

HENRY L. PIERCE LABORATORY SEMINAR SERIES

Supply Chain Networks Against Time: From Food to Pharma

Professor Anna Nagurney

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Abstract: Supply chains consist of networks of suppliers, manufacturers, transportation service providers, storage facilities and distributors, as well as retailers, and consumers. They serve as the critical infrastructure backbones for the provision of goods and services in our modern global economy. Supply chains have revolutionized the way in which products are sourced, produced, distributed, and consumed around the globe. They may involve thousands of stakeholders from suppliers and manufacturers to hundreds of thousands of demand points. Supply chains, however, are not just about complex manufactured products such as airplanes, automobiles, or computers. While many of the products of supply chains are durable goods that can be shipped and stored for a prolonged period prior to use, others are perishable -- from the food that we ingest, the medicines and vaccines that heal us and save lives, and, for the fashion-conscious -- the clothes that we wear.

In this talk, I will overview our research that emphasizes multiple disciplines from engineering and operations research and management science to chemistry and physics, all with a unifying theme of supply chain networks, and associated perspectives, to model product deterioration over time and perishability. I will describe food supply chains, medical nuclear supply chains, electric power supply chains, and a case study in the pharmaceutical industry. Some of the work has appeared in our recent book, "Networks Against Time: Supply Chain Analytics for Perishable Products."

Biosketch: Anna Nagurney is the John F. Smith Memorial Professor at the Isenberg School of Management at the University of Massachusetts Amherst and the Director of the Virtual Center for Supernetworks, which she founded in 2001. She holds ScB, AB, ScM and PhD degrees from Brown University in Providence, RI. She is the author of 11 books, and the new book, "Competing on Supply Chain Quality: A Network Economics Perspective," with Dong Li, in press with Springer, more than 175 refereed journal articles, and over 50 book chapters. Anna's research focuses on network systems from transportation and logistical ones, including supply chains, to financial, economic, social networks and their integration, along with the Internet.



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4 pm

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Faculty Host: Carolina Osorio