

PHYSICS CHULA COLLOQUIUM

Eytan Katzav

Hebrew University of Jerusalem

will speak on

Complex Networks: A Statistical Physics Perspective

Complex networks refer to the study of systems made up of interconnected elements or nodes, such as social networks, transportation networks, and biological networks. From a statistical physics perspective, complex networks are studied using tools and concepts from statistical mechanics, such as phase transitions and critical phenomena and diffusion. Researchers in this field aim to understand the properties and behaviour of large-scale networked systems, including patterns of connectivity, robustness to failure, and the emergence of collective behaviour. Additionally, the statistical physics perspective allows to understand the dynamical processes taking place on the network, such as the spread of information or disease. We will make the point that this perspective offers a unique advantage in understanding complex networks as well as in designing new tools such as search engines.

About Eytan

Eytan graduated with a PhD in Statistical Physics from Tel-Aviv University, Israel in 2004. He was a postdoc at Ecole Normale Supérieure in Paris until 2008, after which he was appointed lecturer in Mathematics at King's College London. Since 2014 he is a Professor at the Hebrew University. Eytan is a Statistical Physicist, a discipline which attempts to understand collective behaviour that emerges from many degrees of freedom. In recent years he applies statistical physics to the theory of complex networks and will share his perspective on the field.

Thursday,
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16:30 - 17:30

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