

Lawrence Tech[®]

LAWRENCE TECHNOLOGICAL UNIVERSITY MAGAZINE | Winter 2012/13



Abyl 80: Homecoming, Moudgil inauguration, highlight start of LTU's 80th year

New dean's ambitious agenda for College of Management | LTU basketball bounces back
Architectural engineering grads building bright future | NASA intern works on supersonic flight
Alumni News & Notes | Report to Investors | and more!

Lawrence Tech

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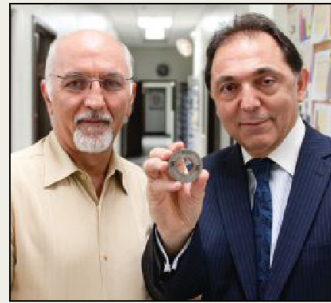
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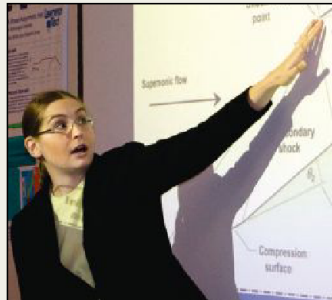
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On the cover: Photographer Gary Duncan captured the Blue Devil spirit of LTU fans during the men's soccer game that concluded Homecoming Week activities in September. Membership in the National Association of Intercollegiate Athletics has brought many more athletic events to campus.

Correction: On page 45 of the summer issue, Kendall Tucker was misidentified in a photo taken at the Henry Ford Museum during Winterlude 2012. We apologize for the error.

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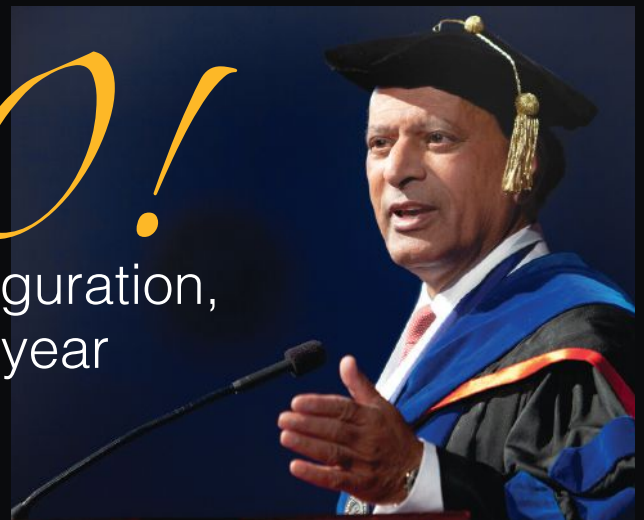




The inauguration of Lawrence Technological University's seventh president attracted a large audience of students, faculty, staff, alumni, delegates from other institutions, community leaders, and others to Ridler Field House.

Abley 80!

Homecoming, Moudgil inauguration, highlight start of LTU's 80th year



LTU President and CEO Virinder K. Moudgil

With a reminder that Mark Twain called a college presidency "the greatest of all callings," Lloyd Reuss, chairman of Lawrence Technological University's Board of Trustees, led the formal investiture of Virinder Moudgil as LTU's seventh president on September 27. ...



LTU President Virinder Moudgil (second from left) was joined at his inauguration by his son, Rishi Moudgil; his grandson, Aditya Shah; his wife, Parviz Gandhi Moudgil; his daughter, Sapna Moudgil-Shah; and his son-in-law, Prital Shah.



Following his formal induction by Lloyd Reuss, chairman of the Board of Trustees, President Moudgil was welcomed to his new position by his predecessors, Lewis Walker, chancellor and former president, and Richard Marburger, president emeritus. Left to right are Walker, Reuss, Moudgil, and Marburger.



Two members of Oakland County's congressional delegation, Gary Peters (left) and Sander Levin, congratulated President Moudgil following his inauguration.

To view a video of President Moudgil's inaugural address, visit: www.ltu.edu/inauguration. Read about his background in the Summer 2012 issue of this magazine or visit: www.ltu.edu/mag.summer2012.

President and CEO Virinder Moudgil acknowledged a toast and applause at a dinner reception at the University Technology and Learning Center.



LTU's Don Ridler Field House was magically transformed with special lighting and staging for the ceremony marked by the academic pomp, circumstance, and imagery dating back to the beginnings of academia.

“Yours will be the great privilege and responsibility of leading Lawrence Technological University to the fulfillment of its tremendous promise in the years to come,” Reuss said as he placed the presidential medallion over Moudgil’s shoulders.

A large contingent of friends and colleagues came from Oakland University, where Moudgil had served 36 years as a highly regarded faculty member, researcher, and, since 2001, as senior vice president and provost.

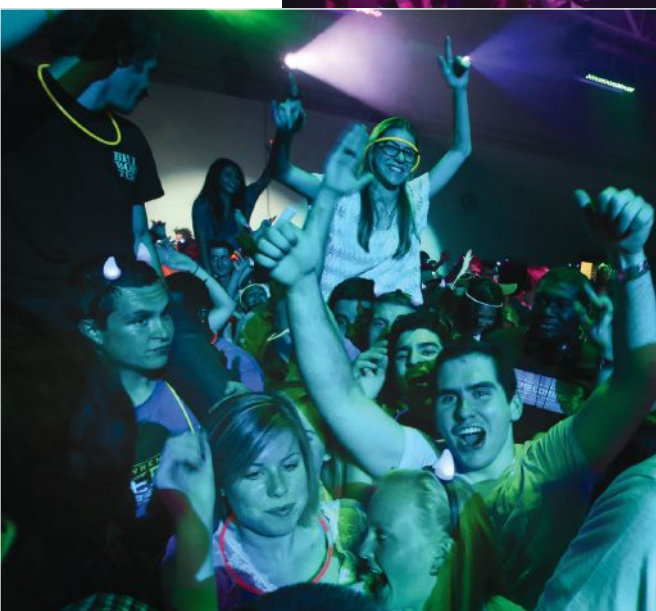
In his upbeat inaugural address, Moudgil thanked the trustees and campus community for their support, commented on Lawrence Tech’s rich history of innovation and service, cited the remarkable accomplishments of a number of graduates, and said that its people were the University’s greatest asset.

He reminded the audience, “We are a private and distinctive institution that has had a notable role in Michigan’s contributions toward America’s global leadership during periods of war and peace.”

Saying that student learning and campus life will be top priorities of his administration, Moudgil called the quality of the University’s academic programs of “paramount importance.” He reached out to all parts of the University community and its supporters for ideas, counsel, and help to improve facilities, increase endowment, recruit and reward outstanding faculty and staff, and add more scholarship and financial aid options.

LTU’s Don Ridler Field House was magically transformed with special lighting and staging for the ceremony marked by

A concert with DEV and the Cataracs at Ridler Field House was the highlight of the Midnight Madness program on Homecoming Friday, Sept. 28.



LTU mascot Blue basked in the glow of Blue Devil spirit that permeated Ridler Field House during Midnight Madness.

Ably 80 CONTINUED

Part of LTU's 80th anniversary celebration was a display of fireworks over the Quad, which also served as the conclusion of the inauguration festivities on Sept. 27.

the academic pomp, circumstance, and imagery dating back to the beginnings of academia. The assets did double duty the following night, Friday, when the space was reconfigured for a "midnight madness" athletic pep rally and club-style student concert featuring DEV and the Cataracs.

The combined Inauguration and Homecoming Week starting Sunday, September 23, offered over 30 different events through the following Saturday that aimed to interest and involve every part of the Lawrence Tech community.

Activities included a campus disc golf tournament, Ultimate Frisbee, an open house at LTU's Frank Lloyd Wright-designed Affleck House, an academic symposium examining high tech's future and beyond, demonstrations of the new LTU bike trail, an alumni car show and mixer, dedication of Harlan Hall and the transformed Mary E. Marburger Science and Engineering Auditorium, a reception for retirees (the X-Techs), a best pizza in town contest, and more.

Varsity and intramural athletic events included women's volleyball, men's and women's soccer, a powder puff football game, a four-mile run and one-mile walk, Quidditch tournament, and faculty-versus-students tug of war.

President Moudgil gamely attended nearly all events. He hosted a dinner with student leaders, participated on the symposium panel, was feted at a reception and dinner following his inauguration, and led ceremonies that retired the jerseys of LTU basketball legends Norm Han-



During a ceremony held at Ridler Field House on Homecoming Friday, Sept. 28, LTU President Virinder Moudgil congratulated (left to right) Athletic Hall of Famers Ray Mawhorter, Blaine Denning, and Herman Pett, as well as Dirk Hankins, the son of Hall of Famer Norm Hankins.



The Hippogriffs, led by Andy Neevel (left), prepared for the sprint to mid-field at the South Housing grounds in the Homecoming version of the Harry Potter game of Quidditch. The Hippogriffs lost in the finals to the Blue Devil Troopers, who captured their second straight Quidditch Cup.



LTU freshman Brandon Busuttill headed the ball toward a teammate during the men's soccer game on Homecoming Saturday.



Alyssa Bolling (1) carried the ball and Corynn Moten (12) joined the Blue Devil attack during the women's soccer game.

kins and Blaine Denning who led teams to national prominence in the 1940s and '50s.

A Thursday night "80th anniversary" fireworks show on the campus quadrangle attracted hundreds of students, faculty, staff, and friends and signaled to the surrounding community that Lawrence Technological University was celebrating its storied past and a bright future. □BJA



The student team had some trouble against the faculty and staff in the Homecoming tug-of-war competition, but youth prevailed in the end.



Freshman Alexandra Bryden picked up yardage for the Blue team during the inaugural Blue vs. White Homecoming Powder Puff Football Game, which was won by the White team, 21-0. Bryden also is a member of the women's soccer team.



LTU's Karlene Foisy (10) spiked the ball past two defenders from the University of Michigan-Dearborn during the Homecoming Week game on Sept. 25.

Ambitious agenda

New dean sets his



Since becoming dean on Aug. 1, Bahman Mirshab has placed the College of Management at Lawrence Technological University on a course of continuous improvement with two major goals to reach – accreditation by the Association to Advance Collegiate Schools of Business (AACSB) and the implementation of a new curriculum for the bachelor’s degree program in business administration.

Currently, the College of Management is one of only three Michigan business programs accredited by both the International Assembly for Collegiate Business Education (IACBE) and the Association of Collegiate Business Schools and Programs (ACBSP). AACSB accreditation would further demonstrate the strength of LTU’s management programs.

“Our top priority is to strengthen the reputation of the College of Management, and the best way to do that is to build the premier management program in southeast Michigan,” Mirshab said. “Seeking AACSB accreditation is the best way I know of to document and demonstrate that we belong among the elite business schools worldwide.”

Mirshab is uniquely qualified to lead this quest. As dean of the Cameron School of Business at the University of St. Thomas in Houston from 2006 until he came to LTU, he led his team through all the steps of the AACSB process and secured initial accreditation.

At the same time, he is very familiar with the southeast Michigan business community that Lawrence Tech’s College of Management serves. After earning a bachelor’s degree in

economics from the University of Tehran in his native Iran, he came to the Detroit area in 1973 to earn a master’s degree in economics from what is now the University of Detroit Mercy (UDM) and then went on to attain a PhD from Wayne State University. He taught at UDM for many years and was dean of UDM’s College of Business Administration before taking the job in Texas.

Mirshab is an expert in the use of quantitative tools in management decision-making, systems thinking, and analysis of the social and economic effects of income taxes. He has an active and established record of scholarly activities. He also has served as the AACSB regional program director and vice president of its Mid-Continent East region.

Building on a strong foundation

With more than 300 students, the master’s degree in business administration (MBA) is LTU’s largest graduate program, and Mirshab’s plans include further strengthening the already high quality of that program and others. Lawrence Tech also offers doctoral programs in management and graduate certificates in several specialty fields.

LTU is one of a few non-Canadian universities accredited to offer an MBA degree in Ontario. In collaboration with

Dean Bahman Mirshab of the College of Management discusses the importance of additional accreditation with students in an accounting class taught by Adjunct Nick Elliott (second from left in the front row).

sights high for College of Management



Bahman Mirshab

the Defense Acquisition University, the College of Management also has developed the Senior Service College Fellowship program for civilian managers at TACOM to earn the Master of Global Leadership and Management.

“All of this has been accomplished with a dedicated group of faculty and staff who go out of their way to do the best they can with limited resources,” Mirshab said. “There is a high level of accomplishment that we can build on.”

Reaching for excellence

AACSB has become the premier accrediting agency for bachelor’s, master’s, and doctoral degree programs in business administration and accounting. As of July 2012, only 655 schools of business, or less than 5 percent worldwide, have earned this mark of distinction. Today, the AACSB Accreditation Standards are used as the basis to evaluate a business school’s mission, operations, faculty qualifications and contributions, programs, and other critical areas.

The approval process typically takes up to seven years, and Mirshab hopes to have initial accreditation in time for the 2017–18 academic year. He points out that graduates and current students will benefit even if this higher level of accreditation comes after they have graduated.

“Accreditation demonstrates that the institution is not only committed to quality business education, but also to the philosophy of total quality management and continual improvement,” he said.

Provost Maria Vaz said this goal fits in with the mission LTU has set for the College of Management. “Management and business schools have an obligation to constantly improve degree programs because powerful economic trends are changing business practices both here in the United States and around the world,” she said. “We brought Dr. Mirshab to LTU because he has the knowledge and experience to take LTU’s College of Management to a higher level of excellence.”



Last summer Dean Bahman Mirshab and Jerry Lindman, director of the Center for Nonprofit Management, met with a delegation from Tajikistan, which was on a fact-finding tour about developing a nonprofit sector in that Asian country.

Building a new bachelor’s degree program

Mirshab’s arrival also coincides with another major initiative – the return of the Bachelor of Science in Business Administration (BSBA) program in the College of Management as a replacement of the Bachelor of Science in Business Management (BSBM) program that has been jointly offered with the College of Arts and Sciences. Senior Lecturer Karen Evans, BSHu’03, who has directed the BSBM program for several years, is assisting with the transition to the new BSBA program that began in 2012.

“Our market research and industry and student advisory boards told us that this was the perfect time to move from the narrow focus of ‘management’ to the broader offering of ‘business administration,’” Evans said. “A capstone course in which business students will work on interdisciplinary projects in an experiential learning setting makes our BSBA distinct from business degrees offered elsewhere.”

Mirshab and the faculty are looking at several concentrations or majors for the BSBA, including general business, information technology, and marketing. Nonprofit management as a major or concentration could be added to build on the success of LTU’s Center for Nonprofit Management. An interdisciplinary minor in entrepreneur-

LTU’s online MBA is nationally ranked

■ The MBA online program offered at Lawrence Technological University has been ranked 18th in the country by mbaonline.com. Close to 200 students are pursuing their MBA at LTU online.

The first national survey of online academic programs by *U.S. News & World Report* also gave the College of Management’s online courses high marks for student services and technology, faculty credentials and training, and student engagement.

LTU’s online MBA program is specifically geared to working professionals who wish to further their position within their business fields. The program is highly flexible and incorporates the University’s “theory and practice” approach to learning.

Students earning their degree online can choose between concentrations in project management or nonprofit management. The curriculum consists of 36 hours of course work, of which 27 hours are in core courses, and nine hours are in electives.

Among the factors considered in the ranking process of mbaonline.com were tuition rates, financial aid options, retention and graduation rates, academic quality, faculty, and resources available to students beyond the virtual classroom.

ship open to students from across the university is also under consideration.

“Our new and revised BSBA degree is designed to develop a student’s intellectual ability, executive personality, and managerial skills through a combination of business and general education,” Mirshab said.

Another goal for the new BSBA program is to offer maximum flexibility to students. In addition to day and evening programs on campus, LTU will offer the program online. In addition, all students will have at least one internship experience.

The University’s leadership curriculum for undergraduates will also help achieve the mission of producing graduates who can be effective leaders capable of serving a wide range of organizations in both the for-profit and nonprofit sectors. They will be ready to pursue either a business career or advanced studies, and to take advantage of opportunities in the global economy.

“Restarting our undergraduate business degree in the College of Management is the most important thing we are going to do,” Mirshab said. “This will give us a stronger foundation on which to build.”

Reaching out to alumni

Mirshab said the alumni of the College of Management have an important role to play in his plans for both more growth and an enhanced reputation. Alumni are needed to provide valuable advice as members of advisory committees for both accreditation and the BSBA program.

This spring the College of Management will hold its first Alumni Week, which it hopes to make an annual event. The goal is to set aside a week to highlight the accomplishments and contributions of College of Management alumni by inviting them back to campus to share their knowledge and experience with current students. Some will give class presentations on topics relevant to specific courses. One of the highlights of Alumni Week will be a keynote presentation by a prominent alumnus.

Another major event scheduled for spring 2013 is the induction of the first group into the College of Management Hall of Fame. This will be the highest recognition given by the College of Management to business leaders whose careers exemplify both individual excellence and dedication to the success of others. It is designed to honor, preserve, and perpetuate the names and outstanding accomplishments of inductees who have significantly influenced the College of Management. □EP

David Egleston, Patty Castelli, and Tom Marx are collaborating on the impact of reflective leadership on cultural adaptation leading to improved performance of multinational organizations.



Recent research activities in the College of Management

In addition to demanding teaching schedules, the faculty of the College of Management engage in a wide range of research activities. Recent accomplishments include:

- Associate Professor Patty Castelli, Assistant Professor David Egleston, and College Professor Tom Marx are conducting original research to determine the impact of reflective leadership on the cultural adaptation that may result in improved performance of multinational organizations. The project is based on Castelli’s earlier publications to test the efficacy of her reflective learning model by developing a quantitative instrument to measure the extent that global leaders demonstrate reflective learning in their organizations. In November, Castelli presented a paper on Global Reflective Leadership to the Association for Global Business in Washington, DC.

- Associate Professor Peter Chang has received a patent for his process for dynamically filling changeable fields of template files with a variety of sources, filling multiple template segments over multiple stations in an assembly-line-like setting, and using a template to provide a website layout.

- Assistant Professor Anne Kohnke and Teresa Gonda, a recent graduate of Cohort 5 of the Senior Service College Fellowship program, co-authored a paper presented at the Midwest Academy of Management in Chicago in October. Their research aimed to identify key outcomes and insights of an initiative within the Army Life Cycle Management Command to achieve more affordable systems, collaborative leadership, and improved efficiency. The paper was a precursor to the work Gonda completed on her master’s thesis.

- Kohnke and Director of eLearning Services Richard Bush were awarded an LTU seed grant for their proposal in collaboration with Henry Ford eHome Health Care. The objective is to determine what predicts patients’ acceptance of technology, measured by behavioral intention, and to analyze the perceived usefulness and effectiveness of the Henry Ford eHome Care Telehealth home health monitoring equipment.

- Assistant Professor Nadia Shuayto presented her award-winning journal article “MBA Programs: Critical Management Skills Desired by Business and Academic Leaders” at the second Principles of Responsible Management Education Middle East North Africa Forum in Lebanon in November.

- Associate Professor Jackie Stavros spoke to students and alumni in the PhD program at the School of Business at Benedictine University in Illinois in December. Her topic was whole systems change using appreciative inquiry and the SOAR (Strengths, Opportunities, Aspirations, Results) framework. She is the co-author of “SOAR: Building Strengths-Based Strategy” by Thin Book Publishing.

- Professor A. Lerine Steenkamp and Ashraf Badawood, DMIT’12, received the 2012 Meritorious PhD Paper Award in the category PhD Student/Faculty at the Information Systems Educators Conference in November for “A Systematic Approach to Faculty Development toward Improved Capability in Tertiary Teaching in a Blended Learning Environment.”

S

Sometimes it seems like Filza Walters and her students in the five-year master's degree program in architectural engineering are out to save the world. At the very least, they are pioneers in a new academic program at Lawrence Technological University that seeks a better balance between the two fields of building engineering and architecture.

Buildings account for nearly 40 percent of the world's energy consumption, and that share could grow even larger unless they become more energy-efficient. According to the World Business Council for Sustainable Development, the construction sector needs to cut the energy consumption rate of buildings by 60 percent by 2050 if the world is going to meet global climate change targets.

It will take many innovations in engineering to achieve such a lofty goal, and students in LTU's architectural engineering program hope to be part of the solution.

"It's a passion of mine to improve buildings around the world and supply Third-World countries with living environments that will be sustainable and healthy and economically viable," architectural engineering student Rachel LaCasse said. "I came to LTU to focus on what it takes to make residential structures safe, economical, and green. I'd like to create a business model and then take it to other countries."

By combining an architectural design core with an engineering curriculum, Lawrence Tech is equipping students with both the artistic perspective to understand what an architect is trying to accomplish and the specialized engineering skills to design and engineer energy-efficient structures.

Architectural engineers analyze sites, building orientation, and exposure; design the heating, cooling, lighting, and power distribution systems; develop fire protection systems; and determine how water usage and waste will be managed and minimized.

"People in the field are realizing that engineers and architects are going to have to work closely together to figure out new solutions," Walters said. "Our architectural engineering

Filza Walters brings a mix of enthusiasm and practical experience to her role as director of the architectural engineering degree program.

Building brighter futures

Architectural engineering grads expected to lead growing field



Building information modeling and computer visualization

graduates will be able to bridge the gap that has traditionally existed between the two disciplines.”

Graduates will be qualified to seek licensure in engineering.

A program that's growing fast

While waiting for the graduates of her program to make their mark, Walters can take credit for creating the fastest growing major at LTU. Even though the first cohort that entered in 2009 won't earn master's degrees until 2014, architectural engineering has grown to 80 students, making it the fifth largest major in the College of Engineering.

It's the only degree program of its kind in Michigan and one of 21 similar programs across the country. Walters earned her bachelor's degree in one of the few established programs at Kansas State University.

She also brings the practical knowledge gained from more than 18 years of experience as a designer, consulting engineer, project manager, and owner's representative, working on commercial, institutional, healthcare, industrial, and educational facilities. She earned her MBA at LTU and was an adjunct professor in the College of Architecture and Design before joining the full-time faculty to start the new degree program.

LTU's unique mix of engineering and architecture education has attracted students from Colorado, New York, Minnesota, Texas, and Kentucky, as well as Greece, Romania, Lebanon, Iraq, Ethiopia, and Vietnam. The program is also proving to be a good way to attract women to engineering. Currently 40 percent of the students in architectural engineering are women – double the national average for engineering programs.

“Architectural engineering usually grows to be the largest engineering program at the universities where it is offered,” Walters said.

Lawrence Tech's College of Engineering now offers an undergraduate-level certificate in building information modeling and computer visualization (BIM+CV.) Computer modeling and visualization are playing an increasingly important role in building design, construction, and operation.

BIM+CV is a 12-credit-hour online program available both to LTU students or professionals who want to increase their ability to use computer applications in architectural work.

Computer software programs, such as AutoCAD, Revit, and 3D Studio Max, offer 3D modeling techniques that integrate a building's components – properties, location, geometry, spatial relationships, etc. The ability to “visualize” the project not only increases productivity in the overall building process, but also improves communication between architects, engineers, contractors, and other key team members.

For more, visit www.ltu.edu/ltuonline/buildinginfomodeling-cert.asp or call 248.204.2610. □EP

Sustainability is the new imperative

The program is on the cutting edge of a movement to attain a better balance between architecture and engineering in the construction industry. Lawrence Tech is an appropriate place for that to happen, since the original academic program in architecture was an offshoot of engineering. For many years architectural engineering was the only architecture degree program at LTU.

In the 1960s, there was a national movement to separate the study of architecture design from the study of engineering systems for buildings. While the architecture profession in general moved away from the engineering aspects of the built environment, the interaction between engineering and architecture continued on the Lawrence Tech campus.

“There is a reason there are only 21 programs around the nation. It's not easy for two colleges to work together to foster a cooperative relationship, which in the end benefits the students who seek this unique degree, and companies who seek these unique students,” Walters said.



Associate Professor Robert Fletcher (left) and Architectural Engineering Director Filza Walters (right) discuss the geothermal system in the A. Alfred Taubman Student Services Center with architectural engineering students.

“Our students are highly sought after by architecture and engineering firms, construction companies, and building owners ...”



Robert White of IlluminArt in Ypsilanti talks to Assistant Professor Douglas Skidmore's studio class about lighting design.

Architectural engineering student Chris Frazzolare finds that LTU is a great place to learn about sustainable architecture. The University's A. Alfred Taubman Student Services Center has a geothermal heating and cooling system and a green roof that reduces energy consumption and water pollution. A number of techniques for stormwater management are employed on campus, and the solar-panel array and wind turbine on top of the Engineering Building provide the opportunity for hands-on experience with alternative energy sources.

“We have many sustainable systems that are implemented here in our buildings, so there are many people on campus who have information for you,” he said.

The new program in architectural engineering also has found a receptive audience in the professions.

“Lawrence Tech's architectural engineering program meets a great need in the construction industry, which suffers from a lack of building-oriented design engineers,” said Gordon Holness, chairman emeritus of Albert Kahn Associates Inc. and past president of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

The growing recognition that energy-efficient buildings are needed in the battle against climate change is creating a strong demand for professionals who understand both architecture and emerging trends in engineering. In the rapidly expanding field of sustainable building design, architects must adapt their designs to a new generation of mechanical and electrical systems. At the same time, building engineers must be aware of the design challenges and opportunities that those new systems create.

Strong demand for LTU students

LTU architectural engineering graduates will be prepared to take leadership roles in this growing field. “Our students are highly sought after by architecture and engineering firms, construction companies, and building owners because they are gaining the knowledge and specialized skills needed to compete in an increasingly technical, green, and energy-conscious marketplace,” Walters said.

She has already seen dramatic evidence of the strong demand for this skill set in the construction industry. Seventy percent of her students find summer internships in the field after their sophomore year. “These firms hire the students for internships and then do not want to let them go,” Walters said.

LTU interns are ready to contribute to a company while still undergraduates because they take building systems design and engineering courses early in the curriculum and are conversant with the computer software programs used by their employers, such as AutoCAD, Revit, and 3D Studio Max. LTU supplies all undergraduates with a high-powered laptop loaded with all the software programs they need for their courses. The software programs for architectural engineering are recommended by professionals in the architecture, engineering, and construction fields.

Is the strong demand for graduates of this program reflective of the intellectual strengths of the students attracted to this field? “Design is a right-brain function and engineering is a left-brain function. This program requires a person who is mentally ambidextrous, who uses both sides of the brain well. There aren't many people like that,” Walters said. □EP

BOUNCING BACK

Lawrence Tech
revives its
storied basketball
tradition

LTU Co-captain Jon Harden launches a three-point shot during the first half of the home opener against Lourdes University.



‘We feel that basketball can add a lot to the excitement of being on a college campus.’



LTU President Virinder Moudgil was joined by former player Vick Yezbick and Southfield Mayor Brenda Lawrence for the ceremonial tip-off for the men's game.

Lawrence Technological University athletics entered a new era on Nov. 17 when the men's and women's basketball teams hosted Lourdes University at the Don Ridler Field House. When the crowd of more than 400 erupted in cheers for every LTU basket in the final minutes of both games, it was a little hard to believe that the Blue Devils hadn't hosted a collegiate basketball game for the past 48 years.

That day varsity basketball felt right at home at Ridler, a facility that was built almost 20 years after the previous basketball program ended in 1964. The coaches and players on both teams are starting from scratch this year, but at times they seemed to be tapping into a tradition of basketball excellence that dates back almost as far as the University's founding 80 years ago.

The high point for Lawrence Tech basketball came in the decade after World War II when the Blue Devils often represented Michigan in the National Association of Intercollegiate Basketball tournaments, and even made a trip to the National Invitation Tournament in 1951.

During Homecoming in September, the University recalled those glory days with a ceremony to retire and raise to Ridler's rafters the numbers of two players from that era, Norm Hankins (4) and Blaine Denning (14). (See photo on page 4.)

In the 1940s LTU helped change the pace of collegiate basketball with a run-and-shoot offense that made Hankins the top scorer among major college players in 1947–48. Denning was a



Brad Watterworth (45) goes up for the historic opening tip-off when the men's basketball team played its first home opener in 48 years.



Freshman guard Allison Bicknell (3) uses her speed to penetrate the Lourdes defense. Co-captain Jill Carland (32) follows the play.



Lady Blue Devils Head Coach Mary Pinkowski draws up a play for her team during a timeout against Lourdes.

post player with a devastating hook shot from either hand who later played for the Harlem Globetrotters and was drafted by the Baltimore Bullets (today the Washington Wizards).

Reconnecting with tradition

Making the connection with LTU's basketball heritage was Vick Yezbick, who attended the home opener. He averaged 15 points a game for the Blue Devils 60 years ago in the 1952–53 season and played home games before capacity crowds in the Coliseum at the Michigan State Fairgrounds.

He told the *Oakland Press* that he teared up a little during the opening ceremony signaling the resumption of basketball at LTU. Later he received a big round of applause when he was introduced to the crowd.

"This is great. I feel like a celebrity," Yezbick said.

LTU President and CEO Virinder Moudgil and Southfield Mayor Brenda Lawrence tossed up the basketball for the cer-

emonial tip-off for the men's game. Provost Maria Vaz did the same for the women's game.

Dean of Students Kevin Finn and Recreation, Athletics, and Wellness Director Scott Trudeau handled last minute details for the event they began planning almost two years ago when LTU was accepted as a new member of the National Association of Intercollegiate Athletics.

Lawrence Tech's athletics program has grown to include soccer, volleyball, hockey, cross country, bowling, and lacrosse, but basketball is the sport that can do the most to connect with the University's heritage and energize the collegiate atmosphere on campus.

"We feel that basketball can add a lot to the excitement of being on a college campus," Finn said. "You can see it in all the blue that our fans are wearing."

Some LTU fans made a bold fashion statement with blue paint when they attended the first home basketball game since the 1960s.

Blue was also the color of choice for the face and body paint on some of the students.

LTU's basketball tradition gives Head Coach Tom Kempf of the men's team and Head Coach Mary Pinkowski of the women's team something to aim for, but in this first season they have the challenge of molding brand new teams with mostly freshman players. Their previous experience makes them equal to the task.

Capable coaching

For eight years Kempf was assistant coach at Aquinas College in Grand Rapids, which won several conference championships and qualified for the NAIA national tournament four times during his tenure. He also won state championships coaching both boys' and girls' teams at Gabriel Richard High School in Ann Arbor.

Pinkowski coached the women's varsity team at the University of Michigan-Dearborn for five years. Her 2008-09 team set the UM-D record for most victories. She also coached at Webber International University in Florida for four years, taking her team to the NAIA national tournament in the 2005-06 season.



The LTU basketball teams are playing 22 of their 30 games in the Wolverine-Hoosier Athletic Conference, a league that has several teams ranked nationally in the NAIA. Dealing with defeat has been an important mental hurdle to clear during this first season.

"Character is revealed when you're losing, not when you're winning. They have to be positive and help each other through the tough times," Pinkowski said of the Lady Blue Devils. "I'm looking for heart and hustle, not what's on the scoreboard."

Coming into the home opener, the men's team had lost its first five games on the road, while the women's team had split its first two games in a tournament. In the home openers, both teams fell behind before staging dramatic rallies that fell short in the final minutes. But they gave their fans plenty to cheer about.

The men's team got to within four points with a minute to play and ended up losing by six points.

"Two weeks ago, we lost [to Lourdes] by 33," Kempf told the *Oakland Press*. "And today, we stepped up to the task at hand. Sometimes you can lose your focus with a big game like this, and I was pleased with our players because this game could have gone either way."

Just three days later, both the men's and women's teams got their first WHAC victories and also their first victories at home. The women won their game against the University of Northwestern Ohio, 91-79, while the men battled to a 64-61 victory. For more information about LTU basketball and the schedules of upcoming games, visit www.bluedevilathletics.com. □EP



Co-captain Anthony Sisson evades double coverage to open a passing lane to teammate John Osantowski (34).

Intern tackles problem with supersonic flight at NASA

Mechanical engineering major Stephanie (Shevenock) Campbell fulfilled a childhood ambition over the summer when she interned at NASA's Glenn Research Center in Cleveland through the NASA Aeronautics Scholarship Program, but her work didn't have anything to do with space travel. She and her colleagues turned back the clock to work on a problem that has gone unsolved since the dawn of supersonic flight.

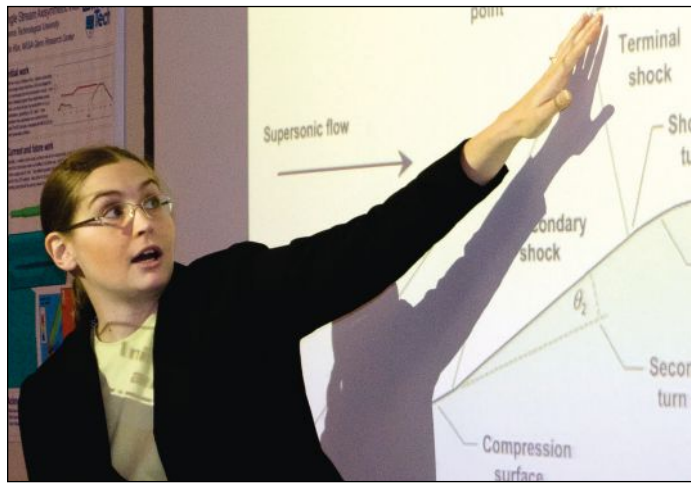
Supersonic flight was achieved in 1947, but because of the very loud supersonic boom, it was banned over land in the United States. Now there is a move to allow transcontinental supersonic flights, and engineers have found ways to reduce the decibel level of the supersonic boom. NASA has to determine if the proposed designs are safe.

Under certain circumstances when a plane is under stress, reduced mass flow in the redesigned air inlets can create an additional – and potentially very damaging – phenomenon known as buzz. Campbell was assigned to the team researching the buzz.

She found that this general problem had been addressed directly in 1954 in a PhD thesis, "Supersonic Diffuser Instability," written by Charles Dailey at the California Institute of Technology.

"Other interns were working with lasers, and I was reading this paper written with a typewriter," she said.

Her assignment was to use computational fluid dynamics (CFD) to model the effect of buzz through a process called meshing, which involves the analysis of millions of volume elements to map out the flow under certain conditions. The computer model breaks down the surfaces into very small sections for analysis, then builds volume elements from these sections. It takes many hours for a computer to translate all the data



Senior Stephanie Campbell explains her NASA research for the Department of Mechanical Engineering's Third Thursday Seminar Series in September.

into a visual picture showing the varying flow characteristics of different sections of the air inlet.

"People doing CFD find meshing to be a hassle, so I focused on meshing to alleviate the load on

the rest of the team," she said.

Campbell hadn't completed her task when her internship ended, but her supervisor hopes to get funding to have her finish after she graduates from LTU. She

plans to complete her classes in December and start a graduate program in aerospace engineering in the fall. Her husband, Alex, expects to graduate from LTU in May.

She first became fascinated with aerospace on a visit to the Grissom Memorial Museum in Indiana when she was seven or eight years old. Astronaut Jim Newman was a friend of her uncle, Ken Grezlik, BSME'78, and a correspondence with him encouraged her to pursue her interest.

Campbell said the opportunities and personal attention she received at Lawrence Tech have helped her decide to pursue aerospace engineering as a career.

"At Lawrence Tech I was able to try things that helped me find out what I wanted to do," she said. "Everyone has been very supportive. I don't think the amount of attention you get from professors here is available at other colleges." □EP

Walker moves from president to chancellor

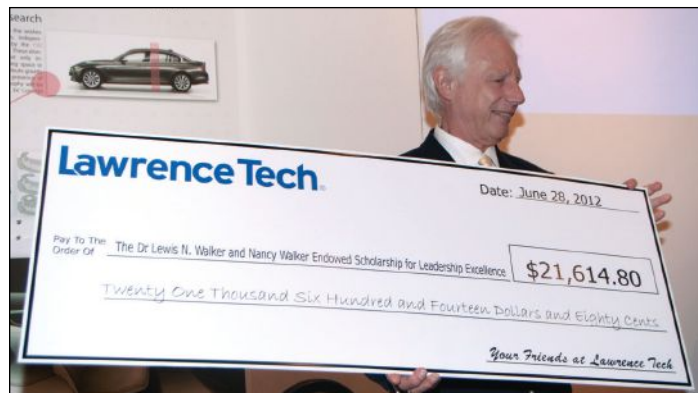
Lewis Walker stepped down as the sixth president of Lawrence Technological University on June 30 and assumed the new mantle of chancellor. Two days earlier he was honored at a reception attended by many faculty, staff, students, alumni, family, and friends.

Vice President of University Advancement Steve Brown served as master of ceremonies and highlighted Walker's "leadership, ideas, fortitude, and enthusiasm."

Provost Maria Vaz and Trustee Howard Padgham also spoke about Walker's accomplishments that included expanding student access to technology, international partnerships, the new leadership curriculum, a major expansion of "fast-track" certificate offerings, the expansion of athletics, and facility improvements across the campus.

Another legacy that Walker is leaving to the University is the Dr. Lewis N. Walker and Nancy Walker Endowed Scholarship for Leadership Excellence. Proceeds from the retirement reception added nearly \$20,000 to the endowment.

The honorary co-chairs and speakers for the event were DTE Energy Vice President Vincent Dow, BSEE'79; Automation Alley Executive Director Ken Rogers; and Mark Bill, BSME'75, past president of the LTU Alumni Association.



LTU Chancellor Lewis Walker holds a ceremonial check that represents more than \$21,000 that has been raised for the Endowed Scholarship for Leadership Excellence that he and his wife, Nancy, have established.

LTU improves ranking on return on tuition

Lawrence Technological University ranked highest in the metropolitan Detroit three-county area and moved up to the top 20 percent of colleges and universities nationwide in the 2012 Bloomberg Businessweek national survey on the increased earning power generated by a college bachelor's degree.

In this survey conducted by Payscale, a Seattle-based compensation data firm, the net return on investment (ROI) was determined by averaging the earnings of a college's graduates in 30 years in 2012 dollars and then subtracting the 2011 cost of a bachelor's degree at the college and the average 30-year earnings of contemporaries who started working right after high school.

The net ROI on a Lawrence Tech bachelor's degree over 30

years was \$285,100, which was in the top 20 percent of the 850 colleges surveyed nationwide. In the 2010 survey, the University was in the top 30 percent.

The annual return on investment was 7.3 percent. When the average amount of financial aid was taken into consideration, the net ROI for LTU graduates was 8.3 percent annually.

Lawrence Tech's 30-year ROI and the annual ROI with and without financial aid were better than the results for the other Detroit-area colleges covered by the survey.

"Students and their families are increasingly concerned about the bottom line of their investment of time and money in a college education," said President Virinder Moudgil. "They want to know that their college educa-

Bloomberg Businessweek

tion will pay off in their careers. We're pleased that the results at Lawrence Technological University have been consistently strong and reflect the type of high-paying, high-value professions that LTU graduates typically aspire to."

Lawrence Tech continues to rank high in other national surveys, including:

- America's Best Universities 2013 by *U.S. News & World Report*. LTU was again ranked in the top tier and among the best in the Regional Universities-Midwest category. It is also ranked among the nation's top undergraduate engineering programs.

- Best in the Midwest 2013 by the Princeton Review. LTU was selected as one of the Midwest Region universities among the top 25 percent of universities nationwide.

- 2013 Military Friendly Schools by *G.I. Jobs* magazine. LTU was included in the top 15 percent of colleges, universities, and trade schools that do the most to embrace America's veterans as students.

LTU is also a member of the Association of Independent Technological Universities, whose mission is to share best practices, inspire innovation, and advance engineering and science education. The group of 22 universities includes MIT, Caltech and Carnegie Mellon University.

NSF funds scholarships in power engineering

The National Science Foundation has awarded a five-year grant totaling \$598,000 to provide scholarships to help 100 Monroe County Community College (MCCC) students earn degrees in power engineering from Lawrence Technological University.

In partnership with DTE Energy, MCCC has developed an associate degree program in nuclear engineering technology. After completing that two-year program, the MCCC graduates will be eligible for an NSF scholarship to study electrical engineering with a concentration in power engineering at LTU.

The grant provides a scholarship pool of up to \$100,400 a year to 20 students through the 2016-17 academic year. Scholarship recipients could start taking courses at Lawrence Tech in January. Many of these students will have jobs at DTE Energy

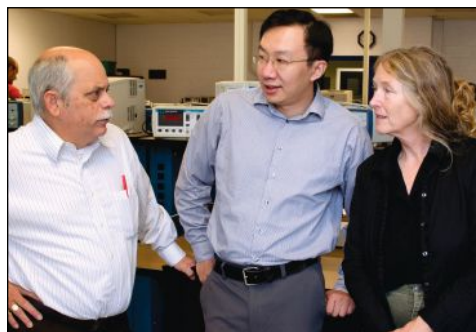
while they complete their studies at Lawrence Tech.

The LTU-MCCC partnership is designed to address the national need for a highly skilled, diversified workforce in the generation, transmission, and distribution of power. Graduates of the LTU bachelor's degree program also will be qualified to pursue graduate studies.

"Electricity generation is one industry you can't outsource, and there is a shortage of power engi-

neers in this country that could become acute in the next few years as many engineers in this field retire," said Professor Philip Olivier, chair of LTU's Department of Electrical and Computer Engineering. "The job prospects of new power engineers are very bright."

DTE Energy has a specific need to hire more nuclear engineers for its Enrico Fermi Nuclear Generating Station located on the shores of Lake Erie near Monroe.



Philip Olivier (left), Kun Hua and Lisa Anneberg of LTU's Department of Electrical and Computer Engineering put together a successful grant application for 20 annual scholarships for five years.

Lawrence Tech Assistant Professor Kun Hua is the principal investigator (PI) for the NSF grant, and the co-PIs are Associate Professor Lisa Anneberg and Olivier. "The project is strengthening the partnership between the two-year and four-year institutions of higher education, along with local engineering and technology employers," Hua said.

To ensure student success, LTU will offer a comprehensive package of student outreach and support, career exploration, and job placement services. The scholarship recipients will learn about power engineering through interdisciplinary courses, research projects, conferences, guest lectures, field trips, and membership in professional organizations.

"LTU is leveraging its network of local and regional industry partnerships, including DTE Energy, to aid in the recruitment, retention, and job placement of these scholarship recipients," Hua said. □EP

Library rolls out 24/7 research service to supplement new online catalog

The Lawrence Tech Library has added a new 24/7 research service, Research Help Now! (RHN), to go along with its new online catalog, TechCat+, the public face of the library's new IT backbone, OCLC's WorldShare Management System.

OCLC was originally the Ohio College Library Center at its founding in 1971, but it has grown to become the world's most influential source of bibliographic information with over 1.8 billion holdings from 72,000 libraries in 170 countries. Lawrence Tech has

been a contributing member of OCLC since 1977 and was the first university in Michigan to join the WorldShare system.

RHN is a cooperative of Michigan academic libraries that provides 24/7 reference service via instant messaging. The Lawrence Tech Library joined the cooperative in October, and the LTU librarians are now working with their counterparts at Michigan State University, Eastern Michigan University, Spring Arbor University, and the majority of Michigan community colleges to

extend reference assistance to students whenever they need help.

RHN uses the QuestionPoint software of OCLC, and it is a round-the-clock service because librarians at OCLC's headquarters answer questions overnight when most North American libraries are closed.

Lawrence Tech librarians take turns monitoring the statewide question queue several hours during the week and counsel students from any of the member libraries in navigating through the complicated information universe. If a



student from Lawrence Tech gets help from a librarian at another college, the LTU librarians can follow up to make sure the questions have been completely answered.

□EP

Crime scene techniques aim to spark interest in science

"Maggot mass!" exclaimed Kathy Mirakovits, the lead instructor of CSI: Lawrence Tech, a forensic science summer workshop for educators held at Lawrence Technological University in July.

"I love how you're so excited," commented one of the science teachers taking the one-week course.

"Yes, sick, isn't it?" joked Mirakovits, a science teacher at Portage North High School and a nationally recognized expert on using crime scene investigation (CSI) techniques to teach science to high school students.

The teachers were examining the maggots attracted to the carcasses of dead pigs at the "body farm" behind the Engineering Building near 10 Mile Road.

Leading the discussion was Neal Haskell, a forensic entomologist at St. Joseph's College in Indiana who has played a key role in numerous murder trials by establishing the approximate time of death through analysis of the life-cycle development of flies on the victim's body. Maggot is a general term describing the larvae

and pupae that turn into adult flies.

Haskell discussed skills and techniques he uses in the courtroom, but the teachers were more interested in how they can be applied in the classroom to build student enthusiasm for learning about science.

Gunshot residue, blood spatter patterns, and autopsy techniques are some of the other topics covered in the one-week course

that has been held at LTU for the past six years. LTU Senior Lecturer LaVetta Appleby and Associate Professors Jeff Morrissette and Julie Zwiesler-Vollick explained some of the CSI techniques that they teach to students at Lawrence Tech. The University also hosts the Forensic Summer Science Institute for high school science students.

Applying scientific principles and techniques to forensic analy-

sis is a good way to show students that what they are learning in science class has real-life applications, said Becki Schafer, who teaches forensics and anatomy at Walled Lake North High School.

Hands-on activities help students experience the process of learning, instead of focusing on how much information they need to acquire in order to succeed on tests. "Students need to know how to learn," Schafer said. □EP



Walled Lake Northern High School teacher Becki Schafer (left) collects maggots from a pig carcass as a participant in "CSI: Lawrence Tech."

Students win prestigious state planning award

Students from the Master of Urban Design program at Lawrence Technological University have won the Outstanding Student Project Award from the Michigan Association of Planning (MAP/APA Michigan) for the “Mid-Century Modern Design Guidelines” they developed for the Southfield Planning Department.

Winning the award were two LTU students, David Lewis and Matthew Galbraith, and two recent graduates, Carolina Ferrero, MUD’12, and Michael Mason, MUD’12.

Working as interns in the planning department, the graduate students documented three districts/neighborhoods and dozens of buildings built in the Mid-Century Modern style from the 1950s to the early 1970s that are important to the architectural heritage of Southfield, a first-ring suburb of Detroit that grew rapidly after World War II.

One of the most significant buildings in Southfield is the former Reynolds Metals Regional Sales Office designed by Minoru Yamasaki, a Troy-based architect best known for the World Trade Center in New York.

In order to complete the design guidelines, the LTU students extended the internship they took for a course, Principals and Practices of Urban Design, taught by the master’s program coordinator Constance Bodurow.

The design guidelines provide the Southfield Planning Department with an essential tool to keep significant structures and districts intact. The guidelines not only define the style and identify significant structures, but also provide recommendations for enhancements through the use of case studies.

The student authors gathered input from local historians, architects, and academics in order

to comprehensively identify, document, and inventory the city’s significant resources. The recommendations made by the students were considered and applied, resulting in the adoption of Mid-Century Design Guidelines for the City of Southfield.

“The Mid-Century Modern Design Guidelines is a valuable asset for the planning department in our understanding and review of the redevelopment of existing Mid-Century Modern buildings and sites,” said Terry Croad, Southfield’s director of planning who worked with the student interns. □EP



Southfield Planning Director Terry Croad (left) joins Michael Mason, MUD’12, and graduate student Matthew Galbraith as they accept the Outstanding Student Project Award from the Michigan Association of Planning.



New faculty welcomed

Every year Lawrence Technological University holds an orientation program for new full-time faculty. From left to right in the photo are Matthew Cole and David Egleston (Management), Arts and Sciences Dean Hsiao-Ping Moore, Engineering Associate Dean Lewis Frasch, Lisa Dillon (Arts and Sciences), Associate Provost Alan McCord, Rebecca Chung (Arts and Sciences), Management Dean Bahman Mirshab, Karen Swanson and Andrew Hanzel (Architecture and Design), Patrick Nelson (Arts and Sciences), Meaghan Barry (Architecture and Design), Architecture and Design Dean Glen LeRoy, Christopher Schanck (Architecture and Design), Mansoor Nasir and James Mynderse (Engineering), Douglas Skidmore (Architecture and Design), President Virinder Moudgil, Nishantha Bandara (Engineering), Provost Maria Vaz, Scott Shall (Architecture and Design), and Nabih Jaber (Engineering).

LTU team wins design/build competition for religious shelter

The team of (left to right) Harold Remlinger, BSAr’04, MAr’06, and Adjunct Professors Shari Stein and Ralph Nunez designed and built the winning entry in the Sukkah Arbor contest for a traditional temporary shelter for quiet contemplation during the important Jewish holiday of Sukkot. The contest attracted 50 entries from across the country.



Blue Devil athletes show why they are champions off the field

Lawrence Technological University's athletic programs have expanded dramatically this year, and off the field the players are already performing like all-stars through their community

service activities and commitment to the Live 5 program of the National Association of Intercollegiate Athletics (NAIA). Live 5 is the NAIA's new Champions of Character program

that teaches student athletes to follow and live by five core values: integrity, respect, responsibility, sportsmanship, and servant leadership. The Blue Devils have been doing just that.

This fall, the men's and women's soccer teams sponsored the "Kick Out Hunger" food drive to support Gleaners Community Food Bank of Southeastern

Michigan. Along with collecting food and money during Homecoming week, the men's team spent a morning in August giving a helping hand at the food bank.

"It was great to get together as a team and volunteer to help Gleaners," said senior captain Chadd Scruggs who really appreciates how Gleaners helps those who are less fortunate.

The LTU women's soccer team also collected food and contributions for Gleaners during the men's soccer team's Homecoming game.

Several women soccer players gave back to their sport by coaching the Dearborn Heights Soccer Club (DHSC) youth soccer teams.

"They are a huge asset to our little club and their mere presence makes a positive impression on the players and families that they work with," said DHSC Director of Coaching John Moriarty.

Freshman midfielder Claire Huddas enjoys her involvement with the younger players. "I look forward to spending time with my teammates and doing something good for the community," said Huddas.

Also this fall the men's and women's soccer teams joined the lacrosse team on a project that demonstrated servant leadership. The teams cleaned the pathway between the parking lot and The Point athletic fields where games are held. The athletes picked up litter, removed trash from the stream, and added a new layer of mulch to the walking path so fans and visiting teams will have a safe and clean route to and from the playing field.

Women's Soccer Head Coach Jamie Scott said these projects are just the beginning. "LTU women's soccer has plans to be more active in servant leadership and giving back to the community," said Scott. "The girls understand the importance of giving back. It is another opportunity for them to be together while doing something good." □CY



Soccer and lacrosse players joined forces to clean up the path to the playing fields of The Point athletic fields. The toughest assignment was fishing out trash from the tributary of the Rouge River that runs through campus.

Jumping into the new SAE racing season

Members of LTU's SAE Baja team demonstrate the jumping capabilities of last year's racing vehicle as part of the SAE Grand Prix event hosted by Blue Devil Motorsports in September. Teams from Kettering University and Oakland University also revved up their racing vehicles for time trials. The event helped kick off the new SAE season that culminates with regional competitions in the spring.



makeLab produces a different kind of cloud solution

An array of 66 baffles, some as long as 31 feet, have transformed the ceiling of Lawrence Tech's John and Betty Chanik Admissions Welcome Center into a work of art that is designed to diffuse the sometimes overpowering natural light shining through the glass roof of the A. Alfred Taubman Student Services Center.

Nicknamed "the cloud," the series of vertical baffles diffuses the sunlight rather than blocking it. The room is more comfortable for people who no longer sit in direct sunlight, and images on a projection screen are easier to see.

The project is a dramatic demonstration of the capabilities of the makeLab, which was established in 2010 by the College of Architecture and Design under the leadership of Assistant Professor Jim Stevens to give students and faculty access to digital fabrication.

Pandush Gaqi and Steve Kroodsma, two 2010 architecture graduates and makeLab Fellows, spent seven months on the project that has saved the University thousands of dollars while providing the makeLab with a new CNC machine that was needed for a project of this size.

University Architect Joseph Veryser, BSAr'76, turned the project over to the Gaqi and Kroodsma when a professional design firm

had trouble coming up with a workable solution and it appeared likely that outside contractors would charge at least \$15,000. The project ended up costing \$7,000.

The makeLab team was faced with the challenge of devising a solution that would be compatible with the existing lighting fixtures and fire-suppression sprinkler system. The team had to devise a way to block the sunlight with non-flammable, easy-to-clean materials that wouldn't collect dust.

They employed software programs to simulate the sun's effect inside the room throughout the year, and then used the resulting data to design the baffles.

Gaqi and Kroodsma and their makeLab collaborators, students Natalie Haddad and Kyle Van Klompenberg, realized that the existing CNC cutting table wasn't big enough to cut the long baffles efficiently. So they each donated \$1,400 for parts and built a much bigger cutting table with a vacuum function capable of holding the low-density fiberboard pieces in place to be cut.

They estimate that the new table reduced the cut time for the 66 baffles to 10 hours from 50 hours or more. "This was about learning and speeding up the process for future projects," said Gaqi, the project manager who

also was working in the makeLab as a designer/fabricator.

Gaqi and Kroodsma said they couldn't have accomplished the project without support from Stevens, Associate Dean Ralph Nelson, and the Coleman

Foundation, but Veryser's confidence in them may have been the best support of all. "It's funny what you can accomplish when they give you freedom," Gaqi said. □EP

Students share their vision for downtown Detroit



Representing Lawrence Tech at an August program at the M@dison Building in downtown Detroit on redefining Detroit were (from left) Mike Lapico, Keith Marks, Brian Game, Associate Professor Amy Deines, Emma Zatkoff, and Irina Dwyer. The program was organized by Quicken Loans, Bedrock Real Estate Services, Rock Ventures, Rossetti, and Lawrence Tech. The students had participated in LTU's detroitSHOP studio in Detroit in the spring, and used concepts and designs from the studio to support their ideas.

Blue Devil Bike Crew tours Detroit again



In September these students, faculty, staff, and alumni represented Lawrence Technological University at the 11th annual Tour de Troit through the streets of Detroit. In all, 50 Blue Devil Bikers joined in the record-breaking turnout of 5,000 riders for the unique opportunity to take over the streets and see some of the best sights in the Motor City while raising money for Southwest Detroit Greenlink, a nonprofit that develops bike lanes and other cycling facilities in Detroit. The group has also been active creating a bike trail on campus.



Pandush Gaqi (left) and Steve Kroodsma install baffles for the ceiling of the Welcome Center.

Appleby named a ‘Real McCoy’ educator

Senior Lecturer LaVetta Appleby of Lawrence Technological University has been named one of the first five “Real McCoy” educators by the Detroit Area Pre-College Engineering Program (DAPCEP).

DAPCEP and DTE Energy presented the inaugural Real McCoy awards for education in science, technology, engineering, and mathematics (STEM) and the medical field in August at the headquarters of DTE Energy in Detroit. Appleby was recognized in the science category. She teaches chemistry and is associate director of the Master of Science Education program at LTU.

DAPCEP is a Detroit-based nonprofit that provides STEM programming to underrepresented metropolitan Detroit youth in kindergarten through 12th grade. With help from its corporate and eight university partners, DAPCEP serves more than 4,000 students each year at no cost.

“DAPCEP has given me an avenue to share my love of science

with mid-school and high school students to help them reach their goals,” Appleby said in accepting the award. “It is important that we continue to support this program, so that students will pursue STEM education, in hopes that it will open up a whole new world for them.”

Lawrence Tech has partnered with DAPCEP on science education for students in grades

6–12 for more than 20 years, and Appleby has been teaching in the program for more than 10 years. One of the courses she has taught to DAPCEP students is Forensic Physics.

Appleby realizes how important it is to get students interested in the subject matter. Many high school students, especially girls, often wonder why it is important to learn physics, so Appleby has

made physics part of a crime scene investigation (CSI) class. (See related story, page 17.)

“The students are excited about forensics, and the physics they’re learning is disguised,” she said. “All they want to do is solve the case, and they get really excited.”

The DAPCEP Real McCoy Awards are named after Detroitier Elijah McCoy (1844–1925), a mechanical engineer who invented an automatic lubricator for steam engines. □EP



Senior Lecturer LaVetta Appleby (in white coat) was joined at the August DAPCEP award ceremony by (from left) George McDay and LTU colleagues Valentina Tobos, Anthony Sky, Glen Bauer, and Howard Davis.

Electric vehicle charging station upgraded

Lawrence Technological University has upgraded its electric vehicle charging station to 240 volts. In a symbolic gesture, LTU Campus Architect Joseph Veryser, BSAr’76, and DTE Energy Vice President of Distribution Operations Vincent Dow, BSEE’79 (right), free LTU mascot Blue from his dependence on gasoline. ClipperCreek and DTE Energy helped upgrade the charging station. The dedication ceremony was held during the eighth annual Seminars on Sustainability hosted by LTU in October.



Alumni provide support for Mars mission

When Curiosity, the NASA Mars rover, took core samples during its historic mission this fall, its robotic arm relied on two sensors developed by two graduates of Lawrence Technological University.

The sensors were manufactured by FUTEK Advanced Sensor Technology, Inc. of Irvine, CA, which was founded by brothers Javad Mokhberty, who earned a degree in mechanical engineering in 1979, and Mohammed Mokhberty, who earned a degree in industrial management in 1978. (The brothers spell their last name differently.)

FUTEK makes sensors for the aerospace, medical, robotic/automation, and automotive industries. It has more than 100 employees, including 11 engineers, and its revenues will approach \$20 million this year.

The company develops load cells, torque sensors, pressure sensors, multi-axial sensors, and related software for low-temperature and vacuum environments. Raytheon, MIT, Lockheed Martin, and NASA's Jet Propulsion Laboratory (JPL) have all partnered with FUTEK.

For Curiosity, FUTEK designed two unique sensors to operate in the frigid temperatures on Mars, which range from 23°F to as low as -124°F. A multi-axial load and torsion sensor is responsible for monitoring the Rover's drilling arm and its robotic maneuvers as it retrieves sediments for analysis; and a secondary load cell that supervises the precision and force used to drill directly into the surface of Mars.

While growing up in Iran, Javad Mokhberty was inspired by NASA's 1969 Apollo moon mission. He and his brother decided to pursue their education in the United States and both worked to support themselves while attending Lawrence Tech. Their professional paths diverged, but

eventually they ended up together in California, where they began working full-time on their own company in 1989.

Shortly after the Challenger disaster in 1986, Mokhberty, the company's CEO, became involved in the space shuttle Discovery mission when he helped design a sensor to be immersed in the sub-zero temperatures of liquid oxygen in an external tank. Then he worked on a sensor to be immersed in liquid nitrogen. The expertise he developed in cryogenic sensors led to the founding of FUTEK.

At FUTEK, testing and evaluation are critical when designing sensors for space exploration.

"There are many factors involved in designing sensors for Mars, but the most important is that failure is not an option," Mokhberty said.

One of the FUTEK sensors on the Mars rover has more than 120

miniature soldered joints that all have to be tested, and 1,700 photos were taken to document every connection. FUTEK employees are certified by NASA.

"NASA is comfortable with our corporate culture. At FUTEK we don't have quality control. Instead QC stands for Quality Culture," Mokhberty said. "Everyone involved takes responsibility for inspection and verification, and validation is important for every step we take."

In 2012, FUTEK added 20 positions, a second shift, and a new Torque Division. Close to \$2 million has been invested in new construction, equipment, and software – all without the help of government grants.

The brothers insist on using parts made in the United States.

"Having a business where everything is made in the U.S. is kind of rare, but it's very important to us," Mokhberty said. "It reminds me of the TV program, 'Mission

Impossible.' It's very difficult to get all the parts in the U.S., but it's possible."

Mokhberty said the education he received at Lawrence Tech was instrumental to his success and singled out Richard Lundstrom.

"Working with Professor Lundstrom calibrated my expectations to a high level for standards, discipline, determination, and a positive attitude when accepting challenges. He taught me to be solution-minded," he said.

Lundstrom also helped Mokhberty get a job at GSE of Farmington Hills, where another Lawrence Tech alumnus, Fred Zink, BSIM'80, was his mentor.

"My experience at GSE in sensor design and application was the solid foundation I needed to start FUTEK," Mokhberty said.

FUTEK has already designed sensors for the next generation of the Martian rover's robotic arm. In addition, the company is working with NASA on four other projects:

- Parachute sensors for the Orion Multi-Purpose Crew Vehicle intended to be the NASA Space Shuttle replacement in 2020.
- Docking station load cells for a new international space station.
- The Visible Infrared Imager Radiometer Suite for testing in low temperatures intended for the National Polar-Orbiting Operational Environment Satellite System preparatory project.
- The Shear History Extensional Rheology Experiment, also involving MIT, to examine the stress and strain of polymer fluid in micro-gravity. □EP



Mohammed Mokhberty (left) and Javad Mokhberty show a sensor similar to the one that monitors the drilling force in the sample-gathering robotic arm of the Mars rover Curiosity.

With two advanced degrees, Schroeder assumes new post at Polk

Kathleen Schroeder, MBA'95, DBA'08, brings 30 years of professional experience in information systems, data processing, and programming to her new position as vice president of information services and support at Polk, the Southfield-based provider of automotive information and marketing expertise.

Schroeder joined Polk in 2005 and has served as director of product optimization and data processing, senior director of quality management, and, most recently, senior director of European information systems.

There's no doubt in her mind that her two degrees from Lawrence Tech enhanced her career opportunities. "My MBA provided a solid grounding in business areas outside of my IT experience, such as marketing, finance, and human resources, and my

doctorate gave me the research skills that I use every day to evaluate new technologies and business concepts," she said.

Looking back to her student days, Schroeder is particularly grateful for the opportunity to learn from Associate Professor Jackie Stavros and Associate Professor Patty Castelli.

"From Dr. Stavros I learned unique approaches to problem solving, strategies to effectively manage organizational change, and the power of positive energy," she said. "Dr. Castelli gave me very valuable insights into leadership traits and best practices that I have incorporated into my own management style. I used both Drs. Stavros and Castelli as role models when I was given the opportunity to teach at Lawrence Tech as an adjunct professor."

In the latter role, Schroeder



Kathleen Schroeder was appointed vice president of information services and support at Polk in July.

earned an Adjunct Faculty of the Year award from the College of Management.

"In addition to the faculty, I have been very fortunate to have developed friendships with many of my classmates from Lawrence Tech," she said. "Being surrounded in the classroom by smart, talented individuals led to some very energetic and informa-

tive discussions. Spending hours with them outside the classroom working on group projects and in study sessions helped form a lasting bond of mutual respect and friendship."

Schroeder and her husband and fellow alumnus, Ray Schroeder, AEET'98, have two children. □CWM

Alumni Association finds new ways to reach out

The Alumni Association is trying new methods to help graduates reconnect and remain engaged with their alma mater.

"We will continue to reach out to alums to bring them back to campus and enrich their experience," said Alumni Association President Diane Cairns, CIMBA'01, a producer for eLearning Services and adjunct instructor at LTU.

A major initiative this March will be a new lifelong learning program. Details will be posted on lawrencetech.net, the Alumni Association's portal for getting information to alumni.

The Alumni Association has a strong presence online and is connecting with alumni around the globe. A survey sent out to alumni in the summer verified that the best way to communicate with them is online, but Cairns has also found that some of the best connections are made in one-on-one conversations. "The board

members and I are asking alumni how the University can help them, and we are getting very specific responses," she said.

Activities for alumni at Homecoming in September included a classic car show where alumni got the chance to show off their favorite rides from yesteryear. Many alumni want to see how the campus has changed since they graduated, and two tours were

given that day.

Alumni have gotten involved through their support of the SAE racing teams, the LTU booth at the North American International Auto Show, and the expanding athletics program. The Two Forks Up etiquette program in October provided a pleasant way for alumnae to network with each other as well as students.

Affinity groups, such as the

Greek fraternities, provide other avenues for alumni to reconnect, and Alumni Association board members often offer to help set up connections with the University.

There are plans to hire a student to manage communications at lawrencetech.net.

Helping alums to get in touch with old friends or to make new friends is always the top goal of the Alumni Association's "friend-raising" activities. Generating financial support for academic programs is another important goal.

It is also true that an active alumni association helps the University score well in the national rankings by *U.S. News & World Report*. "Involvement by alumni is one of the factors weighed strongly in assessing the University's strength. As the reputation of the University increases, so does the value of a degree from here," Cairns said. "We've also found that our alumni are our best marketers for bringing in engaged students." □EP



Alumni Association President Diane Cairns presents a check to student Marc Basta of the Formula Hybrid team to support the kick-off picnic for Blue Devil Motorsports held in August. At left is Alumni Association board member Jeff Balazs.

Sailing, sailing... in a boat of his own making

For years, Doug Scherbarth, BSCh'80, had dreamed of building his own cabin sailboat. And so he did just that, but his time line to complete the project was a bit optimistic.

What he calculated would be a one-year "after work and weekends" project turned into a labor of love spanning nine years before he finally launched the 43-foot boat with a 55-foot mast in 2004 with a 90-ton crane.

Scherbarth, an advisory engineer at SafeNet in Belcamp, MD, worked on the project virtually on his own without a kit.

"This whole process started with building a cedar strip canoe and then two kayaks. It seemed at the time building a larger boat wouldn't be that much longer," he recalled, smiling in retrospect at his naiveté.

He purchased plans for a wood epoxy sailboat and began constructing the hull upside down by laminating many strips of Douglas fir into five layers covered by two layers of polyester fabric saturated with epoxy. He attached the wooden portion of the keel and constructed a rolling frame so the boat could be rolled to an upright position.

"Yay! It must be almost done and it only took one year," Scherbarth recalled telling himself at the time. "It's probably good that I did not know how wrong that was!"

While all this work was going on, he was busy collecting and melting down wheel weights to be used in the ballast keel. "The weights are one to four ounces each so it took a bunch to get to 8,000 pounds. I built a plywood skinned keel plug and then cast lightweight concrete over that to make a mold," he explained.

Scherbarth then set up four separate melters and burners to

fill the keel. "Interestingly, it only took about 35 pounds of propane to melt 8,000 pounds of lead," he noted.

The pour was going well until a helper noticed that the mold was leaking – and about 5,000 pounds of lead ended up spilling on the ground. He had to spray cold water on the lead to prevent it from rolling down his driveway and into the street. It took him three months to cut the solidified lead into chunks and clean up the

mess. Fortunately, he was able to re-use all of the lead on the next pour with a much stronger mold.

As the project sailed toward the finish line, Scherbarth made the patterns and did the sand casting needed to make the boat's silicon bronze fittings. He also built the vessel's refrigerator and freezer systems using various components. And finally, he installed a used 80-horsepower diesel engine that had to be re-built and re-sleeved prior to installation.

"Along the way, I got lots of satisfaction from improving or learning new skills like TIG welding, sand casting, diesel engine mechanics, interior and canvas-

work sewing, vacuum bagging and composite panel construction, sailing rig design, and stainless fitting fabrication," Scherbarth said.

"I had help and support from many quarters, but generally I needed to discover ways to complete most tasks solo. There were a few setbacks – like falling into the hull and breaking both wrists, which prevented me from doing much work for about four months while the deck was being built."

Now, with the hard work long over, Scherbarth enjoys sailing on Chesapeake Bay with his son, Eric. His more recent adventures include building a race car from the ground up and learning ballroom dancing with Lynne, his wife of 33 years.

Scherbarth joined SafeNet, the largest company in the United States exclusively focused on the protection of high-value information assets, in 2000 after five years as a consultant for the firm.

So how did a chemistry major end up working in the software industry?

"I had an interest in computers and took several programming classes as well as working on a number of personal projects while at Lawrence Tech," Scherbarth said. "During an interview with Dow Chemical, I indicated an interest that resulted in being hired into the Dedicated Systems Group, which automated and collected data from process and testing gear." □ CWM



Douglas Scherbarth knows virtually everything there is to know about his sailboat because he built it with his own hands.

Research shows that computers can match humans in art analysis

Jane Tarakhovsky, MSCS'11, is the daughter of two artists, and it looked like she was leaving the art world behind when she decided to become a computer scientist. But her recent research project at Lawrence Technological University has demonstrated that computers can compete with art historians in

critiquing painting styles.

Tarakhovsky used a computer program developed by Assistant Professor Lior Shamir to demonstrate that a computer can find similarities in the styles of artists just as art critics and historians do.

In the experiment, published in the *ACM Journal on Computing*

and *Cultural Heritage* and widely reported elsewhere, Tarakhovsky and Shamir used a complex computer algorithm to analyze approximately 1,000 paintings of 34 well-known artists, and found similarities between them based solely on the visual content of the paintings. Surprisingly, the computer provided a network of similarities between painters that is largely in agreement with the perception of art historians.

For instance, the computer placed the High Renaissance artists Raphael, Da Vinci, and Michelangelo very close to each other. The Baroque painters Vermeer, Rubens, and Rembrandt were placed in another cluster.

This is significant because non-experts generally have difficulty telling the difference between closely related schools of art such as Early and High Renaissance or Mannerism and Romanticism. "This experiment showed that machines can outperform untrained humans in the analysis of fine art," Shamir said.

The experiment was performed

by extracting 4,027 numerical image context descriptors – numbers that reflect the content of the image, such as texture, color, and shapes, in a quantitative fashion. The analysis reflected many aspects of the visual content and used pattern recognition and statistical methods to detect complex patterns of similarities and dissimilarities between the artistic styles. The computer then quantified these similarities.

Tarakhovsky, who lives in Lake Orion, is the daughter of two Russian artists. Her father was a member of the former USSR Artists. She graduated from an art school at 15 years old and earned a bachelor's degree in history in Russia, but switched her career path to computer science since emigrating to the United States in 1998.

Tarakhovsky utilized her knowledge of art to demonstrate the versatility of an algorithm that Shamir originally developed for biological image analysis while working at the National Institutes of Health in 2009. She designed a new system based on the code and then designed the experiment to compare artists.

She also has used the computer program as a consultant to help a client identify bacteria in clinical samples.

Tarakhovsky also worked with Professor CJ Chung on Robofest, an international competition that he founded to encourage young students to study science, technology, engineering, and mathematics, the so-called STEM subjects.

"My professors provided me with a broad perspective and have encouraged me to go to new levels," she said.

She said that her experience demonstrates that people can make the transition from subjects like art and history to scientific disciplines that are more in demand now that the economy is increasingly driven by technology.

"Everyone has the ability to apply themselves in different areas," she said. □EP

Computer scientist Jane Tarakhovsky has used a computer program developed by Lior Shamir (right) to demonstrate the potential uses of computer analysis in art criticism.



Professor exhibits artwork in Birmingham

Lawrence Tech Professor Gretchen Maricak, BSAr'76, BA'77, discusses her painting of the Medusa concrete mixing plant in Detroit, which was part of an exhibit at the Birmingham Historical Society in the fall. There were two companion exhibits, "The Arts and Crafts Period in Birmingham's Eco-City Neighborhood" and "The Architectural Art of Gretchen Maricak," which included a wide range of styles and subjects.



LTU and Technology Highway team up to help entrepreneurs

Francis “Tex” Criqui, BSME’76, is playing a key role in the new approach Lawrence Technological University has taken to foster a more entrepreneurial mindset among students and faculty and helping entrepreneurs bring new products to market.

LTU has had a part-time engineering entrepreneur in residence (EEIR) for several years, but under Criqui’s leadership that function is now being performed by a team

of consultants from Technology Highway, a Detroit-area consulting firm.

By leveraging the talent and expertise of a team for the new EEIR/LTU Entrepreneurial Collaboratory, Technology Highway supports a broader scope of entrepreneurial activity, according to Mark Brucki, LTU’s executive director of economic development and government relations. “We are confident that this team

approach will be very productive for our students and faculty who want to commercialize products or processes they have developed through research,” Brucki said.

Criqui worked for General Motors for 40 years. He was regional director for an engineering consulting firm for five years and worked another five years as director of operations for a management consulting firm.

The Technology Highway consultants have extensive experience in technology and innovation, strategic planning, lifecycle management, product data management, process design and definition, standards and regulatory compliance, project management, and

Francis “Tex” Criqui, BSME’76, is honored as a speaker in the Blue Devil Entrepreneurial Venture Series by Lecturer Don Reimer, BSIM’62, (left) and Michael Zulinski, BSIM’74, chairman of the Legends, the organization of entrepreneurial LTU alumni.

organizational performance.

“In addition to the significant business experience of Technology Highway consultants, we have developed a clear understanding of what innovators and new startups must do to successfully commercialize their ideas,” Criqui said. “Our involvement with various regional support organizations have sharpened our tool set and prepared us to accomplish the goals of the EEIR/LTU Entrepreneurial Collaboratory.”

The goals are to:

- Foster an entrepreneurial mindset among students and faculty.
- Develop an engaged network of area entrepreneurs and involve them in LTU events, academic programs, and student projects.
- Advise start-ups and aspiring entrepreneurs.
- Pursue additional funding for entrepreneurship programs.
- Assist in the commercialization process of student projects. □EP



Lawrence Tech helps host annual conference of minority architects



The National Organization of Minority Architects (NOMA) spent the evening of Oct. 18 at Lawrence Technological University as part of its 40th annual conference held in Detroit. Following a reception in the Architecture Building gallery, Glen LeRoy, LTU’s dean of the College of Architecture and Design, moderated a panel discussion on Detroit urban planning. Among those attending were (from left) Lamont Edwards, BSAr’12; Bryan Cook, BSAr’06, MAR’11; William Mack III, BSAr’07; Sandra Little, BSAr’94, MAR’98, conference co-chair; College of Architecture and Design Dean Glen LeRoy; Tiffany Brown, BSAr’05, MAR’07, NOMA Detroit vice president and conference co-chair; and Kai Brown, BSAr’07.

Restoring Frank Lloyd Wright's Affleck House is a labor of love

Thanks to the hands-on leadership from alumni, major progress has been made this year on a long-term plan to renovate Lawrence Technological University's iconic Affleck House designed by Frank Lloyd Wright.

The 1941 home in Bloomfield Hills was donated to the University in 1978 by the Affleck family. Although there have been several restoration efforts at the home since that time, this is the most comprehensive and ambitious.

Working in conjunction with LTU's College of Architecture and Design, Lawrence Tech's Distinguished Architecture Alumni Committee is taking the lead in a long-term campaign to restore the house that was placed on the Michigan Register of Historic Places in 1978 and the National Register of Historic Places in 1985.

The big project for 2012 was reconstruction of the exterior staircase, which was done by skilled craftspeople and trainees organized by the International Masonry Training Institute at no charge to the University. Restoration specialists also cleaned and repointed exterior brick work around the house.

Future projects on the list include reconstructing the driveway and landscaping to match the original design, rewiring the electrical system, replacing the kitchen appliances, restoring the 2.3-acre site and its unique water features, reglazing the windows and skylights, installing a geothermal heating/cooling system, fabricating interior furnishings, and replacing the roof.

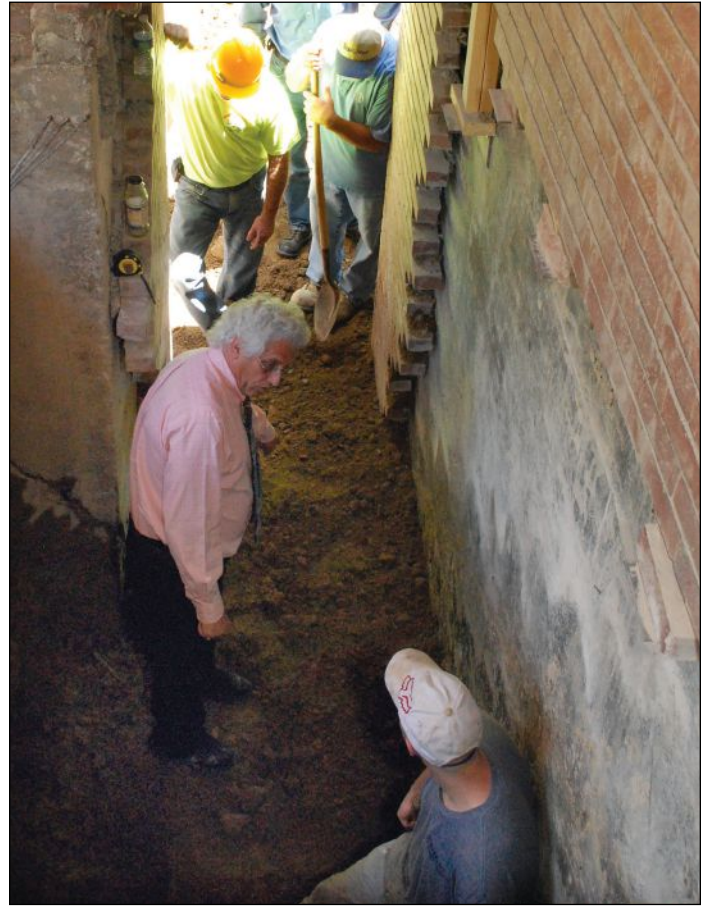
"There is no question that age and the elements have taken their toll," said Deirdre Jimenez, BSAr'83, BSA'85, the 2008 Distinguished Architecture Award winner and chair of the restoration committee.

In July Ben Tiseo (center) got to the bottom of drainage problems that had undermined the exterior staircase at the Affleck House.

Other Distinguished Architecture Alumni Award winners involved in the project include Fred Butters, BSAr'83, BA'r84; Alan Cobb, BSAr'76, FAIA; Harvey Ferrero, BSArE'55; Thomas O'Connor, BSArE'64, FAIA; James Ryan, BSArE'66; and Benedetto Tiseo, BSAr'78, FAIA.

To help underwrite the cost of the repairs, Butters has been fashioning limited-edition, handcrafted pens with cypress wood removed from the house during a recent renovation, and Ferrero has produced sets of black-and-white and color prints of the house during the four seasons. The prints are signed by the artist and available for purchase online at www.lawrencetech.net, as are the pens.

Also working on the restoration projects are Dean Glen LeRoy of the College of Architecture and Design, Professor Will Allen, Associate Professor Dan Faoro, Associate Professor Dale Gyure, and Associate Professor Janice Means.



The University is using the renovation as an opportunity to demonstrate sustainability best practices and promote education by involving LTU students and trade apprentice programs in the planning and execution of the projects with the collaboration of

the faculty, industry organizations, and suppliers.

The Affleck House is used by the University for events and classes, and tours are offered by appointment. For more, go to www.ltu.edu/affleck_house. □EP

AFFLECK HOUSE Cypress Pen

Acquire an exquisite piece of Usonian heritage for a minimum gift of \$400 to support the **Affleck House Restoration Fund**.

Production is limited to 100 pens fashioned from sections of red cypress siding removed from the Affleck House during a recent renovation.



To order an Affleck House Cypress Pen, visit www.ltu.edu/affleck_house/cypress_pens.asp.

DelGrosso named CEO of Henniges Automotive Holdings

Lawrence Tech's focus on theory and practice is what best prepared Douglas DelGrosso, BSME'84, for a successful career in the automotive industry. In August he became CEO of Henniges Automotive Holdings Inc. in Auburn Hills.

"Coming out of school, I was able to immediately apply what I learned in the classroom because it was taught with a focus on practical application by instructors who had worked in industry," he said.

DelGrosso has nearly 30 years' experience in the automotive industry, most recently as vice president and general manager of Global Braking & Suspensions at TRW Corp. Before that he was president and COO of Lear Corp.

With facilities in North America, Europe, and China and 4,800 employees worldwide, Henniges Automotive Holdings produces highly engineered sealing and anti-vibration systems to the global automotive market. In 2010, the company was acquired by Littlejohn & Co., a private equity firm.

"I have only good memories of my time at Lawrence Tech," DelGrosso recalled. "I worked full-time while being a full-time student, but I still had time to develop some strong personal relationships, some of which have lasted until today. When I wasn't studying or working, I remember playing euchre in the cafeteria, which

was located in the Engineering Building."

One of his most memorable instructors was Professor Gilder Jackson, who taught European history. "He had a way of communicating that made the subject matter particularly interesting. He was a classic college professor – tweed jacket, khakis, and penny loafers," said DelGrosso, who served on Lawrence Tech's Board of Trustees from 1998 to 2010.

□CWM



Douglas DelGrosso

Stay connected with Lawrencetech.net

Find information on upcoming events at your alma mater – alumni meetings, campus events, lectures, free programs, and more. There are many opportunities to connect with LTU and your fellow alumni.

Go to www.lawrencetech.net to update your information, register for events, find answers to frequently asked questions, get information on alumni boards and cabinets, view university news releases, and join discussion groups.

Watch for upcoming events at www.lawrencetech.net. Alumni will have a role to play at the North American International Auto Show Jan. 14–27, 2013. Also, stay tuned for lifelong learning initiatives being planned for the spring. The Easter Bunny Brunch is scheduled for Sunday, March 17, in the Buell Management Building atrium.

Entrepreneurial Venture Series brings back alums to speak

The Blue Devil Entrepreneurial Venture Series is bringing back six alumni during the 2012–13 academic year to share with students and the public their observations about the importance of entrepreneurship in building companies and careers.

In September, Francis "Tex" Criqui, BSME'76, spoke on "Commercialization Services for Students." He is founder and principal of Technology Highway. (See related story on page 26.)

In October, Rayna Handelman, BSME'87, discussed "Keys to Marketing Your Innovations." She is vice president of global strategic marketing for KEMET.

In November, Jeffrey Roman, BSCvE'01, discussed "Visioning the Future and Creating It." He is chief financial officer and engineering director of EnSite.

Three programs are planned for the spring term:

- "Keep Innovating – Keep Growing," by Laura Clary, BSA'95, president and founder, iDesign Solutions, Thursday, Jan. 17, 12:15 p.m., Buell Management Building, M218.

- "Creating a Customer-Focused Manufacturing Company," by Naji Gebara, BSEE'92, MEMS'97, DEMS'06, CEO of PGF Technology Group Inc., Thursday, Feb. 21, Buell Management Building, M218.

- "21st Century Product Development and Manufacturing," by Cary Wood, MSIO'96, president and CEO of Sparton Corp., Thursday, March 21, Buell Management Building, M218.

The Blue Devil Entrepreneurial Venture Series is free and open to the public, and food and beverages are provided. To learn more, go to www.ltu.edu/venture. □EP



Prior to her Blue Devil Entrepreneurial Venture Series lecture in October, alumna Rayna Handelman (left) spoke with Mark Brucki of University Advancement and members of the Collegiate Entrepreneurial Organization at Lawrence Tech, Mike Sheets, Sybil Hill, and Sylvia Moore.

LTU well represented at AIA Michigan awards ceremony



Lawrence Technological University had a large contingent at AIA Michigan's Celebration of Architecture annual awards program in June, including (from left) LTU Trustee Victor Saroki, BSAr'79, BA'80, FAIA, this year's AIA Michigan president who presented the awards; Paul Urbanek, BSAr'81, BA'82, FAIA; James Ryan, BSArE'66, FAIA; Adjunct Professor Celeste Novak, and Associate Professor Joon Kim. Novak won the Gold Medal, Ryan won the Hastings Award, Kim won the President's Award, and Urbanek was honored for his election to the AIA College of Fellows.

Licata honored for a lifetime of achievement

The annual Distinguished Architecture Alumni Award program on Oct. 3 at Lawrence Technological University was a memorial retrospective on the life and career of Richard Licata, BSAr'76, FAIA, who lost his battle to cancer after being named the 2012 award recipient.

Alan Cobb, BSAr'76, another fellow of the American Institute of Architects, delivered both personal and professional recollections about his classmate. Education, sustainability, and urban issues were the focus of Licata's career. He inspired hundreds of students interested in pursuing a career in architecture and alternative energy technologies.

Shortly after graduation, Licata received a fellowship and worked at the AIA Research Corp. (AIA/RC) in Washington, DC, and quickly became involved in creating an American approach to sustainable building systems and developing academic curricula for architecture and renewable energy. Along with Cobb and another classmate,

August Percha, BSAr'76, he won the AIA/RC Design Awards competition for research on environmental design.

Licata's early work as an architect was shown in the exhibit "Modern Architecture in the West" at an AIA Western Region conference, but he became better known as a leader of the movement to bring sustainability to architecture.

As president of AIA Nevada,

he provided a statewide vision for "the Blueprint for Nevada," which was cited by the AIA as a national model. He introduced community design processes in Reno and helped develop the federal HUD 108 loan program. He regularly spoke on behalf of the U.S. Green Building Council and the Sierra Club, and served as an advisor to U.S. Senate Majority Leader Harry Reid and White House senior staff



Richard Licata

on sustainability issues and jobs created by the renewable energy sector.

He was only the seventh AIA Fellow from Nevada and the first from the northern part of the state. He provided years of leadership to the AIA Northern Nevada chapter, AIA Nevada, the Western Mountain Region (receiving silver metals from each), and the AIA National Institute. □EP



Alan Cobb (left) and Dean Glen LeRoy join Shanna Licata, the widow of Richard Licata, this year's winner of the Distinguished Architecture Alumni Award.

Alumni Notes

Alumni Notes includes news gathered from alumni, their families and friends, corporate news releases, and Michigan newspapers. Submissions received after the deadline for this issue will appear in the summer 2013 issue. Use the form in this section to share news about you!

1933-1959

Vincent Kaye, BEE'35, celebrated his 104th birthday in September at Manoogian Manor Assisted Living in Livonia. He spent his career in electrical engineering at several companies in the Detroit area. His wife of 67 years, Rose, died in 2002.

1960-1979

Philip Garcia Jr., BSAr'76, has joined engineering and architectural firm Barge Waggoner Sumner and Cannon Inc., based in Nashville, TN, as manager of architectural services. He was previously an architect/project manager at CRB Consulting Engineers Inc. in Kalamazoo.



Gary A. Kecskes, BSAr'77, BA'78, MAR'01, has been appointed assistant vice president of Workforce Solutions and

Community and Adult Learning at Waubonsee Community College in Aurora, IL. He was formerly the dean for community outreach at Housatonic Community College in Bridgeport, CT, and held several administrative positions at LTU.

John S. Spencer, BSBA'78, has retired after a 27-year career as a Canton Township employee. John started his career as finance director and has served in positions such as chief finance officer, budget and water billing manager, and, most recently, information technology manager.

1980-1989

Shakir W. Alkhafaji, BSAr'80, is president and CEO of Southfield-based Veritas Ltd., an umbrella organization for a group of affiliate companies engaged in cross-border commercial ventures, principally between the United States, China, and the Middle East.

Kirk R. Oliver, BSEE'81, has been named chief financial officer at UGI Corp. in Valley Forge, PA. UGI is a distributor and marketer of energy products and services. Kirk is also a board member of Lawrence Tech's capital campaign steering committee.

John D. Jankens, BSEE'83, celebrated the 10th anniversary of his ordination as a Lutheran minister this year. He is pastor of Trinity Lutheran Church in Hanceville, AL. Before joining the ministry, John was a civilian engineer for the U.S. Department of Defense.

Jon E. Shackelford, BSME'86, an intellectual property attorney, has launched Endurance Law Group in Jackson. The new firm, headed by Jon and his law partner Brad Smith, serves clients across a wide spectrum of business sizes and types.

James A. Miloch, BSEE'87, PE, LEED AP, has joined Fishbeck, Thompson, Carr and Huber Inc. as a senior electrical engineer in the Farmington Hills office. FTCH is a civil engineering, environmental, architectural/engineering and construction management firm.

David F. Beard, BSEE'88, is a senior engineer at Ford Motor Co., specializing in electrical/electronic computer-aided engineering. Dave began his career as a U.S. Navy technician, working on satellite communication and cryptographic equipment. He later worked for Williams International.

Phillip P. Putney, BSBA'89, CPA/PFS, MST, is the owner of AFS Wealth Management LLC in Farmington Hills, an independent financial adviser and advisory associate offering securities and advisory services through Centaurs Financial Inc.

Consider another degree of success

In recent years, Lawrence Tech has greatly expanded to over 100 degree and certificate programs – from associate through the bachelor's, master's, and doctoral level. There are plenty of options for taking individual courses or earning your next degree during the day, evenings, weekends, or online.

Explore the full range of offerings from a single course to fast track certificates to complete degrees at www.ltu.edu. And when you're ready to sign up or ask more questions, visit www.ltu.edu/futurestudents.

1990-1999

Douglas J. Callahan, BSME'93, MBA'99, has been named president and CCO of MMI Engineered Solutions in Saline. The company produces components and material-handling solutions using advanced composites and engineered resins.

Elaine M. Keiser, BSAr'95, MAR'97, AIA, is an architect and principal at Elaine Keiser Architect Inc. in Petoskey. Her work at a home on Lake Charlevoix was showcased this summer in a special issue of *Better Homes and Gardens* magazine.

Eric A. Yeaster, BSME'96, MBA'06, has founded Yeaster Legal PLLC, a Highland-based law firm offering mediation, legal counseling, and representation to small businesses, entrepreneurs, and those facing criminal charges.

Keith A. Phillips, BSAr'97, MAR'03, is the owner of Think Shop Architects in Brighton. Keith said he incorporates ideas and concepts from his personal life experiences into each of his designs.

2000-2012

Salvatore "Sam" A. Moschelli, BSAr'00, MAR'06, director of design and sustainability for Shelter2Home, spoke at Lawrence Tech in March about housing and building needs in Haiti in the aftermath of the January

2010 earthquakes there. Sam has spent the past two years building houses, schools, and other much-needed buildings in Haiti.

Adam Dailide, BSAr'03, MAR'06, has been promoted to dean of academic affairs at ITT Technical Institute in Dearborn.

Angela Nelle-Pagel, BSAr'03, MAR'08, AIA, LEED AP, has received her professional registration to practice architecture in Michigan after successfully completing her board exams. Angela is a design architect at Wilcox Architectural Studio in Gaylord.

Stephen C. McKay, BSAr'05, MAR'07, vice president of Cranbrook Custom Homes in Shelby Township, has been recognized as one of *Professional Builder* magazine's "40 Under 40," honoring builders and architects under age 40 who represent the next generation of leadership and innovation in home building.

Todd P. Dudzinski, BSAr'06, MAR'08, a lieutenant with the Troy Fire Department, has been selected as Firefighter of the Year for 2012. In his 10 years with the department, Todd has "consistently performed his assigned duties in an exemplary manner and has volunteered for many additional responsibilities," said Fire Chief Bill Nelson. He is employed at Integrated Design Solutions in Troy.

A L U M N I N O T E S

Jill S. DeGowske, BSME'08, a design engineer at Denso International America (DIAM) in Southfield, received the Rumbaugh Outstanding Student Leader Award at this year's SAE World Congress.

Michael Samaroo, BSME'08, is a transportation applications engineer at Crane Controls in Los Angeles. He is also a member of Plug In America, a coalition of drivers and former lessees of several electric car models, along with advocates of energy independence and clean air.

Julie L. VanderMeer, BSCvE'08, is an intelligent transportation systems engineer for the Michigan Department of Transportation in Detroit. In October, she married John Schaffer, a senior project engineer for Calsonic Kansei North America in Farmington Hills.

Andrew M. Maurer, BSME'09, is an intellectual property intern at Howard & Howard Attorneys in Royal Oak and an honor student at Thomas M. Cooley Law School. In 2011, he married Allison Frownfelter, an Oakland University graduate with a degree in elementary education.

William D. Donnelly III, BSAr'10, is a designer and fabrication specialist at Think Shop Architects in Brighton.

Benjamin D. Berr, BSAr'11, is with Think Shop Architects in Brighton, where he collaborates in all areas from initial design to finished installation.

Kyle L. Post, BSAr'11, works for Student Life, a Christian organization at the University of the South Pacific. He also has a passion for photography, the result of a class he took as a student at Lawrence Tech. He has published a book of 400 photos he took on a tour of Europe.

Matthew D. Haenlein, BSAr'12, has joined Wigen Tincknell Meyers & Associates in Saginaw as an architectural technician. Matthew provides technical assistance to project architects and designers with 3-D, AutoCAD, and building information modeling.

Robert J. Moelich, BSCM'12, has joined Roncelli Inc. in Sterling Heights as project engineer.

News For Alumni Notes

Use the space below to tell us about you or your fellow Lawrence Tech or DIT alums. Mail it to the Office of Alumni Relations, fax to 248.204.2207, or email alumni@ltu.edu. You may also submit Alumni Notes online at www.lawrencetech.net. Tell us about honors, promotions, marriages, appointments, and other activities.

New Address?

Name _____

Street _____

City State ZIP _____

Home Phone () _____

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In Memoriam

Information for this section is gathered from family and friends of the deceased, and from media accounts. When providing an obituary, please furnish as much information as possible, including the date of death and any Lawrence Tech- or DIT-connected survivors and their graduation dates. If sending a newspaper clipping, please include the date and name of the paper.

Clifford N. Wright, BARe'41, of Redford, July 23, 2012. Mr. Wright, founder of Clifford N. Wright Architects in Birmingham, was a 1970 Alumni Achievement Award winner. A prolific architect, his projects included hundreds of home plans, some of which were published in *Better Homes and Gardens* and other national magazines. He served in the Navy during World War II. He was survived by two sons.

James B. Stevens, BEE'44, of Farmington, July 29, 2012.

James R. Smith, BARe'46, of Grosse Pointe, May 1, 2012. He was survived by his wife, Shirley, and a son.

Robert W. Hooper, BSME'48, of Novi, May 11, 2012. Mr. Hooper, a retired Chrysler engineer, served as corresponding secretary of the Alumni Association in 1962–63. He was survived by two daughters and a son.

G. Donald Pierce, BSME'48, of Coldwater, May 11, 2012. Mr. Pierce held several leadership positions with the Alumni Association from 1949–55, including president. He was retired from the Cross Co. He was survived by his wife, Jane, and four children.

Louis H. Zanner, BSIE'48, of Au Gres, June 26, 2012. Mr. Zanner was the owner of Zanner's Products and Sales Inc. and Zanner's Ice Cream. In 2004–05, he received the "Ambassador of Goodwill," the Lions Club's highest honor, for his many years of service. Mr. Zanner was survived by three sons and a daughter.

Donald T. Jendrusch, BSME'49, of Madison Heights, July 6, 2012. Mr. Jendrusch, a Ford Motor Co. retiree, was survived by six daughters and a son.

Richard C. Kayser, BSME'49, of Fraser, Dec. 24, 2011.

F. Paul Noring, BSIE'49, of Arlington, VA, July 17, 2012. Mr. Noring was retired from the U.S. military. He was survived by his wife, Vlasta, and a son.

Eugene W. Trapp, BSME'50, of Clarkston, April 23, 2012. Mr. Trapp was survived by two children.

Lee W. Crowell, BSArE'51, of New Boston, July 16, 2012. Mr. Crowell was retired from the Giffels & Associates architecture firm. He was survived by his wife, Geraldine, three daughters, and a son.

Joseph P. Gietzen, BSME'51, of Northville, June 26, 2012. Mr. Gietzen was a retired Ford Motor Co. engineer. He was survived by four daughters.

John L. Rupinski, BSBA'51, of New York City, June 10, 2012. Mr. Rupinski, a member of the Blue Devils basketball team in his student days, co-founded Guaranteed Tune Up, a chain of automotive service centers. He was survived by two sons and a daughter.

John G. Crowley, BSME'52, of St. Clair Shores, July 21, 2012. Mr. Crowley was survived by his wife, Dorothy, two daughters, and two sons.

Melvin E. Trombley, BSIM'52, of St. Clair Shores, April 26, 2006.

Robert F. Dean, BSME'53, of Bellbrook, OH, July 10, 2012. Mr. Dean was retired from Chrysler Defense/General Dynamics Land Systems. He was survived by his wife, Leila, and a daughter.

John M. Miller, BSIE'53, of Holland, April 22, 2012. Mr. Miller worked at Ford Motor Co. for 33 years and was a registered professional engineer for the states of Michigan and Hawaii. He served in the Army Air Corps during World War II and was survived by his wife, Loretta, and three children.

Clifton F. Briner, BSME'54, of Fort Wayne, IN, Sept. 26, 2011. Mr. Briner was retired from Purdue University and ITT. He was survived by his wife, June, and four children.

George D. MacMunn, BSEE'54, of Stanwood, Sept. 8, 2012. Mr. Dickson was a retired electrical engineer at Jervis B. Webb Co. He was survived by two daughters.

Harold H. Dunn, BSEE'55, of Westland, Aug. 17, 2012. Mr. Dunn was a retired Ford Motor Co. engineer. He was survived by his wife, Sharon, three sons, two daughters, and two stepchildren.

Frank E. Brunyansky, AEET'57, of Panama City, FL, March 30, 2012.

Stanley R. Sylvester, BSIM'57, of Clinton Township, March 16, 2012. Mr. Sylvester was survived by his wife, Nora, and three sons.

Laverne C. Kreutzkamp, ABCT'58, of Belleville, March 2, 2012. Mr. Kreutzkamp was a self-employed architectural planner. He was survived by his wife, Lorraine, and two sons.

Wesley S. Bachelor, BSIE'59, of Brighton, April 12, 2012. Mr. Bachelor was a retired General Motors executive, finishing his career as Torus Division manager at the Hydramatic Division in Ypsilanti. An Army veteran of World War II, he was survived by his wife, Barbara, five sons, and three daughters.

Michael S. Downes, BSArE'60, of Sterling Heights, March 9, 2012. Mr. Downes was survived by four sons and two daughters.

Joseph Maiuri, BSME'60, of St. Clair Shores, March 1, 2012. Mr. Maiuri was survived by his wife, Eva.

Roger A. Mesko, BSIM'60, of Pinckney, Feb. 13, 2012. Mr. Mesko was a general foreman at both Ford Motor Co. and Rochester-Midland before starting several companies including Woodcraft, Water-Wise, and Biotech. He was survived by his wife, Suzanne, and three sons.

Arthur R. Van Steelandt, BSME'60, of Rochester Hills, April 4, 2012. Mr. Van Steelandt was a retiree from the General Motors Tech Center. He was survived by his wife, Rosemary, three daughters, and two sons.

Richard J. Kinsey, BSME'61, of Plymouth, June 18, 2012. Mr. Kinsey was a Ford Motor Co. retiree. He was survived by his wife, Sharon, a son, and a daughter.

Joseph Tate, AMT'61, of Wyandotte, June 24, 2012. Mr. Tate was president and owner of Sun Plastic Coating. He was survived by a son and a daughter.

Howard H. Lange, BSIM'63, of Rochester Hills, April 16, 2012. Mr. Tate worked for Ford Motor Co. in a variety of positions in the controller's office at the Utica Trim plant. He was survived by his wife, Carole, two daughters, and a son.

Steve Varjabedian, BSME'63, BSIM'68, of Plymouth, May 30, 2012. Mr. Varjabedian was a retired Ford Motor Co. engineer. He was survived by his wife, Sara, and three sons.

Eugene Malinowski, BSIE'64, of Cedar Key, FL, June 4, 2012. Mr. Malinowski was retired from Southwestern Pennsylvania Industries. He was survived by his wife, Rose Ann.

Floyd W. Fater, AIST'65, of Jackson, July 9, 2012. Mr. Fater worked for Consumers Power as a gas regulations supervisor. He was survived by his wife, Maxine, three sons, and a daughter.

William M. Houston, AIST'65, of Livonia, July 5, 2012. Mr. Houston, a General Motors retiree, was survived by his wife, Ada, and three sons.

Robert W. Proctor, BSIE'65, of Las Vegas, March 19, 2009.

Louis E. Schiete, AEET'66, of Clarkston, Sept. 22, 2009.

James W. Koepke Sr., BSEE'68, of Livonia, May 14, 2012. Mr. Koepke, a retired Unisys employee, was survived by his wife, Doris, two sons, and a daughter.

I N M E M O R I A M

Gerald A. Parylo, AMT'68, of Casco, July 23, 2012. Mr. Parylo worked for Buco Products and Cadillac Products Automotive. He was survived by his wife, Patricia.

Richard W. Krajewski, AIST'69, of Daytona Beach, FL, July 7, 2012. Mr. Krajewski was survived by two daughters and a son.

Albert G. Morris, BSME'70, of Howell, July 25, 2012. Mr. Morris was an owner of Advance Spline and Engineering Inc. for more than 30 years. He was survived by his wife, Gertrude, and two daughters.

Thomas J. Panian, BSIM'71, of Jupiter, FL, Nov. 10, 2010.

Stanley J. Pence, BSIM'71, of Walnut Creek, CA, April 5, 2012. Mr. Pence had a long career with John Hancock in Michigan prior to his transfer to the West Coast. He was survived by his wife, Tana, two sons, one daughter, and three stepsons.

John R. Armstrong, BSIM'72, of Shelby Township, Dec. 3, 2011.

Frank E. Wallis, AEET'72, of Rochester Hills, June 16, 2012. Mr. Wallis worked for Detroit Edison for 44 years, retiring from the Service Planning Department-Oakland Division. The Korean War veteran was survived by his wife, Rita, three daughters, and a son.

Paul W. Brauninger, BSIM'73, of Marco Island, FL, Aug. 3, 2012. Mr. Brauninger was a retired controller at Cone Drive. He was survived by his wife, Patricia, two daughters, and a son.

James S. Sarnovsky, BSIM'74, of Livonia, March 14, 2012. A DTE Energy employee, Mr. Sarnovsky was survived by two sons and a daughter.

Samuel P. Pappalardo, BSIM'75, of St. Charles, IL, March 9, 2012. An employee of Tower Insurance, Mr. Pappalardo was survived by his wife, Brenda, a son, and a daughter.

Dennis C. Ziebol, BSIM'77, of Livonia, April 5, 2012. A retired Ford Motor Co. engineer, Mr. Ziebol was survived by his wife, Kathleen, two daughters, and a son.

Thomas E. Kilbride, BSAR'81, of Royal Oak, April 8, 2012. Mr. Kilbride worked on industrial engineering and design projects for the automotive industry throughout the United States, Canada, and Mexico.

John W. Porter, PhD, HD'88, of Ann Arbor, June 27, 2012. Dr. Porter's distinguished career in education in Michigan spanned more than 50 years and included service as State Superintendent of Public Instruction and president of Eastern Michigan University. He was survived by five sons and three daughters.

Connie E. Reschke, MBA'95, of Livonia, March 4, 2012.

Douglas R. Shepard, BSMCS'00, of Waterford, March 26, 2012. Mr. Shepard was employed at the General Motors Tech Center.

Stephen D. Landon, BSAR'03, of Mount Morris, July 8, 2012. Mr. Landon was an associate professor at the University of Michigan-Flint, where he taught theater design courses, along with other theater classes, and served as the university's resident scene designer.

Jesse M. Dequin, BSEE'06, of Canton, May 20, 2012. Mr. Dequin was survived by his wife, Danielle.

DIT IN MEMORIAM

Richard H. Parsons, BSME'38, of Mount Pleasant, Feb. 3, 2011.

Milton Handelman, BSBA'45, of West Bloomfield, July 3, 2012. He was survived by his wife, Betty, and two sons.

Jerome F. Kowalski, BSBA'64, of Macomb, June 17, 2012. Mr. Kowalski worked for Detroit Edison for 45 years. He was survived by two daughters.

James B. Shearer, BSMA'73, of Washington, MI, Aug. 15, 2012. He was survived by his wife, Mary Ann, two daughters, and a son..

THE LAWRENCE TECH FAMILY

David Brody – noted civil engineer

David Brody, 82, of Southfield, a former adjunct professor in the College of Engineering, died May 11, 2012.

Mr. Brody was a civil engineer at Hubbel, Roth & Clark from 1951-1996. He was responsible for several major projects in the Metro Detroit area including the Wayne County Wyandotte Wastewater Treatment Plant and the Detroit Wastewater Treatment Plant.

In 1997, he was named Civil Engineer of the Year by the Michigan Section and Southeastern Branch of the American Society of Civil Engineers. In 2007, he was awarded a patent for his system to reduce flooding in communities with large, complicated draining systems.

Mr. Brody was survived by his wife, Susan, and three daughters.

Anthony J. deAlbuquerque – taught heating and cooling engineering

Anthony J. deAlbuquerque, a retired senior engineer at General Motors Research, died June 4, 2012. He was 84.

Mr. deAlbuquerque taught heating and cooling engineering at Lawrence Tech, Oakland Community College, Macomb Community College, Wayne State University, and the University of Detroit. He also was the chairman of the Technical and Education Committee of the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

Mary Brosch – former librarian

Mary Pauline Brosch of Farmington Hills, a former Lawrence Tech librarian, died May 14, 2012. She was 83.

Mrs. Brosch was survived by her husband, Robert, and a daughter.



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HIGHLIGHTS

Rome • Colosseum • Assisi • Perugia • Siena • Florence • Chianti Winery • Venice
Murano Island • Lugano, Switzerland • Como

Report to Investors | INVESTORS



Associate Professor Jeffery Morrissette of the Department of Natural Sciences works with students in one of the recently renovated labs in the Science Building. Renovations and equipment upgrades are made possible by grants and generous contributions from alumni and other friends of the University.

REPORT TO INVESTORS

FROM THE PRESIDENT AND CEO



At the annual Convocation ceremony held on the Quad in August, President Virinder Moudgil and Student Government President Brandon Hartwick personally greeted every member of the incoming freshman class.

The Friday evening of Homecoming and Inauguration Week on September 28 was truly a night to remember. Ridler Field House was awash in a sea of blue and white as students, faculty, staff, alumni, parents, and other friends cheered the student athletes playing on our 11 new varsity teams. Among them was the new men's basketball team,

returning to the hardwood for the first time in 48 years.

As a prelude to the sport's return, the jersey numbers of two of Lawrence Tech's fabled players from our nationally ranked teams of the late 1940s and early 1950s were permanently retired and hoisted to the rafters – Norm Hankins and Blaine Denning. Norm could not attend, but Blaine, resplendent in his

bright blue LTU Athletic Hall of Fame jacket, stepped forward proud and tall as the crowd roared its approval. It had been 60 years, and Blaine and his teammates were still attracting cheers.

Ladies and gentlemen, if you have not visited campus recently, you've not seen the renewed spirit of our students, their energy, and commitment to excellence. In the classrooms, the laboratories, the studios, and now on the fields and courts, Lawrence Technological University students are striding confidently to a brighter future.

It was precisely this aspect of our students, and the support they receive from dedicated faculty and staff, alumni, and friends, that attracted me to LTU. This is a university where greatness is being fostered.

At my inauguration as Lawrence Tech's seventh president on September 27, I was heartened by the well-spring of affection and support so many of you expressed for this institution.

In my address, I mentioned that this is an exciting time to be engaged in higher education. Our nation and our world face many challenges, and never has there been a more pressing need for new ideas and new solutions to today's vexing problems.

Many of you know that this is not unfamiliar ground for this university. Eighty years ago, during the darkest months of the Great Depression, Russell Lawrence

Charles Koury, BSMa'73, and President Virinder Moudgil share a chuckle at the alumni car show on Homecoming Saturday, Sept. 29.



R E P O R T T O I N V E S T O R S

had the vision and foresight to believe that technology and engineering were key to economic growth and societal advancement.

Our founder was himself laid off as dean of engineering along with most of his faculty at the University of Detroit. He had a new and different vision of engineering education. His dream was that higher education and the professions it serves could collaborate and be true partners.

What was unusual and indeed pioneering in that era was that Lawrence Tech would provide evening programs to serve working people. Russell collaborated with Henry and Edsel Ford who provided guidance, counsel, and the space adjoining the sprawling former Model T assembly plant in Highland Park to launch a new and revolutionary experiment – Lawrence Institute of Technology.

Our early students, faculty, and alumni contributed mightily to this region's apt designation as the "Arsenal

of Democracy" during World War II, designing and manufacturing armaments and vehicles, tanks, and planes. Then, in the rapid shift to the consumer economy that followed, many of our alumni moved up to leadership positions in such industries as automotive, aeronautics and aerospace, defense, electronics, architecture, construction, and more.

Today, LTU is a comprehensive university with a focused, professional emphasis. We have over 100 programs, from associate degrees through doctorates.

In this and other issues of the *Lawrence Tech Magazine*, and in the report that follows from our provost, Maria Vaz, you've seen that LTU's strong curriculum provides a foundation for the whole and well-educated person. We take pride in developing good communicators and place great emphasis on developing leadership and entrepreneurship skills.

For generations, LTU has fostered leadership that has



Lawrence Tech basketball great Blaine Denning's jersey was retired during a moving Homecoming tribute.

had a transformative influence on students and communities. The words of our third president, Wayne Buell, still resonate today – that Lawrence Tech is a private university serving a public purpose. LTU is also an agile university, located in the business epicenter of Metro Detroit – a university that can quickly assess



President Virinder Moudgil (right) answered a question from the audience during the Sept. 25 inauguration symposium on technology. The other participants were (left to right) Associate Provost Al McCord, the moderator; Grand Rapids designer Joseph Jeup; Vincent Dow, BSEE'79, vice president for distribution operations at DTE Energy; State of Michigan Chief Information Officer David Behen; and Caltech Professor Yu-Chong Tai.

R E P O R T T O I N V E S T O R S

and anticipate academic, corporate, and regional needs and respond quickly with new programs that address opportunities in a rapidly changing economy.

Despite the slow economic recovery, southeastern Michigan is one of the world's great centers of job opportunity for those of us interested in being employed in architecture, technology, and engineering.

- Our College of Engineering, the academic base from which all LTU programs have evolved, is a vibrant contributor of engineers and technologists who remain the engine of Michigan's economy.

- Our College of Architecture and Design is the proud alma mater of nearly half of all licensed architects in Michigan. The college is also aiding the economic renaissance of our state by training and producing experts in transportation and industrial design.

- From our College of Arts and Sciences comes the firm academic foundation in liberal arts, critical thinking, ethics, and cultural empowerment skills fostered by our core curriculum.

- And, our College of Management provides opportunities for aspiring leaders in all disciplines to manage people, businesses, and other forms of enterprise.

But we cannot rest on our laurels. Today's competition can come from anywhere on the globe. The global economy is producing fundamental changes.

In a recent article in *Forbes*, Vivek Wadhwa points to a rebirth of U.S. manufacturing, and the return of some US corporations currently manufacturing in China – a reverse transition being led by robotics, artificial intelligence, and nanotechnology, areas well represented in our curricula.

What distinguishes LTU is

the spirit of innovation and entrepreneurship; our faculty, students, and staff *make things*; they *create products*; and they *innovate*. Many inventions and devices that we all use today were developed by LTU graduates. And many other amazing accomplishments ranging from sensors on the latest Mars rover to the tallest building in China, bear the imprint of our talented graduates.

Lawrence Tech is building new synergies and meeting new needs with exciting new programs – such as automotive design, sustainable architecture, emerging energy technologies, innovative materials, life sciences, robotics, and computer applications. We are developing new delivery methods through LTU Online that bring a Lawrence Tech education to ever greater audiences.

Student life is accelerating. Discussions on additional housing are progressing, new varsity sports are under way, student clubs are enthusiastically active, as are study abroad and exchange programs, co-ops, and industry internships.

Many faculty have distinguished themselves nationally and internationally. We must provide additional opportunities to support their pursuit of academic and scholastic excellence.

Since joining the LTU community on July 1, I have already enjoyed meeting thousands of students, faculty, staff, alumni, and donors coast to coast. This has allowed me opportunities to learn much

President Virinder Moudgil welcomed guests of the preview event hosted by LTU for Eyes on Design, a celebration of automotive design held in June.



Physics Assistant Professor Joe Zhou demonstrates the optical tweezers setup built by student Jason Miller as part of his senior project. The tweezers utilize optical forces from a laser beam to manipulate cell structures.

R E P O R T T O I N V E S T O R S

about the spirit and values LTU holds dear. It is my aim that we will largely employ a bottom-up rather than top-down approach to set goals and advance the University's vision. Such an approach transcends personal ideas by combining them with campus aspirations, and the expectations of alumni and corporate partners.

The quality of our academic programs is of paramount importance. With the largest freshman class in years entering this fall, presenting the highest GPA and ACT scores ever, it must be an institutional goal to complement this strength with a resolve that all current and future LTU programs be accredited by appropriate professional organizations.

Student learning and campus life will be top priorities. We will strive for increasing enrollment and retention and expand opportunities and resources for students to engage in the university and the community.

We must continue our progress in fund raising, so wonderfully inspired by the Taubman Challenge, to create a new state-of-the-art facility serving the twin pillars of our institution's historic success in engineering and architecture, and the emerging programs in the life sciences and management.

At the same time, we must increase our endowment and create vital new scholarships. The national statistics on student debt demand that we



Students discussed the upcoming school year with President Moudgil following the annual Convocation ceremony.

work to expand both need-based and merit scholarships to lower the financial burden on students.

No president can do it alone. LTU – and I – will actively continue to seek your involvement, your ideas, your counsel, and your support to improve facilities, increase endowment, recruit and reward outstanding faculty and staff, and add more scholarship and financial aid options.

In the end, it is all about our students who will become alumni, leaders, and community transformers.

I am grateful to Chairman Lloyd Reuss and the trustees for their confidence in my leadership and for this appointment as president. I appreciate the kind example and counsel of two predecessors in this office, President Emeritus Richard Marburger and Chancellor Lewis Walker.

I look forward to working

with our campus community, alumni, donors, business and corporate community collaborators, international partners, and other friends who have supported Lawrence Tech to bring us to where we are today.

For now, new generations of students wait to be educated to serve their communities, the nation, and the world.

Together, we can do much, no matter how difficult the challenge might be. Together, we will assure that LTU fulfills its noble vision to be a pre-eminent private university producing leaders with an entrepreneurial spirit and a global view.

Thank you for your continued support of Lawrence Technological University.

A handwritten signature in blue ink that reads "Virinder K. Moudgil".

Virinder K. Moudgil

R E P O R T T O I N V E S T O R S

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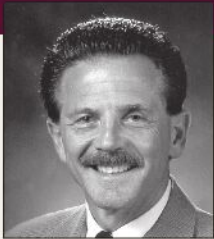
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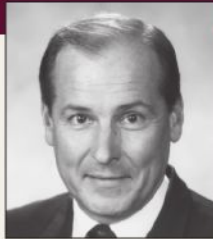
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CIO, Ford of Europe



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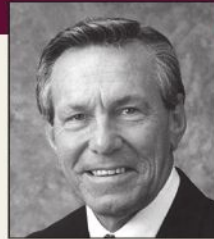
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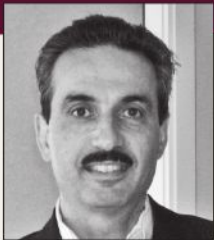
Lloyd E. Reuss
Chairman of the Board, Lawrence Technological University; Former President, General Motors Co.



Mark C. Roualet
President, General Dynamics Land Systems



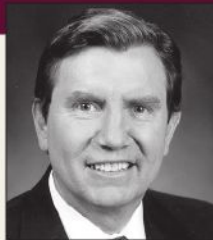
Barbara Samardzich
Vice President, Product Development, Ford of Europe



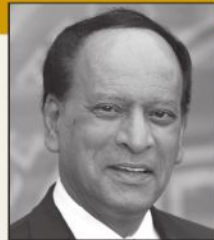
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President, Victor Saroki & Associates Architects, PC



John G. Smith
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David B. Wohleen
Former Vice Chairman, Delphi Corp.

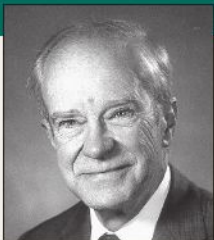


Ex officio
Virinder K. Moudgil
President and CEO, Lawrence Technological University

ADVISORY MEMBERS OF THE CORPORATION



Richard H. Cummings
Former Senior Vice Chairman, NBD Bank and NBD Bancorp, Inc.



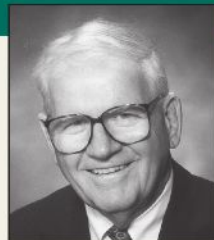
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William D. Innes, BSME'53,
Former Executive Vice President, Ford Motor Co.



Julius L. Pallone
President, J.L. Pallone Associates



Kurt O. Tech, BSME'48
Management Consultant; Former President, The Cross Company

FROM THE PROVOST



Maria Vaz

For 80 years, one of the most distinctive aspects of a Lawrence Technological University education has been our adherence to exposing students to both the theory and practice of their chosen field. This was the centerpiece of founder Russell Lawrence’s learning philosophy and it remains so today.

In hundreds of ways, students and faculty in each of our four colleges put their classroom knowledge to work solving real-world problems. Among them:

- Six undergraduate biomedical engineering students participating with Professors Yawen Li and Eric Meyer are advancing research on tissue engineering and the biomechanics of preventing knee and leg injuries.
- Four undergraduate electrical engineering students have developed a sensing alarm system that aims to prevent the dozens of heat-related child deaths each year caused by being left unattended in vehicles.

Members of the incoming freshman class formed their target date for graduation – 2016 – during Discovery Days before the start of the fall semester. The largest freshman class in recent years set an LTU record for the highest high school grade point averages and ACT scores.

- The unique nature of civil engineering graduate student Brittany Schuel’s research on the characteristics of high-strength concrete exposed to elevated fire temperatures resulted in her receiving the American Concrete Institute’s 2012–13 Pankow Student Fellowship Award.

- Computer science graduate student Jane Tarakhovsky collaborated with Professor Lior Shamir to show that computers can come surprisingly close to matching humans in the analysis of artistic techniques and style. Their research results were reported worldwide by such media as NBC.

- BSBA student Nathan Wallely collaborated with both the Colleges of Engineering and Management to develop a business plan for LTU’s Center for Innovative Materials Research. The plan’s goal is to maximize the facility’s use and grow corporate and government partnerships in sustainable product testing and development for defense,

homeland security, and infrastructure applications.

- Over 200 attendees at the 2012 Social Media and Web Analytic Summit in Boston heard DBA student Lori Kuehn report on her research integrating multiple sources of data to better understand the gap between what consumers say and what they do.

The result of this application of theory to state-of-the-art practice has long led employers to say that LTU graduates “hit the ground running.” It is an attribute also formally rewarded. Bloomberg Businessweek this year again reports that Lawrence Tech undergrads receive the highest return on their tuition investment of any college or university in the metropolitan area. The survey advanced the University to the top 20 percent of colleges and universities nationwide.

Over 200 employers recruited on campus this year, among the highest number in the past nine years. The four historically large employers of Lawrence Tech graduates, Ford, Chrysler, General Motors, and DTE Energy, along with many Tier 1 and 2 automotive suppliers, and many other companies in various sectors such as energy, civil engineering and construction, architecture, and computer applications, are aggressively recruiting our students in technology-related areas. These firms and many others



R E P O R T T O I N V E S T O R S



Provost Maria Vaz and Student Government President Brandon Hartwick wished Co-captain Jill Carland good luck following the ceremonial tip-off for the first women's varsity basketball game ever played at LTU on Nov. 17.

are diversifying, creating opportunities that go far beyond the automotive sector.

For the first time, Lawrence Tech has been named to the President's Higher Education Community Service Honor Roll by the Corporation for National and Community

Service. This prestigious annual roster highlights the role that colleges and universities play in solving community problems and placing more students on a lifelong path of civic engagement. In 2011–12 more than 800 LTU students completed nearly 5,000 community engagement hours in a variety of settings. This is an amazing culture of university-wide service on campus!

Enhancements to academic facilities this year included the renovation of many labs in both the engineering and science programs; interior upgrades to several buildings on campus, including energy-efficient heat and lighting; an expansion of the popular, new makeLAB that allows CAD fabrication of architectural fixtures and models; and new equipment for use in the audio engineering program. Over \$500,000 was spent to improve and renovate the newly named Mary E. Marburger

Science and Engineering Auditorium in the Science Building.

This year's Blue Devil Homecoming Week in September included many great events and activities, from an immensely popular four-mile run and one-mile walk, and the alumni car show, to a student service project building a campus cross-country bike course, to a faculty vs. students tug of war, a concert, and the spirited rollout of our growing roster of the National Association of Intercollegiate Athletics (NAIA) varsity programs. Some 130 talented new student athletes joined us this fall and we are very excited about the future of Blue Devil athletics.

Problem-Based Learning and Active Collaborative Learning pedagogies continue to be implemented across many courses in the Lawrence Tech curriculum. The goal is to help assure that students are



Students who each published a chapbook of poetry for a creative writing class during the spring semester discussed their work with Provost Maria Vaz.

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competitive in their chosen profession through continuous enhancement of the University's strong and rigorous academic experience.

The National Survey of Student Engagement compared Lawrence Tech students to peers from 300 colleges and universities across the country. It showed that LTU freshmen:

- Asked more questions in class (76% vs. 60%).
- Made more class presentations (59% vs. 33%).
- Worked more often with other students on projects during class (66% vs. 45%).
- Participated more often in community service or volunteer work (65% vs. 39%).

The survey also reported that Lawrence Tech seniors:

- Study harder than students in the comparison group of universities – 72% of LTU seniors spend more than 10 hours/week preparing for class vs. 62% in the comparison group.
- Know that LTU emphasizes studying and academic work (87% vs. 82%).
- Worked more often with other students on projects during class (62% vs. 49%).
- Worked more often with classmates outside of class to prepare class assignments (71% vs. 60%).
- Tutored or taught other students (29% vs. 22%).



The findings help confirm both the rigor and scope of LTU's educational programs and aid further program development and improvement.

The cost of attending Lawrence Tech is among the lowest of Michigan's private colleges and universities as well as among the lowest of America's great technological universities. Lawrence Tech sets tuition rates with the goal of providing students with the best possible learning experiences. We strive to assure that a student's investment in tuition remains the excellent value it is, as reflected in the Bloomberg Businessweek survey.

Lawrence Tech's Board of Trustees approved an increase in tuition and fees for summer and fall 2012 of 6 percent. At the same time, funds available for financial aid were increased. More graduate scholarships and grants

provide funds to students who lost their tuition reimbursement and/or the Michigan Tuition Grant.

Maintaining both the distinctiveness and affordability of a Lawrence Tech education remains our top priority, and that's where your continued support and contributions have the greatest impact. With your generosity, and with students at the center of all we do, we strive to continue to enhance campus life, academic offerings, and career opportunities.

Thank you!

Maria J. Vaz

De Lin Institute of Technology President Jeou-Shyan Horng and LTU Provost Maria Vaz signed a collaboration agreement in Taiwan in the spring. At left is Professor Pei-Lin Wang, chair of the English Department at De Lin, and at right is Dean Hsiao-Ping Moore of LTU's College of Arts and Sciences.

REPORT TO INVESTORS

FROM THE VICE PRESIDENT OF UNIVERSITY ADVANCEMENT



Stephen Brown

This year has been a very challenging one with respect to fund raising for Lawrence Technological University, coming on the heels of last year's extraordinary performance led by the generous gift from A. Alfred Taubman toward the University's new Taubman Engineering, Life Sciences, and Architecture Complex.

LTU's comprehensive capital campaign, "Proud Heritage, Bold Future," stands at \$70.5 million in gifts, government grants, and pledges toward the \$75 to \$100 million goal with four years left in the campaign. Unfortunately, while we are pleased with this progress, most gifts continue to be in the form of pledges and bequests, which affect our ability to begin construction in as timely a manner as we would like.

When we were awarded Mr. Taubman's generous \$11 million gift, he issued a challenge grant requiring

LTU to raise an additional \$20 million toward the complex over three years. To date, with estate gifts, cash, and pledges, we are halfway there, but we need to "hold the pedal to the metal" to secure the \$55 million needed to complete this project as quickly as possible. Our goal is to have enough cash in hand to begin construction on the first phase of the complex by the summer of 2014.

In addition to the generosity of many donors and corporations to our campaign to date, we are extremely fortunate to have a dedicated and incredibly loyal team of faculty and staff members who contribute handsomely to the University's fund-raising efforts. Annual participation rates in excess of 65 percent have been the norm, and contributions to date of almost \$1 million toward the campaign have been received.

Likewise, our "Tech Invitational" golf outing continues to contribute importantly to

the campaign by helping to fund the mission and student projects. This event has been a mainstay of our cultivation with friends, donors, and companies for nine consecutive years.

While we are disappointed that we were not fortunate enough to receive a mega-gift to the campaign this year, we remain optimistic in our ability to achieve the overall goals. We have many significant asks "in play" among loyal constituents, and a hardworking, dedicated, and loyal team of volunteers and staff committed to achieving our goals.

The Office of University Advancement continues to collaborate well with faculty, resulting in over \$16 million in research projects and grants to date in the comprehensive campaign. Proposals outstanding could potentially add another \$7 million in the year ahead.

Lawrence Tech held its bi-annual Michigan Congressional Delegation reception in Washington, DC, hosted by Congressman Sander Levin. Federal and state legislators and agency leaders, along with many local officials, continue to visit campus on a frequent basis searching for collaborative projects, resources, and facilities as we continue to build our outreach into the broader community.

Among key legislators visiting us in the past year have been Congressmen Gary Peters and Levin, State Rep-

University Advancement Vice President Stephen Brown (left) introduced A. Alfred Taubman at LTU's 2012 Winterlude honoring major donors to the University. It was held at the Henry Ford Museum in Dearborn.



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representative Rudy Hobbs, and State Senator Vincent Gregory along with local office holders, including Southfield Mayor Brenda Lawrence and the City Council. In October, Lawrence Tech hosted the CBS Detroit/WWJ Newsradio 950/*Great Lakes Innovation and Technology Report's* "Meet the Candidates" forum that featured local, state, and congressional candidates and advocates on both sides of Michigan's six statewide ballot proposals.

Companies with a substantial footprint in the southeast Michigan market continue to work with us on research projects, student programs, and new initiatives benefiting both their companies and our students. These firms include Ford, Denso, Chrysler, GM, DTE Energy, American Axle, Mahle, and ITC Holdings. Of particular note, for the first time in 20 years, General Motors selected LTU as a University Partner, creating the opportunity for more formalized working relationships with GM and access to competitive program funding.

In the Office of Marketing and Public Affairs, our team has been busy on many fronts securing a number of "record" achievements. Over the past year, LTU's solid reputation has been positively impacted with over 1,000 media stories featuring all the great news regarding grants, new faculty and staff, student success, and more. Additionally, the team has produced over 600 projects for the greater univer-

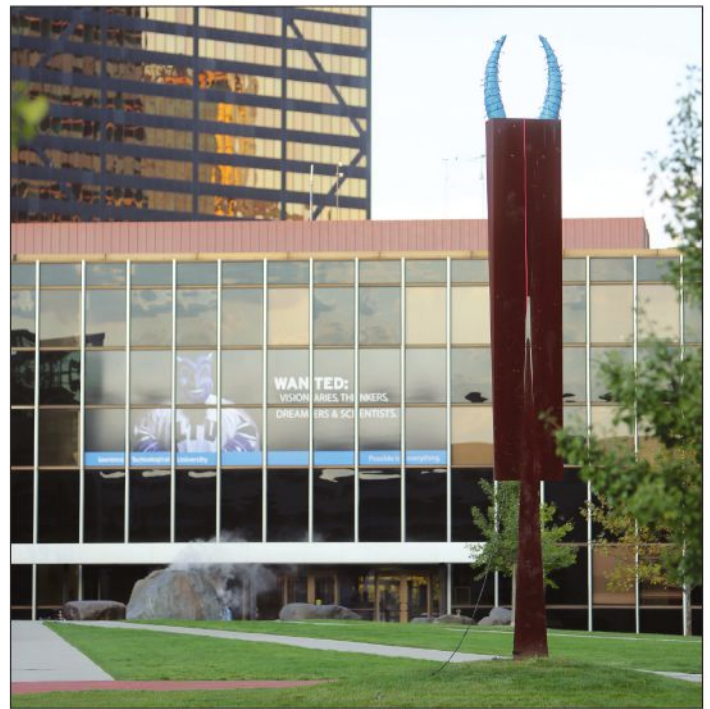
sity community ranging from admissions materials, program brochures, posters, and web announcements. We are fortunate to have a team that has demonstrated incredible loyalty to the institution in terms of tenure and is dedicated to conveying a consistent brand identity across the University to our many constituents.

Based on the Art and Science study conducted last year, and the positioning of "cutting-edge technology and beyond" that emerged, Marketing and Public Affairs developed a new advertising campaign that differentiates Lawrence Tech from our main competitors, particularly those in southeast Michigan, where we attract 70 percent of our students and prospects.

The campaign was developed to better capitalize on the kind of student we attract at Lawrence Tech, someone who is curious, not just "book" smart, inquisitive, engaging, and more interested in an education than merely obtaining a degree. Our students want a well-rounded collegiate "experience" with opportunities to practice what they learn from the very start of their college careers.

Additionally, since LTU is not for everyone, we wanted to capture the same "feeling" of the very successful US Marine campaign, "The few, the proud, the Marines."

Four radio commercials were developed and began airing in the winter of 2011. Three television spots have also been developed that we hope to air in the upcoming recruitment season. The cam-



paign is based on the premise that "if you believe that everything is possible" (i.e., you are inquisitive and curious, you want to experiment, try new things) and that "possible is everything" (i.e., if you try hard enough with resources that allow you to be your best and achieve your goals), "we want you at LTU."

All spots capture the distinctive programs Lawrence Tech offers, the commitment to student life, and the interdisciplinary approach LTU takes with our theory-and-practice philosophy.

This new campaign is also featured throughout campus on light-pole banners and display boards. An internal marketing piece was developed for all employees to explain the thinking behind the campaign in order to secure

Even the Ockham's Wedge sculpture in the center of the Quad caught a little Blue Devil spirit during Homecoming. Panels on the Science Building highlight LTU's new marketing message, "Possible is Everything."

REPORT TO INVESTORS

their active support to spread the new message.

Given our historically low share of advertising “voice” in the southeast Michigan market, we believe that the addition of television to our communications effort will positively impact future enrollment.

The University community also participated in another successful Homecoming Week following on the heels of our first, in many years, in the fall of 2011. Partnering with the Office of Student Affairs, the Office of University Advancement was able to solicit some \$50,000 in in-kind and cash donations to support Homecoming Week. The campus was decorated with Blue Devil paraphernalia everywhere. The week culminated with the men’s and women’s soccer games, a unique car show, live entertainment, and food for all on Saturday. Blue Devil spirit is alive and well!

We are very appreciative of the support from the campus community for both the campaign and the new advertising message. The generosity of Lawrence Tech’s many donors is valued and much appreciated. We look forward to working with you and with Lawrence Technological University’s new president, Virinder Moudgil, to broaden the University’s outreach ever further among alumni, corporations, and the community at large.



Stephen E. Brown



LTU student Emilio Feliciano discussed his part in an exhibit of work by students in the transportation design program, which was developed with the counsel and support of Detroit automobile manufacturers.

2011 Donor Honor Roll Additions

The donors in the annual category of the Presidents Club were inadvertently left out of the 2011 Donor Honor Roll published in our summer issue. Please accept our sincere apologies for this oversight.

Presidents Club – Annual

AAUW – Birmingham Branch
Arotech

*Ms. Diane R. Cairns, CIMBA’01

*Dr. and Mrs. Peter H. Chang

*Mr. Timothy R. Chavis

*Dr. and Mrs. Chan-Jin Chung

CIMX-FM

Conde Nast

Mr. and Mrs. David A. Darbyshire, BSME’87

Mr. and Mrs. Michael G. Darga, BSCE’85

Mr. and Mrs. Vincent G. Dow, BSEE’79

Mr. and Mrs. Anthony R. Duce, AIA, BSAr’77, BA’78

Mr. Dave Elberson

*Prof. Daniel L. Faoro

Green Parrot

*Mr. Marcus Hoedeman

Dr. Jamie C. Hsu

Dr. Shi-Ping Hsu

IAC

Mr. Michael J. Ienna

Mr. and Mrs. Addison E. Igleheart, BSAr’70

Mr. Qinghong Ji, MSIS’10

Kennametal

Mrs. Amy M. Kozlowski, BSME’04, MSME’07, MBA’10

Land Rover Farmington Hills

Lawrence Tech Univ. Student Branch of SAE

Masco Corporation Foundation

*Dr. Al McCord

Dr. Philip D. Mosciski, BSAr’84, BA’85, MA’09
and Mrs. Diane A. Mosciski, BSEE’85

Dr. Alison A. Moy

Nath Law Group

National Defense Industrial Association, Michigan Chapter

Mr. and Mrs. Thomas F. O’Connor, FAIA, BSAr’64

Painless Performance

Mr. George P. Parker, BSIE’61

Robotis Inc.

SCI Floor Covering, Inc.

Mr. and Mrs. Richard D. Smith, BSME’53

StoutWare Engineering

Trinity Transportation Group

University Housing Solutions LLC

Mr. and Paul R. Urbanek, BSAr’81, BA’82

Mr. Kenneth R. Van Tine, BSAr’85, BA’86 and

Mrs. Gina R. Van Tine, BSAr’89, BA’94

Mr. Chester F. Wells, BSME’49

*Mr. Grant T. Wenzinger

Mr. and Mrs. Robbie A. Williams, BSCvE’50

Mr. John Wisniewski

*Ms. Angeline R. Zelenak

*Mr. David G. Zilli

*LTU Employee

REPORT TO INVESTORS

FROM THE VICE PRESIDENT FOR FINANCE AND ADMINISTRATION



Linda Height

Lawrence Technological University ended the 2011–12 fiscal year on a positive note, with a surplus of \$653,193, exceeding budget projections by \$210,000. Although enrollment was down from the previous year, strong adherence to budget management by all areas of the campus contributed to a favorable year-end result. This is important for the University, as these results are viewed by our banks and rating agencies as key measures of our financial health.

Through the efforts of our purchasing agent, we continue to review and negotiate our major contracts in order to provide the best service at the lowest price, resulting in a savings of \$50,000 this fiscal year. Additionally, due to the efforts of our Office of Information Technology, changes to contracts and improvements in systems continue to

decrease costs and improve services to students, faculty, and staff. Work has begun on assessing new security and access systems to provide ease of access for the campus community while maintaining a safe physical environment.

Because of our involvement with the Michigan Colleges Foundation, Lawrence Tech was able to take advantage of a peer audit program on Environmental Protection Agency issues. This program allowed us to prepare for state and federal audits and avoid potential penalties that could have cost the University over \$300,000. These audit results also identified the University as a benchmark site for the way in which our Department of Natural Sciences maintains and reports its chemical inventory. We were also commended for our use of Blue Water Technology, which uses ionized water rather than chemicals to clean.

This technology was instituted here by Aramark, our campus facilities partner.

Numerous improvements to the campus have been completed over the past year. Notable among them this year was the modernization and enhancements to what is now known as the Mary E. Marburger Science and Engineering Auditorium. Our soccer field was upgraded. Sustainability continues to be a focus. Several prescribed burns were conducted to improve the habitat for native plants. Our electric vehicle charging stations, among the first in Michigan six years ago, were upgraded with the help of DTE Energy.

Through our membership on Southfield's City Centre Advisory Board, we have been able to leverage the University's contribution with city funds for such improvements as the gateway project on the corner of Civic Center Drive and Northwestern Highway. Sidewalk, seating, and landscape improvements have revitalized that corner of campus and are fostering pedestrian and bicycle access between campus and city



The upgraded Mary E. Marburger Science and Engineering Auditorium was formally dedicated during Homecoming Week.

REPORT TO INVESTORS

amenities. Business Services, the Offices of the Dean of Students and Campus Architect, and others are working closely with Southfield officials and the business community to develop a college town environment that will provide everyone on campus greater choices for entertainment, refreshments, and services.

Each year, we invest more in student scholarships. This year, we increased scholarships by \$870,000, from \$11,597,000 to \$12,467,000. This included new scholar-

ships for student athletics as well as enhanced support for graduate students.

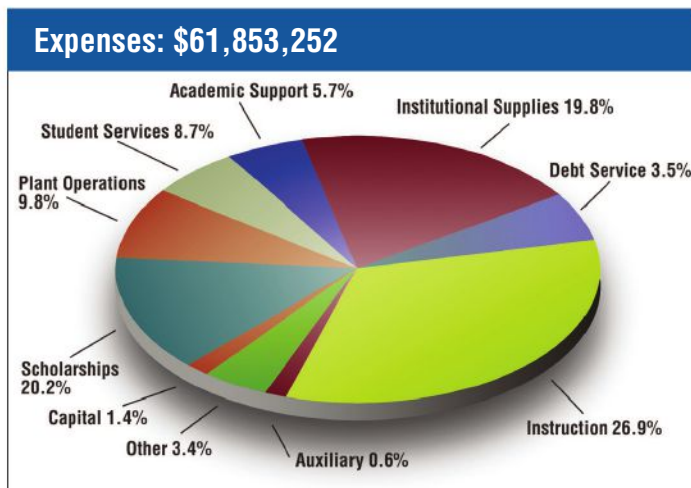
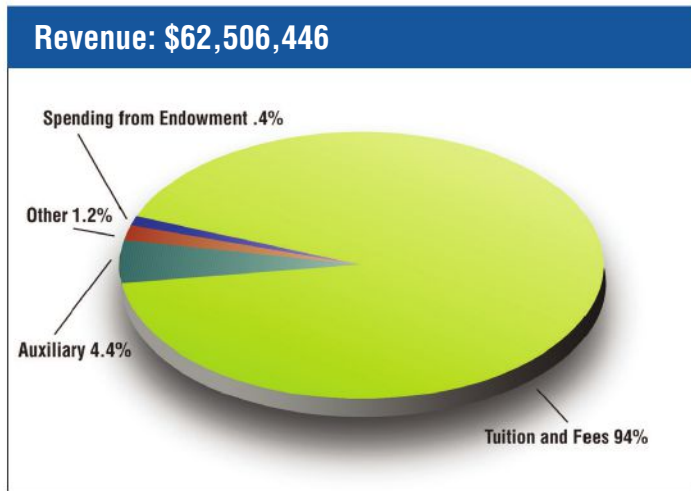
Reduction of the University debt is a priority for us as we move forward. We are happy to report that we reduced the University's debt load by \$3,000,000 in FY 2011-12. This will continue to be a focus for us in the upcoming fiscal year.

Investments in the University Endowment performed well in this fiscal year. Lawrence Tech outperformed similar institutions and the S&P 500

over one-, three-, and five-year intervals. These investments are monitored constantly, and University's investment strategy is reviewed with the Finance Committee of the Board of Trustees.



Linda L. Height



Landscaping and other improvements were completed this fall for the new soccer field at the Point.

Financial results for fiscal year ending June 30, 2012

*Are you tired of being blown by
the winds of a fluctuating market?*

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With fixed income for life, you no longer need to watch the markets.
Help Lawrence Technological University and have security.

- Secure fixed income for life
- Higher income based on age
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- Bypass of capital gain on gift
- Tax-free income portion
- Remainder to charity

To learn more about Gift Annuities, contact Dennis Howie at 248.204.2304 or visit

www.ltu.edu/giftplanning.

T H E B A C K P A G E

Marburger makes the most of an active retirement

Almost 20 years after “retiring” as president of Lawrence Technological University, President Emeritus Richard E. Marburger continues his active service to LTU as a goodwill ambassador, volunteer student advisor, and tireless proponent who helps the University in any way he can.

A highlight of the 80th anniversary celebration during Homecoming Week was the dedication of the renovated Mary E. Marburger Science and Engineering Auditorium, named in memory of Marburger’s late wife. The work and other improvements in the Science Building were made possible by his \$100,000 gift and a \$1.2 million gift from his friends, former Trustee John Harlan and his wife, Beth.

What Marburger likes to call the “vibrant rebirth” of the auditorium is the latest in a long list of improvements that he has helped bring about with his enthusiasm and energy. At 85, he maintains a daily schedule that would tire many who are half his age, a point not lost when he received this year’s Lifetime Achievement Award from the Engineering Society of Detroit.

Like Charles Chambers and Lewis Walker before him, LTU President Virinder Moudgil has sought out Marburger’s counsel and advice. “Dr. Marburger has been exceedingly helpful in explaining relationships and providing background about the University’s interactions with corporate partners and donors,” Moudgil said. “I requested him to continue the strong relationships he has developed with several of our most generous benefactors. That long-term continuity of friendship and service is tremendously valuable.”

A gifted and popular teacher of physics and engineering, Marburger joined Lawrence Tech’s adjunct faculty in 1965 and the full-time faculty in 1969. He led the College of Arts and Sciences before being named vice president for academic



With President Emeritus Richard Marburger in the background, Diane and David Stein cut the ribbon for the Mary E. Marburger Science and Engineering Auditorium. They were representing Diane’s parents, John and Beth Harlan, who supported the auditorium project and renovations on the Science Building’s second floor, which has been renamed Harlan Hall.

affairs (provost). He holds three degrees in physics from Wayne State University, including the PhD, and was a researcher at General Motors.

During his presidency from 1977 to 1993, the Wayne H. Buell Management Building,

the Don Ridler Field House, and a major addition to the Engineering Building opened. He was an early proponent of computers to aid the educational process. He launched the first major capital campaign, which exceeded its goal. He initiated the return of graduate programs and in 1989 led Lawrence Tech’s transformation from an institute of technology to university.

Marburger and his late wife funded the annual awards recognizing LTU’s faculty, staff, administrator, and teaching innovator of the year. Their two children, Kathy and Dennis, are both Lawrence Tech graduates.

In his interactions with students today, Marburger sees his role largely as a motivator and facilitator. He helps them sort through life goals and overcome academic challenges. He’s provided many letters of recommendation and introduction.

“To accomplish things on behalf of students, the care that we take with them, I think that few other institutions have the will or the interest to do,” said Marburger, summing up his vision for the University that he demonstrates by personal example. “We assure that a student’s time is optimized in the classroom and laboratory. Anything we can do, we will do. It’s a benefit of the real partnership between students and this university.” □BJA