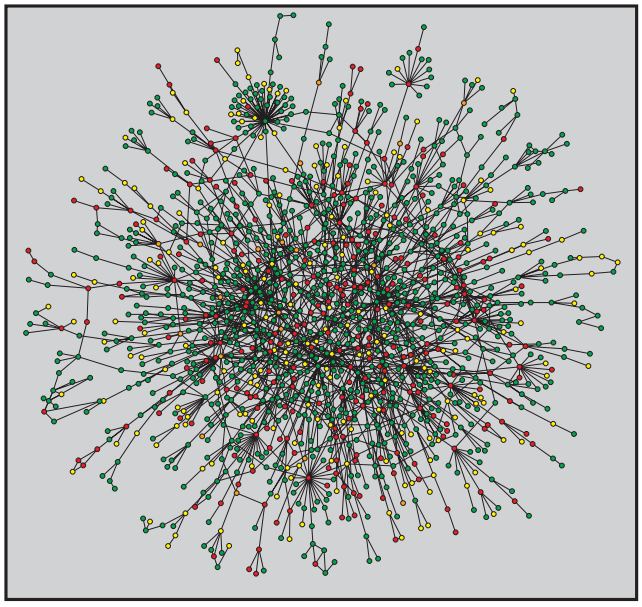
Making Connections

People in a society, neurons in the brain, and pages on the Web, along with their connections, are all examples of networks. Mathematicians study characteristics of networks, such as the number and distribution of connections, to discover what such attributes may reveal about the intrinsic nature of a network. For example, the colors in the picture below indicate how disruptive deleting a node would be to the network, in this case a living cell. The discovery and verification of network properties such as this has significance for applications ranging from the microscopic to the worldwide, including the protection of both computers and humans against viruses.

For more information: "Scale-Free Networks", by Albert-László Barabási and Eric Bonabeau, *Scientific American*, May 2003



Image, protein-protein interactions, courtesy of: Hawoong Jeong (KAIST)

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