Queen to Address One of Lawrence Tech’s Largest Graduating Classes

By Bruce Annett, Executive Director
Marketing and Public Affairs

Lawrence Tech’s 2007 graduating class is one of its largest ever, and includes some 970 graduates receiving associate, bachelor’s, master’s and doctoral degrees. As many as 6,000 are expected to attend the 75th Commencement on May 20 at 2 p.m. at Cobo Arena in Detroit.

A brunch on campus will precede the ceremonies.

James E. Queen, group vice president for global engineering at General Motors Corp., will present the commencement address and receive a doctor of engineering degree, honoris causa.

Two accomplished alumni will receive Lawrence Tech alumni achievement awards. Rosemary K. Bayer, MBA’03, is business manager for Sun Microsystems’ General Motors Global Account, where she leads a team spread across 16 countries. That team has delivered nearly 150 percent annual growth in global sales and annual improvements in customer satisfaction scores. She also provides leadership for Sun’s service and technical teams, sparking innovations in GM products and services while reducing costs.

Bayer is a founder of the Michigan Council of Women in Technology (MCWT) and is president of the MCWT Foundation, which provides inspiration and pragmatic support to technologically oriented girls and women.

She was named one of the Top Michigan (continued on page 6)

Lawrence Tech Students Design Luxury Doghouse

By Eric Pope
Tech News Editor

Engineering technology students in Kenneth Cook’s capstone senior projects class have come up with the perfect gift for the pampered pet – a dog house with heating and air conditioning, video monitoring, an automatic door and other features that can be added.

Each year student teams in Cook’s class conceive, research, design, manufacture, and market inventive products.

This year’s product lineup – which was on display at Open House on April 28 -- includes a ventilated seat cushion for children’s car seats, a laser stud finder for hanging drywall, a lighted mailbox, an automobile mirror that eliminates a driver’s blind spot, a universal umbrella holder, a radio and/or music system for golfers, and lightweight, interlocking forms for pouring concrete walls.

While they aren’t giving up their day jobs just yet, the doghouse designers think they have identified a profitable niche in the upper (continued on page 11)
Marburgers Add Fourth Annual Award

By Eric Pope
Tech News Editor

President Emeritus Richard Marburger and his wife Mary have added a new achievement award to the annual awards that were presented to an outstanding member of the faculty, staff, and administration at a May 1 ceremony in the faculty dining area.

C.J. Chung, associate professor of computer science, was the first recipient of the Mary E. and Richard E. Marburger Distinguished Achievement Award: The Champion for Institutional Excellence and Preeminence.

He joined this year’s winners of the Mary E. and Richard E. Marburger Excellence in Achievement Awards:

- Staff person of the year: Dawn Andrews, Admissions
- Faculty member of the year: Philip Plowright, assistant professor of architecture; and Lewis Frasch, associate dean of the College of Engineering.

Plowright, College of Architecture and Design

- Administrator of the year: Lewis Frasch, College of Engineering

All four winners received a $1,000 honorarium along with a certificate presented by President Lewis N. Walker.

In addition to teaching computer science, Chung has developed the Robofest World Championships into a learning experience that has brought Lawrence Tech to the attention of thousands of students in grades 5-12 who are interested in computers.

Chung also has developed team activities for Lawrence Tech students such as AIBO robot dogs and the H2Bot. Last year he developed a Robot Thanksgiving Parade to capitalize on a longstanding tradition in the Detroit area.

Plowright, an assistant professor, teaches design studio and graduate theory courses, in addition to many other academic activities. He was nominated by several students. “Every day I walk in his class I know I’m going to learn something important, whether about architecture, being a professional, or life!” one student wrote.

Plowright is currently the faculty lead for Team ALOeTERRA, which is representing Lawrence Tech in the Solar Decathlon competition to design and build a self-sufficient, solar-powered home. He also leads the Architecture Study Abroad program and will accompany students to Paris in June.

Frasch won the administrator’s award after taking on the role of associate dean at the beginning of the 2006-2007 academic year. He had some big shoes to fill following the retirement of longtime associate dean, Richard Maslowski.

“Professor Frasch provided leadership and a smooth transition from Dean Mas,” one faculty member wrote in nominating Frasch. “His dedication to learning the roles and responsibilities of his new position led to continued service to the faculty and students with no interruptions.”

Andrews, the graduate applications specialist in the admissions office, received the most nominations this year – almost all from students.

“She is a hard-working, cooperative and kind-hearted lady [and] she knows everything about admissions,” one student wrote. “Because of her politeness and cooperation, there is rapid change in the admissions of international students.”

One professor noted that many students she knows have thanked Andrews for making the trip from faraway countries like Ghana, China, India, and Nepal less overwhelming.

Have a Great Summer!
Look for our next issue on Aug. 29
The A. Alfred Taubman Student Services Center was one of three educational buildings recognized for excellence in architecture at the annual awards ceremony of the Michigan chapter of the American Institute of Architects (AIA).

Lawrence Tech alumnus and adjunct faculty member Arthur F. Smith, who designed the Taubman Center for Harley Ellis Devereaux of Southfield, won the Robert F. Hastings Award for outstanding contributions to the profession.

Victor Saroki & Associates of Birmingham won the Architecture Firm Award for distinguished architecture for at least 10 years. Saroki is an alumnus.

JPRA of Farmington Hills was named the Intern Development Program firm of the year. The firm’s chairman is Lawrence Tech alumnus Jim Ryan.

Another Lawrence Tech alumnus, Paul G. Johnson, became an AIA fellow at the AIA’s 2007 National Convention and Design Expo held in San Antonio. He is a member of SmithGroup Inc.'s Building Technology Studio in Detroit.

Several other Lawrence Tech alumni also were recognized by AIA Michigan this year.

Lawrence Tech Assistant Professor Donald Carpenter of the Civil Engineering Department is one of three principal investigators for an $850,000, four-year study of ethics education for engineering undergraduate students, funded by the National Science Foundation.

The groundbreaking study will pair engineering faculty with moral development specialists to help determine how to improve the ethical decision-making capabilities of engineering undergraduates by assessing curricular and extracurricular activities that relate to ethics.

The study’s other principal investigators are from the University of Michigan and California Polytechnic-San Luis Obispo.

The study will include site visits to 20 institutions that offer engineering degrees to interview students, faculty and administrators. Those institutions range from private specialty schools to large public research universities. By the end of the project, more than 4,000 students and 150 faculty/administrators will be surveyed to assess the impact of various inputs on ethical development.

The study group will identify what academic factors have the most positive impact on ethical development, and then promote the development of best practices through a series of workshops.

According to Carpenter, the study was motivated by national research over the past 40 years showing higher levels of academic dishonesty and cheating in undergraduate engineering than in almost all other disciplines.

“Students who cheat in college are more likely to make unethical decisions as professionals,” Carpenter said. “Affecting the decision-making process of engineering students will have a positive impact on the integrity of professionals.”

Engineering programs have an obligation to address ethical issues, according to Lawrence Tech President Lewis N. Walker.

“A firm understanding of ethics and professional responsibility is essential for engineers in order to ensure public safety and protect the public good,” Walker said. “Incorporating ethical decision-making skills into our students’ education will positively impact the future of business and commerce in our country.”

More information about the study can be found at www.engin.umich.edu/research/e3/.

For information on the National Science Foundation, see www.nsf.gov.
Minakhi Jena, an administrative assistant for student relations in the College of Management, has been named staff member of the month for April by the Lawrence Tech Staff Recognition Committee.

Since 2005 Jena has performed a number of tasks associated with recruiting applicants and helping them through the application process.

According to the co-worker who nominated her for the award, Jena has established a more effective process for managing relationships with potential students and has made the application process easier.

“She has distinguished herself as a reliable source of helpful information for applicants and matriculating students alike. … Her quiet yet friendly manner makes her a joy to work with. … We would be lost without her.”

Jena, who has held administrative positions at other universities including Yale, said she enjoys working with the College of Management’s small staff because it is like a “close-knit family” working toward one goal — providing the best education to nontraditional students.

“I enjoy communicating with students and solving their problems and helping them reach their educational goals,” Jena said.

The other nominees for April were Alice McHard of the College of Architecture and Design and Wenping Bo of the College of Management.

The Lawrence Tech Staff Recognition committee will name its next staff member of the month in October. The nomination form can be found online at www.ltu.edu/facultyan-dstaff/staff_senate.asp.

Adam Dumas
Vice President of Communications
Sigma Phi Epsilon Fraternity

As the year winds to a close, the Sigma Phi Epsilon fraternity is grateful to reflect upon a very successful and exciting year.

SigEp congratulates the eight Lawrence Tech students who were awarded membership during the spring semester, and two more students who will hopefully be accepted by the end of the spring semester.

Three brothers of Sigma Phi Epsilon won three positions on the executive board of the Inter Fraternal Council. The chapter sent 10 leaders to the Kentucky Carlson Leadership Academy, and this summer is sending two outstanding leaders, Vince Daniele and Lee Bunting, free of charge, to Conclave, a week-long national leadership conference in Atlanta.

The Volleyball Blast fund-raiser held at the Don Ridler Field House in March brought in about $3,000, the most money that Sigma Phi Epsilon has ever donated to YouthAIDS. Last year, the SigEps at LTU raised the most money for charity out of all the SigEp chapters in the Midwest. By surpassing last year’s total donations mark, SigEp hopes to repeat that honor this year.

SigEp won the Greek Week and Greek Day competitions at Lawrence Tech this year. The fraternity came together to elect Lee Bunting and Aaron Richard as coaches for this year’s competition. They put forth their efforts to organize time trials and practice dates, and delegate who was doing which event.

Throughout Greek Week, SigEp won the Egg Toss competition, and then took third in the Home Run Derby and in the Song and Skit Competition. When Greek Day came, our coaches motivated the group to be very competitive in some events and dominate other events. Through sacrifice, practice, and great organization, Sigma Phi Epsilon took home the trophy in respectable fashion.

Now, not only is Sigma Phi Epsilon one of the largest fraternities on campus with one of the highest average GPA’s, but is arguably the most athletic fraternity on campus!

Sigma Phi Epsilon offers generous scholarships to incoming freshmen who exhibit outstanding academic records, leadership experience, and service throughout high school.

The brothers will be accepting applications, traveling to interviews, hosting events and going to Tigers baseball games with some of the incoming freshmen in order to make their transition to LTU, both financially and personally, a little smoother.

The SigEp chapter is very happy to give back to the community, see all its hard work paying off, and looks forward to a bright future of growth and development ahead.
Fraternities and Sororities Celebrate Greek Week 2007

By Brian Eady, President
Inter Fraternal Council

On Saturday, April 14, the Lawrence Tech Greek community concluded its Greek Week 2007 celebration with the annual Greek Day competition.

While the Greek Day activities included several silly events such as a tricycle race, three-legged race, and the tug-of-war, the overall premise of the day was to provide a forum for fraternities and sororities to celebrate brotherhood and sisterhood, inter-fraternalism, and the completion of another successful year for Greek life in general.

Congratulations to Sigma Phi Epsilon Fraternity and Delta Tau Sigma Sorority that walked away as the champions of Greek Day. Also, a very special thank you goes out to Sigma Pi for providing lunch with its annual Pig Roast and to the people who helped make the day fun and exciting for all.

To find out more about Greek life, visit the “Greek Life” section on the Lawrence Tech web site, www.ltu.edu/student_affairs/greek.asp.

Fraternity Honors Virginia Tech Victims With Black Lantern Processional

By Andrew Faust, Editor
Alpha Sigma Phi

On April 19, the Gamma Psi chapter of Alpha Sigma Phi Fraternity at Lawrence Technological University held a Black Lantern ceremony in memory and honor of the victims of the Virginia Tech tragedy.

The Black Lantern processional is one of the oldest traditions of Alpha Sigma Phi that dates back to the Alpha Chapter at Yale University. In this ceremony all of the brothers in the fraternity are dressed in black robes with hoods up, marching in single file. Led by the marshal dressed in white, each brother carries a black lantern with a single flame. The procession marches in silence as a memorial for those brothers who have passed this world and have entered the Omega Chapter. This act signifies that, although these members are no longer present, their spirit remains forever in the minds of the brothers.

New members of Alpha Sigma Phi painted the spirit rock the previous week in memory and honor of the students lost. The procession started from the painted spirit rock and slowly moved through the quad, culminating in front of the Elliott Fountain with a formation in the shape of an Omega. Many students congregated by the misting fountain rock to show their support for the deceased and their families.

During the ceremony, the Alpha Sigs inducted the victims into the fraternity as honorary members, then proceeded to read aloud the name of each of the 32 victims, lighting a candle for each. Prayers were said, followed by a short silence to reflect on the recent events.

The tragedy at Virginia Tech has moved our nation as a whole, in response to this shocking event, it is up to the smaller communities to join together to console one another. In the words of Aristotle, “Evil brings men together.”

SUMMER PRACTICE SCHEDULE

MAY 13, 27 10AM- 11:30AM
JUNE 10, 24 6PM - 7:30PM
JULY 8, 22 6PM - 7:30PM
AUGUST 5, 19 6PM - 7:30PM

All practices will be held at the Arctic Edge in Canton. The arena is located at 46615 Michigan Ave., Canton, MI 48188.

The Rink is approximately three miles west of I-275 on the south side of the street.

RETURNING PLAYERS, $10 PER SKATE
NONRETURNING PLAYERS, $15 PER SKATE

Please contact Coach Kevin Gee for details at ltucoach@yahoo.com or 313-624-6177.

The brothers and sisters of Lawrence Tech’s fraternities and sororities came together for friendly competition and collegiality on Greek Day, April 14, the culmination of a week of Greek activities on campus.
Student Government Leaders Elected

At its April 3 meeting, the Faculty Senate reelected the following officers for the 2007-2008 academic year:

- Ghassan Azar (Math/Computer Science), chair.
- Steven Rost (Architecture), vice chair.
- Harold Hotelling (HSSC), secretary/parliamentarian.
- Srikant Raghavan (Management), treasurer.

The Faculty Senate is chartered by the Trustees “to represent and promote faculty aims for the purpose of furthering academic excellence” and meets biweekly during the academic year to review academic programs and policies, respond to faculty concerns, and consult with the University administration as part of the overall governance of Lawrence Tech. All faculty can read the Senate’s minutes on the Faculty Senate Blackboard site, and are encouraged to attend the all-faculty meeting held each semester by the Senate.

Commencement: One of the Largest Ever

(continued from page 1)

Women in Computing in 2003 and is a frequent speaker on mentoring as a way to develop and encourage younger professional women. She holds a bachelor of science degree in computer science and math from Central Michigan University and an MBA with distinction from Lawrence Tech.

John J. Sammut, BSEE, BSBA ’88, has served as president and CEO of Electronic Product Integration Corporation (EPIC) since 1999.

EPIC provides world-class, high-quality electronic manufacturing systems to original equipment manufacturers (OEMs) in the industrial control, automotive, medical, computer, and telecommunication industries. The firm is based in Rochester Hills and has manufacturing facilities in Ohio, Tennessee and Mexico, as well as a distribution center in Texas.

In 2006, Sammut received the Ernst & Young Technology Entrepreneur of the Year Award for the Central Great Lakes Region.

In addition to his dual degrees from Lawrence Tech in electrical engineering and business administration, Sammut holds an MBA from the European Institute of International Business.

Sammut served as president of the Eta Kappa Nu honor society at Lawrence Tech and received the University’s Outstanding Student Award. He formerly served on the board of Lawrence Tech’s National Alumni Association.

A scholarship recipient, Sammut has been generous to his alma mater in a number of ways. Most recently, he and his wife, Carol, endowed the Phi Kappa Upsilon Scholarship and funded the John and Carol Sammut Office of Financial Aid in Lawrence Tech’s A. Alfred Taubman Student Services Center.

James E. Queen, a Lawrence Tech trustee, was named GM’s group vice president of global engineering on April 1. Queen continues to lead GM’s vehicle engineering operations worldwide as he has done since 2005. He had been vice president of GM North America Engineering since 2001.

He has been passionate and instrumental in leading GM’s vehicle engineering team and transforming its operations into a truly global organization. Queen began his career with General Motors in 1977 as a salaried employee-in-training with the Buick Division.

An Ohio native, he earned a bachelor’s degree in aeronautical and aerospace engineering at the U.S. Naval Academy in 1971. He served as a Marine aviator 1971-77 and graduated from the Navy Fighter Weapons School, also known as “Top Gun.” It was there that he developed his “need for speed,” which is evident today in his strategy to develop more compelling GM vehicles at a much faster rate than ever before.

Queen also participated in the Amos Tuck Executive Development Program at Dartmouth College in 1990. He is the automotive chair for the Juvenile Diabetes Research Foundation's Walk to Cure Diabetes. He is the leadership liaison for GM's Asian/Indian Affinity Group.
We live here. We work here. We’re here to stay.
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Picture an Army convoy of 20 trucks traveling along a road that snakes through a mountain pass in Afghanistan. Except for the lead vehicle, all the truck cabs are empty. The other 19 unmanned vehicles respond automatically to the road conditions and commands from the first vehicle.

That's the type of project that students examine in the new master of science degree program in mechatronic systems engineering (MSMSE) at Lawrence Technological University.

In order to accomplish such a complex task, the mechanical engineering involved in operating a vehicle must be combined with the programming of electrical and computing engineering and computer science. Integrating the requirements of different disciplines has always been a big challenge for engineers.

Mechatronics employs a different approach that cuts across multiple academic disciplines. An engineer skilled in mechatronics can create a seamless and unified system for a specific project that encompasses the principles of the different disciplines involved while at the same time fulfilling the specific requirements of each.

According to Vladimir Vantsevich, director of the master's degree program, mechanical engineers trained in mechatronic systems also develop an understanding of electrical and computer engineering. “It’s like getting two engineers for the price of one,” he said.

Lawrence Tech's mechatronics program is the first in Michigan and one of only a few in the entire country. In Europe and Asia, many universities have had mechatronics degree programs in place for several years.

“This is a new strategic direction for Lawrence Tech,” said Laird Johnston, dean of the College of Engineering. “Mechatronics has become such an important field that all mechanical, electrical and computer engineers should be exposed to it.”

Mechatronic systems have applications in aviation, space, industrial robotics and military transportation, in addition to the auto industry. Graduates will be able to apply their knowledge to fields as varied as biomedical engineering, material processing and media communications.

Instruction in mechatronics at Lawrence Tech began in fall 2006 with two graduate-level courses on analytical and adaptive dynamics and modern control systems. Courses for the two-year master’s degree program are scheduled in the evening to accommodate practicing engineers.

Nineteen graduate students took mechatronics courses in the spring term, and another 10 have signed up to join the program.

An introductory course in mechatronics at the undergraduate level was introduced in the spring, and it will become a requirement for a bachelor’s degree in mechanical engineering.

Vantsevich is a professor of engineering who earned his doctorate in automotive engineering from the Belarusian Polytechnic Institute in his native country. He had almost 30 years of experience in designing vehicle driveline systems and automatic control of vehicle dynamics and performance before joining the Lawrence Tech faculty in 2001.

His personal contacts have opened up opportunities for collaboration with European universities and companies that have been working in the field for years. Lawrence Tech has started research exchanges with Bauman Moscow State Technical University, Moscow-based NAMI-Service and the National Academy of Science in Belarus. A collaborative agreement is in the works in the United Kingdom.

The Lawrence Tech program has benefited from an advisory board of more than 20 engineers and executives who provide the perspective of industry, professional societies and government agencies such as the U.S. Army’s Research Development and Engineering Command (RDECOM) in Warren.

The Big Three U.S. automakers are represented on the board, along with Toyota Technical Center USA Inc., Johnson Controls Inc. and Eaton Corp.

Lawrence Tech has built a mechatronics laboratory with equipment valued at $460,000, primarily through the support of members of...
Summer Camp Lineup Now Includes Auto Design

Lawrence Technological University will offer nine summer camps for high school juniors and seniors on topics ranging from automotive design to criminal investigation forensics.

All the enrichment camps will be held in college classrooms and laboratories on Lawrence Tech’s Southfield campus.

The first automotive design summer camp will be held 8:30 a.m. to 5 p.m. Monday through Friday, June 25-29. The cost is $200, or $350 for students who live on campus for the week.

This camp is a great opportunity for creative and talented students possessing drawing skills and a passion for styling cars in a highly competitive environment. Participants will be exposed to the design and development of concept cars resulting in ideation sketches and scale models. Professional demonstrations along with individual evaluations will be conducted.

The camp will be run by Vance Hanna and Keith Nagara, practicing automotive designers who are the co-directors of Lawrence Tech’s new bachelor of science degree program in transportation design.

“Top Camp” designers can receive scholarships for the transportation design degree program.

Hanna and Nagara have worked with industry leaders to create the bachelor’s degree program that combines design skills with knowledge of the technological issues involved in the manufacturing process. The goal is to educate designers who know how to communicate with engineers.

The summer camp provides a head start for high school juniors and seniors who are interested in this field.

Most of the other summer camps at Lawrence Tech run Monday through Thursday. Except where otherwise noted, the camps listed below cost $125 and run on a daily schedule of 9 a.m. to 3 p.m.

Biomedical Engineering Camp, June 18-21
Features roles played by biomedical engineers in improving the practice of medicine. Team projects acquaint students with basic engineering design tools and instrumentation used in medical settings.

Forensic Summer Science Institute, June 25 - July 3
Uses state-of-the-art lab equipment to explore DNA fingerprinting, drug testing, hair and fiber analysis, ballistics and gunshot residue, blood detection (with fluorescence analysis) and more. Hours are 8:30 a.m. – 3:30 p.m.

Alternative Energy & Power Generation Camp, July 9-12
Working in small groups, students receive an overview of alternative energy technologies – fuel cell, photovoltaic, biomass and passive solar energy – and learn about data collection.

Entrepreneur Discovery BizCamp, July 16-27
An overview of entrepreneurship and the challenges and rewards of running a business. The camp uses a textbook and incorporates hands-on experiences and a business plan competition. This camp costs $400, and hours are 9 a.m. – 4 p.m.

Autonomous Robotics Camp, July 23-26
Students assemble L2Bot, Lawrence Tech’s laptop robot with a webcam. Basic concepts are explored in autonomous robotics, including image processing, computer vision, speech synthesis and speech recognition.

Telecommunications/Communications Systems Camp, July 23-26
Students construct and create hands-on applications for their own satellite dishes, radio transmitters, computer network interface devices, serial communication programs, internet communications systems and telephone networks.

Gaming Camp, July 23-26
Students learn about developing video games and create their own mini-game portfolio. Includes 3D graphics production, modeling, texturing and animating.

Biotechnology Camp, July 23-26
In a research lab setting, students observe bacteria and viruses, grow mammalian cells and identify clone genes. They perform experiments and pursue their own research projects.

For registration information, contact Lisa Kujawa, Lawrence Tech’s assistant provost for enrollment, at kujawa@ltu.edu

A registration form that can be faxed in can be downloaded at www.ltu.edu/community_k12/summer_camps_07.asp.
NextEnergy CEO Jim Croce Wins Leader and Innovator Award

NextEnergy CEO Jim Croce was named Grant Thornton Leader and Innovator of the Year at the annual awards program held at Lawrence Tech April 27.

Lawrence Tech and WWJ Newsradio 950 are co-sponsors with accounting firm Grant Thornton LLP of the award program that recognizes outstanding leadership and innovation at Michigan companies, community organizations and enterprises.

Croce was chosen from among 47 award nominees profiled weekly on WWJ's Great Lakes IT Report since March 2006. Eleanor Josaitis of Focus: HOPE, winner of the initial Leader and Innovator of the Year award last year, presented this year's award.

Detroit-based NextEnergy, a nonprofit, 501(c) (3) organization, was founded in 2002 and capitalized with a $30 million seed grant from the Michigan Economic Development Corporation. One of its goals is to implement an economic development strategy for Michigan to accelerate research, development and manufacturing of alternative energy technologies.

Croce, a veteran of DTE Energy’s alternative energy efforts, has led NextEnergy in the past few years to a nationally prominent position in the alternative energy field. The NextEnergy Center is home to emerging alternative energy companies, and the center is the site of frequent seminars and other events advancing the cause of renewable energy sources.

“Jim Croce and NextEnergy are helping build the foundation of Michigan's new economy,” said Lawrence Tech President Lewis N. Walker. “During these times of change, many leaders and innovators are taking steps that will lead to future growth. Lawrence Tech welcomes this opportunity to join Grant Thornton and WWJ in bringing attention to what is right about Michigan's economy.”

Anyone can make nominations for future Leader & Innovator award honorees by going to www.ltu.edu/leaders.

Give Hunger the Boot

Lawrence Tech student Maria Egova (L) holds the model that students of Professor Tom Regenbogan’s sculpture class used to plan out a massive array of tuna fish cans on display in the Taubman Center during the April 28 Open House. Gleaners, a Detroit food bank, supplied 6,000 12-oz. cans that the students turned into a sculpture of a boot six feet high and nine feet long. “And Give It The Boot” was a service learning project intended to publicize the need to do more to fight hunger in this country.
Mechatronics: New Approach to Engineering

(continued from page 8)

the industry advisory board. Major pieces of equipment have come from KUKA Robotics, a German company with facilities in Clinton Township; software developer dSPACE of Novi; National Instruments, which has a sales office in Livonia; Kistler USA, which has a sales and application office in Farmington Hills; and Festo.

Technicians Lee Kesh and Mark Schmidt helped construct the lab.

“Mechatronics is something that you can’t teach with just chalk and a board,” Vantsevich said. “In addition to the analytical skills, students need hands-on experience with how complex algorithms translate into action for a robotic machine.”

Using both software and hardware from National Instruments prepares students for the real world, and the LabVIEW platform allows students to concentrate on mechatronic concepts rather than changing tool chains for design, prototyping and hardware “in the loop,” according to Becky Linton, a National Instruments field sales representative for Michigan.

“Mechatronics systems are simply the evolution of engineering,” Linton said.

Over the past several years Kistler USA has worked with Vantsevich on several projects involving the principles of mechatronic systems.

“The master of science degree in mechatronics systems engineering offered at Lawrence Tech is distinct from other engineering degree programs and is especially useful for engineers who want to improve their knowledge in interdisciplinary science and high-technology areas,” said John Kubler, corporate development manager of Kistler USA, a subsidiary of a Swiss company.

To take full advantage of having equipment that is currently used by industry, Lawrence Tech has signed up three adjunct professors who are engineers at companies where the lab equipment is used. Vantsevich has instituted the unusual approach of having industry professionals address as many as 10 topics spread across several courses.

Because the laboratory reflects current practices in industry, Lawrence Tech students gain experience with sophisticated equipment that they can expect to use when they graduate and get jobs in this fast-growing area of engineering.

Another asset for the new degree program is the four-wheel-drive (4WD) vehicle chassis dynamometer that is part of the Automotive Engineering Institute at Lawrence Tech. Vantsevich utilizes the equipment for testing mechatronic driveline systems and for teaching about test-instrumentation and measurement systems.

The dynamometer also will be used for testing mechatronic systems that students are helping to develop for driverless vehicles in military convoys.

Luxury Doghouse: Engineering Technology Project

(continued from page 1)

end of the seemingly inexhaustible market for dog products. Steve Byrd of Plymouth, Tom Castle of Chesterfield, Robert Goldsworthy of Troy and Blair Teeple of Royal Oak have set up a new company, Pet Dimensions Inc., to market their luxury dog house.

They expect to charge about $1,000 for the “Pooch Palace.” Their marketing study showed that some dog owners are willing to spend about that amount for a customized dog house.

Extra features like lighting and automatic food and water dispensers would cost extra. Two smaller versions of the luxury dog house would cost less.

“This is a high-end dog house, and the students found that there’s nothing like it on the market,” Cook said.

Cook is a registered professional engineer and a certified clinical engineer who holds 25 patents. Over the years his students have been granted more than a dozen patents.

The four students who have formed Pet Dimensions Inc. bring together knowledge of electrical engineering, mechanical engineering, manufacturing, construction management and architecture. When Teeple worked in a pet shop for several years, customers often asked her about special features for dog houses.

“Many people think of their dogs as members of the family,” Teeple said. “When we did our marketing study, these were features people were interested in seeing.”

Some manufacturers offer miniature air conditioning/heating units to hook up to dog houses, but this could be the first dog house on the market that has a built-in heating-and-cooling system using thermoelectric heat transfer. The solid-state, all-electric system is environmentally friendly, and the door that closes automatically also helps conserve energy.

The house can maintain a temperature of 60 degrees whether it’s 85 or 20 degrees outside. All the pet owner has to do is switch the system between heating and cooling as the seasons change. The controls are covered so that the occupant can’t fiddle with the settings.

The well-designed structure with wood siding and cedar trim has a hinged roof that provides easy access to the carpeted living compartment that is about four feet by four feet. Outside a ramp leads up to a roof-top deck.

There are infrared, wireless video cameras with microphones mounted inside and outside so that the owner can check up on the dog’s food consumption and also on what is happening in the backyard.

RefWorks Basics

Lawrence Tech’s library is offering three training sessions for RefWorks, a web-based bibliographic/citation manager that helps organize references, create footnotes and generate bibliographies in the appropriate style.

RefWorks Basics will be held as follows:

- Faculty, May 17, 2:30-3:30 p.m.
- Everyone, May 18, 3:30-4:30 p.m.
- Students, May 22, 2-3 p.m.

Sign up through the Library home page. Please direct questions to refdesk@ltu.edu.