

# SPSU

THE MAGAZINE | FALL 2010



**Home Away From Home**

# SPSU

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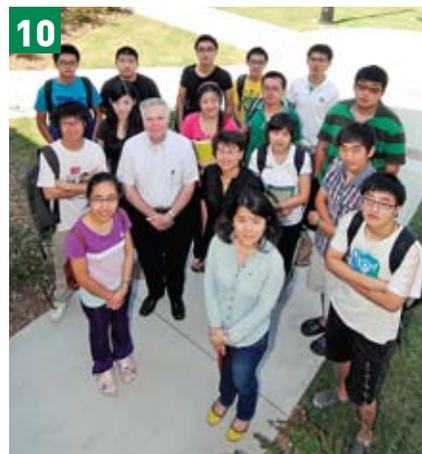
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Greetings from SPSU!

As I write this, all of us on the SPSU campus are enjoying the first cool days of the fall semester. The new student housing and campus restaurant opened in time for returning students, our enrollment is up 6.4%, and the new Engineering Technology Center and Architecture Studio Annex will be completed later this fall. We look forward to moving into these new facilities in time for the beginning of spring semester 2011. If you haven't visited campus recently, I hope you will do so soon. I predict that you will be amazed at the recent changes!



SPSU continues to promote the unique mission of a polytechnic university, and we are working with other polytechnic institutions to increase our visibility and public awareness of our hands-on, learn-by-doing approach to education. For the last two years, SPSU has participated in both planning and presenting the program at the annual Polytechnic Summit. This meeting brings together representatives of universities across the U.S. that focus on the application of knowledge to solve real-world problems. The first two summits were held at the University of Wisconsin – Stout, the newly designated polytechnic institution in the University of Wisconsin system. In 2011, the 3rd Polytechnic Summit will be held here in Marietta. Faculty and staff are already planning for this meeting, and we look forward to welcoming our polytechnic colleagues to the SPSU campus.

As you will read in this issue, our students and faculty continue to demonstrate our polytechnic focus in the classroom, in co-curricular activities, in internships, in global engagement, and in business and industry. They use technology to address important issues facing our planet, such as using virtual reality for military research. In a future issue, you may read about new technologies currently being developed at SPSU, like a mechanical cap to contain high-pressure underwater oil leaks. As a polytechnic university, SPSU has a responsibility to find solutions, and we are looking for ways to collaborate more widely in doing this. We are pursuing partnerships within the University System of Georgia, with the Technical College System of Georgia, and with companies and universities around the world.

As a friend of SPSU, you are an important part of our polytechnic family. Thanks for your support as we continue to look for ways to apply knowledge to make the world a better place.

I hope to see you around campus soon!

A handwritten signature in blue ink that reads "Lisa A. Rossbacher".

Lisa A. Rossbacher, Ph.D.  
President

# Home Away



## SPSU students have new choices in campus housing and a spacious new dining hall

With the addition of 720 beds to campus this fall between Hornet Village and University Columns, Southern Polytechnic State University now has the capacity to offer a variety of housing choices to 30 percent of its students. That's important since student enrollment has increased by more than 30 percent over the past five years.

While first-year students who live on campus must reside in traditional dorm rooms in Howell or Norton halls, the choices for upper-classmen and graduate students now range from on-campus apartment housing in the Commons or Courtyard complexes to the suites found in Hornet Village to a room in one of the 10 special-interest houses in University Columns.

Hornet Village consists of two four-story buildings containing 600 beds in suite-style rooms. Each suite

contains two bedrooms (either singles or doubles) that share a bathroom and are connected by a kitchenette and foyer. Common rooms on each floor are equipped with large flat-screen TVs. Each building also includes study/tutoring lounges and a large laundry room with machines that are free to the residents.

Hornet Village residents must participate in the meal plan, but with the campus' new, 16,000 square foot dining hall next door, offering a much larger seating capacity and fancier cuisine than its predecessor, this should be palatable. The lower level of this building contains an executive dining room and private patio that will be used for special functions.

University Columns has added another 120 beds to the campus – 12 in each of the houses, which are occupied by fraternities, sororities,

international students, and honors students. Each house includes a large “chapter room” for gatherings, a full kitchen, laundry facilities, and a study lounge.

SPSU was the first university in the University System of Georgia to build student housing using USG's public/private venture model in 1998. No state or public funds were used in the construction of the current housing. Instead, university leaders created a foundation that sold bonds to raise the funds, and the bonds will be repaid through rent revenue. This funding method is allowing the University to build housing based on demand.

A campus-wide event was held before the beginning of the fall semester to celebrate the opening of the new housing and allow alumni, students, and friends to visit SPSU's newest additions to its residential life.

# From Home



New facilities that opened this fall include (clockwise from top) Stinger's Restaurant at the X, Hornet Village, University Columns, and the patio outside the eXecutive Dining Room.

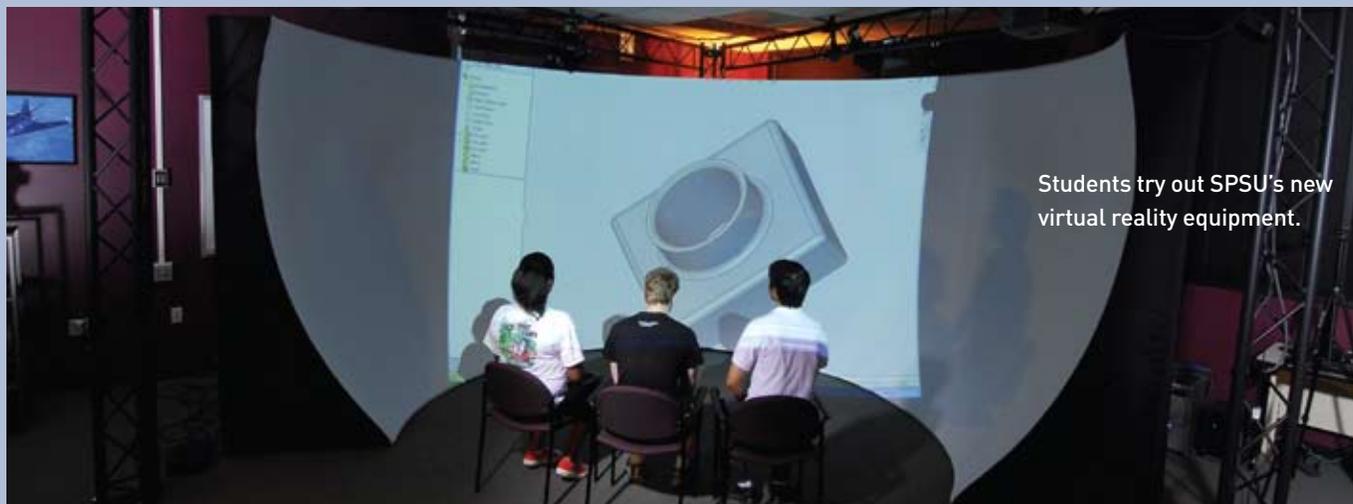




Students settled into their new quarters in late August. At top, they helped SPSU President Lisa A. Rossbacher cut the ribbon on University Columns. Bottom right, senior Juan B. Fleming had his hands full moving into Hornet Village. Bottom left, a room in the Gamma Phi Beta sorority house. At left, students visit the new greek houses during the campus-wide open house.



# Using virtual reality technology for research



Students try out SPSU's new virtual reality equipment.

**Southern Polytechnic State University has purchased state-of-the-art equipment and technology to create a new Visualization and Simulation Research Center.**

**The center features an IMAX-like projection system that will significantly enhance education and research in 3-D virtual and augmented reality technology, and in geographic information systems. Applications of this work include distance learning and training, the ability to offer virtual laboratories, and product development for various industries, including the military.**

The display system features four digital projectors and an 8-by-10 foot screen. In a standard movie theater, the screen is flat, but SPSU's is curved at the top and bottom, allowing the creation of a virtual environment with 3-D imaging.

Virtual reality technology of this kind has been of great interest to the military because it allows users to be placed in safe, controlled, virtual environments for the development of systems for foot soldiers, mission

rehearsal for special operations, training for user-controlled robots, and even treatment of phobias.

"This virtual technology is not limited to military research," explained SPSU professor Dr. Max North. "In the future, an architecture student could design a 3-D building that allows users to walk through its rendering, or a biology student could dissect a frog without harming an animal or getting his or her hands dirty."

The newly acquired equipment will be used to aid the research of both Dr. North from SPSU's School of Engineering Technology & Management and Dr. Cyril Okhio of SPSU's Division of Engineering. They are leading the way in the Atlanta area in the fields of virtual reality technology and engineering visualization applications. The pair played an important role in SPSU receiving the first technology of this kind in the state, with partial funding provided by the U.S. Army Research Office's Development and Engineering Command.

"This center offers SPSU a sophisticated tool-set that cuts across all disciplines and is valuable to all our students," said Dr. Okhio. "It provides students with cutting-edge technology and tools that make them very attractive to U.S. industry both now and in the future."

For more information on SPSU's Visualization and Simulation Research Center, visit <http://eu.spsu.edu/comments/vsrc.php>.

# HANDS-ON SKILLS IN OREGON

*SPSU interns gain real-life experience working for Oregon DOT*

Summer interns Angela Denson and Michael Rhodes were exposed to all kinds of real-world experiences.

The Southern Polytechnic State University seniors interned with the Oregon Department of Transportation (ODOT) in Salem, Ore., from mid-May to mid-August and were able to turn their classroom lessons into hands-on skills.

Denson, who worked in construction until being laid off in January 2009, served as a pavement services intern for ODOT and learned valuable lessons like believing she could do any job, no matter how difficult.

"I have learned that all construction is similar in scope," she said. "There just might be different terminology, but it all comes together in the end. Learning to analyze plans for scoping, gathering data to create a pavement design, or even finding out how the construction history plays a part in all of the work, are the most valuable parts of this internship."

SPSU interns gain real-life experience working for Oregon Department of Transportation.



Denson heard about the internship at an information session at SPSU last fall.

“I was still unemployed in the industry,” the Atlanta native said. “I had been doing part-time work and increased my hours and time at school to help further complete my education in a timely manner and decided since I was not working in the industry, this would be a great experience, both educational and professional.”

Denson, 44, was “ecstatic and a little nervous” when notified in March that she had been awarded the internship.

“I was not aware of the (Pavement Services) unit’s scope of work on a daily basis,” she said. “However, I felt I could gain any knowledge quickly, since I had been in the construction industry for a number of years, so it couldn’t be that hard.”

Liz Hunt, Denson’s supervisor, said the construction management major was chosen for “many reasons,” including her construction experience.

“We were looking for an intern that could bring real-world experience to the position along with relevant education,” she said. “Angela was always ready and willing to take on new projects, regardless of whether they were down the street or across the state.”

Rhodes, 22, a civil engineering technology (CET) major, went into his internship wondering if he was prepared for the working world, but his fears soon were alleviated.

“The first day I started work, I observed the routines and policies the office practiced and was surprised that they ran parallel to the techniques and procedures the CET faculty at Southern Poly taught and are teaching me,” he said.

Rhodes’ “multifaceted” internship gave him experience in surveying, project management,



Angela Denson (far left) and a few other ODOT interns attend a Native American powwow in Oregon.

quality control, traffic signal and underwater bridge inspection, and he was “exceptionally glad” that he had paid attention in his classes.

“In my Surveying I class taught by Prof. (Dan) Branham in CET, record-keeping and having an organized surveyor’s manual were necessary to do well in his class,” Rhodes said. “Three times this summer, I had contractors contact me in regards to the records I kept, and if my manual was not organized, there was no way I would’ve been able to produce the measurements they would’ve needed.”

He also worked heavily with asphalt and concrete road construction. His construction materials class “enabled me to offer suggestions and insight to the asphalt used on my job sites based on the environment and conditions it will be influenced by,” he said.

Denson said she had other positive experiences in Oregon that weren’t work-related, like attending a Native American powwow, going white-water rafting, and seeing Multnomah Falls and Three Sisters volcanic peaks.

“I have traveled from the beautiful greens of Oregon to desert browns of Oregon,” she said. “I have enjoyed the experience of Oregon as a state, which I would have never visited had I not gotten this internship.”

After her graduation next year, she hopes to find a job in commercial or heavy-construction project management, “possibly pavement services in light of this internship.”

“This has been a great experience for me since I decided to focus on a different career from my earlier years of employment,” she said.

Rhodes said his internship allowed him to “take chances and experience things that I could have never imagined.”

“My occupation this summer has instilled skills and knowledge that can only further my career and goals,” he said. “As I go into my senior year, I will apply the new skills and observations that I acquired in Oregon to be a better student, engineer, and person.”

# SPSU EXPERIENCES BANNER YEAR

**Southern Polytechnic State University has been a hotbed of activity for the Fulbright Scholar program during the last year.**

Raj Sashti, SPSU's director of International Program Development, secured a grant for SPSU to host the University's first Fulbright Scholar-in-Residence for the 2010-11 academic year, while separately two SPSU professors – Dr. Thomas Rotnem and Dr. Omar Zia – were awarded Fulbright Scholar grants to teach and do research in Latvia and Tajikistan, respectively.

The Fulbright program, the flagship international educational exchange program sponsored by the U.S. Department of State's Bureau of Educational and Cultural Affairs and the Council for International Exchange of Scholars, sends 800 U.S. faculty members to 140 countries each year to lecture, research, and teach while an equal number of foreign faculty members visit the United States.

Sashti, who coordinates SPSU's Fulbright scholarships, secured a grant for SPSU to host Hungarian professor Dr. Eszter Simon as a scholar-in-residence in the social and international studies department through May.

"She's doing fantastic," Sashti said of Dr. Simon, who arrived in late July.

Dr. Simon, who has taught international relations and American politics classes in Slovakia and Hungary, said she's "always had an interest in the United States."

"My first degree is in American studies," she said, noting her master's and doctoral degrees are from an international school with an American curriculum. "I teach American politics at home. I research American foreign policy, so teaching in the United States was a natural choice. I have always wondered how well I would do in American higher education. So, I was very excited that I was given a chance to find it out."

The Budakeszi, Hungary, resident, who was recruited by Sashti, said she came specifically to SPSU for several reasons.

"I love teaching, and I hoped to teach at a place where the primary focus of faculty is teaching," she said. "I rather liked the idea of a smaller university with a small community where it is easy to get to know both students and fellow faculty members. I also fancied the

challenge of teaching at a school where, because of the majors offered, most of the students have a different focus than the students I am actually used to teaching."

Simon is teaching classes in global issues and Central and Eastern European history, politics and society, and will be working on several research projects, including collecting material on the hot line between the White House and the Kremlin during the Cold War; studying foreign policy decision making in the United States and United Kingdom; and exploring "what political lessons British intervention in Malaysia has for current American efforts in Afghanistan and Iraq."

"I am curious what it took for the British government in the late 1940s-early 1950s to turn a losing effort into the only successful counterinsurgency effort that we know of so far," she said.

"Part of my research is on my home region and my own country, Hungary. The bigger bulk of my research focuses on international conflict and the peacefulness of democracies."

Simon also hopes to publish at least two articles on her research and to present her papers at conferences.

Dr. Tom Rotnem, a professor in the social and international



Dr. Eszter Simon

# FOR FULBRIGHT SCHOLARS

studies department, spent spring semester at the University of Latvia in Riga teaching a graduate-level international political economy course and an undergraduate-level American government course.

The Decatur, Ga., resident, who has taught at SPSU for 10 years, also researched the political economy of Baltic countries' Eurozone accession.

"The three Baltic states – Latvia, Lithuania, and Estonia – had been well on the way toward Eurozone accession until the financial crisis threw them off target," he said.

Dr. Rotnem said his research sought to find out why these governments chose to "hold the line" against devaluing their currencies and what were the economic, financial, and political impediments to "arriving at their 'solution,' if you can call it that."

"I hope to be able to publish an article or two in a political-science journal," he said, adding he will continue collaborating with scholars from the region.

Dr. Rotnem, who applied for the Fulbright grant in mid-2008 and received it in March 2009, said he chose Latvia for a variety of reasons.

"Firstly, in that year's competition, there were only a few awards in my region of



Dr. Thomas Rotnem

research – the 15 states of the former Soviet Union – that asked for political scientists with my area of expertise," he said.

Secondly, he had ample opportunity to use his Russian since a large percentage of the Latvian

population is Russian. Finally, he wanted to be in a "stable country," since his family would be with him part of the time.

"I was looking forward to working and living in another setting, in a region of the world that gets little attention nowadays but deserves more," he said.

The Baltic states and their capital cities also are "historic, extremely beautiful and relatively inexpensive," he added.

Dr. Rotnem, who lived from late January to early July in a two-bedroom apartment amongst Latvians and away from the "touristy" area of Riga, had several unforgettable experiences.

He loved the snowfall during the country's worst winter in 20 years, enjoyed bobsledding down an Olympic training track and tried hard to learn Latvian.

Dr. Omar Zia, a professor in the electrical and computer

engineering technology department, headed to Asia at the start of the fall semester to teach at Tajikistan Technical State University in Dushanbe.

He is teaching a modern control theory class and working with two professors on a research project that looks to harness renewable energy for a country that lacks fossil fuels. He is also scheduled to help students work on their theses and dissertations for doctoral degrees.

"I was born in that part of the world, and I have been looking forward to sharing with my students not only the knowledge and professional experience I have gained in the U.S., but also to acquaint them with the virtues of America and Americans that I have witnessed and experienced over the last 30 years," Dr. Zia said. "Tajiks do not know much about America,

other than what they were told by the Soviet Union propaganda machine and what they get today from satellite TV programs and the Internet, which is often wrong. In a small way, for whatever it is worth, I want to do my part to correct it."

Clearly, the ongoing activities of these Fulbright scholars and the Office of International Program Development are helping SPSU to expand its global impact.



Dr. Omar Zia

# Chinese partnership helps SPSU bridge East and West

**Southern Polytechnic State University continues its international programs tradition with the addition of new articulation programs with Chinese partner institutions.**

Similar to other programs with partner schools in places such as Germany and Africa, Chinese students have the opportunity to study abroad by coming to SPSU. Headed by Dr. Richard Bennett, director of international programs, these partnerships allow students to learn about different cultures while still pursuing academic achievement.

Dr. Julie Newell, Social and International Studies chair, said one of the benefits of the partnership is the articulated degree program where students have easy, pre-approved transfer of their credits to SPSU, and are able to complete their studies and earn an SPSU degree. She said, "It brings significant numbers of students to enrich the diversity of our campus community. It offers more than just study abroad – as valuable as that is."

Through the development of the Chinese program, SPSU became the only university



Chinese students gather outside their special-interest house in the new University Columns. SPSU's Chinese partnership program allows international students to fully immerse themselves in American college culture while working towards their degrees.

in Georgia recognized by the Chinese Ministry of Education as having an approved program of partnership with a Chinese institution. Dr. Bennett said nearly 350 students have participated in the program since its inception in 2004.

Graduates from the program who have chosen to go directly to graduate study in the U.S. have been admitted directly to institutions such as Columbia University, New York University, The Johns Hopkins University, and University of Pennsylvania. Three graduates of the program are working on their Ph.Ds.

Through the years, SPSU has worked with multiple Chinese universities. Longtime articulations are currently in place at North China University of Technology in Beijing and Northeast Normal University in Changchun, Jilin Province.

For the past three years, SPSU has partnered with Guangxi Normal University in Guilin, a city in south China, which Dr. Bennett said is expected to show a dramatic increase in activity: “We already have eight students from there on our campus,” he said.

China’s Jiliang University, located in Hangzhou, the capital city of Zhejiang Province, is another school on SPSU’s radar. A program is in the process of being created there.

So does the program vary based on the university? “Just as each university is different in character, so the program with each also varies,” said Dr. Bennett. “The variation includes the disciplines in which

the program was initiated and the ways in which the program expands. What is the same is the process used once the students are at SPSU, and the experiences they have while with us.”

However, the way the students get involved does depend on the university from which they come. Dr. Bennett said each university has specific selection criteria.

“They are aware from the start of what our usual admission requirements are, which are part of the admission criteria,” he said. “In the partnership development, their universities are aware what majors/areas of study make the most sense for their students to come to SPSU.”

The bulk of the selection process is conducted by the student’s home university, but they are interviewed by SPSU before they come, said Dr. Bennett.

An interest in American culture was the reason Tietong Lü participated in the program. Lü, an architecture major from North China University of Technology

in Beijing, took part in the program beginning in August of 2008. She said, “Studying abroad changed me in many areas: cultural, professional, and personal.”

Of the long-term benefits, she said, “The experience of studying abroad will help me think independently,” adding she will be able to network as she pursues work in China after she graduates.

Graduation requirements for the program are the same as for American students. “In any given semester, approximately half of the Honors program graduates are from our international programs students,” Dr. Bennett said.

As for the future, Dr. Bennett said SPSU is working on expanding the program inside China. Additionally, there are articulation agreements being developed with universities in both the Republic of Georgia and in Malaysia.

“One of the things we have discussed is developing international course projects in which students both at SPSU and a partner campus work jointly on a project which then can become the basis of a seminar in one or the other countries at the conclusion,” he said. “We also want to make the programs the basis for developing internationalized degree programs in creative and innovative ways.”

Dr. Bennett said, “The success of these students both at SPSU and in graduate study is itself a significant statement of the quality of both the SPSU education and of the program in which they are participating.”



# Alumnus makes impact



Jim J. Hills '77

Research and collaboration have long been the magic ingredients for success for Southern Polytechnic State University. Alumnus Jim Hills has taken note.

A 1977 mechanical engineering technology graduate, Hills is the president of Applied Technical Services Inc. (ATS), a consulting engineering firm started by his father in 1967.

# within the industry

ATS performs materials inspection, chemical analysis, non-destructive testing, and forensic engineering, which can be used on nuclear plants or aircraft, for example.

“We are currently working on a program for the military, inspecting the highly stressed components of a torn-down F-15 fighter jet so engineers can determine the life expectancy of the aircraft,” explained Hills.

So how did Hills become involved with the company? “I started learning business and engineering at the age of 12,” he said.

What he didn’t learn from working with his father, he learned at SPSU. “The biggest reason I came to Southern Tech was because there was a combination of both classroom study and hands-on experience in the labs and shops. By working in the metallurgy lab, I was able to gain experience in materials testing, one of the primary functions of ATS.”

However, Hills did point out the one class that has had the biggest impact on his current role. “Engineering economy is probably the single most important class that I took at Southern Tech, because it helped me understand how to analyze technical projects from a finance standpoint. It taught me to understand and weigh financial risks to determine if we should make an investment in a project and the terms on which the investment should be made.”

That knowledge not only helped him move from being a technician to president of the company, but also helped ATS grow from a small business to an organization with 450 employees in 14 branch offices across the southeastern U.S. with annual revenue of more than \$50 million.

“Every day at ATS is a venture in collaboration. ATS is a company essentially made up of about 25 departments that function as small businesses. Each one has its own

managers with their own areas of professional engineering or technical expertise who are responsible for profit/loss statements and operating that department.”

Developing that managerial talent in employees is also a part of Hills’ job. “It takes people to grow a business,” Hills added.

“It takes people who enjoy what they’re doing, who are experts at what they are doing, and who have good business aptitude. I look for employees who are knowledgeable in their engineering field of expertise, and I encourage them to excel and learn the business aspects of what they do so that they can grow a business.”

ATS employs more than 25 SPSU alumni and has employed hundreds of students through the co-operative education program and as interns. “We’ve brought in a number of SPSU students to work with us for a semester, engaging them with more technical responsibilities and teaching them more about the business aspects, in hopes that they will continue to come back and eventually become ATS employees when they graduate,” he said.

ATS and Hills recently made a generous financial commitment of \$50,000 to the Southern Polytechnic State University Foundation toward the Building on Strength Campaign. The gift will be recognized through the naming of the Engineering Materials Lab on the first floor of the new Engineering Technology Center, scheduled to open in November.

“SPSU helped prepare me for my career, and I believe in the University and its ability to prepare the future leaders of the Georgia workforce.”

To learn more about the Building on Strength Campaign, or to make a contribution, contact Kit Trench by phone at 678-915-7307 or by email at ktrench@spsu.edu

ATS employs more than 25 SPSU alumni and has employed hundreds of students for the co-operative program and as interns.

# Gaming's awesome growth

## Not just kid stuff, SPSU's new degree has got game

**In the countdown leading up to the start of fall classes at Southern Polytechnic State University, Dr. Jon Preston, an associate professor in the School of Computing and Software Engineering (CSE), scrambled to ensure that the state-of-the-art resources needed by CSE students interested in gaming were waiting for them when they arrived.**

Dr. Preston, coordinator of computer game design and development at SPSU, worked hard with a group of students and technicians to assemble a greatly expanded game lab in anticipation of the students who would be pursuing SPSU's Bachelor of Science degree in Computer Game Design and Development (CGDD) this fall.

The degree – the first of its kind to be offered by a public institution in Georgia – is just a year old, and its rapid growth from 29 students in fall 2009 to the projected 100 this fall necessitated doubling the capacity of the game lab less than two years after the lab opened. (See sidebar for more details.)

"We expected to have 100 students by the end of the second year of the CGDD program, not the start of it," Dr. Preston said cheerfully during a break from grappling with

cables and ports. "We're seeing tremendous growth and have also hired a new faculty member, Dr. Jeff Chastine, to help lead the gaming program."

### **Degree to fill critical need for programmers**

SPSU designed the CGDD degree to fill a critical need for computer game programmers identified by the burgeoning gaming industry, which analysts expect to be raking in \$70 billion globally by 2015. SPSU's goal is to produce game programmers rather than just designers because indications point to programming skills as less likely to be outsourced by companies.

"The gaming industry has no problem getting people with design skills," said Dr. Han Reichgelt, dean of the School of Computing and

Software Engineering, "but they can't find the programmers they need. We hope to help them with that."

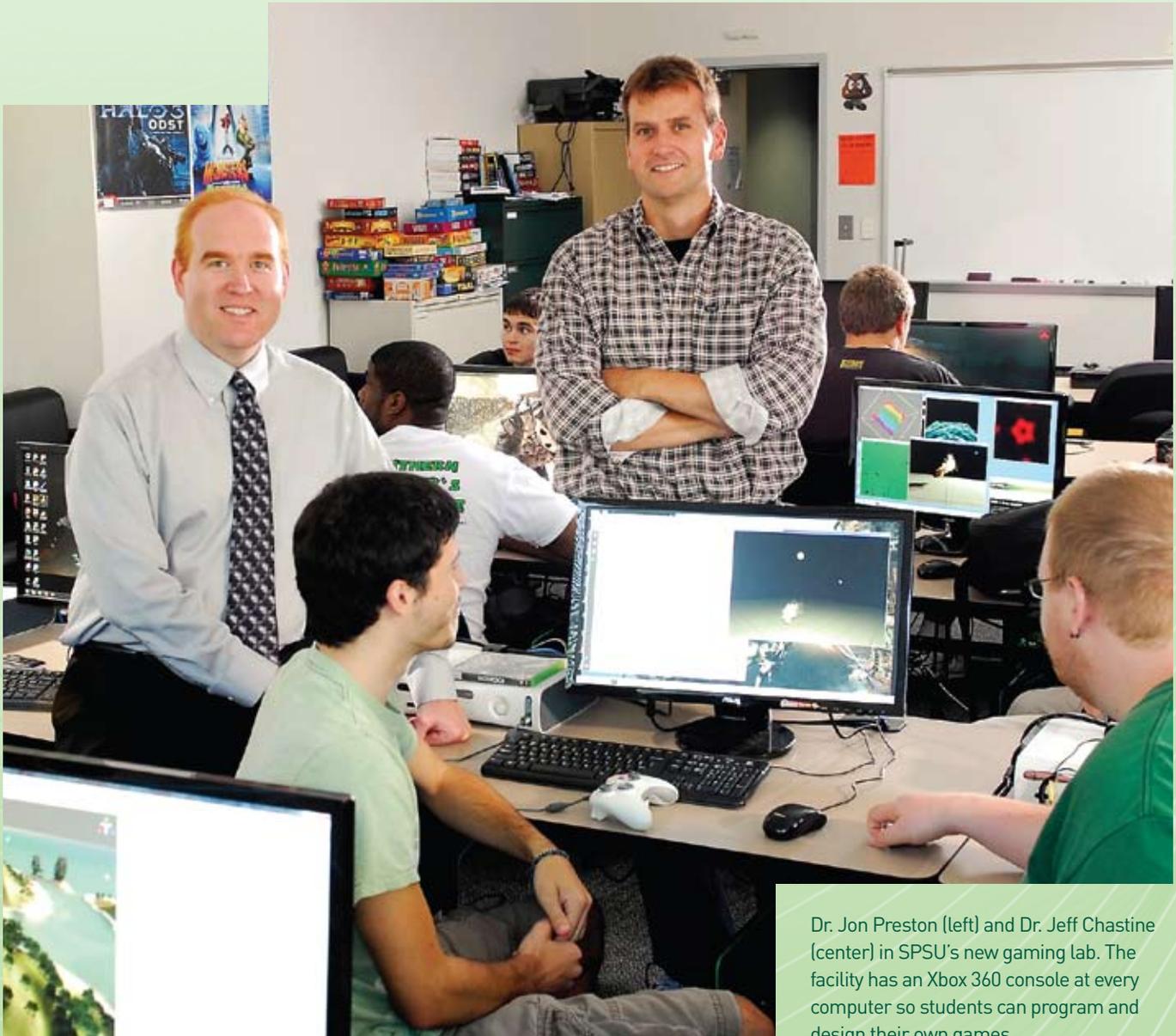
According to *Game Developer's* magazine 2010 Salary Survey, the average U.S. game industry salary in 2009 was \$75,573. The average salary for game programmers with three years or less of experience was \$54,975 and was \$46,000 for game designers (including creative directors and writers).

The United States has had a hard time keeping up with the recent upswing in the computer gaming industry's employment needs. Experts are projecting that there will be more than 140,000 new jobs in computing by 2012, but they estimate that the U.S. will have 60,000 fewer individuals with computing degrees than there are positions available.

In the gaming program, SPSU students gain the skills and

**“The gaming industry has no problem getting people with design skills, but they can’t find the programmers they need. We hope to help them with that.”**

—Dr. Han Reichgelt, dean of the School of Computing and Software Engineering



Dr. Jon Preston (left) and Dr. Jeff Chastine (center) in SPSU’s new gaming lab. The facility has an Xbox 360 console at every computer so students can program and design their own games.



Dr. Jeff Chastine shows students a real-life game design example during a design and programming class in the gaming lab.

## Gaming lab expanded

The School of Computing and Software Engineering's (CSE) game design and deCSE's game design and development lab opened in March 2008 – when gaming was just a concentration in SPSU's undergraduate program in software engineering and not yet a major – to attract more students to computer science majors and to provide extra motivation to students struggling to get through CSE introductory programming courses.

These efforts were already succeeding when the school launched its Bachelor of Science in CGDD degree in fall 2009. As a result of the degree program's rapid growth and the lab's popularity with computer science students in general, the lab has just moved to new, larger quarters in the Atrium Building and expanded from 15 to 31 Xbox 360-equipped computer stations. In addition, the lab includes consoles for PlayStation 3 and Nintendo Wii and space for team collaboration.

Students in the CGDD program share the lab with students in the CSE programming courses, according to Dr. Preston. And when the lab is not in use for education or research, students are welcome to slip in for a little recreation, too.

"I love working on building games in here, and I enjoy helping students with their projects," said Christian Rolling, a computer science major who is a game lab assistant.

Ryan Slaton, another computer science major, said, "Gaming makes computer science interesting. The [CGDD] classes are fun and interesting."

knowledge to apply computing and software engineering techniques to the design and production of digital media not only for entertainment, but also for research and education by studying simulation modeling, artificial intelligence, data structures, and algorithms.

The field of computer gaming is not limited to teenagers using their PCs or consoles to fight and conquer ever more sinister aliens and droids purely for fun. Rapidly evolving opportunities for gaming graduates also include the design and development of serious/educational games, online/social media games and applications, massively multiplayer online games (MMOG), and games for mobile devices. The military has also increasingly been turning to computer simulation to assist in the training of soldiers.

### Games-for-learning helps local schools

As the coordinator of SPSU's Center for Applied Gaming and Media Arts, Dr. Preston has partnered with local schools and businesses to help them develop innovative and engaging educational/training games.

For example, with the help of a Science, Technology, Engineering, and Math (S.T.E.M.) mini-grant, the center recently worked with the Marietta Center for Advanced Academics to develop an educational game for the magnet school. The partnership brought honors students from the school together with SPSU gaming students to develop Ocean Quest, which supports the engineering and oceanography programs at the school by requiring

students to design and outfit virtual submarines capable of searching a virtual ocean for various types of fish, minerals, and plants, which they must collect and identify.

Students at the Center for Applied Gaming and Media Arts also built four games for Lovinggood Middle School in Marietta

in another games-for-learning partnership supported by a S.T.E.M. mini-grant. And the game lab has hosted visits by students from other middle schools to sample educational games.

As a result of the center's work, Dr. Preston was recently asked to address a workshop in Texas on Vertically Integrated Student Teams about the promotion of S.T.E.M. learning by teaming up K-12 students and college students.

He and colleagues Dr. Wasim Barham, assistant professor in the Division of Engineering, and Dr. James Werner, assistant professor in the Department of English, Technical Communication and Media Arts, have secured \$147,000 from the National Science Foundation's Engineering Education Unit to fund a year-long study. The project, entitled "Using a Virtual Gaming Environment in Strength of Materials: Increasing Access and Improving Learning Effectiveness," will produce three virtual 3-D simulated laboratory exercises for use in Strength of Materials courses that will broaden student exposure to engineering laboratories, improve student learning, and reduce costs associated with actual labs.



A game developed by a student in the computer gaming and design program recreates SPSU's famous bathtub races.

## Annual events building gaming community

The Computer Game Design and Development program is also building traditions by hosting two fun annual events:

- **The Georgia Fall Game Jam, held each September in coordination with the Art Institute of Atlanta, is a weekend immersion event that fosters innovation and experimentation. Participants gather on campus at 5 p.m. on a Friday and spend the next 48 hours in teams building a game from scratch, fueled by little sleep and lots of caffeine; and**
- **Halloween Zombie Game Night, which is, well, pretty much what you're picturing.**

## Enterprise applications a bonus

With the demand for consumer "apps" growing by leaps and bounds, game development in this area is particularly hot right now, and Dr. Preston is teaching a course this fall in Mobile Game Development (designing for mobile devices such as the iPad and iPhone).

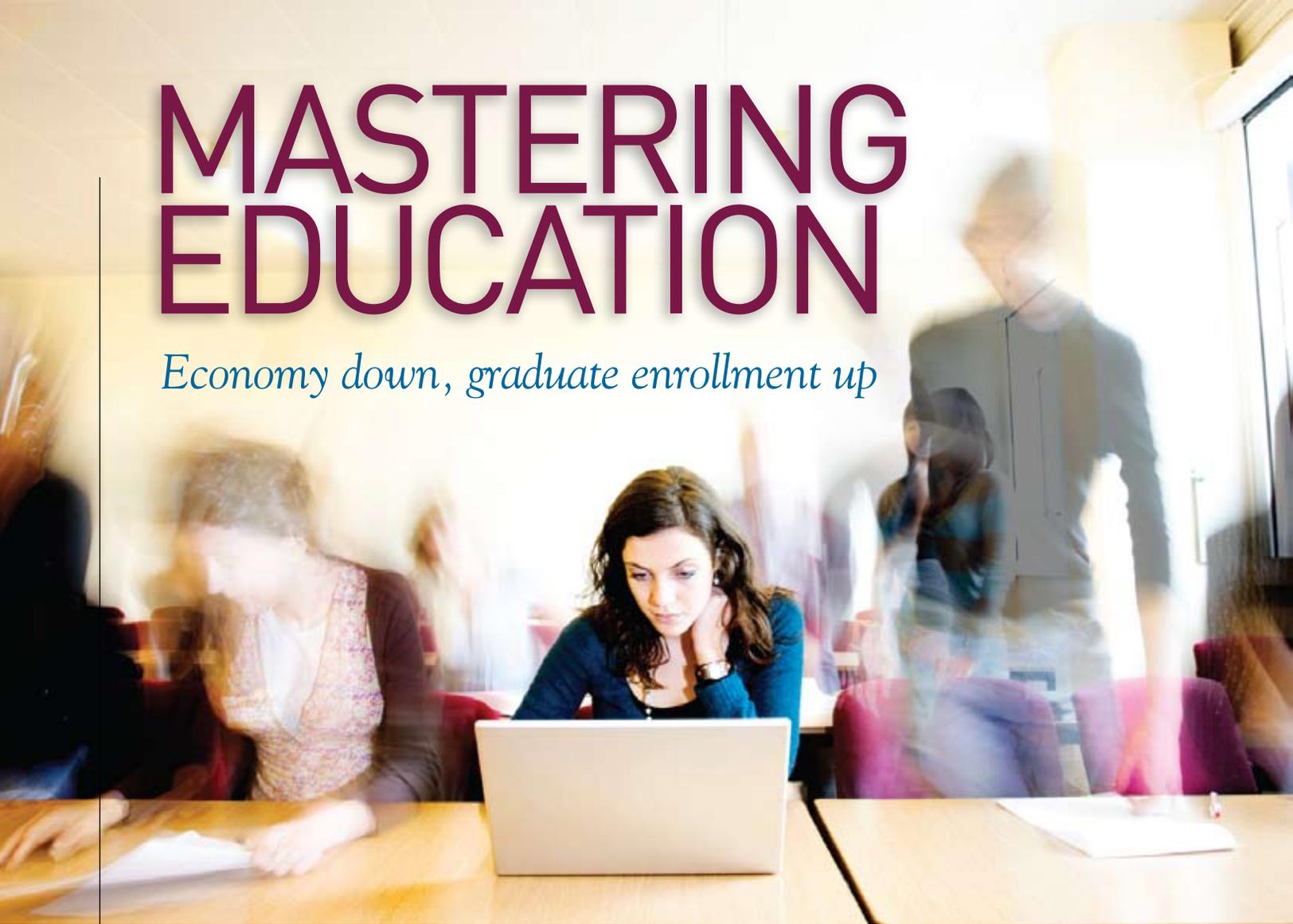
"The barrier for entry [into this kind of work] is very low right now," he said. "You could take an app you developed for your Senior Capstone Experience project, market it for, say, 99 cents apiece, and sell 1,000 or so. And we want our students to feel that kind of ownership in the work

they do here. Take it and run with it, make some money."

And Georgia is a great place to be for game programmers. The state is home to about 60 gaming companies, which together employ roughly 2,000 people, according to the Georgia Film, Music and Digital Entertainment Office. Fueled by a good pipeline of graduates with gaming design and development skills from schools such as SPSU, Georgia Institute of Technology, and Savannah College of Art and Design, industry watchers say future prospects for gaming in Georgia are excellent.

# MASTERING EDUCATION

*Economy down, graduate enrollment up*



**The administration and faculty of Southern Polytechnic State University have worked hard over the past four years to advance a strategic plan to make SPSU a more comprehensive university by increasing enrollment and the variety of degree programs offered.**

For graduate programs, the goal was to increase the enrollment of new students by 5-7 percent per year and increase support for graduate programs. The reality has exceeded all expectations.

The number of graduate applicants has increased by 36 percent from 337 to 459 since fall 2006, and total graduate enrollment has grown 39 percent, from 502 to 700.

Aggressive recruitment and marketing and the addition of new programs factor into this growth, and the weak economy has also contributed.

SPSU has attracted additional graduate students by adding several degree programs over the past two years, among them master's degrees in accounting, and information and instructional design. SPSU also accommodates graduate students by offering some programs online. Several, such as the quality assurance program and the information design and communication program, are completely online. Others offer the options of classroom-based, online, or hybrid courses.

"Having access to courses online makes it more convenient for students who have full-time jobs, and families, or who live outside of metro Atlanta," said Nikki Palamiotis, director of graduate studies. "We have a number of students who reside in other states and countries and couldn't possibly come to campus for classes."

Bryan Rothwell is one of those students. A resident of Charlotte, N.C., Rothwell is currently pursuing his master of science in information design and communication.

"That master of science designation was important to me," explained Rothwell. "SPSU is one of only a few schools in the country that offers a master of science versus a master of arts in this field. This told me that this school approaches the concept of technical communication differently from almost all of the other schools on my list."

Rothwell considered a number of colleges and universities before enrolling at SPSU. "While researching graduate schools, I entertained all possibilities and compiled a spreadsheet of all of the schools nationwide that offer a master's degree in a version of technical writing. I sorted my list by distance, by lowest tuition, and by *U.S. News and World Report* rankings; in each case, SPSU came out very close to the top. No other school on the spreadsheet was near

**"SPSU is one of only a few schools in the country that offers a Master of Science versus a Master of Arts."**

— Bryan Rothwell, Charlotte, N.C.

the top for all criteria."

Palamiotis explained, "It's important that SPSU continues to build on the strength of its graduate programs. We are looking to offer a master of science in architecture soon. Our hope is that students who complete the five-year undergraduate program in architecture will go on to complete the master's degree program as well."

Among the graduate programs showing the most dramatic growth is

information technology (IT). Total enrollment has increased by 126 percent since fall 2006.

This is particularly remarkable in view of the nationwide enrollment slump in computer-related degree programs ever since the dot-com bubble burst in 2000.

"Southern Polytechnic is one of the few institutions in the country seeing an increase in IT enrollment at this point," said Dr. Han Reichgelt, dean of the School of Computing and Software Engineering. "The number of IT majors as a percentage of the SPSU student body is growing as well."

He credits efforts to sharpen the program's focus and accommodate working professionals. "We really revamped our program. We sat down with faculty and alumni to figure out what was needed to prepare our students for senior positions in industry, and the program is so much more focused now. It's well suited for mid-career professionals."

In addition, Dr. Reichgelt said, "We made sure there was an online path through the program so that students can mix and match online and on-site courses to suit their circumstances. This is much better for working professionals."

"We are enjoying great success with the growth of our graduate programs these days," Palamiotis concluded. "It's an exciting time for Southern Polytechnic State University."

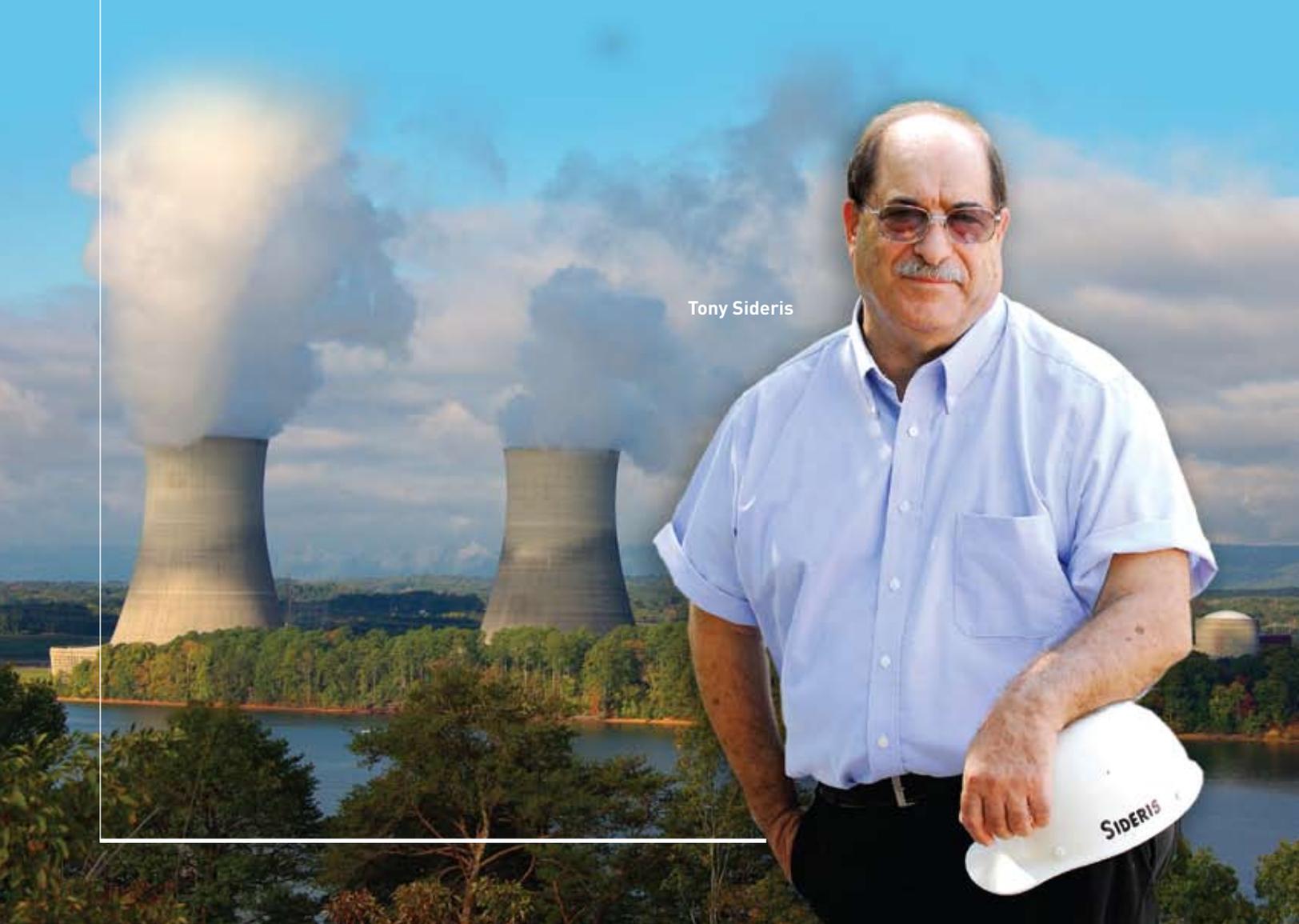
For more information on SPSU's graduate programs, visit [www.spsu.edu/graduates](http://www.spsu.edu/graduates).

# Nuclear power program receives surge from grant funding

If all goes as planned, Southern Polytechnic State University could soon be known as one of the nation's premier institutions for education in nuclear power generation.

Under the direction of Tony Sideris, the University's Center for Nuclear Power Generation program is expected to attract a growing number of students interested in nuclear power-related careers.

Tony Sideris



**“This is very important for the students and it’s very important for the university, too. Once we have the academic program in place, we can offer Nuclear Power Generation majors and minors. No other university in the United States does that.”**

— Tony Sideris, director of the SPSU Center for Nuclear Power Generation program

Sideris, who is semi-retired from a 40-year career in the nuclear and fossil power generation industry, proposed a program in nuclear power generation to SPSU in 2006, after learning that 16 of 32 new nuclear plants will be located in the southeastern part of the United States. The new plants are expected to create 80,000 jobs in the coming years, he said.

SPSU’s program, which launched with two continuing education courses in October 2009, focuses on power plant construction and maintenance.

“There’s nobody really that offers courses like we do because we built the curriculum,” Sideris said.

The classes, which are part of SPSU’s continuing education program, are being offered again this fall. Students who complete both the Construction & Startup and Quality Assurance/Quality Control courses and write a paper relating what they have learned to their major can receive a Nuclear Power Generation endorsement.

Sideris is currently working with the Construction Management program at SPSU to expand the program into courses that will give students academic credit. He hopes to have the full program in place by spring 2011, when he anticipates 80 to 100 students will enroll in the classes. The classes will cover subjects such as health and safety, fire protection, and design and operations of nuclear plants.

“This is very important for the students and it’s very important for the University, too,” he said.

Sideris and nearly two dozen other steering committee members, who include SPSU educators and a number of representatives from the nuclear power industry, share a commitment to seeing SPSU’s program succeed.

“The response from the community and students has been excellent,” said Sideris.

The program has already gained industry attention, attracting guest speakers from places such as Tennessee Valley Authority, the Institute of Nuclear Power Operations, and Fluor Engineering.

“We have some big companies that have helped out and expressed interest in expanding the program,” Sideris said.

The program was launched last year with the assistance of a \$200,000 grant from the U.S. Nuclear Regulatory Commission. It has since attracted \$700,000 in grant funding, including an additional \$89,000 from the NRC to create a Nuclear Power Plant Cranes course.

Such courses will give students a leg up when it comes to securing jobs in the rapidly growing, specialized industry.

“SPSU is a small school, but it’s a very good university that could support the workforce needs of this industry,” Sideris said.

NRC grant dollars will fund scholarships that will cover tuition for at least four nuclear power classes offered through continuing education, allowing a projected 60 students to earn an endorsement at no cost next year.

“This is a big thing that the NRC did. It shows that they really like our program,” Sideris noted.

For more information about the Center for Nuclear Power Generation, visit [www.spsu.edu/nuclear](http://www.spsu.edu/nuclear)

# CLINCHING THE GOAL

**Even before Southern Polytechnic State University men's soccer team scored its first goal of the season, the team was ranked number nine in the National Association of Intercollegiate Athletics' (NAIA) Top 25 Coaches' Poll and had been selected as conference favorites by the Southern States Athletics Conference (SSAC).**

The NAIA's poll marked the first time in the soccer program's four-year history that the team was ranked nationally in a preseason poll.

Coming off the heels of an undefeated regular season after which the Hornets clinched their first conference championship and reached the NAIA national tournament, expectations for the current season are high.

Head Soccer Coach Kom Momeni said, in order to deal with the high expectations, "the team is committed to setting higher standards in training and in how we approach every aspect of what we do." He added, "Going forward everyone involved in the program will be focused and

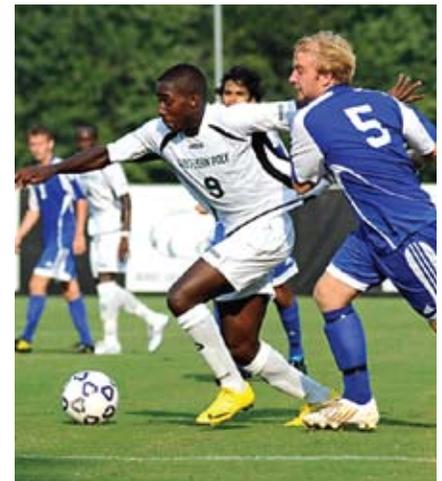
prepared for nothing short of perfection. We have an excellent schedule ahead of us and know that we will get the opponent's best effort each and every match."

This season the Hornets have one of the toughest schedules in the nation. They play eight teams that were ranked in the top 25 last year and of those eight, six competed in the national tournament. SPSU also plays in the competitive SSAC where "every game will be extremely challenging and exciting," said Coach Momeni.

Adding to the excitement, the Hornets have brought in a strong recruiting class full of local talent for the 2010 season. All but one of the

16 new recruits are from Georgia, and 13 are from the Atlanta-metro area. The new recruits will be joining returners, Diego Nicholson, Sean Grisham, Chris Szalwinski, Emeka Maduka, Eric Ati, Marcos Mendez, and Kouami d'Almeida.

"All these players, old and new, were recruited because of their abilities on and off the field," said Momeni. "We are looking for them to come in and raise our level of play as a program each and every day and help us get to the next level."



# New head women's basketball coach dribbles into position

## As Southern Polytechnic State University's new head women's basketball coach, Laquanda Dawkins has several goals she wants to accomplish.

The former University of North Carolina Tar Heels guard took over the position as head coach in mid-June after coaching at Winthrop University, Florida International University, The University of Iowa, and Gardner-Webb University.

"I'm blessed and excited to be a part of the Southern Poly family and am looking forward to helping build on the program's success," she said. "I'm thrilled to inherit a team that went 30-5 in 2009-10, earned its first conference tournament championship, and advanced to the second round of the 2010 NAIA [National Association of Intercollegiate Athletics] Division I Women's Basketball National Championship in its first-ever tournament appearance."

Coach Dawkins said she wanted the position because SPSU is diverse, academically strong, and "small enough to give its students personal attention."

"SPSU is a place where we can contend for the SSAC [Southern States Athletic Conference] title and become a player on the national scene," she said.

The Shelby, N.C., native wants her players to achieve academic success, to have a 100 percent graduation rate and to be successful in life as well as on the basketball court.

"I desire to enhance the educational experience of student-athletes within intercollegiate sports and perform the role that the coach-mentor plays in that process that is highlighted far beyond the X's and O's of a playbook," she said. "It is important that our



Laquanda Dawkins

coaches prepare players properly. Student-athletes who have moved on to success in sports and in life talk about the role of the coach and oftentimes talk about how their coaches prepared them for adulthood."

For her team, she wants it to be respected and competitive, to improve with each game, to have winning overall and league records, to win all home games, and to win conference and NAIA national titles.

"I'm ready for the season to start now and am looking forward to having the women's basketball team compete and work hard and make the team's goals a reality," she said.

Coach Dawkins earned a bachelor's degree in physical education from UNC-Chapel Hill and a master's degree from Florida International University. She plans to pursue a doctorate.

The new season begins in November, and the first home game will be on Friday, Nov. 19 against Auburn University Montgomery.

# The jobs are still out there – Career Services can help

## CAREER SERVICES HAS AN IMPORTANT MESSAGE FOR

Southern Polytechnic State University graduates and students nearing graduation, as well as those interested in student internships and co-operative education opportunities – There are jobs available!

“The number of requests to fill co-op and internship jobs we are getting from recruiters has outpaced the number of students who contact us looking for work,” said Phyllis Weatherly, director of SPSU’s Career and Counseling Center. “Yes, the economy has slowed things down and companies are being more cautious about hiring, but there ARE opportunities out there. We have more jobs posted now than in the last year or two, and the number of internships and co-ops available has increased. Things are definitely looking up.”

Although some companies have curtailed their normally aggressive recruiting activities during the current recession, Weatherly said many of the internships and co-ops facilitated by Career Services have turned into full-time jobs.

“We’re seeing a lot of these conversions,” she said. “I hear wonderful things from these employers about SPSU students, and it’s so gratifying. One company told us that an SPSU student had done such an amazing job in a co-op position that they hired him, and now they want more students.”

Aventis Systems, a small but fast-growing Marietta firm, has hired several SPSU graduates. Tiffany Bloomer, the company’s director of business development, said “We really benefit from the hands-on technology experience that Southern Poly grads have. While knowledge of our industry is very important, being familiar with the tools and procedures of the actual work helps the on-the-job learning curve of our hires. [SPSU graduates] tend to have excellent experience working with the types of equipment that we process, giving SPSU students an edge over those of other institutions.”

Another local company that has hired more than 25 SPSU alumni and countless co-op students and interns over the years is the consulting engineering firm Applied Technical Services Inc. (ATS). To read an article about its president, SPSU mechanical engineering technology graduate Jim Hills, see p.13.

Weatherly advised that students should not wait until late in their senior year to start a job search and to make use of the resources available through Career Services, which offers workshops and one-on-one advice on search

strategies, writing a resume, and job interview skills. This year, the Career and Counseling Center also plans to add a workshop for graduates on working for the federal government.

In addition, the center’s database, Career Link, can provide alumni and current students with contact information for a wide variety of employers and arrange internships and co-ops for students wanting to get their feet wet in a field that interests them.

## WHO’S EARNING WHAT?

Each year, Career Services surveys SPSU graduates to determine the average salaries being earned in each degree field by those with three years experience or less. Here is a sampling of the most recent data based on 2009 salaries:

### Bachelor’s Degrees

Architecture	\$37,960
Civil Engineering Technology	\$47,750
Computer Science	\$53,200
Construction Management	\$49,900
Electrical Engineering Technology	\$53,500
Information Technology	\$58,700
Mechanical Engineering Technology	\$46,800

### Master’s Degrees

Computer Science	\$64,200
Information Technology	\$65,800
M.B.A.	\$62,700
Quality Assurance	\$71,300

### CO-OPERATIVE EDUCATION (monthly averages)

#### Baccalaureate Program

1st Work Semester	\$1,900
2nd Work Semester	\$2,200
3rd Work Semester	\$2,500

### INTERNSHIPS (hourly averages)

#### Undergraduate Internships

Architecture	\$12.00
Business Administration/Management	\$14.00
Computer Engineering Technology	\$14.60
Technical & Professional Communication	\$15.00
Telecommunications Engineering Technology	\$15.00

#### Graduate Internships

Computer Science	\$16.20
Information Design and Communication	\$24.00
Information Technology	\$15.20
M.B.A.	\$14.50

# A Gift That Gives Back

answers to your questions about charitable gift annuities

- An opportunity to give
- A way to ensure retirement income
- An easy tool for managing your money
- A source for "peace of mind"
- A tax-efficient option to make a future gift
- A way to strengthen SPSU!

## Charitable Gift Annuity Rates

To determine the size of payments you will receive for a charitable gift annuity, multiply the rate shown below for your age by the dollar amount of the property used to create the charitable gift annuity.

*Example: a 70-year-old who creates a \$10,000 charitable gift annuity will receive \$580 each year*

Single life rates as of 7-1-2010

AGE	RATE	AGE	RATE
65-66	5.5	79	7.0
67	5.6	80	7.2
68	5.7	81	7.4
69-70	5.8	82	7.5
71	5.9	83	7.7
72	6.0	84	7.9
73	6.1	85	8.1
74	6.3	86	8.3
75	6.4	87	8.6
76	6.5	88	8.9
77	6.7	89	9.2
78	6.8	90& over	9.5



For more information, contact:

Kit Trench  
Office of Advancement  
ktrench@spsu.edu  
678-915-7307

## Save These Dates

November 10, 2010

### **Young Hornet Happy Hour/ Networking Event**

6:30-8:30 p.m. at Dave and Buster's in Marietta  
Play games and have your first two drinks on us!  
RSVP to [events@spsu.edu](mailto:events@spsu.edu) by November 5.

December 3, 2010

### **SPSU Alumni Night at the Atlanta Hawks**

Take in an exciting Atlanta Hawks game versus the Philadelphia 76ers. Join SPSU alums at 5 p.m. at a private pre-game reception before the gates open to the public at 6:30 p.m. Bring your family—kids ages 6-14 will have the opportunity to go down onto the court at halftime! Tickets are \$23 and include a free Hawks jersey and two drink tickets. Purchase tickets by calling 678-915-7351.

December 18, 2010

### **Fall Graduation**

10 a.m. – School of Arts and Sciences and School of Engineering Technology and Management  
2 p.m. – School of Architecture, Civil Engineering Technology and Construction, and School of Computing and Software Engineering  
Both sessions will be held in the SPSU Gymnasium.

January 2011

### **Engineering Technology Center Ribbon Cutting**

Join us as we celebrate the opening of our brand new 123,000 square foot, \$33.3M academic building. Date and time to be determined.

February 11, 2011

### **SPSU Alumni Night at the Atlanta Thrashers**

Help us make this brand new alumni event a great success! Come and see an Atlanta Thrashers game versus the New York Rangers. Join SPSU alums at 5 p.m. at a private pre-game reception before the gates open to the public at 6:30 p.m. Tickets are \$23.25 and include a voucher for a Chick-fil-A combo and two drink tickets. Purchase tickets by calling 678-915-7351.

April 2, 2011

### **Bathtub Race and Alumni Reunion**

For the second year, we will be racing human-powered bathtubs. Mark your calendars to enjoy the race and a pig pickin' with classmates, current students, faculty, and staff.

**As these events draw near, information about them will be posted at <http://go.spsu.edu> and on Facebook at [www.facebook.com/spsualumni](http://www.facebook.com/spsualumni).**