IN·DEI·NOMINE·F

Radboud University Nijmegen

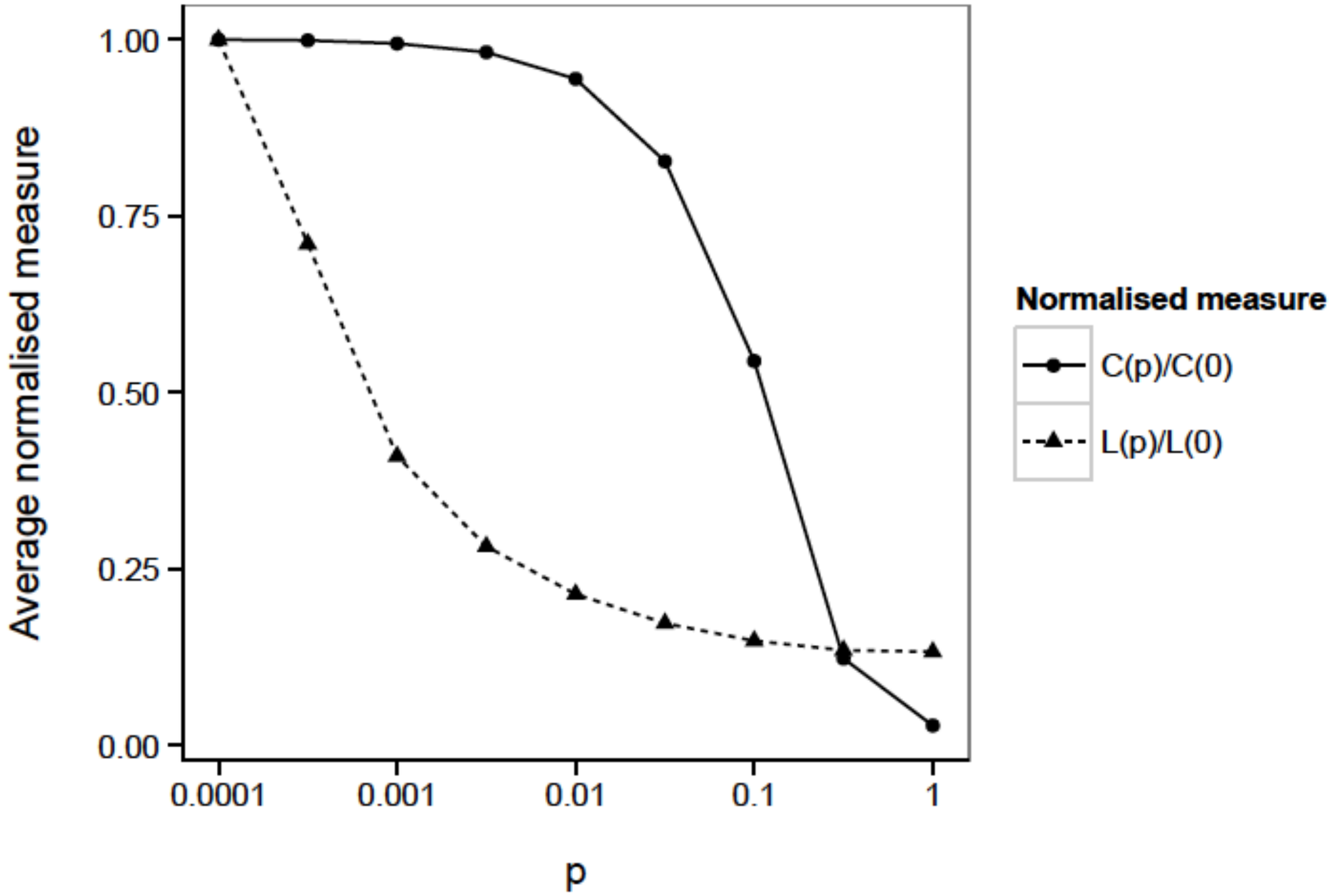
Network / Graph topology: It’s a Small World After All

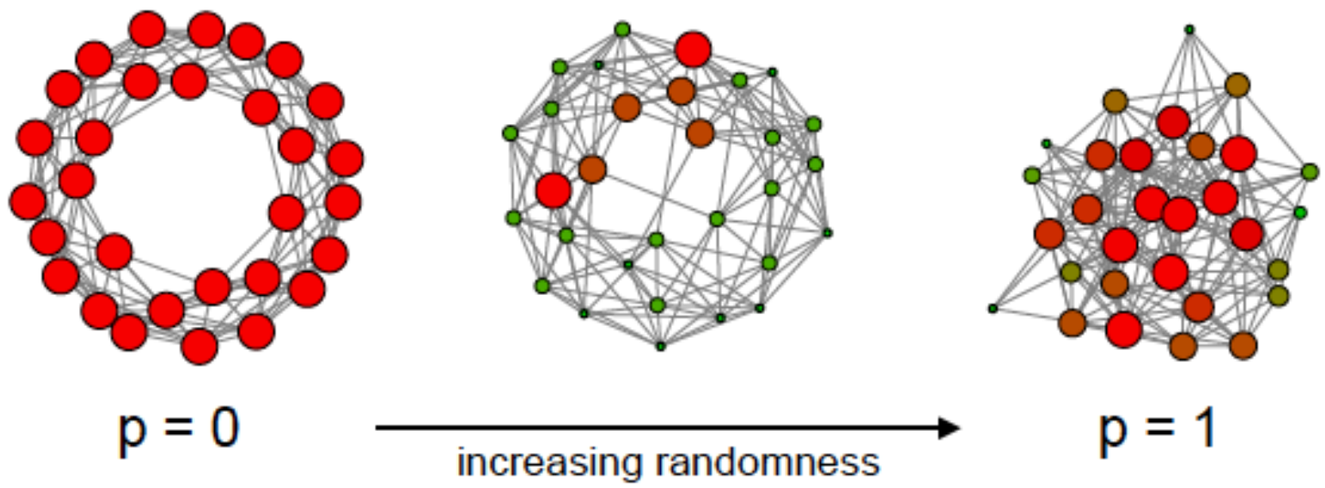
“small-world” test:

Average path length (L)

Clustering coefficient (C)

Compare to randomly rewired version





Sound familiar?

In between
fully ordered
&
completely random
=
optimal

Watts, D. J., & Strogatz, S. H. (1998). Collective dynamics of ‘small-world’networks. N*ature*, *393*(6684), 440-442.

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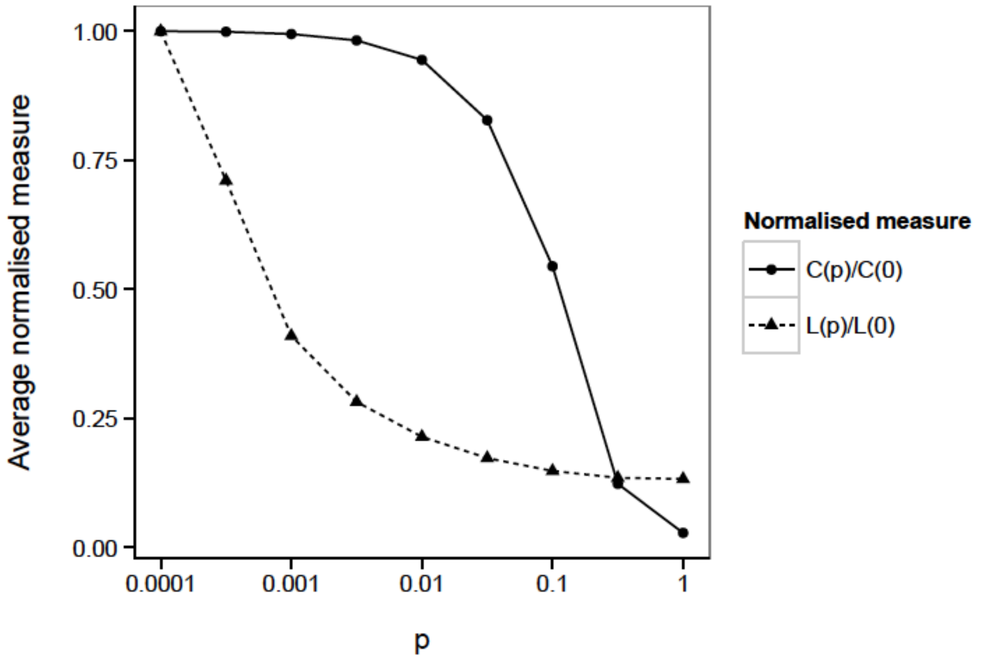

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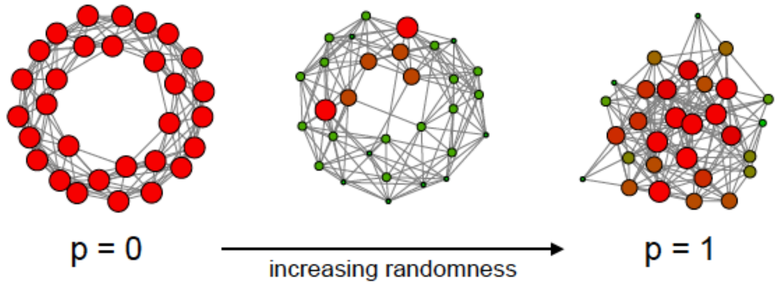
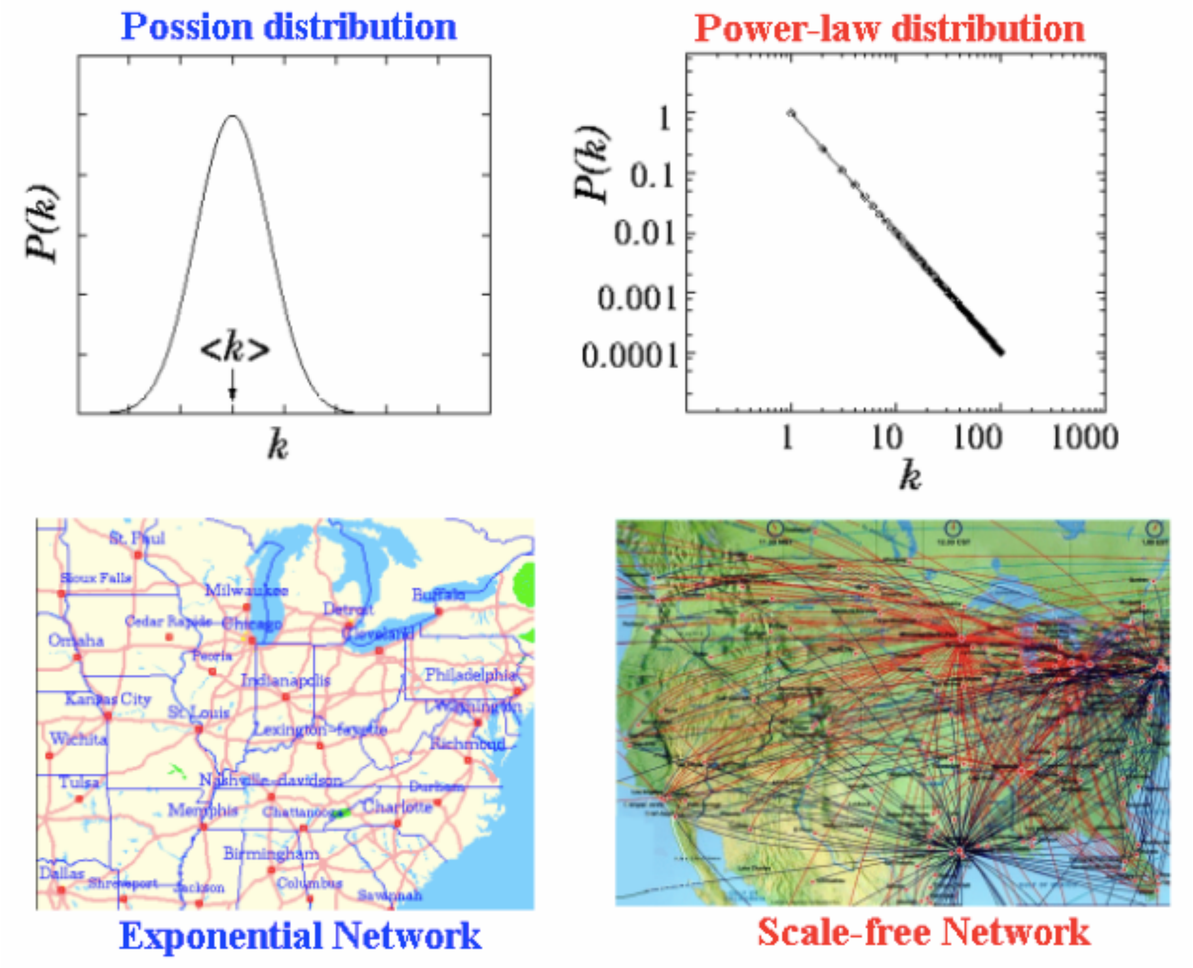


Watts, D. J., & Strogatz, S. H. (1998). Collective dynamics of 'small-world'networks. N*ature*, *393*(6684), 440-442.

Network / Graph topology: It's a Scale Free World After All



Number of connections a node in the network has: degree (δ)

Scale-free network: degree distribution is a power law!

Wang, X. F., & Chen, G. (2003). Complex Networks: small-world, scale-free and beyond. Circuits and Systems Magazine, IEEE, 3(1), 6–20. IEEE. Retrieved May 18, 2011, from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1228503.