A step beyond

On May 9, Vincent “Bo” Jackson went a step beyond a promise he had made to his late mother during his days as one of America’s most-celebrated athletes. He fulfilled that promise when he graduated from Auburn in 1995, after retiring from sports. Now a successful Chicago-based businessman, he returned to Auburn this month as the featured speaker at spring commencement.

For guiding students

Faculty members, son establish award honoring mentors

Two Auburn faculty members and their son, a successful software developer, have endowed an award to recognize engineering faculty who distinguish themselves as mentors to their students.

Thaddeus A. Roppel, an associate professor in the Department of Electrical and Computer Engineering, was honored as the first recipient of the Mark A. Spencer Creative Mentorship Award at the Samuel Ginn College of Engineering’s spring awards ceremony.

The new award was created by Auburn faculty members William and Samia Spencer and their son Mark, a 32-year-old communications software pioneer, in recognition of the valuable role that mentors played in Mark’s engineering education at Auburn. Bill Spencer is the former head of the Department of Educational Foundations, Leadership and Technology in the College of Education. Samia Spencer is Alumni Professor of French in the Department of Foreign Languages and Literatures in the College of Liberal Arts.

The award is designed to recognize and encourage mentorship by engineering faculty members as a critical component of teaching. It carries a $10,000 stipend, to be divided between selected faculty members and their mentored students.

“Faculty mentors give students an avenue to further develop their interests and talents,” said Engineering Dean Larry Benefield. “This award recognizes those who look beyond the classroom for opportunities to teach and nurture their students.”

“We believe that it is important for the university to applaud good mentoring and those faculty members who recognize the potential of students,” said Samia Spencer. “Mark was a good student, but it was the extra effort put in by Dr. Roppel that really allowed Mark to grow in his interest and skill.”

See Mentoring award, page 2
Saturday Art Club
Museum offers Saturday art adventures for kids this summer

Metalwork, print making and sculpture are just some of the variety of art topics and techniques students ages 6 to 18 can explore throughout the summer as Auburn’s Jule Collins Smith Museum of Fine Arts presents the Saturday Art Club.

The club, which is free, is popular with children of faculty and staff as well as others in the community. Starting this Saturday, May 16, the club meets every Saturday at 10 a.m. through Aug. 29, except July 4. Participants may stay as long as they like until 1 p.m.

During the sessions, museum educators will work with students in an open-studio environment to help them learn about everything from shape composition and building up an image using shapes, to bookmaking, journal building and paper making. Each day will have a general project idea but students will be encouraged to actively approach the techniques and concepts from their own points of view, said Andrew Henley, the museum’s education curator for K-12 students.

He added that students will be experimenting with different materials and subjects with the guidance of art educators, which, he said, should lead to creative results.

Henley said there will be age-appropriate activities based on the general theme at each session. Tables for younger children will include a reading or a book to tie in the theme. Children will also be exposed to art-related vocabulary such as color, line and shape and will get the opportunity to use authentic materials such as oil pastels, silverpoint and colored pencils throughout the sessions.

Opportunities will also be available to help parents learn how to talk about and teach art to their children. “I hope that the sessions serve as a good conversation starter,” Henley said.

While the benefits of learning about art are significant for all ages, Henley said younger age groups can particularly benefit.

“Art is something that is done by absolutely everybody,” he said. “But especially for children under 12, it is innate as they are still experimenting and exploring the world around them.”

Participation in events such as the Saturday Art Club provides invaluable exposure to different types of art for children, Henley said, adding that such events can teach that art can be an outlet. “Art gives a child another means of expression.”

The Saturday Art Club also serves as another way to introduce small children to museums and the idea of what a museum is.

“It helps illustrate that museums are not intimidating and shows kids that the museum is not a formal, somber place,” he said. “They learn that it is actually okay to talk at a museum instead of being quiet. And that it is okay to talk about what each piece of artwork is trying to convey.”

A wide variety of topics will be covered throughout the summer. They include metalwork, including embossing and pewter casting; landscape drawing and painting, with invented places and the museum grounds; drawing, exploring various media and techniques; collages, mixed media and juxtapositions; shape composition, building up an image using shapes; patterns and decorative motifs; printmaking, wood and linocuts; Styrofoam prints for the younger students; more drawing techniques; weaving, with yarn, found materials and other media; sculpture, with stone carving and clay modeling; furniture design, ergonomics and decorative approaches; drawing spaces, linear perspective, interior and exterior places; advanced materials and drawing with odd things; bookmaking, journal building and paper making; and mosaics, in small and large scale with found object inclusions.

— Katie Wilder

Research discovery increases odds for tailor-made treatments for cancer

Auburn researchers Mark Byrne and Jacek Wower have developed a way to provide more control over the release of drugs into the body and, as a result, reduce the frequency of doses and side effects from multiple medications.

Their work involves harnessing the power of nucleic acids to control the rate, release amount and delivery location of medications throughout the body.

“We anticipate tremendous benefits to the treatment of various cancers and viral infections,” said Wower. “There is a need to create tailor-made treatments for these kinds of diseases because one person may respond differently to a medication than another. Medicine of the future will take into account a unique genetic blueprint of every patient, increased risks for certain illnesses and how patients respond to disease and therapy.”

Byrne and Wower, along with doctoral student Siddarth Venkatesh, used tiny RNA molecules called aptamers to control the release of drugs. For each patient, the drug delivery can be set to occur at various rates or under certain conditions, including exposure to an enzyme or reaching a specific temperature. Unlike past studies, this technology is capable of delivering doses of multiple drugs at different rates or a single drug at controllable and extended rates from one medical device.

“A nucleic acids work well for controlled drug delivery because they can easily be programmed to bind therapeutics, metals, other nucleic acids and proteins,” said Byrne. “Based on the patient’s needs, the strength of the binding can cause drugs to release at varying rates and amounts over a certain time and can be controlled in a variety of ways.”

The research team, which now includes doctoral student Padma Sundaram, is also using gold nanoparticles for targeting specific cells to deliver injectable drugs. The gold nanoparticles are biodegradable or excretable and can be injected directly into the bloodstream along with the medication. The combination could prove to be an important step for providing multiple-drug releasing carriers capable of delivering the right amount of medication at the right time.

Wower, a professor in Auburn’s Department of Animal Sciences, is a biochemist who studies the structure and function of RNA molecules. Byrne, whose expertise is biomedical engineering, biomaterials, biomedical devices and drug delivery, is the Sanders Associate Professor of Chemical Engineering at Auburn.

The Auburn researchers recently presented their findings at the annual American Institute of Chemical Engineers meeting in Philadelphia.

— Sally Credille