



# MECHANICAL ENGINEERING NEWS

November 4, 2002

A newsletter for the UML Mechanical Engineering community (also available online at <http://m-5.uml.edu>)

---

Any items you would like to see included in the newsletter or any suggestions/comments?

Please email them to: [peter\\_avitabile@uml.edu](mailto:peter_avitabile@uml.edu) or leave them with Jackie Paradise in the Mech Eng office.

## Mechanical Seminar Series

On Friday October 25<sup>th</sup>, Frederick A. Costanzo, Head, Underwater Shock Analysis Branch Survivability and Weapons Effects, Department Naval Surface Warfare Center gave a seminar presentation. His presentation was titled "Engineering Applications in a Government Defense Laboratory".

Fred talked about the Naval Surface Warfare Center Carderock Division along with some of the mechanical engineering challenges that accompany this Naval Laboratory's mission. A number of examples highlighting the application of fundamental engineering principles to real life problems was presented, complemented by a discussion associated with how current engineering students can better prepare themselves for transition to the professional workplace. Fred also included sharing of first hand experiences regarding the importance in an engineering environment of developing sharp communication skills.



Shock Trial Testing of CVN 71

## Spotlight on COMPANIES



NSWCCD

Maryland

<http://www.dt.navy.mil/>

The Carderock Division of the Naval Surface Warfare Center (NSWCCD) is the Navy's center of excellence for ships and ship systems. The key elements in its technological success are the breadth and depth of its capabilities and the expertise of its scientists and engineers. With unique laboratories and test facilities, large-scale land-based engineering and test sites, and at-sea measurement facilities throughout the United States, Carderock has been at the forefront of technologies vital to the success of the Navy and the maritime industry for more than a century. The Division's primary locations are its headquarters in West Bethesda, Maryland and the Ship Systems Engineering Station in Philadelphia, Pennsylvania. NSWCCD is a major component of the Naval Sea Systems Command. Visit their website to obtain more information [www.dt.navy.mil](http://www.dt.navy.mil)

## Spring Registration - Nov 4th to 15th

Don't forget that registration for the spring semester is November 4<sup>th</sup> to 15<sup>th</sup>. Before you meet with your advisor, take some time to review where you are at in your educational career. Then meet with your advisor and get your course schedule all set now for the spring semester. Also, try to meet during the first week of advising rather than waiting until the second week. If everyone waits until the second week, then there may not be enough time to sit and discuss your progress and future plans with your advisor.



# MECHANICAL ENGINEERING NEWS

November 4, 2002

A newsletter for the UML Mechanical Engineering community (also available online at <http://m-5.uml.edu>)

## So where is Julie Chen ???



Program Director of the Materials Processing and Manufacturing (MPM) Program, Division of Design, Manufacture, and Industrial Innovation (DMII); Directorate for Engineering (ENG); National Science Foundation (NSF).

## and why is her title so long ???

Julie has taken a two year position as a Program Director at National Science Foundation. Her job is to support innovative and merit-reviewed activities in research and education. A big part of that job is handling research proposals. Last year's budget for that program was on the order of \$5M, with grants ranging from \$6K for a Research Experiences for Undergraduates (REU) award to 1-year, \$100K, Small Grants for Exploratory Research (SGER) awards to 3-4 year, \$400K, multiple researcher awards.

The DMII/MPM Program funds research to expand the fundamental knowledge needed to create new manufacturing processes, including increasing understanding of material behavior, virtual manufacturing simulations and environmentally benign manufacturing practices. Some examples include: new rapid prototyping or net-shape processes to build products from the ground up, without machining away material; hybrid processes to create lightweight composite foams or extremely tough 3-D reinforced composites; and processes to create high-density, reliable electronic packaging.

According to Julie, the motto of NSF is "People, Tools, Ideas". NSF wants to help develop high quality researchers/educators, equipment that opens up new capabilities, and expansion of our fundamental knowledge base.

## Spotlight on NSF



National Science Foundation  
Washington, DC  
<http://www.nsf.gov>

The National Science Foundation (NSF) is an independent agency of the U.S. Government, established by the National Science Foundation Act of 1950. NSF's mission is to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.

## **DON'T FORGET THE SEMINARS!!!**

Mechanical Engineering Seminar Series -

Speakers for Fall 2002

**Nov 8** (no seminar this week)

**Nov 15** Jason Allaire, Lawrence Pumps

**Nov 22** Tom O'Leary – EMC Corporation

**Dec 6** Dave Crompton – SSG Inc – Optical Systems

**Dec 13** John Mirageas – Flir Systems

## On the lighter side

