Complexity Science Seminar

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Science B 501

Hyperbolic Geometry of Complex Networks

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We establish a connection between the scale-free topology of complex networks, and the hyperbolic geometry of hidden metric spaces underlying these networks.
Given a hyperbolic space, network topologies with scale-free degree distributions and strong clustering naturally emerge on top of the space as topological reflections of its hyperbolic geometry.
Conversely, for any scale-free network with strong clustering, there is an effective hyperbolic space underlying the network.
In my talk, I will introduce the concept of the hidden metric space and will discuss the applications of the concept to link prediction and navigation in networks.

Everyone is welcome!