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The complete issue of the July 2008 Informer can be found at: http://www.csun.edu/~icostea/Costea/Activities/SME/InformerJuly2008.pdf.

The Manufacturing MSEM Department believes in manufacturing !!!
and in SME and WESTEC!!!
Two manufacturing "supermen" at CSUN:
Professor -Tarek Shraibati and Student - Dustin Halko.

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WESTEC the most important annual manufacturing event for the MSEM Department

The MSEM Department chose the SME WESTEC to be the most important event in which to participate annually. This is based on the faculty recognizing the fact that the Manufacturing Challenge Competition offers a unique opportunity which challenges the students to get a real life look at the actual manufacturing process. Since its inception the Manufacturing Systems Engineering and Management Department (founded in 2001) at California State University, Northridge has had a strong active involvement in WESTEC: students and faculty participated as volunteers, and faculty made presentations and organized technical sessions and conference tracks (Professors Bonita Campbell, Ileana Costea, and Ahmad Sarfaraz). The department also contributed to the SME Manufacturing Challenge competitions for years by sending its senior design teams (supervised by professor Tarek Shraibati) and various faculty as jurors (Ileana Costea, and Tarek Shraibati). However, this year is the department's success year: the CSUN team won 2nd prize in the Manufacturing Challenge Competition and the team's senior design leader, Dustin Halko, received the William B. Johnson Leadership award.

CSUN MSEM senior students, (l-r) Brian Dickenson and Dustin Halko holding the William B. Johnson Award WESTEC 2008, Los Angeles, CA

The winning team consists of the students currently taking the MSE488 Senior Design course (Instructor: Tarek Shraibati): Jairo Diaz, Brian Edward Dickenson, Varooj Essaian, Malvinder Singh Gill, Dustin Daniel Halko, Jose Rafael Rosales Paez, and Hatice Esra Sanli. Dustin is an older re-entry student, whose passion is manufacturing. He spent some years in the military, and has worked for a company that makes custom engines for motorcycles. This year's CSUN team's project was an "Infinitely Variable Transmission System" for an electric motor.

Asked why he believes the MSEM team might have won the competition this year, Professor Tarek Shraibati said: "The MSE senior design class used a classic project management approach to get the work done. They identified the parts that had to be made, created a work break-down structure, and assigned out tasks to group members based on their capabilities." The project was an assembly of 40 parts of which 20 were created by the team in the CSUN Manufacturing lab on CNC machines, a Haas TMI, a Fadal 3020 (brought by Professor Costea as a donation by Fadal Inc. in 2000), and a Gildemeister CNC lathe (donated by Nokia two years ago). At the question: Why the need for so many pieces of equipment to create the part which helped in winning the competition? Professor Shraibati answered: "Because there were so many parts needed to be fabricated, the nature of the design required lots of very tight tolerancing, and each machine is more appropriate to making certain parts. This gave the students the opportunity to learn from doing and they finally became more proficient at using a CNC machine."

The project presented at the Manufacturing Challenge Competition is a natural for the MSEM department. It represents advanced work for a potential prototype for a robot drive system. Robots are the "soul" of the manufacturing endeavors at CSUN, and robots (large and small) make Tarek Shraibati the MSEM faculty "superman."

Robots, robots everywhere for the CSUN MSEM Department, with the faculty superman Tarek Shraibati.

Big robots: FIRST ROBOTICS Competition

Tarek Shraibati is on the Los Angeles Regional Organizing Committee for the First Robotics Challenge annual competition. He has been involved with the First Robotics Competition since 2000. Throughout the years the MSEM Department sponsored Louisville (an all girl high school) and Granada High School. This year both High Schools won various awards at the regional level, "Industrial Safety," and "Sportsmanship," and advanced to the "playoffs," stage following the "seating rounds," in Las Vegas, San Diego, and Los Angeles.

Small robots: VEX Competition

Between May 1-3, 2008, the VEX Robotics competition took placed at CSUN. It was organized by Tarek Shraibati and had the participation of 91 high and middle school teams from 9 countries. It is the first ever world-wide VEX competition. The competition started in Korea, and its sponsors include NASA, The Future Foundation, Autodesk, Inc., and CSUN. *(Continued on Page 15)*

During the days of the competition, CSUN was in lights of the TV News for this event, which was presented by *ABC, Eyewitness News*, Los Angeles, *MESA 4 NEWS*, *KTLA Prime News*, and *FOX 11 News* (You can see the clips at http://www.ecs.csun.edu/ecsdean/vex.html).
Several events were hosted at CSUN for local schools: the Off-season competition or the FRC (big robot) and the FYC (smaller robot) for which the same Tarek Shraibati is the LA regional affiliate and has run this program since 2006.
Teaching robotics to High School students: MSE101 Introduction to Engineering This course is part of the CSUN ACCESS Program which encourages young people to go into engineering schools. CSUN started the program two years ago. This year there are 11 high schools who participate in the program and it is estimated that 100 high school students will take the course. The HS students will take the same CSUN on-line lecture part, and the lab course will be taken at CSUN by CSUN students while HS teachers and adjunct faculty will be hired to facilitate the lab work at the home schools.

When nine Pierce College students entered a manufacturing trade show contest Monday, they didn't just come up with a better mousetrap.
They submitted a simpler mechanical gumball machine.
"It's something that kids will enjoy," said Ryan Smetzer, 20, of Thousand Oaks, demonstrating the gumball marvel made of billet aluminum and topped with a Jack in the Box antenna ball with antlers.
"I think it could be the new design for the 21st century."
The 22nd Westec Manufacturing Challenge by the Society of Manufacturing Engineers drew 11 college teams of would-be engineers and machinists from throughout the region.
Held at the Los Angeles Convention Center during the nation's largest manufacturing trade show, which runs through Thursday, the contest gave students a chance to strut their mechanical stuff.
A better Baja sand racer. A sleek electrical turbine. A bicycle-driven ambulance. A bike-driven emergency generator from off-the-shelf parts. A transmission made for robots. A radio-controlled boat that can electrocute fish.
There was even a one-man tank with Caterpillar treads.
All were proudly on display as stern-faced judges scrutinized for the best designs.
At the end of the day, California State University, Chico, won the grand prize for its Baja sand racer.
Pierce College placed third in the two-year college category. California State University, Northridge, placed second in the four-year college category.