
Dr. Alan Hecht, a senior official of the United States Environmental Protection Agency (EPA), spoke about sustainable development to a standing-room crowd of over 120 Ohio State faculty, students, and visitors at University Hall on November 16, 2005.

“Rapid population and economic growth will cause significant stress on Earth’s resources, threatening humanity’s ability to improve or even maintain environmental quality,” said Hecht. “How countries manage their natural capital may well determine their future levels of income, well-being and national security.” His presentation can be found at resilience.osu.edu.

Dr. Hecht was on campus leading a delegation of EPA scientists to meet with a group of distinguished OSU faculty members, hosted by the Center for Resilience and the Social Responsibility Initiative. In his role as EPA’s Director for Sustainable Development, Office of R&D, Hecht is developing the agency’s sustainability research strategy. EPA selected OSU for the first of a series of university visits to learn about leading-edge research in the coupling of socio-economic and ecological systems.

Among the numerous Ohio State faculty that shared research highlights with EPA were Alan Randall, Department Chair of Agricultural, Environmental, and Developmental Economics, Bill Mitsch, Director of the Ohio Center for Wetland and River Restoration, David Culver, Evolution, Ecology, and Organismal Biology, Rattan Lal, Director of the Carbon Management and Sequestration Center, and Hal Walker, Civil and Environmental Engineering.

Autumn Symposium on Supply Chain Resilience Was a Learning Experience

The timing was eerily appropriate. Barely a month after the devastation of hurricane Katrina, OSU held a symposium titled: “Towards a Resilient Global Supply Chain.” On October 14, 2005, over 60 people from the business community met with OSU academic experts to learn about supply chain resilience – the capacity of a supply chain to recover from crises or disruptions and adapt to turbulent change in the business environment.

Drivers of resilience include a variety of enterprise characteristics such as foresight, adaptability, agility, safety, security, strategic alliances, stakeholder relationships, and resource efficiency.

The featured speakers (pictured below) were:

- **Nick LaHowchic** (right), Chief Executive Officer, Limited Logistics Services, speaking on “Enterprise Navigation in an Age of Turbulence”
- **Dr. Yosi Sheffi** (left), Director of the Center for Transportation & Logistics at M.I.T. and author of “The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage.”

The actual presentations can be downloaded at resilience.osu.edu – just click on Proceedings.
Sustainable Systems Symposium will Tackle the Challenge of Complexity

What future energy sources will provide power to our cities, businesses and transport systems? Can we sustain global economic growth and avoid major disruptions or ecological impacts?

A group of distinguished scholars and industry experts will meet at Ohio State on March 2 and 3, 2006, to address the challenges of developing sustainable systems that meet human needs for energy and mobility. This interdisciplinary symposium, co-sponsored by NSF, EPA, and the Green Chemistry Institute, will explore how complex industrial systems can achieve both short-term continuity and long-term ecological integrity.

Participants from Ohio State and other institutions will represent a variety of disciplines, including Economics, Ecology, Engineering, Energy and Environmental Sciences, Statistics, Public Policy, and Management Science.

The keynote speakers will include a number of well-known sustainability pioneers:

- **Michael Bertolucci**, President, Interface Research
- **Paul Anastas**, Director, Green Chemistry Institute
- **Phil Berry**, Director of Footwear Sustainability at Nike
- **John Ehrenfeld**, Executive Director of the International Society for Industrial Ecology

The symposium will culminate with a public lecture by the prolific **Brad Allenby**, a professor of civil and environmental engineering at Arizona State University, and the former Vice President for Environment, Health and Safety at AT&T. His lecture, co-sponsored by Battelle Memorial Institute, is titled “Resilience in Earth Systems Engineering.”

According to symposium chair Dr. Joseph Fiksel, “This meeting will bring together a diverse and talented group of people with a common interest in sustainability. We hope to develop a meaningful research agenda for economic and ecological modeling of complex systems to support business and policy decisions. This isn’t an academic exercise – there are pressing problems to be addressed.”

More details about the symposium agenda and instructions for those who would like to participate are available on the Web at resilience.osu.edu.

New Book on Resilience Engineering

Professor **David Woods** of Ohio State, expert on human factors and ergonomics, has co-edited a new book called “Resilience Engineering: Concepts and Precepts.” Woods and his colleagues, Erik Hollnagel and Nancy Leveson, believe that the achievement of safety and reliability in complex systems requires an organizational capacity to anticipate and adapt to the changing shape of risk. For more details and ordering information visit: www.ashgate.com

Nanotechnology Life Cycle Analysis

The U.S. Environmental Protection Agency (EPA) Office of Research and Development has awarded a research grant for life cycle analysis (LCA) of nanotechnology impacts to Dr. **Bhavik Bakshi**, Co-Director of the Center for Resilience.

“LCA is essential for managing risk in nanotechnology R&D and commercialization, and can help to prevent both irrational optimism and unfounded fear of this new field,” says Bakshi. But LCA normally requires detailed data about process emissions and their impacts. Bakshi’s approach, called “thermodynamic LCA”, is useful for the assessment of emerging technologies in the absence of such data.

This project will develop life cycle data for the manufacture of polymer nanocomposites, and will use thermodynamic LCA to analyze manufacturing processes for consumable and durable products, such as automotive body panels and food wrapping film.

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New Book on Resilience Engineering

**Resilience Engineering:**

**Concepts and Precepts**

**David Woods**, **Paul Anastas**, **Phil Berry**, and **John Ehrenfeld**

**Ohio State University Press**

**503 West 18th Avenue, Columbus, OH 43210**

**Ordering Information:**

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