



# MECHANICAL ENGINEERING NEWS

November 26, 2007

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

Contact [john\\_mckelliget@uml.edu](mailto:john_mckelliget@uml.edu) with any items you would like to see included in the newsletter

## Calendar

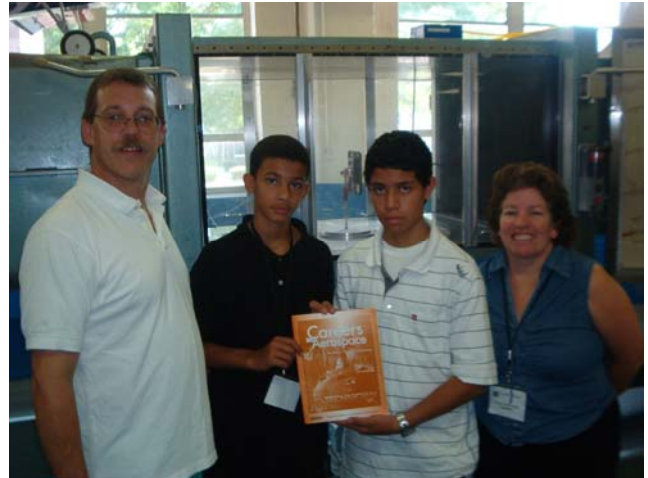
**Nov 26 Nypro Careers Night**  
**Jan 31 Deadline to sign up for Order of Engineer**  
**Feb 20 Order of Engineer Ceremony (5 to 7pm)**  
**March 1Deadline to sign up for Spring FE exam**  
**April 12 Spring FE exam**

## AIAA Offers Scholarships at UMass Lowell Summer Design Camps.

Summer Design Camps are offered each summer at UMass Lowell to encourage primarily middle school students to plan for careers in engineering, science, mathematics, and technology. Design camps last one week and are offered in such diverse areas as robotics, video game making, electronics, Flight School I and Flight School II. The Design Camp program is supported by NSF, as well as other organizations and companies. The idea of summer design camps was conceived and developed by Mr. Douglas Prime, a former middle and high school teacher who now works at UMass Lowell, supported by NSF.

This year, our AIAA section awarded three \$350 scholarships to students in the Flight School Design Camps. The Flight Schools teach students the principles of aeronautics and cover such topics as model airplane building, model rockets, balloons, etc. The Flight School Design Camps are under the supervision of Mr. Bill Bowen, who teaches 11<sup>th</sup> and 12<sup>th</sup> grade honors physics and advanced placement physics to students at Westford Academy. He is assisted by Ms. Diane MacDonald who teaches Technology and Engineering at the Guillmett School in Lawrence, MA. AIAA Scholarships were awarded to Juan Catano, Christopher Gomez, and Nikolas Emack-Bazelais. Other scholarships were awarded to Michael Azzi and Navarre Williams.

At the conclusion of the Flight Schools, Prof. Gene Niemi, the AIAA advisor at UMass Lowell, gave the students a tour of the ME Department's wind tunnels.



Shown from left to right are Bill Bowen, Chris Gomez, Juan Catano, and Diane MacDonal



Shown from left to right are Bill Bowen, Navarre Williams, and Gene Niemi

## Student Files Patent

On September 28, 2007 Rockwell International engineers and UML ME sophomore COOP student Shaun Hentchel filed a patent entitled "*Polarimetric Based Color Sensor*".

## Baseball Lab Featured

As the Red Sox swept to victory in the World Series the ME Department's Baseball Research Center was featured prominently on TV and in the national and local press.

Articles appeared in the Boston Globe and in a number of local newspapers. The Lab was also featured as a segment in the new PBS show "Wired Science". If you have seen this show you might have noticed that the UML logo appears both before and after the show. In an attempt to increase our national visibility the University has become an underwriter for this nation-wide science magazine.

The segment featuring the Baseball Research Center can be viewed at the following address.

[http://www.pbs.org/kcet/wiredscience/video/138-ball\\_busters.html](http://www.pbs.org/kcet/wiredscience/video/138-ball_busters.html)

## Recent Research Contracts

Prof. Avitabile has been awarded a \$99,809 contract from the US Army Aviation and Missile Command for research on "*System Modeling Approaches of Helicopter/Wing/Missile configurations*".

Prof. Sherwood has been awarded a \$10,000 contract from the All Japan Baseball Bat Industry Association for research on "*Collaborative International Research to Explore a Global Bat Performance Standard*".

Prof. Sun received a renewal and increase of his award from Northeastern University for research on "*Droplet-based Processing of Quasicrystalline Magnesium Alloys for the Production of High-Performance Particulate, Bulk, and Coating Materials*". The award was increased from \$37,702 to \$89,713.

Prof. Chen received a \$589,776 contract from the National Science Foundation for research on "*Industrial Safety of Nanoheaters*". Prof. Chen is Co-PI with Prof. Gu of Chemical Engineering.

Prof. Duffy received a renewal and increase of his award from the National Science Foundation for

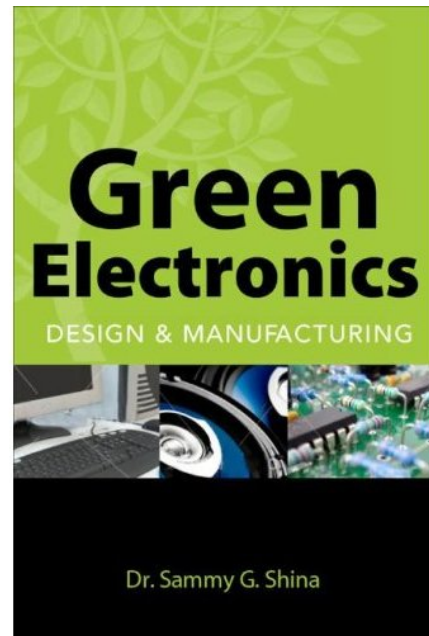
research on "*Service Learning Integrated throughout a college of engineering*". The award was increased from \$999,695 to \$1,036, 177.

Prof. Duffy received a \$17,500 contract from the National Collegiate Inventors & Innovators Alliance (NCIIA) for research on "*Microenterprise of Solar Water Purification Bottles with Dye Indicator*".

Prof. Shina received a \$25,000 contract from the US Environmental Protection Agency for research on "*New England Halogen Free Research Consortium Testing Project Long Term Reliability Study*".

## Shina on Sabbatical.

Prof. Sammy Shina of the ME department will be on Sabbatical for the Spring 2008 semester. He will be editing his new Green Electronics Design and Manufacturing Book to be published by McGraw Hill.



## Open House

Prof. McKelliget would like to express his thanks to the following students, staff, and faculty who helped to make our recent open house a success: Chris Warren, Krithika. Swaminathan, Jacqueline Pelealuw, Patrick Drane, Timothy Connolly, Glen Bousquet, Justin Massei, Juan Cabrera, Ellen Heirlein, Jacqueline Paradise, Keith Flynn, Faize Jamil, Emmanuelle Reynaud, Sammy Shina, peter avitabile, hongwei sun.