

# **The impact of social network complexity: from web-search to epidemics.**

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## **Abstract:**

Recent years have witnessed a tremendous progress in the gathering of large scale social networks thanks to the development of new informatics tools and the increase in computational power. Networks which trace the activities and interactions of individuals, social patterns, transportation fluxes and population movements on a local and global scale have been analyzed and found to exhibit complex features encoded in large scale heterogeneity, self-organization and other properties typical of complex systems. We will review the complex features characterizing many of these networks and their impact on dynamical processes ranging from the information discovery on the web to the geographical spreading of large scale epidemics.