

School of Technology

Eastern Illinois University

Applied Engineering & Technology • Career & Technical Education • Organizational & Professional Development • Master of Science in Technology



Green Go-kart: Mitch Sempowicz, a recent graduate of the Masters in Technology program, takes his biomass fueled go-kart for a spin. Sempowicz built the biomass gasifier for a class project.

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Future Fund Surpasses \$200K and School of Technology Scholarship Funds Grow

The School of Technology's Future Fund has surpassed the \$200,000 funding level, thanks to several generous gifts that boosted the fund toward the halfway mark. The overall goal for Future Fund is \$500,000. Two recent donors will be honored with naming events this coming fall. Klehm Hall 1309, which houses the Scanning Electron Microscope Laboratory, will be named after Robert F. DeBolt, 62'; and classroom KH 2040 will be named after Mark Rogstad, 79' who passed away in 2008.

For the first six months of 2012, alumni and friends of the School of Technology consistently gave an average of \$4,250 through monthly donations including the Annual Fund. In addition to the Future Fund, these gifts are designated for organizations such as the Career and Technical Business Education Fund and the Carolyn A. Forbes Centennial Scholarship. Faculty and staff in the School of Technology contribute in excess of \$225 each month toward Future Fund and various School of Technology Scholarships.

In this time of decreased state funding, the importance of these contributions to move programs forward is increasing, and Gifts from alumni and

friends of the School of Technology are crucial to the continued development of our programs and scholarships. **On page 5** of this newsletter the recipients of the many scholarships offered by the School of Technology are featured.

Letter from the Chair

In 2011, the School of Technology successfully completed the requirements for reaccreditation by the Association of Technology Management and Applied Engineering (ATMAE). The program received full accreditation for six years at the November, 2011, ATMAE Conference. Accreditation by ATMAE certifies quality and denotes high academic standards to students, parents and potential employers and demonstrates our continued commitment to excellence in education.

The school welcomed Dr. Isaac Slaven to the department in August. His expertise in energy-related courses will add to the depth and breadth of knowledge within the department. Sean Roberts (AET), Aaron Melton (AET), and Christina Frye (OPD) also joined us as annually contracted faculty.

During the fall semester students from the Career and Technical Education program and Construction Club designed and sponsored a float in EIU's Homecoming Parade. Later that morning, at Tent City, graduate students

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www.eiu.edu/tech

Chair's Letter continued from page 1

and faculty provided information on School of Technology's role with the CENCERE gasifier research project.

As the fall semester closed, faculty and staff in the School of Technology grieved the death of faculty member Dr. Kaninika Bhatnagar. Kaninika passed away on December 30, 2011 at Barnes-Jewish Hospital in St. Louis. A reception celebrating her life was held January 18, 2012 in Klehm Hall. A video tribute and memory book were sent to her family in India.

An interdisciplinary undergraduate minor in Environmental Sustainability was approved this year, as was an interdisciplinary Master of Science in Sustainable Energy graduate degree program. The latter focuses on preparing leaders and managers for the entire energy industry and was approved by the Illinois Board of Higher Education. This graduate level, multi-disciplinary degree, is science based and technology management focused. Dr. Peter Ping Liu from the School of Technology was the primary driver of these new curriculum endeavors.

This spring, four AET students presented at EIU's Undergraduate Showcase. George Buzard presented the results of "HDR Photography: A Review of Practices, Techniques, Advantages and Limitations," and Nathan Herring presented results from "Eco-friendliness & Durability of Aqueous, UV and Solvent Inks." Gabe Grant served as their faculty mentor. Chengdong Hu presented "Investigation of Local Biomass Resources for Sustainable Energy," and Kyle Zimmerman presented "Biomass Gasification: A Clean and Efficient

Way to Harvest Renewable Energy."

Dr. Rendong Bai served as their faculty mentor.

At the Graduate Showcase held on March 27, 2012 two MS in Technology students presented on their research related to biomass and alternative fuels. Mitchell Sempowicz presented his research on alternative fuels using wood chips to create fuel for a go-kart and Wei Wang presented his research on the alternative fuel source of *Arundo donax* (Giant Cane). Dr. Jerry Cloward served as their faculty mentor.

The renewed interest on research in the School of Technology has increased our visibility on campus and in the community. Next year we look forward to the building of an educational facility to house the new Center for Clean Energy Research and Education (CENCERE). For more information about CENCERE and EIU's renewable energy commitment please visit: <http://www.eiu.edu/sustainability/research.php>

As interim chair of the School of Technology I want to thank the committed faculty, staff and students in the School of Technology for making this a productive year. With the exceptional talent and commitment of our dedicated staff the School of Technology is well-positioned for continued success in 2012-2013.

Sincerely,



Student Spotlight

Katie Landry, an Applied Engineering & Technology Major with Construction Concentration who just completed her freshman year at Eastern Illinois University (EIU), recently spent a day in Springfield at the Capitol with Matt Davidson, a new member of the EIU Construction Technology Advisory Board. Davidson is a 1982 and 1984 graduate of EIU and is currently a lobbyist and the Executive Director of the Associated General Contractors of Illinois. Their Association represents 75 road builders in Illinois and Iowa and 92 Associate Members in the states of Illinois, Iowa, Indiana, Missouri, Tennessee, Minnesota and Florida. Coles County Members of the AGCI are Howell Paving, A.J. Walker Construction Company, NE-CO Asphalt and First Mid Insurance Group. Macon County AGCI members include: The Dunn Company, Bodine Electric, & J.L. Hubbard Insurance & Bonds. Pictured: Illinois State Representative Adam Brown (R-Decatur) and Katie Landry.

"Inquiry is fatal to certainty."

-Will Durant

RESEARCH **ASK** HYPOTHESIS ANALYZE REPORT DESIGN EXPERIMENT OBSERVE

School of Technology Student Research Symposium

This past fall, The School of Technology hosted the Third Annual Student Research Symposium. This event provided a forum for undergraduate and graduate students to showcase their talent as well as on-going research of professors in the School of Technology. Research presented by both graduate and undergraduate students include:

Job and Economic Development Impact (JEDI) Models for Renewable Energy Projects by Muhammad Rizwan, MS in Technology, with Dr. Peter Ping Liu as faculty mentor.

The Process of Turning Biomass to Energy (Experimental Scale) by Wei Wang, MS in Technology, with Dr. Peter Ping Liu and Dr. Jerry Cloward as faculty mentors.

Mobile Web and HTML5 Apps for Higher Education by Daniel Harvey, MS in Technology, with Dr. Rendong Bai and Dr. Peter Ping Liu as faculty mentors.

Statistical Equivalence in the Face Recognition Using Multicolor Experiment and Live Subjects with Dissimilar Skin Tones by Bryan Baker, MS in Technology, with Dr. Rigoberto Chinchilla as faculty mentor.

Beyond LibQual+: Making the Patron a Partner by Todd Bruns MS in Technology with Dr. Rendong Bai as faculty mentor.

Implications Regarding Quick Response Code Usage in Modern Society by Robert Raschke, BS in Applied Engineering and Technology with Mr. Gabe Grant as faculty mentor.

Total Quality System in Chick-Fil-A by Subhadra Manasa Jatavallabhula and Ramya Sree Myneni, MS in Technology with Dr. Rendong Bai as faculty mentor.

Time and Cost Effectiveness of UV, Solvent, and Aqueous Ink for Packaging Applications by Nathan Herring, BS in Applied Engineering and Technology with Mr. Gabe Grant as faculty mentor.

Face Recognition Technology and its uses in Advertisement and Social Media by Dennis Davis, BS in Applied Engineering and Technology with Mr. Gabe Grant as faculty mentor.

HDR Photography: A Review of Practices, Techniques, Advantages, and limitations by George Buzard, BS in Applied Engineering and Technology with Mr. Gabe Grant as faculty mentor.

The next student research symposium is scheduled for the Spring of 2013.

“The empires of the future are the empires of the mind.”
-Winston Churchill

School of Technology Awarded an NSF Grant for Collaborative Research in Biomass Curriculum Development

Headed by Dr. Peter Ping Liu, the Center for Clean Energy Research and Education (CENCERE), along with the School of Technology was awarded a grant by the National Science Foundation for nearly \$200,000.



NSF Grant Purchases- Biomass hammer mill and biomass pelletizer.

Faculty in the School of Technology will use the money to develop coursework, create workshops, and support “green” research efforts at EIU toward becoming a more sustainable campus. The School of Technology Faculty on the project include Dr. Peter Ping Liu as the grant coordinator, Dr. Rendong Bai provides expertise in data capture, Dr. David Melton facilitates the project management aspects, and

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New Faculty Join the School of Technology

Three new faculty have joined the SOT Faculty. Dr. Isaac Slaven teaches courses in Alternative Energy and serves as the SOT Internship coordinator. Dr. Slaven previously was the statewide program chair for the Sustainable Energy program at Ivy Tech Community College and brings with him considerable experience from forestry and wind energy. Isaac graduated from Purdue University with his PhD in 2010.



Mr. Aaron Melton also joined the AET program in the fall of 2011. Mr. Melton was previously a presidential graduate assistant in the Digital Media Laboratory and now teaches courses in the Digital Media Technologies concentration. In addition, Mr. Melton serves as a co-advisor to the student organization Technical Association of the Graphic Arts. Aaron graduated from Eastern Illinois University with his Master's degree in Technology in the Spring of 2011.



Mr. Sean Roberts is the final addition to the AET program in the fall of 2011. Mr. Roberts served as a graduate assistant in the Computer Aided Drawing lab and Computer Numerical Control machining lab previously and now teaches courses in CAD, CNC, and material properties. Mr. Roberts has facilitated many student projects where learners have engaged in the design and production of numerous items, including the machining of molding for Old Main. Sean graduated from Eastern Illinois University with his Master's degree in Technology in the Spring of 2011.

The department would also like to thank Mrs. Christina Frye for her service over the past year. Mrs. Frye taught courses in the Organizational and Professional Development program. She is leaving to pursue her PhD at the University of Illinois.

Biomass continued from page 3

Dr. Jerry Cloward and Dr. Isaac Slaven bring expertise in biomass materials and handling.

Equipment purchased by the grant includes a biomass hammer mill, a biomass pelletizer, an electronic calorimeter, and pellet quality testing devices.



Equipment- Woodchips that will be converted into fuel are held next to the biomass gasifier.

Graduate Student Award Winners



**Distinguished Graduate Student
On Campus**
Robert Raschke with Dr. David Melton

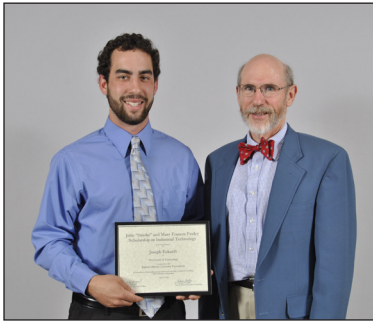


**Distinguished Graduate Student
Off Campus**
Ralph Kuchenbrod with Dr. Lance Hogan

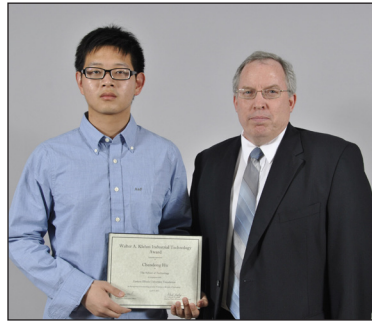


**Distinguished Graduate Student
International**
Muhammad Rizwan

School of Technology Award and Scholarship Winners



John and Mary Frances Pauley
Scholarship in Industrial Technology
Joe Eckhardt with Dr. Thomas Hawkins



Walter A. Klehm
Industrial Technology Scholarship
Chendong Hu with Dr. David Melton



Lou Ann and Tom Waskom
Scholarship
Phillip Sterling with Dr. Diana Wyatt



Messer Family
Scholarship in Technology
Jeff Loffredo with Dr. Margaret Messer



David L. and Audrey Jorns
Business Education Scholarship
Margaret Joyce with Dr. Julie Chadd



Grote Stahl
Scholarship
Katie Landry with Mr. Gabe Grant



Dr. Lillian R. Greathouse
Scholarship
Michael Gurick with Dr. Lillian Greathouse



Lois E. Elliott
Industrial Technology Scholarship
Allen Spargur with Dr. Jerry Cloward



Lucille M. Klehm
Technology Education Award
Allen Spargur with Dr. Jerry Cloward



James D. Price
Scholarship
Michael Gurick with Dr. Julie Chadd



Kenneth and Keith Kohanzo
Industrial Technology Scholarship
Robert Raschke with Mr. Gabe Grant



Walter A. Klehm
Industrial Technology Award
Allison Hacker with Dr. David Melton



Student Ambassadors
Allen Spargur and Katie Landry with
Mrs. Donna Dawson



Harold D. Fildes
Scholarship
Jeff Loffredo with Jean and Foster Rinefort



School of Technology
Alumni Award
Ronique Turner-Winston with
Dr. Deborah Woodley

Other winners not pictured are: Adam Zankowski, Adam Duwendack, Adam Robillard, Haley Junius, Rachel Steinbaugh, Mitchell Gurick, and Bruce Barnard.



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What is new with you? Have you moved? Have you taken on a new job? We would like to know! Our graduates go on to do amazing things in industry and education. Let us know where you are and what you are doing by going to www.eiu.edu/alumni

*Dr. Isaac Slaven - Copywriter
Mr. Gabe Grant - Photographer & Editor*



TAGA Meeting: *Students gather to print shirts at a Thursday TAGA meeting.*



Lab Work: *Dr. Jerry Cloward instructs Nico Silvestri on machining.*



Graduation: *Dr. Deborah Woodley served as banner carrier for the Graduate School at Spring Comencement ceremonies.*