

# Auburn University

Spring 2004 Newsletter Vol. 11, No. 1

Samuel  
Ginn  
College  
of

**Textile** Engineering

## Degree name change reflects greater opportunities

Ryan Creighton (MS '02) worked on a flywheel project as a graduate student. Auburn University is collaborating with NASA on research to store energy in space satellites using fiber composite flywheels.



As of the fall 2003 term, students are able to pursue a Bachelor of Fiber Engineering degree. The Department of Textile Engineering sought university permission to rename the former textile engineering degree in order to reflect the wider job opportunities open to students. The change also acknowl-

edges the breadth of the course requirements for the degree and the interests of faculty and current students. The department will continue to offer the Textile Institute accredited degrees in textile management and technology and textile chemistry.

Textile engineering students create a skateboard, one of the many products for which fibers can serve as a building block.



## Alumnus recognized as distinguished engineer

Dame Hamby (TE '46) was chosen as one of four recipients of the 2003 Distinguished Auburn Engineer Award. Presented annually by the Auburn Alumni Engineering Council to a living Auburn engineering graduate, the award recognizes a distinguished career in engineering and/or management that achieves a special representation of Auburn University.

Hamby began his career in research and development at the B. F. Goodrich Company. He joined the faculty of the School of Textiles at North Carolina State University as an assistant professor in 1947 and in 1960 was awarded the prestigious Burlington Industries Chair in Textiles. In 1965 he became head of the Department of Textile Technology and from 1972 to 1980 served as director, then associate dean, of Textiles Extension and Continuing Education. In 1980 Hamby became associate dean for academic affairs and extension and in 1981 accepted the position of dean of the School of Textiles until his retirement in 1987.

TE alumnus Dame Hamby (fifth from left) accepts an award at the 2003 Auburn Alumni Engineering Council Awards Banquet.



For more than half a century Hamby has been an eminent figure in the field of textile engineering and textile education in the United States and abroad, holding fellowships in the most prestigious associations in the field. As a faculty member at North Carolina State, he pioneered the field of statistical analysis and statistical quality control in the textile industry of North Carolina and, by extension, to the textile industry in the entire Southeast. His seminal work, *Handbook of Textile Testing and Quality Control*, co-authored by Elliot Grover in 1960, continues to be the standard reference book for textile programs in universities and industry.

For his contributions to statistical quality control in textiles, Hamby was awarded the Institute Medal by the Textile Institute (UK) and the Harold DeWitt Smith Award from the American Society of Testing and Materials. In 1984, Philadelphia University awarded him an honorary Doctorate of Textile Science and in 1988 he was acknowledged as Outstanding Alumnus in Auburn's Department of Textile Engineering.

## Textile engineering students study in Germany

The Department of Textile Engineering and the University of Applied Sciences in Reutlingen recently established an academic interchange program that allows students of each university to spend one semester abroad. This semester, two Auburn textile engineering seniors are studying and traveling in Germany. Rebecca Armstrong, a textile management and technology major from Nashville, and Nicole Sizemore, a fiber engineering major from Holly Pond, Ala., took German last semester in preparation for their six-month stay in Reutlingen, Germany.



Rebecca Armstrong



Nicole Sizemore

The goals of the interchange program—the first “established” international student exchange program in the Samuel Ginn College of Engineering—are to raise international awareness and prepare students for an increasingly global marketplace. At the host university, students take courses and perform research, including senior design projects, in polymer and fiber engineering, textile technology and design, global marketing, or related subjects such as computer science, materials science, and automation technology. The curricula of both departments at the two universities match well and some of the courses at Reutlingen are taught in English. The University of Applied Sciences has 110 bilateral agreements in 29 countries. Several students from Reutlingen are planning to study at AU during the second half of this year. Our department plans to expand its exchange program to other universities worldwide.

## Auburn's first hovercraft team prepares for competition

The first of its kind in the Samuel Ginn College of Engineering, the Formula 25 hovercraft team, based in the Department of Textile Engineering, is building a hovercraft for competition in the Annual National Hoverally competition in 2005.

In Formula 25 competition, teams design, build, and race a hovercraft each year, providing students with cross-disciplinary, hands-on experience in a team environment to produce a working vehicle. The Auburn team is part of the College of Engineering's War Eagle Motorsports and is comprised of students from engineering disciplines including textile, mechanical, and industrial, as well as students majoring in industrial design.

Serving as the team's faculty advisor, Faissal Abdel-Hady draws from faculty research in composite materials as well as his extensive experience in manufacturing advanced composite structures for both civil and military applications.



A hovercraft in action.

The Formula 25 concept was conceived in 1995 by Graham Spencer to generate a new breed of hovercraft suitable for racing, mini cruising and participating in HoverAction events.

The Hoverclub of America, with approximately 700 members, has offered to share its experiences and provide technical support to the Auburn team. The club's vice president, Louis Bondurant, recently visited campus to review the team's construction progress.

If Auburn performs well in the U.S. competition and is able to raise the necessary funds, it will advance to the 2005 World Hovercraft Championship sponsored by the World Hovercraft Club.

Team sponsors include Phi Psi Fraternity; Highland Industries, Inc., Greensboro, N.C.; V-2 Composites, Inc., Auburn, Ala.; Southern Mills, Senoia, Ga.; Advanced Plastics, Inc., Pelham, Ala.; Arrowprop, Inc.; Dow Chemical Company; and MGI, Inc., Winnipeg, Canada.

Visit the Formula 25 team web site at [www.eng.auburn.edu/organizations/hovercraft](http://www.eng.auburn.edu/organizations/hovercraft). Learn more about the Hoverclub of America at [www.hoverclubofamerica.org](http://www.hoverclubofamerica.org).



Katie Hudson, a junior in fiber engineering from Muscle Shoals, Ala., works on the clay model of Auburn University's first hovercraft.

## Civil Air Patrol camp

The Department of Textile Engineering hosted the Second Annual Engineering Technologies Academy (E-Tech) on the Auburn campus last summer. Other participating departments included the Department of Aerospace Engineering and the Department of Aviation Management in the College of Business.

The Civil Air Patrol (CAP) selected the attending high school Civil Air Patrol cadets based on CAP activities and interest in engineering. Only 20 spaces were available but more than 70 cadets from across the nation applied. Attendees learned how science, math and engineering work together through their participation in hands-on projects including

the manufacture and testing of airfoils. Student teams made cross-sections of airplane wings from Styrofoam, then overlaid them with fibers and resin to make fiber composite materials. After the wing sections were complete, the students tested them in aerospace wind tunnels.



Trevor Munson of Littleton, Colo., adjusts his fiber composite airfoil before testing at AU's smoke tunnel.

"I liked creating and testing my own airfoil and watching the shockwave in the supersonic wind tunnel," explained 17-year-old cadet Brian Doyle from Philadelphia.

Other projects included making and testing gliders and small rockets and testing a pulse-jet engine. At the end of the week, cadet teams gave presentations about their projects. During their stay on the Auburn campus, they also learned about engineering careers, Auburn's engineering programs, ROTC, and the university as a whole.

Civil Air Patrol and the Department of Textile Engineering are preparing for E-Tech III to be held this summer.

## Alumni news

Charles Gavin III (TM '59) was honored as Textile Engineering Outstanding Alumnus of 2003. Chairman of the board and founder of MFG Chemical, his career involved carpet manufacture, research and development. Under his direction, Columbus Mills developed the first acid-dyed carpet product line, changing the carpet dyeing industry. In 2002, Gavin received the Harold C. Chapin Award in recognition for his outstanding service to the American Association of Textile Chemists and Colorists.



Charles Gavin

## Faculty news

Sabit Adanur, alumni professor in textile engineering, was named the department's Outstanding Faculty Member for 2002-2003.



Sabit Adanur

### EVENTS

Homecoming Open House  
October 9, 2004  
9 a.m. - noon  
Louisiana Tech

Ian Hardin (TS '65) was honored as Textile Engineering Outstanding Alumnus of 2004. He has spent 32 years teaching fiber, textile and polymer chemistry at Auburn University then the University of Georgia. Considered an expert in the use of enzymes as substitutes for conventional chemical processing, he has also developed enzymes for unique treatments of fibers and fabrics to reduce effluent loads and aquatic toxicity. Hardin assumed the position of head of the Department of Textiles, Merchandising and Interiors at the University of Georgia in 1994.



Gisela Buschle-Diller (left), 2003-2004 Outstanding Faculty Member and Ian Hardin (MS '65) (center), 2004 Outstanding Alumnus, with Peter Schwartz, textile engineering department head.

## Graduate student news

The AU Graduate Council selected Andrew Hawkins as one of the 10 Outstanding Master's Students at Auburn University for 2002-2003. A Huntsville native, Hawkins is a 2000 textile chemistry graduate and a 2003 textile science graduate. His research is in "stimuli sensitive" gels and polymers as part of a "smart fibers" project.

Birgul Ascioğlu, a graduate student in Integrated Textile and Apparel Science, was awarded second place in the Engineering Poster Session at the annual AU Research Forum. Her research area is heat transfer modeling in nanofiber-reinforced composites, for which she is working on modeling nanocomposites in order to understand flame resistant behavior. The goal is a composite that has flame resistant behavior. In conventional composites, fibers are in the micron or much bigger level, but in nanocomposites, fibers are in the nano level (one billionth of a meter).



Julia Freeman

## Staff news

Lambda Chapter of Phi Psi Fraternity has announced the 2003-2004 honorary initiation of Julia Freeman. Since 1994 Freeman has served as recruiter, student advisor, scholarship coordinator and placement officer for the Department of Textile Engineering. Her years of enthusiastic service to the textile industry and the members of Lambda Chapter make her a worthy member of Phi Psi Fraternity.

## Undergraduate student news

Andrea Smith, a textile engineering major from Hoover, Ala., was chosen by faculty as the department's Outstanding Student for 2002-2003 and honored at the College of Engineering Award Reception in spring 2002. Andrea is now an engineer with Hubbell Power Systems in Leeds, Ala.

Rebecca Armstrong, a textile management and technology senior from Nashville, was recently chosen by the faculty as Outstanding Student in



Mellany (left) and Melody George

the department for 2003-2004 and was honored at the College of Engineering Award Reception. Becky is studying this semester in the new textile study abroad program at Reutlingen University in Germany and will graduate in August.

Landon Dukes, a senior in fiber engineering from Lewisburg, Tenn., has received the \$3,000 Industrial Fabrics Foundation Student Scholarship Award for 2004.

Jamie Wood, a junior in textile engineering from Wetumpka, Ala., was awarded one of two \$1,500 Luther B. Arnold Scholarships for 2003-2004. The scholarship is named for Arnold, one of the primary founders of the Southern Textile Research Conference, and administered by the American Association of Textile Chemists & Colorists.

This year, Mellany and Melody George, juniors in textile engineering from Birmingham, were two of seven students in the Samuel Ginn College of Engineering to be awarded \$2,500 National Academy for Nuclear Training scholarships. In 2003 they were named NASA Space Grant Scholars and received scholarships of \$1,000 each for their academic achievement and promise for a scientific or technological career. In summer 2002 the George sisters interned with Southern Company at the Farley nuclear facility near Dothan, Ala.

## Student awards

2003: Thomas Hogan Jr., Textile Operating Executives Award; Rebecca Armstrong, Christopher B. Terry Service Award; Jeremy Legg, Outstanding Textile Senior; Eric Chambers, American Association of Textile Chemists and Colorists Senior Award; Mary Smith, Outstanding Freshman Scholarship Award; Jason Mattox, W. Kenneth Lynch Merit Award; and Andrea Smith, Departmental Outstanding Student Award.

2004: Jamie Wood, American Association of Textile Chemists and Colorists Student Award and Outstanding Textile Senior Award; Sarah Jones, Phi Psi Freshman Scholarship Award; Dwight Hines, Christopher B. Terry Service Award; Jonathan Shugart, W. Kenneth Lynch Merit Award; Megan Stroud, Textile Operating Executives Award; Nicole Sizemore, Chattahoochee Valley Phi Psi Alumni Award; Jared Cooper, Phi Psi Senior Honor Award; and Rebecca Armstrong, Departmental Outstanding Student Award.

## ATEF is department's advisory board, largest donor

*Commentary from Peter Schwartz, department head*

The Alabama Textile Education Foundation (ATEF) was founded in 1953 by textile industry leaders who were active in the Alabama Textile Manufacturers Association. Its purpose is to assist educational institutions in providing educational facilities and advantages to students in various branches of learning, particularly those interested in all branches and phases of the textile industry. No member, trustee, or officer of the organization receives compensation.

ATEF is a member of Auburn University's 1856 Society, which recognizes donors and organizations who have made lifetime contributions of \$100,000 or more. ATEF has collected tax exempt membership dues since its inception and in 1984 started a capital campaign fund drive that has raised over \$880,000. Donations come from alumni, the textile industry (of Alabama and other states) and suppliers to the textile industry. Alumni who were instrumental in the initial fund drive include Bob Bugg ('57), Richie Terry ('59), Charles Crowder ('83), and Billy Lane ('59).

These monies have been placed in diversified endowment accounts that are now worth more than \$1 million. The investment portfolio, however, is structured to generate maximum dividends. Earnings support the largest scholarship program in the Department of Textile Engineering, providing 40-50 scholarships per year and supporting efforts that include recruiting and lab equipment. In recent years, ATEF has provided as much as \$105,000 annually for the department, which included a scholarship disbursement of \$80,000.

The ATEF board of trustees, which includes a number of our alumni, also functions as the department's industry advisory board. Members serve on various committees that plan the department's future. Major departmental changes including degree names and curricula are planned and implemented with the advice and support of ATEF. In addition, when I nominate alumni to the College of Engineering Research Council, I prefer to nominate someone who is already an active donor and supportive as a member of ATEF.

Trustees are nominated and appointed every two years, with the next nominations to be made this fall. The time commitment is minimal. There is a fall trustee meeting and an annual membership dinner and meeting in the spring. Included here is a membership form. I encourage our alumni to join ATEF as a way of supporting and influencing the future of the department. We have many talented alumni of all ages, and we need your help in planning our future. Feel free to contact me with any questions.

[schwartz@eng.auburn.edu](mailto:schwartz@eng.auburn.edu)



Peter Schwartz

### Alabama Textile Education Foundation Membership 2004

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone \_\_\_\_\_

E-mail address \_\_\_\_\_

*Yes, I am interested in serving as a trustee*

*The cost for individual membership is \$100 per year.*

Please make checks payable to  
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Contact  
[juliaf@eng.auburn.edu](mailto:juliaf@eng.auburn.edu)  
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