



# MECHANICAL ENGINEERING NEWS

October 21, 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: [medept@uml.edu](mailto:medept@uml.edu) or leave them with Jackie Paradise in the Mech Eng office.

## Mechanical Seminar Series

On Friday October 18<sup>th</sup>, Frank Pechinsky of Raytheon Defense Systems presented an “Brief Overview of Environmental Testing” as part of the Mechanical Engineering Seminar Series. Frank’s presentation provided insight into the typical environmental testing that is routinely performed on defense systems and subsystems as part of the product qualification testing. After the technical part of his presentation, Frank continued on with a presentation that is best entitled “A Day in My Life as an Engineer”. Basically, Frank shed some thoughts on some of the routine tasks that he is faced with everyday as a manager of a structural analysis group. He highlighted the points of organization, documentation and related functions he performs on a daily basis. This portion of the presentation was very useful especially to students who have not been exposed to the normal work environment.

## Spotlight on COMPANIES

# Raytheon

Raytheon  
Lexington, MA  
[www.raytheon.com](http://www.raytheon.com)

Aspiring to be the most admired defense and aerospace systems supplier through world-class people and technology. Raytheon today is focused on defense, government and commercial electronics and business aviation and special mission aircraft.

Headquarters: 141 Spring Street, Lexington, Massachusetts, 02421 with 77,500 employees worldwide and \$16.9 billion in 2001 revenues

Visit their website to obtain more information  
[www.raytheon.com](http://www.raytheon.com)

## Mechanical Seminar Series

On Friday October 25<sup>th</sup>, Eric Denys of Federal-Mogul will present a seminar on “Presentation of the Design Philosophy of a Friction Product – How do I use my NVH education to do my NVH manager job?” as part of the Mechanical Engineering Seminar Series. We are very fortunate to have Eric come to give a presentation for the ME Seminar Series. FM is a leader in this field and has just opened a new state-of-the-art technical center (see below)

## Spotlight on COMPANIES



Federal-Mogul  
Southfield, MI  
[www.federal-mogul.com](http://www.federal-mogul.com)

Federal-Mogul is a global supplier of automotive components and sub-systems serving the world’s original equipment manufacturers and the aftermarket. Federal-Mogul utilizes engineering and materials expertise, proprietary technology, manufacturing skill, distribution flexibility and marketing power to deliver products, brands and services of value to their customers. They are focused on the globalization of their teams, products and processes to bring greater opportunities for their customers and employees, and value to their constituents.

NEW FLASH – October 17, 2002 !!!!!

Federal-Mogul Opens Automotive Friction Products Technical Center in Plymouth Township, Michigan

...Federal-Mogul Corporation today officially opened a state-of-the-art technical center in Plymouth Township, Michigan, devoted to researching, developing and testing advanced automotive brake pads and linings.



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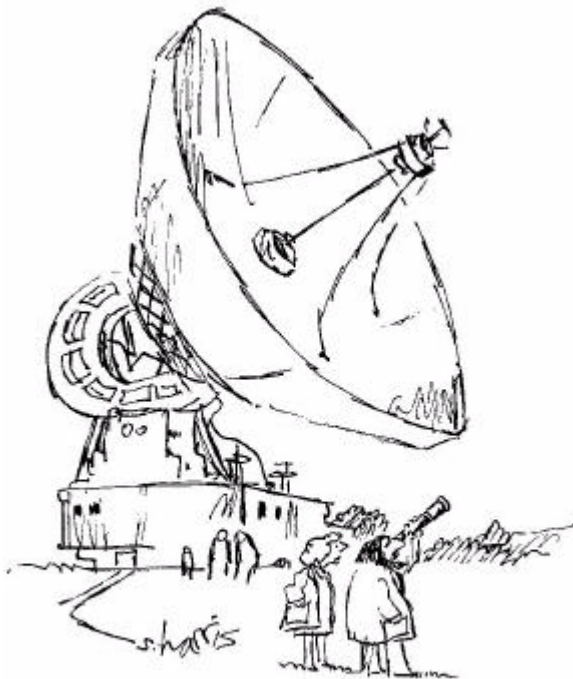
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## Food for Thought - Peter Avitabile

Many times students do not take the time to completely and fully prepare material for homework, reports and projects. Sometimes this is due to various outside commitments, including work, family and ... - well we all know how busy everyone's schedule is today.

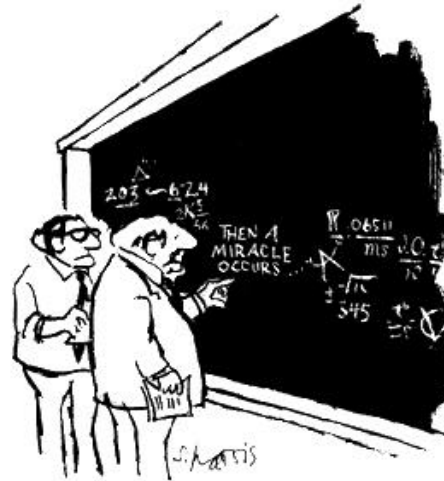
Unfortunately, the students short-change themselves in their educational process when this is the case. Students rush through homeworks, labs, and various assignments so that they can get on to the next commitment.

Many times students rush through their work so quickly that there is not even a thought about how reasonable the results are. Many professors note how students don't even check units, does the answer make sense, is the result in the ballpark or are the answers pure nonsense. The students need to develop approximate approaches or what we call "back of the envelop calculations" to perform a "sanity check".



"JUST CHECKING."

Not only should detailed skills be developed from classes, lectures and independent study/research, but students should also become "intimate" with the subject matter. The material needs to become a part of your life – and not be a set of equations or procedures that need to be memorized for the next test and then quickly forgotten.



"I think you should be more explicit here in step two."

Of course, I am not recommending that steps be skipped in the full development of a particular solution to a problem. But there does need to be some conceptual understanding of the problem before any detailed evaluations are performed.

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

Mechanical Engineering Seminar Series -  
Speakers for Fall 2002

- Oct 18** Frank Pechinsky, Raytheon Missile Systems
- Oct 25** Eric Denys, Federal Mogul
- Nov 1** Frank Costanzo, Naval Surface Warfare Center
- Nov 8** Gene Niemi, UMASS Lowell – Mechanical Eng
- 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