



In the Loop

News for Staff & Faculty

PEOPLE

Nagurney speaks at Mathematics and Collective Behavior Symposium

Anna Nagurney, the John F. Smith Memorial Professor at the Isenberg School of Management, spoke at the Mathematics and Collective Behavior Symposium at the American Association for the Advancement of Science (AAAS) Annual Meeting, Feb. 17-21 in Washington D.C.

This symposium, which is part of the Emerging Science and Technology track, uses mathematical modeling and simulation to show how collective self-organized behavior arises and why it is so pervasive in nature and human society. The properties and dynamics of such aggregate systems will be developed and illustrated using different methods and interdisciplinary perspectives.



She spoke on user-optimized and system-optimized travel behavior and their relevance from congested urban transportation networks to the Internet. She will illustrate how, under user-optimized behavior, the addition of a new link to a network may increase the travel cost to every user. This counterintuitive phenomenon is known as the Braess paradox. She presented her recent research that demonstrates that the paradox may correct itself as the network's demand increases, suggesting a "wisdom of crowds" phenomenon.

Joining her at this symposium were Iain Couzin of Princeton University and Pierre Degond of Paul Sabatier University in France. Warren Page of the City University of New York was the organizer and moderator of this symposium.

The theme of this year's AAAS meeting was Science Without Borders with close to 1,000 scientists presenting multidisciplinary research and developments to 8,000 attendees.

More Information

[Mathematics and Collective Behavior](#)

February 20, 2011.