

MAR10-2009-004548

Abstract for an Invited Paper
for the MAR10 Meeting of
the American Physical Society

Complex Networks: Beyond Topology

ALBERT-LASZLO BARABASI, Northeastern University/Harvard Medical School

Much of the advances we witnessed in the past decade in the statistical mechanics of complex networks were inspired by maps of real networks, informing the modeling and analytical efforts. Yet, in the past few years the richness of data has improved considerably, allowing us to look deeper into the role of the nodes and links that shape the network topology and function. My goal is to move beyond the topology and review a few recent results on complex networks, from the role of distance in shaping our social networks to controllability in biological and technological networks.