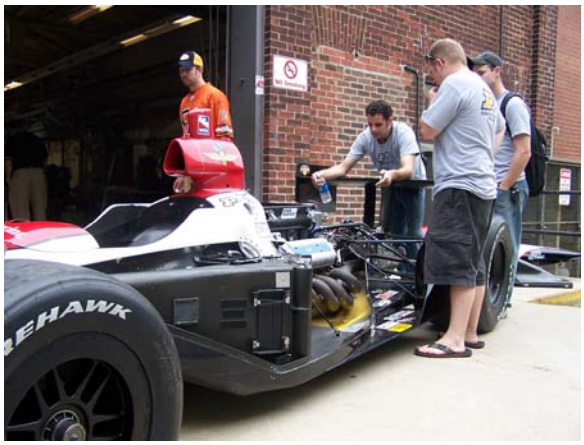
Purdue MET Department - Making an Exciting Tomorrow

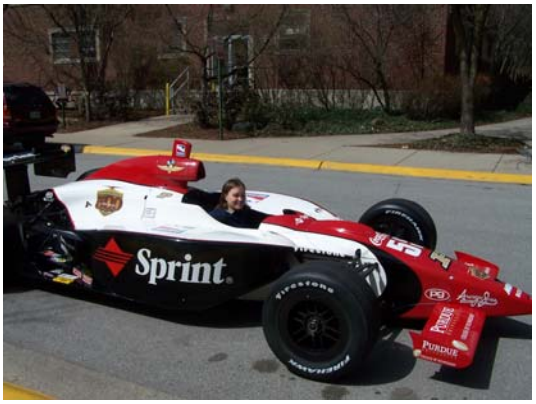
Dear MET/CIMT Graduates and Current Students,

It is the start of another exciting year in the department! Big news for our CIMT graduates is that the program is now officially named Manufacturing Engineering Technology to denote its long- standing accreditation as an engineering technology program and the broad coverage of the current high-technology manufacturing discipline. In August, we had our first graduate with the new degree name. Welcome MfET! We started the year off with our traditional Freshman Orientation on the Sunday before classes with introductions to our faculty, staff, and graduate students, a poker run to familiarize new students with our labs in Knoy Hall and Michael Golden Labs, and refreshments and social time. We had a great turnout with over 80 of our100 newly admitted MfET and MET students participating, and total fall enrollment is strong at 658 undergraduates in West Lafayette.



Spring Alumni Event

In late April, as a kick-off to spring fest, the department held an open-house for current students and alumni to showcase the Indy Car on loan to the department. For two weeks after the Distinguished Technology Alumni banquet, the department had the loan of an Indy car from Sinden Racing. The car was loaned to our motorsports course to give students access to a real car for study. Students pulled all the panels off and examined a real car that raced in 2003. We also used the car to promote the department during the senior picnic, the DTA banquet, and our own open house.



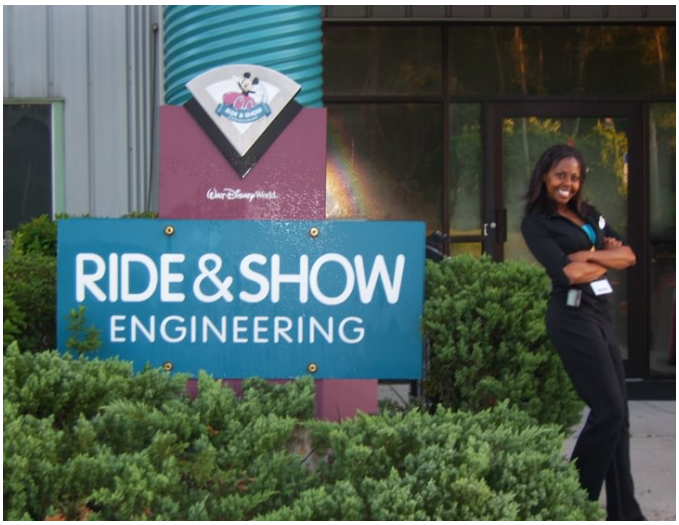
Distinguished Technology Alumni

The department chooses a distinguished alumnus/a each year to celebrate the accomplishments of graduates from our programs. This year, the department chose John Sofia (BS MET, 1984). John began his automotive career at the former Chrysler Corporation in 1984, as a college-student-in-training in the Stamping, Assembly & Diversified Operations Division. He progressed through a series of manufacturing/engineering positions including production supervisor, product/quality/process engineer, and engineering design team leader. Sofia joined American Axle and Manufacturing in March 1994 as area manager at Detroit Gear & Axle. He has served as manufacturing manager at Detroit Gear & Axle; manager of the Current Production & Process Engineering Group; director, Manufacturing Engineering; and plant manager, Detroit Forge. He was named director, Advanced Quality Planning in September 2002, became Vice President for Quality Assurance and Customer Satisfaction in October 2004, and was promoted to Vice President for Engineering and Product Development this summer.

Highlight on Students and Alumni

Tim Shinbara, Manufacturing Engineering Technology graduate student, has been working with Northrop Grumman on a number of projects and just completed his second summer internship in California. His projects have included implementing a Real-Time Locating System (RTLS) on the F-18 assembly line in El Segundo, a Bluetooth®-enabled, composite-sensitive proximity sensor, mitigation of galvanic corrosion on composite tooling, and a project to increase production support awareness of real-time performance within work stations by deploying text messaging, e-mail and visual queues on the assembly line. He is currently co-authoring a Defense Advanced Research Project

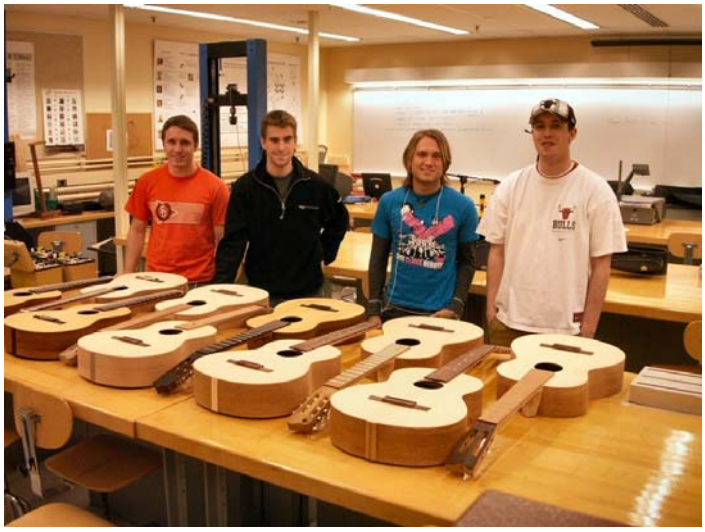
Agency (DARPA) proposal with his Northrop Grumman mentor Nick Bullen to research feasibility, development, and deployment of an Asset Ecosystem. Tim will be completing his MS degree in December.



MET junior Angel Price is well on her way to becoming an Imagineer™. Angel left for Orlando in January to spend this year interning for Walt Disney World Corporation, the first MET in the Disney Professional Engineering Internship program. Starting at Epcot Center, her assignments have involved a myriad of technology applications, from demonstrating a GFX heat exchanger that uses wastewater heat to increase water temperature to working with one of the world's largest animatronics, the Yeti at Expedition Everest at the Animal Kingdom. She says, "there is nothing like watching and learning how an attraction vehicle can go from 0 to 60, in just 3 seconds (Rock 'N' Roller Coaster), and can continue to work for millions of guests, 365 days a year. I was also amazed at how much I was prepared for this position thanks to Purdue. We really do go to a great school, and ALL of those labs are REALLY helpful in the long run. It's amazing what all I have learned so far, and I am that much more excited to see what I will learn next!"

MET Alumnus Robert A. Schuele, (BSMET 1986) died suddenly on April 20, 2006, at the young age of 41. Robert was the president and owner of Air Systems of Royal Oak, Michigan. He was an enthusiastic Boilermaker fan throughout his life and a proud MET alum. His family and friends have started a scholarship fund honoring his memory. You can send contributions to Robert A. Schuele Memorial Scholarship (Purdue Foundation), Purdue University Development Office - Alumni Center, 403 West Wood Street, West Lafayette, Indiana 47907-2007.

What's New in the Department?



The Spring 2006 semester saw the first offering of a course on the manufacture and testing of stringed instruments. Prof. Mark French has been working with stringed instruments and musical acoustics for more than 15 years and developed this class as a way of passing that experience on to MET students. A group of 12 students made classical guitars and performed dynamic tests on them as a way of quantifying the build variation. Making guitars is a lot of fun, but the guitars are really a way of introducing students to typical production problems. Their assigned tasks included design and fabrication of accurate fixtures, development of accurate mathematical descriptions of components, and planning of assembly processes that ensured their parts matched their drawings and fit on the instrument. Along the way, they also assembled and commissioned a CNC router and learned how to measure instrument resonant frequencies using a multi-channel data acquisition system. The class was taught in the ***M****echanical* ***E****ngineering* ***T****echnology* ***A****coustics* ***L****ab (METAL). Visit the lab web site at: www.metalsound.org.*

The department is playing a larger role in Purdue's healthcare improvement efforts. The Regenstrief Center for Healthcare Engineering is improving the efficiency, quality and accessibility of healthcare by tapping into expertise in engineering, science, management and social sciences. In the spring, MET Professor Henry Kraebber was named a Regenstrief Faculty Scholar to work with the center and the college to identify collaboration and research

opportunities. MET Professor Chris Corum has been leading a project with Sisters of St. Francis and IUPUI teaching healthcare professionals to apply lean and six-sigma principles. Her project started in the spring and will wrap up in December followed by a sabbatical to continue her research.

New Faculty and New Faculty Searches

Last year, the department conducted a successful search for a strategic hire in energy to build on our core strengths in energy and sustainability research and education. The department welcomes Dr. Satish Boregowda. Dr. Boregowda's interests include building environmental controls, environmental ergonomics, and sustainable engineering. This upcoming year, we intend to search for two new faculty members. One will be in the area of product realization and design to build on our core strengths in design innovation, CAD, design for manufacture, etc. The other position is targeted for engineering materials to add depth in our teaching and research potential in the broad area of materials technology.

New CNC Capability in the MGL Manufacturing Laboratory

Over the summer two new CNC milling machines were acquired from Hurco to directly support CIMT 342 (Advanced Manufacturing Processes and Practices) for the production of aluminum molds for use in plastic injection molding. MET 242 (Manufacturing Processes II) will use the machines for their intro CNC project, while CIMT 481 (Integration of Manufacturing Systems) will use these machines to assist in the production of fixtures and tooling for the CIMT Capstone project. In addition to supporting classes and class projects, these machines will assist the growing number of research and industry projects to produce various specialized apparatuses and fixtures. Simple pieces can be easily generated using a graphics based conversational language and more sophisticated parts can be programmed using more sophisticated CAM systems.

Call for Graduate Students

Our leadership in applied research is growing. For the academic year 2005-2006, the department led the College of Technology in sponsored program awards. Our faculty generated over $1.3M in external funding to conduct applied research into topics such as PLM education, healthcare applications of lean and six-sigma, machining studies on specialty steels and unleaded brass, RFID and RTLS technology, high-technology manufacturing, testing of energy recovery systems, and many others. As our research mission grows, we are looking for qualified and motivated graduate students to fill our available graduate teaching and research assistantships. If you have ever thought about returning to complete a master's degree or even a Ph. D., now might be the time. You can go on the COT website at www.tech.purdue.edu/academics/graduate/index.cfm for information and application materials. If you are looking for support, send me an email to discuss the opportunities in the department at ***jhartin@purdue.edu****.*

It is an exciting time now at Purdue, in the College of Technology, and in the Department of Mechanical Engineering Technology, and we hope to share it with you. Please tell me what you want to know and what you don't care about. I would like to be able to share stories from our alumni or our MET/MfET current students with you, so send along items of interest. We are always on the lookout for alumni who have distinguished themselves in their career, whether technical achievement or advancement into management. Please send nominations or leads to help us identify our next MET Distinguished Alumnus. We will be planning at least one yearly MET event for our alumni, current students, and faculty. Keep your eyes open for announcements for the spring.

John R. Hartin
MET Department Head
jhartin@purdue.edu

Be sure to keep your address and email address up to date with the Purdue Alumni Association. Visit their site at https://awc.alumni.purdue.edu and stay connected!