In English

WCU Seminar 2011-2

ON THE IMPACT OF TOPOLOGY IN EPIDEMIC NETWORKS

Khosrow Sohraby

(Distinguished Professor, Computing and Engineering at the University of Missouri-Kansas City)

- Date: 4pm~, 16th, June, 2011
- Place: Kumho-Life Bldg. #B101

Department of Nanobio Materials and Electronics

[WCU-DNE Seminar Series]

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On the Impact of Topology in Epidemic Networks

Networks and the epidemiology of transmitted infectious diseases are fundamentally linked. The topology of the network provides the information about the details of the interaction between the members of a population in epidemic networks. Other networks such as social network dealing with spread of information, or a communication network (e.g., Internet) dealing with the spread of a viruses are treated similarly.

In this talk, we review some of the basic epidemiological models and their behaviors. We then provide a simple quantative measure of examining the importance of a node within a network in terms of its ability in spreading a disease. Some simple illustrative examples are provided.

The talk is designed for a general audience and prior knowledge of epidemic models, or communications networks is not necessary.

About the Speaker:

Khosrow Sohraby is the Distinguished Professor of Computing and Engineering at the University of Missouri-Kansas City. He joined UMKC in 1994. Prior to joining academia, Dr. Sohraby was a Research Staff Member at IBM T.J. Watson Research Center in Yorktown Heights, NY for five years, and Member of Technical Staff at AT&T Bell Laboratory for three years.

Dr. Sohraby's research is in the area of design, modeling and analysis of computer and communications networks. He is currently affiliated with the World Class University (WCU) at Gwangju Institute of Science and Technology in Korea.

Dr. Sohraby received his B.S. and MS. degrees from McGill University, and Ph.D. degree from the University of Toronto, all in Electrical Engineering (1979, 1981, and 1985).