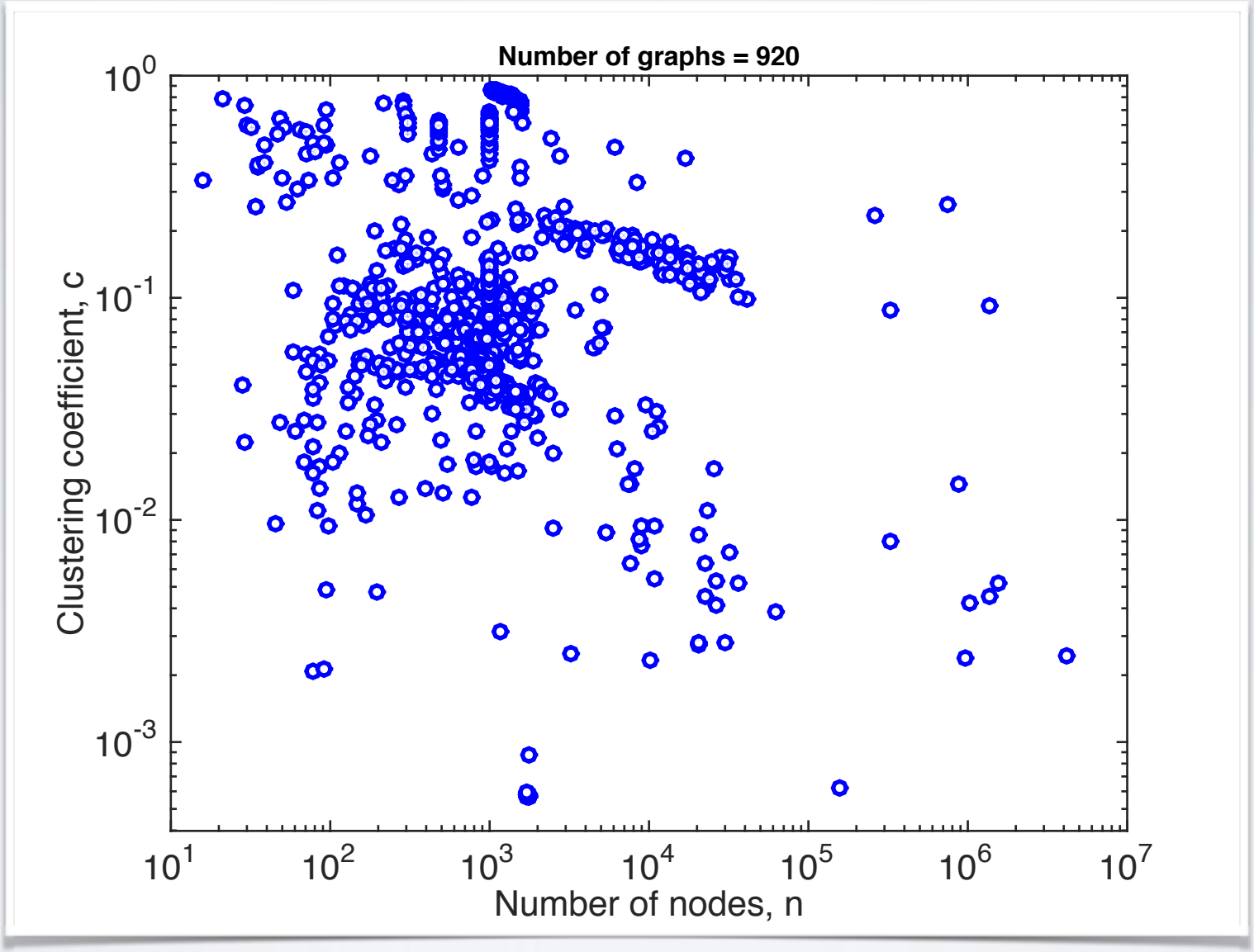
Molloy & Reed. Random Structures Algorithms 6, 61 (1995)
Chung & Lu Proc. Natl. Acad. Sci. USA 99(25), 15879-15882 (2002)

clustering coefficient

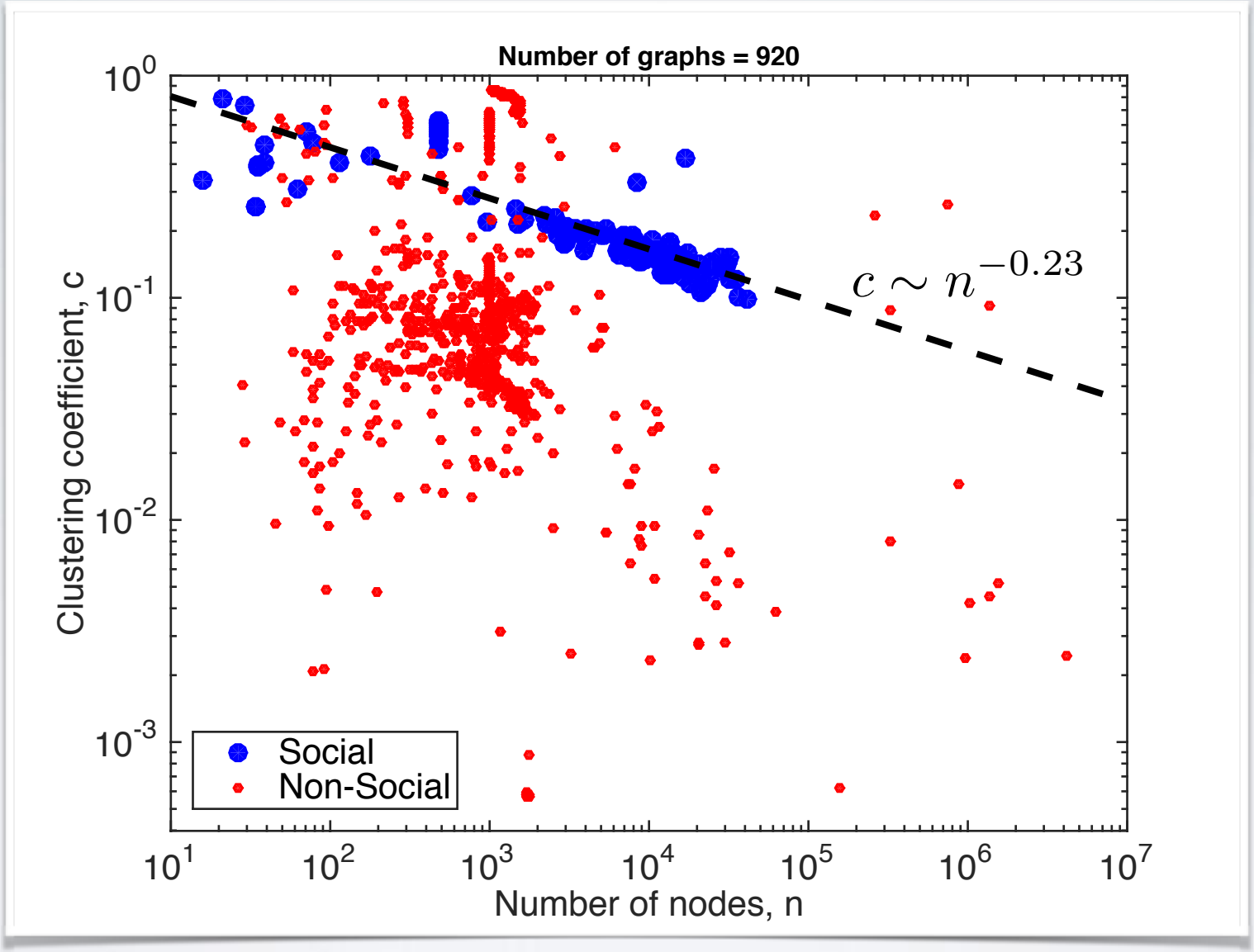
Erdös-Rényi and similar $c \sim n^{-1}$

power-law random graphs $c \sim n^{\beta} = n^{\frac{7-3\alpha}{\alpha-1}}$

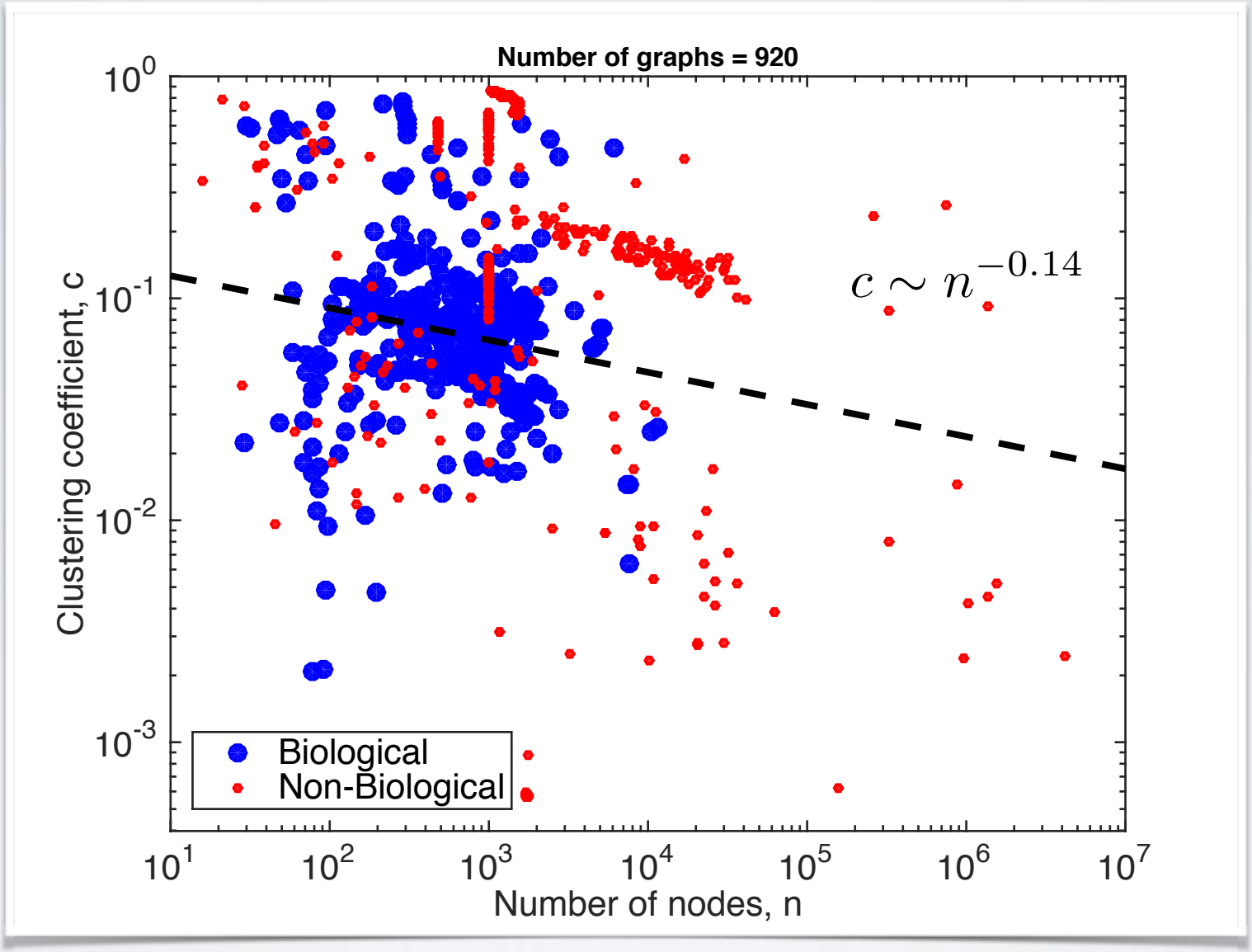
clustering coefficient



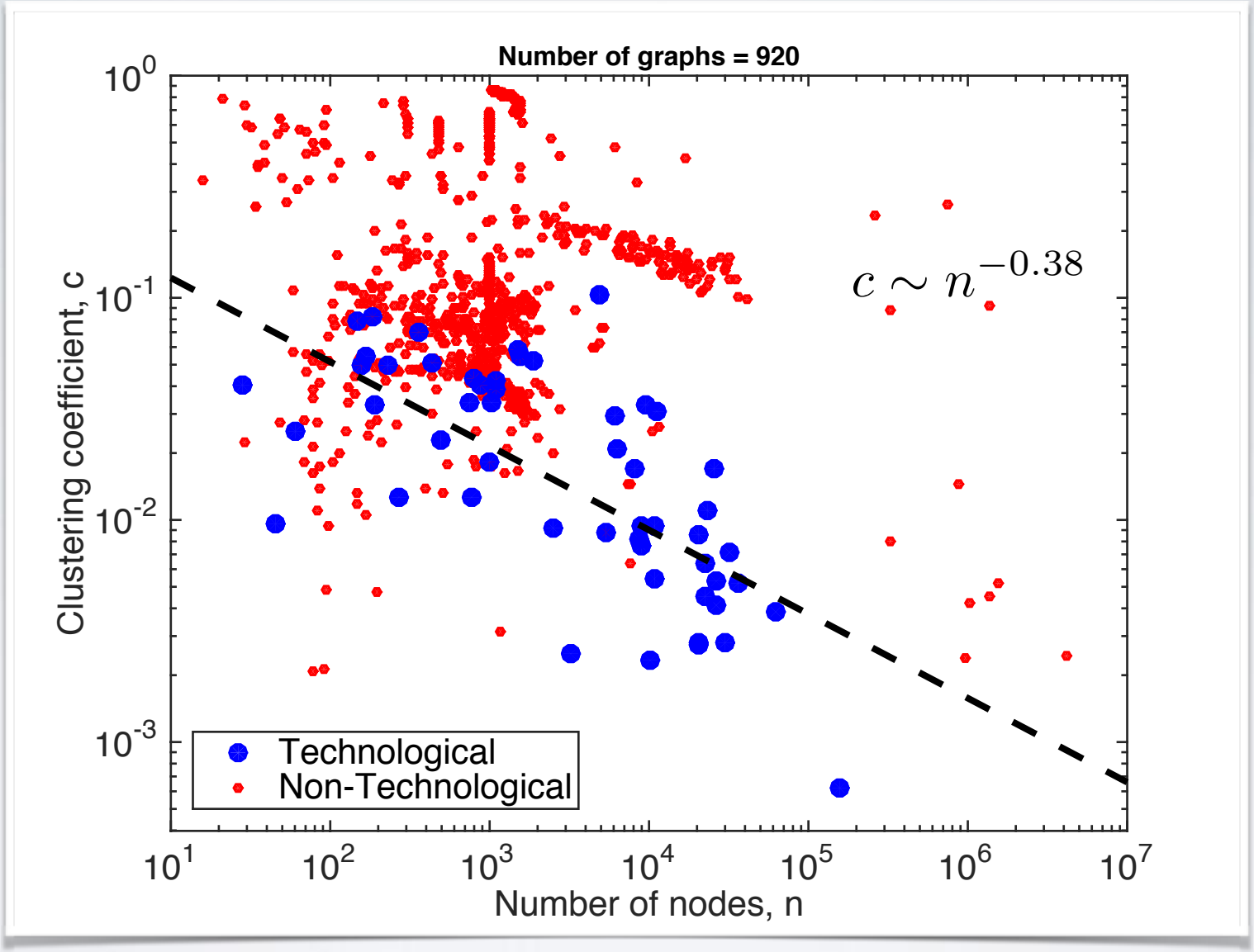
clustering coefficient



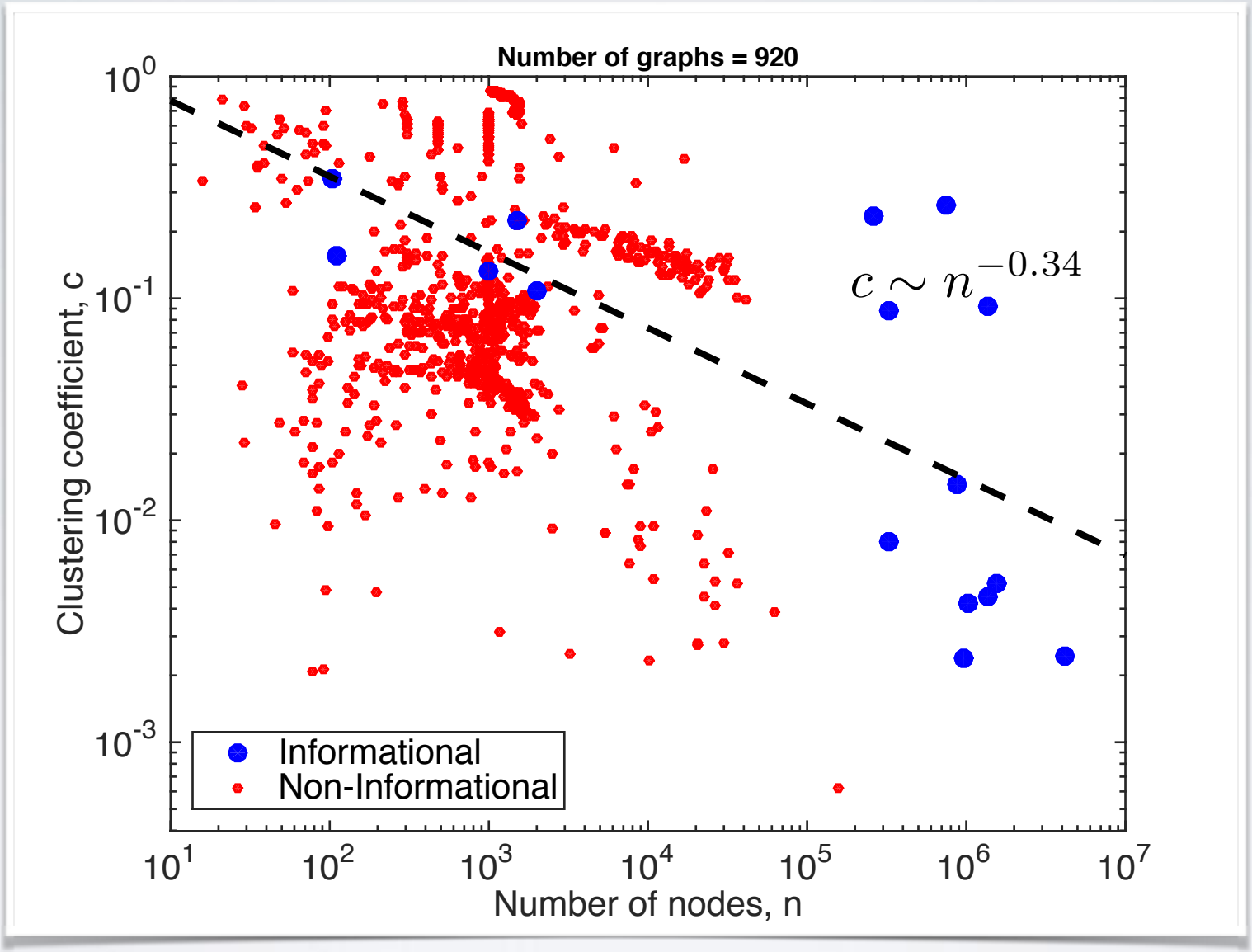
clustering coefficient



clustering coefficient



clustering coefficient



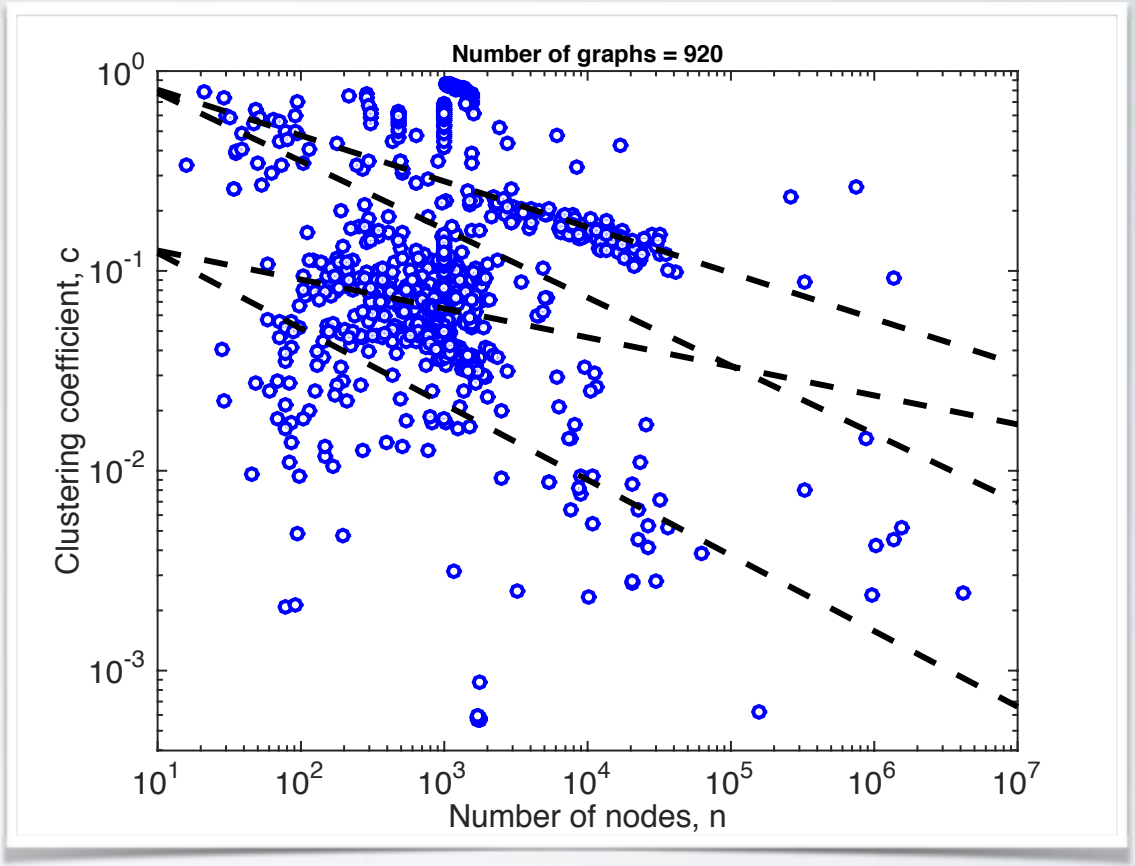
clustering coefficient

social $c \sim n^{-0.23}$

biological $c \sim n^{-0.14}$

technological $c \sim n^{-0.38}$

information $c \sim n^{-0.34}$



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