New Textiles Lab Aims to Advance Functionality of Protective Garments

A new facility at North Carolina State University will help provide increased protection to first responders by testing their turnout gear against potentially harmful chemical and biological threats.

The Man-in-Simulant Test (MIST) laboratory, located at NC State’s College of Textiles, will allow researchers to evaluate the capabilities of protective garments against non-toxic vapors that resemble chemical and biological agents. The new facility will give researchers the necessary technological advances to provide test results and analysis faster than similar facilities.

The MIST facility is the only one of its kind located at a university in the United States. The laboratory was funded by a two-year, $2 million grant from the Department of Defense through a congressionally-directed project by U.S. Rep. Bob Etheridge, who serves on the U.S. Homeland Security Committee. The facility was dedicated on July 21, 2008 at a ceremony attended by Etheridge, Tim Roberts of the U.S. Department of Defense, NC State officials and members of the Raleigh fire department.

The facility allows protective garments to be tested in a functional manner. In the main testing chamber, researchers can test the penetration of chemical vapors through protective clothing on mannequins and human subjects. During testing, subjects can perform the same tasks as a first responder, such as climbing a ladder, crawling or carrying a victim to safety, in an environment that can be controlled for temperature, wind speed and vapor concentration.

Subjects will wear adhesive pads underneath their clothing, which will be analyzed to determine vapor penetration levels through the fabric and at seams and closures of the garment.

In addition to the main test chamber, the facility includes an observation and control room, a conference room with closed-circuit...
On Saturday, May 10th the graduates walked across the stage on the courtyard at the College of Textiles to accept their degree much to the enjoyment of their loved ones. This class, all 107 of them, will enter the working world in diverse fields such as fashion (Abercrombie & Fitch, Moschino, Victoria’s Secret, Buzz & Berly, Jockey, Linda Hartman), retail (Peebles, Kohl’s), aerospace (Hamilton Sundstrand, Northrop Grumman), sportswear (Under Armour, Peter Millar), high performance (W.L. Gore, Teijin Aramid, Narricot, Glen Raven), automotive (General Motors), and many others. There are even two who have been accepted into nationally-ranked dental schools. They will work all over the US in North Carolina, Texas, Ohio, Georgia, Virginia, New York, Wisconsin, Maryland, Michigan, as well as in the United Kingdom.

The first BS in Fashion and Textile Management was given out to Milton Dale Eramo II. Dale began working in New York City for Oscar de la Renta as a production assistant but most recently began work with Polo Ralph Lauren. At Ralph Lauren, Dale is creative presentation coordinator for the North Island, Connecticut, and the Hamptons. Coordinating and styling all visuals in store to create a cohesive look for Ralph Lauren collection to home. David Giovannini majoring in Textile Engineering was the commencement speaker. David has accepted a position with Milliken & Company in South Carolina as a process improvement engineer.

Dr. Roger Barker, director of the Textile Protection and Comfort Center (TPACC) at the College of Textiles, will oversee the new MIST lab. In 2003, Barker received a grant from the Department of Homeland Security to develop a prototype of new firefighter turnout gear, which offers increased protection against heat and chemical and biological agents while also improving comfort and durability. While searching for a facility to test the suit, Barker and his colleagues saw a need for a readily accessible lab and developed a proposal for the MIST facility.

He says the new lab will enhance the research and development of next-generation protective garments by building upon previous and current projects conducted at NC State.

“The new MIST lab will be integrated into our existing garment testing facilities and increases our ability to provide accurate studies of protective gear in a more timely manner,” Barker said. “This facility compliments all of the research we engage in and will accelerate the development process for new types of protective gear.”

During the past decade, projects conducted by TPACC researchers has led to many advances in protective garments, including improved fire- and heat-resistant fabrics for firefighters; surgical gowns that provide doctors and nurses with greater protection against infection from blood and other biological agents; and outerwear that helps safeguard HAZMAT workers from dangerous chemical agents.

187 incoming freshmen started classes at the College of Textiles on August 20th with 141 females and 46 males. 55 are undeclared textile majors, 82 are fashion and textile management majors, 25 in textile technology, 20 in textile engineering and 5 in polymer and color chemistry. Their average SAT is 1131 and average weighted GPA is 4.03. 161 attended public high school, 24 went to private school and 2 were home schooled. 173 are from North Carolina, 13 from out of state and 1 international student from Guatemala.
Dr. Keith Beck Leads the Textile Engineering, Chemistry and Science Department into the New World of Textiles

After 10 years as department head of the textile engineering, chemistry and science Keith Beck has decided it is time for him professionally to return to normal faculty duties. Through the years as department head, Dr. Beck has had a great impact on the development of the department, the faculty and staff within the department, as well as, educating students in polymer and color chemistry.

Dr. Beck, was one of the founders of HueMetrix, a College of Textiles spin-off company. HueMetrix was instrumental in developing a monitoring system that will dye fabrics the right shade the first time. Once a minute, the dye bath is analyzed to determine how much dye is left in the bath. That indicates how much dye has moved to the fabric. Dr. Beck currently serves on the Board of Directors and technical team.

Another great achievement for Dr. Keith Beck was receiving of the Olney Medal for outstanding achievement in textile chemistry given by the American Association of Textile Chemists and Colorists in 2006. The Olney Medal was established in 1944 to recognize outstanding achievement in textile, polymer, or other fields of chemistry of major importance to textile science, including the development of chemical agents or processes used in textile manufacturing or for methods used in textile evaluation.

Dr. Beck began his career teaching organic, advanced organic, and qualitative organic analysis at Elmhurst College for seven years and then accepted a position to teach and conduct research in textile science at Purdue University. He and his family moved to North Carolina State University in 1986 to continue teaching and conduct research activities in textile chemistry. According to Dr. Beck, he feels his major contributions as department head were hiring outstanding young faculty and staff, and emphasizing the importance of teaching in the department. He has continued to enjoy teaching freshmen, seniors and graduate students during his administrative stint.

Dr. Beck has been married to Beverly, a substitute physical education teacher and volleyball referee, for 40 years. Together they enjoy their children: Brady, a wildlife biologist and his wife Karen, a veterinarian; Kelli, a biochemist; and Kerri, a graduate in textile engineering at NCSU and her husband Scott, an F-15 pilot in the Air Force, and their four grandsons: Hayden, Weston, Carter and Grant.

To transition back to full faculty responsibilities, this fall he will do research on liquid chromatographic/mass spectrometric analysis of dyes for forensic purposes at the State Bureau of Investigation in Raleigh.

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Dr. Nataliya Federova from NC State University College of Textiles is the 2008 winner of the Paul Schlack Prize awarded by the International Man-Made Fibres Congress in Dornbirn, Austria. The award has been in existence since 1971. The award was for her thesis work on the “Investigation of the utility of islands-in-the-sea bicomponent fiber technology in the spunbond process.” The prize is awarded by the Paul Schlack Foundation established in honour of the discovery of Polyamide 6 and is valued at 5,000 Euros. The three day conference will have approximately 700 participants from 30 nations with 100 lectures.
Lara O’Brien wakes up bright and early in her Caraleigh condo near Centennial Campus and opens her laptop to view the latest class from the College of Textiles. It’s pretty ironic that under her feet are the hardwood floors of the old Fred Whitaker Cotton Mill that has been renovated into condos. Even more interesting that Lara’s life as a ballet dancer with Carolina Ballet has brought her to the College of Textiles.

Lara started taking ballet classes in the suburbs of Chicago when she was 8 years old and by age 17 she received a scholarship to study at the School of American Ballet with the New York City Ballet. In August 2001, she was hired to work for the very young Carolina Ballet. She has climbed her way up to the rank of first soloist at the company ranked as one of the top 10 ballets in the country, and has been in every production since 2001.

In January 2006, Lara decided to get her feet wet in those ballet shoes and step back into school by becoming a Lifelong Education student. Lara discussed with Robert Weiss, the Artistic Director at the Carolina Ballet, her thoughts of a degree and he discussed with Dean Blan Godfrey during a meeting about set design. After that, she met Philip Dail and decided to major in Fashion and Textile Management. She is taking most of her classes via distance education which allows her flexibility with her schedule.

The College of Textiles’ history with the Carolina Ballet goes back about four years. Jeff Jones, the Creative Director for the Carolina Ballet, met with Jeff Krause because they were having color problems dyeing their leotards. Most recently Jones was looking for different ways to paint their scenery and for fabric to use in a castle scene for Sleeping Beauty. In the end, Freudenberg Evolon fabric was donated to the ballet to use on the castle scene and a flame retardant finish was put on the fabric by Jeff Krause in the College of Textiles pilot plant. In addition, College of Textile printing experts determined that they could print another scene they needed in one color, thus allowing a scenic painter in Winston-Salem, NC to add color and opacity to five 10 yard panels, that when sewn together make a 30 foot by 30 foot canvas. The painter stretches the canvas on the floor and sews the panels together and at times painting with a broomstick so that she does not step on freshly painted areas.

Cotton Inc. donated all the 100% cotton twill fabric, which is close to the type of material that they use normally. The scene was a map of the world and was used in the boat scene where the boat is traveling from one continent to another. Two different printers located in the Digital Design Lab at the College of Textiles were used for the printing. A Yuhan Kimberly printer with nano-pigments was used to print the backdrop and the Stork Amber printer with acid dyes was used to print butterfly wings. Lisa Parillo-Chapman, who worked extensively on this project says, “There was amazing interest in helping the Carolina Ballet with this project. We were able to combine design and new technology to make sure we could meet the specifications of the hand painter. And the end result was magnificent.”
NC State University College of Textiles is pleased to be chosen by Lectra as a privileged partner demonstrating their commitment to the future of the industry. The College of Textiles fashion and textile management students, textile technology students concentrating in design and Anni Albers Scholars will greatly benefit from being exposed to and learning the types of software that are being installed. The 2-D and 3-D software package totals $10.89 million.

Lectra is the world leader in integrated technology solutions such as software, CAD/CAM equipment and associated services and is dedicated to industries all over the globe using soft materials such as textiles, leather, industrial fabrics and composite materials.

Hari KenKare, Lectra’s, schools partnership manager and College of Textiles alumnus says, “I am very proud to be a NC State University alumnus and Lectra employee. I am sure this partnership will help in preparing student with cutting edge fashion technology to face dynamic careers in the fashion world.”

This software is a major step for College of Textiles students to learn with the most advanced technology, says Dr. Trevor Little, professor and former department head in the Textile and Apparel Technology and Management Department. Dr. Little also stated, “They will have a head start on their career once they leave the College. This is a huge advantage, due to the fact that 2-D and 3-D tools are essential part of the professional design process.”

All of the Lectra software that is being installed talks to each other, imports easily and allows the design process to flow much better. In these packages of software students will learn style design in which they can make images,故事boards, and even separate color on prints. Another package allows them to do spec sheets and gives them 6-7 databases to choose items such as seams, buttons, trims, fabrics, sizing designs and they can add more information to the database. This will allow the databases to build and give each class more options for the future.

Other software makes it easier to teach 3-D grading. In general most students have a difficult time learning 3-D grading. Also the teaching of marker making will be enhanced and taught in different stages. In level one they will learn the skill of marker making, level 2 they will actually make the pattern for something like a women’s blouse, and level three they will learn through the software how to tackle women’s wear market for a certain age group. “It’s all about building a product and you can go all the way to the manufacturer or into the designer’s head. That is what is so great about this software,” says Dr. Trevor Little. These are just a few examples of what this software will teach the future designers that graduate from the College of Textiles.

With this software you can communicate to anyone in the world and in today’s global market it is more important than ever to coordinate a global approach to education. And Lectra is doing just that for all 5 of its privileged partners across the United States.

On May 1, 2008 the Anni Albers Scholars Program hosted a Recognition Ceremony to honor the program’s Graduates and Alumni. Scholars, administrators, faculty, family and friends gathered in support of the seven May 2008 Graduates and twenty-six Alumni from December 2002 - December 2007. The ceremony proved a wonderful success and was an example of the growth the program has experienced since its initiation in January 2001.
Energy, energy, energy. We hear these words all the time it seems. NC State University of course is driving innovation in energy and our students are a huge part of that success. Can you imagine spending your summer in a plasma lab doing work in fusion as an energy source? Does it sound far-fetched to you or something from Star Trek? To Joseph Barton, a senior double majoring in Textile Engineering and Physics and a Caldwell Fellow, it sounds like the opportunity to spend the summer in a dream internship that will give him the experience of a lifetime.

Joseph interned at the Princeton Plasma Physics Laboratory (PPPL)( www.pppl.gov), a Department of Energy (DOE) lab overseen by Princeton University, and is one of the many DOE laboratories devoted to increase our understanding of natural energy sources and to provide alternate energy solutions, one of America’s greatest scientific challenges. This opportunity was presented to him at an Oak Ridge National Laboratory (http://www.ornl.gov) “Day of Science” poster session in fall 2007. Obtaining an internship with the PPPL is very competitive both nationally and internationally. So when Joseph found out at the end of February he had been one of the twelve chosen, he was very excited and went to thank the three people within the College of Textiles who helped make it a reality: Philip Dail, his freshmen advisor, textile engineering faculty Dr. Jeff Joines and Dr. Warren Jasper.

All of the experiences Joseph has had at the College of Textiles have led him to such a prestigious internship. His career at the College of Textiles started in the summer before his freshmen year when he worked for Dr. Tim Clapp in the Six Sigma area. Then in his sophomore year he became a TA in Textile Engineering 110 and in the summers worked in the Zeis Textile Extension Education for Economic Development Center. Joseph has also had the experience of working with Dr. Jasper and Dr. Steve Michielsen to help create a device that takes real time measurements of the kinetic coefficient of friction in nonwovens. Most recently he has been working with Dr. John Blondin, an astrophysicist in the College of Physical and Mathematical Sciences. Joseph contributed to Dr. Blondin’s model of high velocity shocks in core collapse supernovae using supercomputers to analyze the dynamic distribution of self gravity in the star before it explodes.

So what does working in a plasma lab looking at fusion as an energy source mean? Fusion power refers to power generated by nuclear fusion reactions. A fusion reaction is when a Duterium nucleus and a Tritium nucleus are forced very close together, close enough to overcome the strong nuclear force and release a vast amount of energy. For reference, recall the power released by the Hydrogen bomb. Although the H-bomb was a fusion reaction, the methods for producing fusion as an energy source are irrelevant for weapons research; in fact, no products of a working fusion reactor would produce waste useful for bomb building. The fuel source is water, so even if a reactor were to fail, there would be no fallout. Compared to fission nuclear reactors with nuclear waste and fallout risks, fusion is the most attractive source of nuclear energy.

Plasma must be heated to temperatures hotter than the core of the sun inside a machine called a tokamak for fusion to occur ( http://en.wikipedia.org/wiki/Tokamak). Joseph is creating a computer model to study the edge effects of the plasma to optimize plasma confinement, since plasma at these temperatures can only be confined by magnetic fields. Additionally, a Wolfpack alum from the Nuclear Engineering Department is Joseph’s research mentor, Dr. Rajesh Maingi. Dr. Maingi received his undergraduate, graduate and PhD from NC State.

Joseph says of his internship, “I’m happy to have found such a niche, being able to apply my information systems skills from my textile engineering degree as well as the skills I have taken from my physics degree. It’s so exciting knowing that I’m contributing to something that has impact on the whole world’s use of energy. There has been a lot of controversy with fusion saying that “fusion is the energy of the future and always will be,” because of the huge engineering obstacles that have yet to be overcome. But scientists are still optimistic because of research being done in the US, China, India, Japan, Korea and the EU; fusion science has progressed faster than computer chip technology in the last decades. It motivates me to continue to pursue plasma/fusion science seeing such a global effort put into a noble cause. The ultimate end goal of providing the technology of a powerful source renewable energy to every human is worth it.”

Joseph will have three semesters left at NC State, but Joseph has no doubts that he plans to attend graduate school in fall 2010 and build upon all that he has learned at NC State University.
In April 2007, Kimberly and Jason Layton approached Holly Weaver after her showing at the Art to Wear fashion show because they liked her casual sense of style and they were looking for a designer to help with their business, buzz & berly. They design and manufacture officially licensed logoed women’s sundresses. They are one of the first companies to produce a dressier alternative to the traditional game day attire of t-shirts and jeans. Buzz & berly was founded in 2004 after Kimberly wore a handmade NC State dress made from off-the-rack fabric to a football game and everyone wanted to know where she got it. But Holly had one more semester and an internship planned with Belk for that summer, but she managed to work for buzz & berly too. Upon graduation in December 2007, she took a full time role with the company as their Product Manager and first employee. Holly says she was excited about the fact that it was a small company and she has such a wide variety of responsibilities and tasks. She is responsible for every step from designing the garments to finding fabrics, making samples, finding manufacturers, labels, and placement of product in the stores. “It’s been great to be part of such a young and growing company and to be able to really put what I learned in school into good practice. The experience that I’ve gained in such a short time is immeasurable considering that I eventually want to start my own business. Working with Kimberly and Jason has been such an amazing learning experience.”

At the moment Holly is filling orders and preparing for the kickoff of football season. buzz & berly introduced their first children’s line this summer in addition to their women’s collections for NC State and UNC. To view their made in North Carolina garments please visit www.buzzandberly.com. You may want to order something before the textile alumni tailgate!

Chad Seastrunk probably never thought as a freshmen in the fall of 2000 that he would be at UNC Chapel Hill working on his master’s degree in Healthcare Administration. Partly because Chad grew up a State fan and he probably doesn’t even own a light blue shirt. However, the endless possibilities of careers in the new world of textiles were opened up to him as a Centennial Scholar majoring in textile engineering. He had the opportunity to take a Six Sigma quality class studying under the Dean of the College of Textiles, who is world renowned in this area. This lead to him teaching Six Sigma in spring 2004.

His first healthcare experience occurred when he worked for Wake Med Hospital doing data analysis for two years. While he was teaching, Duke Health studied Six Sigma at the College of Textiles. The healthcare field started to seem like something different to do with his master’s degree in textile engineering. So, Chad entered the Master of Healthcare Administration at UNC-CH in fall 2007. Chad wants to work in an academic medical center upon graduation in spring 2009.

But the story doesn’t end there. Chad applied for an internship at John Hopkins this summer and after speaking to Michael Rothman, the Director of Quality Improvement, he received the opportunity to intern at the distinguished health care facility. This summer Chad shadowed nurses, physicians, surgeons, and administrators to help him prepare for his future job in healthcare. He also had the opportunity to attend the World Health Organization (WHO) Safe Surgery Saves Lives Campaign Launch in Washington DC. He taught what he learned from his master’s thesis on error proofing and worked at the Center for Innovation and Quality Patient Care at John Hopkins University.

Chad says of his experience, “The Johns Hopkins Hospital provided me with opportunities that I could not get anywhere else. The administrative internship program here has done much to shape the type of leader I will be in healthcare. The stories I have heard and experiences shared with me from nurses, physicians, and administrators will stay with me the rest of my life.”

To find out more about Six Sigma at NC State visit www.tx.ncsu.edu/sixsigma
So what are textiles today? How is the College of Textiles presented to high school students today vs. years past? Well today high school students that attend one of the four week STEP Program camps learn about how composites are made, how to design the next high fashion garment for a NYC runway, how to make a business model or how to design knitted structures. They come to the College of Textiles to spend a week in an area of interest and to experience the whole college experience. From living in dorms to eating in the dining hall to making new friends and learning something new about NC State that they didn’t know before walking around campus. Overall it is an eye opening experience on many levels for these students who may be far from home.

These rising high school seniors are getting ready to embark on their final high school year where a lot of decisions will be made. Hopefully their experience at the College of Textiles will allow them to explore textile degree options and they will decide that the new world of textiles is a career they want to be a part of. These students hear about the program from their high school teachers, counselors, through a friend, a current student or via the college website. Once they are accepted into the program it is free, yes free. The North Carolina Textile Foundation funds the camp and their generosity brings approximately 40% back to college to become full-time Wolfpackers. So the College is doing many things right when it comes to this program.

Mallory Robinson from Raleigh, NC
Millbrook High School
“I found out about the STEP program through a friend in my Apparel 2 class. I am going to be a fashion designer one day and definitely want to come here after coming to this program.”

Megan Gallagher from Winterville, NC
South Central High School
“After finding out about this camp through my science teacher I decided I wanted to explore my options in textiles and learn more about the Centennial Scholarship that the College of Textiles offers. So far this program has been really nice and very informative.”

Taylor Oliver from Murphy, NC
Murphy High School
“I am very interested in fashion and wanted to learn more about the type of things I would study. After finding out about this program on the College of Textiles website I knew I wanted to find out more.”

Pherin Gregory from Henderson, NC
Northern Vance High School
“I think it is ironic that I am in this program this summer and want to study design. My mother made all my clothes until I was in middle school and I made her stop! But after finding out about this camp through a current student and knowing that I did have an interest in the area I am so glad that I decided to take part.”

On June 9th, the College of Textiles Textile Protection and Comfort Center was featured on the Modern Marvels show entitled “Super Hot” on the History Channel. The story highlighted Pyroman, a fully instrumented, life-size manikin capable of evaluating the performance of thermal protective clothing against fire exposure and Coppelius, the college’s sweating manikin.
From STEP Program to Brookhaven National Laboratory

Sidney’s internship focused on radiochemistry and chemical synthesis. More specifically, Sidney focused on techniques for developing new radiotracers to be used for Positron Emission Tomography (PET). PET is an imaging technique that uses radioactive atoms that decay by positron emission to monitor functions such as drug metabolism, and chemical kinetics in the brain. Sidney says he learned more than he’d ever imagined. He says if you would have told him a year ago that he’d be working with radiation, he definitely would have laughed.

Sidney has had many experiences at NC State that have helped him narrow down his field of interest and become a well rounded person. The Caldwell Fellows program has given him endless opportunities to “think big” and get out there and get out of his comfort zone. He says getting out of that comfort zone has allowed him to take part in a language exchange program where members take 30 minutes out of week to speak to someone who speaks a different language. Sidney says, “We learn from each other and learn each other’s language and cultures. It’s great.” Sidney has also worked on chitosan projects with Dr. Richard Kotek at the College of Textiles and how to dye it. He has also been a tutor for the College of Textiles and plans to run for Leader of the Pack in the fall.

Sidney plans to graduate in 2010 with a double major, wonderful work experience and an internship that could change his life. When asked what the best part about being a student at the College of Textiles he said, “definitely the relationship with people here, be that faculty, staff or students. Being part of a small college at a big university is such an advantage.” This is more evident than ever now that he has had the opportunity to go to Brookhaven National Labs researching under the wing of a former college of textiles student.

The Summer Textile Exploration Program at the College of Textiles consists of four one-week sessions for rising high school seniors. It brings some of the best and brightest students to the College of Textiles to learn about all of our degree programs and why the new world of textiles is so exciting. Many of them launch their College of Textiles careers via the program and one such example is Sidney Hill from Kinston, NC. Double majoring in polymer and color chemistry and chemistry his dream was to work for a national lab. Sidney had discussed this wish with his advisor, Dr. David Hinks and then the true beauty of the College of Textiles unfolded. Dr. Hinks had recently received word from a former College of Textile student, Dr. Jacob Hooker, that Brookhaven National Laboratories, operated by the United States Department of Energy (DOE), was currently accepting applications for their summer internship program. Sidney immediately applied for an internship in chemistry and was one of the two accepted of the 100 applications they received.

The Art to Wear Fashion Show held in April 2008 was again a major success. This fashion show held in conjunction with the College of Design was the biggest production ever, making the attendee feel as if they were in New York City during fashion week. Held on the Court of North Carolina on campus, 2,500 people filled the grassy area enjoying 17 students designers work from the College of Textiles and College of Design. Tony Award winning costume designer and North Carolina native, William Ivey Long, enjoyed the show and helped jury the selections that were shown. The Colleges hope you will join us next spring for this wonderful show.

Dr. Stephen, a professor at the College of Textiles and co-creator of an anti-viral fabric that kills viruses on contact was featured on CNN in March. To view the story please visit http://www.cnn.com/video/#/video/tech/2008/03/31/obrien.antiviral.fabric.cnn?iref=videosearch

In Spring 2008, Holly Weaver presented on behalf of the College of Textiles a Relay for Life quilt and money that was donated to the American Cancer Society office in Raleigh, NC. Ten students helped with a fundraiser that sold squares on a quilt that donors decorated. The squares were sewn together to make the quilt.
Announcing the 18th Annual Textile Alumni Tailgate Party and Textile Bowl

NC State vs. Wake Forest
Saturday, November 15, 2008
Tailgate to begin 3 hours prior to game
Gametime: To be announced

You’re invited to join fellow alumni and friends at the College of Textiles tent adjacent to Carter-Finley Stadium and on the west side of the RBC Center. Depending on the time of the game you will either enjoy a pig-pickin’ or brunch! The party will begin 3 hours prior to the start of the game with special speakers and doorprizes to begin 1 ½ hours prior to the game. Football tickets and tailgate tickets will be mailed to you, along with maps and more information, by the end of October.

We HIGHLY RECOMMEND you visit www.tx.ncsu.edu/alumni_visitors/tailgate to register and pay for the tailgate. With this secure option you are able to pay with your credit card. If you choose not to order online please fill out the form below and mail. If you order online or with the form please register by October 24th.

FOOTBALL TICKETS ARE LIMITED SO ORDER EARLY! SORRY NO FOOTBALL TICKETS ONLY ORDERS

Name:____________________________________________________________ Degree(s)/Year(s):_____________________

Address:________________________________________________________________________________________________________

Company:___________________________Title:________________________ Daytime Telephone (______)____________________

Evening Telephone (______)____________________ Email Address _____________________________________________________

____ Football tickets @ $43.00 each = $_______
(# of tickets – limit of two tickets for every meal ticket ordered)

____Textile Alumni Society tailgate tickets @ $12.00 each = $_______
(# of tickets – no limit) Ricky Layton’s Barbecue and Chicken Buffet or Brunch- Children under 6 eat for FREE!!

Postage, Handling and Rental Fees = $5.00

Return this completed form and your check made payable to:
Textile Alumni Society
Send To: Emily Parker
Textile Alumni Society
Box 8301, NCSU Campus
Raleigh, NC 27695-8301

Total =
**Faculty and Staff News**

**Katherine (Kate) Carroll**, has joined the College of Textiles in a Design and Development position. She comes to North Carolina State University from East Carolina University, where she held an Assistant Professor position in Apparel and Interiors Merchandising. She was educated at the University of Manchester, U.K., gaining a BA degree in the History of Art and a minor in the History of Architecture. She holds an MA degree from Michigan State University in Clothing and Textiles, and a Ph.D. in Clothing and Textiles from Virginia Tech. Dr. Carroll has taught at the University of Michigan (Flint), The Savannah College of Art and Design, Virginia Tech and East Carolina University. Her research interests include socially responsible product development and distribution in the global textile and apparel complex; the use of biomimicry in design for special populations; and the history of the apparel and textile industries. Publications include research on Inclusive Design in apparel product development; apparel issues of obese children, and apparel acquisition preferences of working women with disabilities.

This summer **Dr. George Hodge** joined the Graduate School as Interim Assistant Dean for Graduate Program Development. In his new position he will be coordinating review and approval of graduate courses, degrees, and certificates. He will also manage the development of new academic policies and procedures. Previously, he was Director of Graduate Programs for the Textile and Apparel, Technology and Management (TATM) department.

**Professor Emeritus Gary Mock**, retired since 2005, remains actively involved in textile education and history. He recently started his own Web site Textile Industry History which can be seen at www.textilehistory.org and volunteers at The Textile Heritage Museum (www.textileheritagemuseum.org) near Burlington, NC.


**Jan Murph** joined the Zeis Textile Extension Education for Economic Development (TexED) Center as their office administrator on July 1st. Jan brings a wealth of experience including event management, meeting planning, materials coordination, executive administration and customer service. Jan has seven years of NC State experience having served as a program coordinator for the Wolfpack Club.

**Cheryl Darden, (BSTAM 2006), and Brandon Alley (BSTT and Art and Design - Anni Albers Scholar 2008)** are the new College of Textiles recruiters. Cheryl and Brandon will travel across the state and will present to high school students about the opportunities in textiles and the types of careers that they may embark upon after graduation. Furthermore they demonstrate how textiles relate to science. The recruiting program began at the College of Textiles in the 1950s and continues to attract top students to the College.

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**Furniture Land South Discount to Textile Alumni**

The Textile Alumni Society is pleased to announce another advantage to their alumni. Furnitureland South, the World’s Largest Home Furnishings Showplace, offers NCSU College of Textiles alumni, faculty, and staff home furnishings and accessories at discounts of 40-50% off of retail, free design services, and a special 5% rebate that can be applied toward the purchase of any of Furnitureland South’s thousands of in-store accessories.

With more than 1 million square feet of home furnishings and accessories, Furnitureland South provides acres of exquisitely designed vignettes, expert designers, and a white-glove national delivery service. The store is a multi-day destination for discerning consumers from every state and many foreign countries. Money Magazine has said, “a visit to Furnitureland South is like a visit to a home decorating theme park.” Furnitureland South is located on Business 85 between Greensboro and High Point, NC.

In order to qualify for the 5% rebate, you must identify yourself as a College of Textiles associate and contact the following Sales & Design Consultant.

Dale Lackey, the sales associate to contact is also a College of Textiles alumnus. Below is his contact information.

Dale Lackey / 336.822.3000 x2612 ncus@furniturelandsouth.com

To learn more about Furniture Land South visit www.furniturelandsouth.com
New Cubs in the Pack

Kelly (Robertson) Wilson (BS TXM 2000) and her husband Matthew announce the birth of their second child, Matthew Brice Wilson, Jr. born on October 9, 2007. Brice weighed 8 pounds 5 ounces. Big sister Gracie Ruth is enjoying her new little brother. Kelly is employed with RJ Reynolds Tobacco Company in Winston-Salem as a Senior Product Procurement Buyer. The Wilsons reside in Mocksville, NC.

Jenny (Spry) Durham (BSTT & BSTXM 1996) and Tony Durham (BSTS 1988) announce the birth of their daughter, Audrey Reagan Durham, born June 15, 2008. Audrey weighed 8 lbs and was 20 inches long. The Durhams reside in Griffin, GA.

Alumni Update
Your Information:

In order for you to take part in alumni activities and to receive news from the College of Textiles, we need your current contact information. Please visit www.tx.ncsu.edu/alumni_visitors/registration/ to register or email Emily Parker, Director of College Relations at emily_parker@ncsu.edu or call 919-515-6529.

Textile Mergers

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