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## **UCSB Named to Prestigious University/Industry Consortium to Research Robust Uncertainty Management**

**Consortium Awarded \$12.5 Million by DARPA Consortium Awarded \$12.5 Million by DARPA Consortium Awarded \$12.5 Million by DARPA**

Santa Barbara, California ? January 23, 2007?The College of Engineering at UC Santa Barbara has been named by the Defense Advanced Research Projects Agency (DARPA) ) to a prestigious university/industry consortium to research robust uncertainty management. The project will be led at UCSB by Igor Mezic, a professor of mechanical engineering, and Andrzej Banaszuk, technical fellow, at United Technologies Research Center (UTRC) in East Hartford, CT.

The \$12.5 million contract goes to a consortium of five universities and UTRC to study robust uncertainty management in large networks exhibiting complex dynamics. UCSB, recipient of the largest academic subcontract in the program, will receive \$2.3 million from the three-year grant. Participating institutions also include Caltech, Yale, Stanford and Princeton.

What kinds of questions does uncertainty management address? ?DARPA is particularly interested in surveillance networks which involve thousands of aerial unmanned search vehicles that collaborate to find an object of interest,? said Mezic. ?But the same techniques could be used to predict the consequences of a tree branch hitting a power line, causing a blackout to a large portion of the national power grid -- as one did in New York in August, 2003, and could help decision making under uncertainty in corporate environments.?

The research draws on a powerful set of mathematical techniques from dynamical systems theory, graph theory and operator theory. UCSB, UTRC and Caltech first received seed funding from DARPA for research on this topic three years ago. That research led to a redesign of commercially available jet engines produced by Pratt & Whitney (a division of United Technologies Corporation).

About the College of Engineering at UCSB

The College of Engineering at UC Santa Barbara is a global leader in bioengineering, chemical and computational engineering, materials science, nanotechnology and physics. UCSB boasts five Nobel Laureates (four in sciences and engineering) and one winner of the prestigious international Millennium Technology Prize. Our students, professors and staff thrive in a uniquely-successful interdisciplinary and entrepreneurial culture. Our professors' research is among the most cited by their peers, evidence of the significance and relevance of their work.

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