

# Interdisciplinary applications of network dynamics: From microscopic to Macroscopic

Hawoong Jeong

Department of Physics, Korea Advanced Institute of Science and Technology

Taejon, 305-701 KOREA

E-mail: [hjeong@kaist.ac.kr](mailto:hjeong@kaist.ac.kr)

“Everything touches everything.” We are living in a connected world, which has been modeled successfully by complex networks. Ever since, network science becomes new paradigm for understanding our connected yet complex world. After investigating network structure itself, our focus naturally moved to dynamics of/on the network because our connected world is not static but dynamic. In this presentation, we will briefly review the historical development of network science and show some applications of network dynamics ranging from microscopic (metabolic engineering, PNAS, 104 13638) to macroscopic scale (price of anarchy in transportation network, Phys.Rev.Lett. 101 128701).