



# NEWS RELEASE

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For Immediate Release -

## ***New Book Explores Network Vulnerabilities and Synergies***

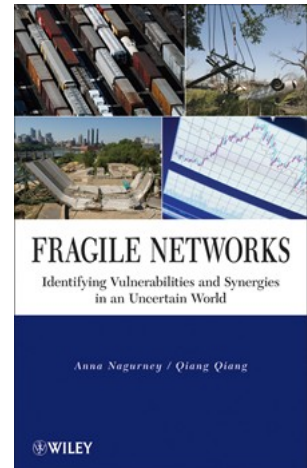
The Virtual Center for Supernetworks at the University of Massachusetts Isenberg School of Management announces the publication of a new book, *Fragile Networks: Identifying Vulnerabilities and Synergies in an Uncertain World* (Wiley). Authored by the center's director, John F. Smith Memorial Professor Anna Nagurney, and Professor Qiang (Patrick) Qiang '09 Ph.D., who is on the faculty at Pennsylvania State University's Great Valley campus, the book applies computer-based network systems modeling and analysis to vulnerabilities and synergies in congested urban transportation networks, supply chain networks, electric power networks, financial networks, the Internet, and other critical networks. The book also depicts and quantifies potential synergies associated with mergers and acquisitions in the corporate world and partnership synergies in humanitarian logistics operations.

As the United States begins to rebuild and renew its critical infrastructure, *Fragile Networks* will prove useful to policy makers, urban planners, business strategists, and others. The book's multidimensional metrics and criteria (including environmental ones) can help identify where investments will yield the greatest pay-offs to society. At the same time, the book's tools can help identify vulnerable network components that present security risks.

Through its mathematical, multivariate approach, *Fragile Networks* explores a host of network activities, including the behavior of network users, demands for resources, resulting flows, and associated costs. Following an introduction to the fundamental methodologies and tools required for network analysis and network vulnerability, the book explores its subject through three sections:

- I— Network Fundamentals, Efficiency Measurement, and Vulnerability Analysis
- II— Applications and Extensions
- III— Mergers and Acquisitions, Network Integration, and Synergies.

*Fragile Networks* is the eleventh book by Anna Nagurney, whose research focuses on networks and decision making.



Publication Information -

Fragile Networks: Identifying Vulnerabilities and Synergies in an Uncertain World  
Anna Nagurney and Qiang (Patrick) Qiang, ISBN: 978047444962, Cloth, 344 pp