

## A Building Crisis

From the Department Head Dr. Alan L. Tharp

For those of you who live in North Carolina, you are probably aware that the State General Assembly has authorized a \$3.1 billion bond referendum for November for building initiatives for the sixteen campuses of the University of North Carolina System. These funds are needed to provide facilities to educate the increased numbers of people requiring a



Venture I

university education and to repair and replace buildings that came into disrepair during lean budget times. One item of good news if

the bond issue passes is that it includes funds for the first two phases of the College of Engineering's move to Centennial Campus. A building to house the Department of Computer Science is included in phase 2 of the bond issue building plan. It is critical to the continued success and advancement of the department

that the computer science faculty, staff, and students be reunited into a single building very soon. Computer Science currently occupies space in nine buildings on two campuses



Research IV

(soon to be ten). Our goal is not to make it into the Guinness Book of Records for the number of buildings occupied by an academic department. The Department has space in Withers, Daniels, and Leazar Halls on the Historic Campus, and in the Engineering Graduate Research Center, Research II, Research IV, Venture I, Venture II, and Partners II on the Centennial Campus. Next year the department will also be occupying space in Venture III on the Centennial Campus. Space is needed to expand the programs of the department, and to meet the student demand for instruction in computer science. This past year, the department began a master's degree in computer networking, joint with the Department of Electrical and Computer Engineering and the

(Continued on page 2)

## \$1 Million SAS Endowed Chair Established

A \$1 million endowed chair in computer science has been established through the generosity of SAS Institute Inc. of Cary.

SAS Institute gave \$666,000 to the Department of Computer Science to endow a distinguished professorship in data warehousing. This endowment made it possible for the department to receive a matching grant of \$334,000 from the Distinguished Professors Trust Fund maintained by the University of North Carolina General Administration. Together this

brings the computer science endowment to the total of \$1 million.

This generous gift will allow the department to recruit an acclaimed computer scientist to be named the SAS Institute Professor of Computer Science. This person will contribute to the development of data warehousing processes through student academics and research. The Computer Science Department's faculty contains many dynamic members whose research and teaching are bringing NC State to the forefront of computer science departments. In the past six years, the department has hired 14 tenure-track

(Continued on page 2)

### SAS Endowed Chair

faculty members, six of whom have received National Science Foundation Career Faculty Development Awards. Undergraduate enrollment has grown from 500 to 1000 currently; graduate enrollment, from 113 to 286.

Academic programs have been focused on emerging areas of computer science, including electronic commerce, network security, optical networks, and quantitative human-computer interface design.

We are very excited about the growth, leading-edge research and teaching activities that have been going on in our department, said Dr.

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### A Building Crisis

College of Management. AURICS (Accelerated Undergraduate Research In Computer Science) was begun last year to better challenge the many very talented undergraduate students entering the Department. The Department is also moving aggressively to build a nationally prominent program in e-commerce. This e-commerce initiative is joint with the College of Management.



Withers Hall

The Department of Computer Science, although being one of the oldest in the country, founded in 1967, only received authority to offer graduate degrees in 1990. Offering graduate degrees allowed a

greater emphasis on research which is essential in providing instruction at all levels in leading-edge technologies. Graduate education requires more space than undergraduate education. Since Computer Science has needed more space over the years, and a new building was not forthcoming, space was taken wherever available. All the space on Centennial Campus except for the Engineering Graduate Research Center is rented space. The College and Department are responsible for most of these rental payments, which diverts funds from other purposes. Despite the modern day technology, direct face-to-face, often unscheduled, interactions between people are essential to furthering the programs of the department. Because of the scatteredness of the people in the department, some faculty members do not see one

Alan L. Tharp, head of the Department of Computer Science. The SAS Institute professorship will help continue this momentum, and most exciting is what this scholar will be able to contribute to the educational experience of our students.

"By establishing this professorship, SAS Institute can help ensure that NC State remains a leading university in engineering and computer science," said Dr. Jim Goodnight, president and CEO of SAS Institute.

Along with this generous gift, SAS Institute provides four endowed scholarships in the Department of Computer Science.

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another except for faculty meetings. Since almost every faculty member can conceivably have teaching and research collaborations with any other member of the faculty, many opportunities have been lost. It is also more challenging and more costly to serve the faculty and students located in so many buildings. Many redundant services need to be provided. The required travel time between buildings reduces the productivity of faculty, staff, and students.



Leazar Hall

But there is good news! With a new building, designed specifically for computer science, the Department will be able to design the space for the programs important in the 21<sup>st</sup> century. The Department will not need to try to retrofit existing buildings. Many Departments of Computer Science around the country have moved into new buildings in the past ten years. We can build on their experience for insights as to what has worked and what has not worked. We will also be asking members of the Department's Industrial Advisory Council to provide us with suggestions on what to include in this building and will ask them to review future building plans. We welcome suggestions from others. If you live in North Carolina, I encourage you and your family and friends to support the University Bond Referendum in November. It is important to the future of all of us.

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# Undergraduate Report 1999-2000

The addition of several new faculty to our department, as well as emerging fields such as network security, electronic commerce and multimedia bring many possibilities to the undergraduate program. As these new faculty start up their research programs, a wide variety of new undergraduate elective courses and opportunities for undergraduate research projects are on the horizon. We expect the energy and vitality these young faculty bring to the department to be readily apparent to eager undergraduates.



### Student Enrollment

Computer science continues to be a popular degree program. Currently there are 943 students enrolled as undergraduate computer science majors. This is up from 727 at the end of the 98-99 year (a 22 percent increase). Acceptance into the CSC department requires a college grade point average of at least a 2.7.

### Graduates

There were 140 B.S. Degrees awarded in Computer Science during the 1999-2000 academic year. Most of our B.S. graduates took positions in industry (95 percent). The average starting salary was approximately \$47,000, up from \$45,000 a year ago (4% increase).

### B.S. in CSC with Honors

- |                    |                  |
|--------------------|------------------|
| Christopher Blythe | Joanna Garlick   |
| Luis Cepeda        | Thomas Vitolo    |
| Felton Dengler     | Patrick Yaner    |
| Aaron Dhiman       | Luke Zettlemoyer |



Daniels Hall

### Graduating University Scholars

- |                    |                |
|--------------------|----------------|
| Christopher Blythe | Carey Rogers   |
| Alan Booth         | Thomas Vitolo  |
| Felton Dengler     | Matthew Wright |
| Joanna Garlick     | Alicia Wilkins |
| Jeffrey Nusz       |                |

### CSC Senior Awards

Also selected as COE Award Recipients

- Luke Zettlemoyer: Scholarly Achievement  
 Carrie Farley: Leadership  
 Thomas Vitolo: Citizenship & Service

### Bitzer Creativity Award

Luke Zettlemoyer



In the EOS Computer Lab at Withers Hall, Students work on projects, complete homework, and check email. Rarely is there an empty seat in the room.



Students love the new Sun Unix stations in Withers 400.

## Graduate Report 1999-2000

Over the last few years we have been noting the dynamic aspects of Computer Science as a discipline and the pervasiveness of computers in all areas of modern life. This has led to a degree program structure with four degrees in Computer Science. Three degrees with computer science concentrations administered by the Operations Research Program, and a concentration field within the Master of Engineering administered by the College of Engineering. Various options, tracks, and concentrations within the above provide 25 distinct sets of requirements for graduate degrees. By distinct we mean that satisfying the requirements for one will not



satisfy the requirements for any other. In addition to the

various degrees, our Graduate Program also supports dual-majors, co-majors, minors and combined bachelor s/master s programs.

### Major Growth in Applications and Admissions

For the 1998 calendar year we had approximately 150 applications for admissions. This grew to more than 250 in 1999. Now we have greatly surpassed those numbers with more than 500 students applying for admission in 2000.

Fall is the preferred semester for beginning graduate study, and application numbers reflect the interest. Official Graduate School applications and admissions numbers for Fall 2000, as of June 30, are presented in the following table. The number of admissions is likely to be higher since the Graduate School is still processing them.

### Students and Degree Production

Our programs averaged about 200 students for the 1999-2000 year. For that year we had 101 in the MCS program, 55 in the MS, 9 in the MSCN, and 34 in the Ph.D. Over the past year, we awarded 47 MCS degrees, 17 MS, one MSCN, and four Ph.D. degrees. The MSCN is a new program with the first students admitted in Fall 1999. As can be seen in the table above, there is considerable interest in the program such that student numbers will increase quickly.

### Awards

The NSF has recognized William Bares with a CAREER Award. William earned his Ph.D. from our department in 1998 working with Drs. James Lester and Woodrow Robbins. Dr. Bares is currently an Assistant Professor at the University of Southwest Louisiana s Center for Advanced Computer Studies. His CAREER Award will support research on constraint-based camera planning for 3D environments, which he began as a graduate student on the PhysViz and CPU City projects with Dr. Lester s IntelliMedia Initiative.



EGRC

## Alumni Speak Out

Question #1: Why did you decide to become a computer scientist?

Brent Bischoff  
Wireless Development Engineer  
Lucent Technologies

I enjoy the challenges it offers. I wanted a career that offers unlimited opportunities and possibilities. Computers and the Internet are changing the way people work, live, and play. There was no way I was going to miss the future it yet beholds.

Merri Jensen  
Setup Developer  
SAS Institute

I was good at math and logic, and fairly competent with a computer in a word-processing sense, and mostly because computers don t talk back unless the programmer makes a mistake. I didn t really ever want to build computers or learn about the hardware. I just wanted to make them work the way that I wanted them to.

Jon Kenney  
I. T. Analyst, CSE-IT  
Cisco Systems

When I was a kid, I used to love writing AppleSoft BASIC programs on my Dad s Apple II computer. Then I used UCSD Pascal on the original IBM PC. Since those days I have learned COBOL, Natural, C, Objective-C, C++, Perl, HTML, Java, JSP, and EJBS. I have always loved programming and still do!

## ePartners Strengthens Ties with Industry

The ePartners initiative is now underway to support the mutual needs of both the Department, including its students, and Industry. By developing stronger partnerships with companies in the Triangle area and beyond, the Department will be more able to provide its students with the best educational experience. The ePartners program offers benefits to students, faculty, alumni, and company partners. Students will have the opportunity to interact more closely with companies through seminars, presentations, a resume bank, etc. The faculty will be able to collaborate with company representatives on emerging issues in the field and share research developments. Companies will benefit from assistance in recruiting and access to a dynamic faculty. The department would also like to involve the alumni in this innovative program. There are two primary ways that alumni can become involved. By contributing \$50, Alumni will be included each year in our Alumni newsletter as a valued supporter and receive our annual ePartners report. Alumni may also choose to support the department through mentoring and other student centered activities. As the name implies, ePartners will use the internet as a tool to facilitate the connection between the department and interested supporters. If you are interested in becoming an ePartner, please contact Carmen Brennan at [brennan@csc.ncsu.edu](mailto:brennan@csc.ncsu.edu).

The department has hired Carmen S. Brennan as director of ePartners. Carmen graduated from NC State summa cum laude with a BA in English. She previously served as an English teacher at Cary High School where she was a Technology Connections Coordinator for the English department. She was also on the NC State/Cary High School Partnership committee where she helped organize Partnership Blitz, a three day experience for the students at Cary High to be exposed to emerging issues in academics by guest lecturers from the NC State faculty.



### Industrial Advisory Council

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IBM Thomas J. Watson Research Center

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Director of Information Technology for the East Coast

JDS Uniphase

## New Faculty Member Laurie Williams



Coming back to the Triangle area is almost like coming back home for Dr. Williams. After completing her BS in Industrial Engineering at Lehigh University in 1984, Dr. Williams came to the triangle to work at IBM. During her nine years at IBM, she held several

technical and managerial positions in engineering and software development. She received her MBA from Duke University in 1990. She went on to receive her PhD in Computer Science from the University of Utah in 2000 before returning to the Triangle area to become an Assistant Professor in Computer Science at NC State.

Female computer scientists are currently a rarity in the field. When asked why she wanted to become a computer scientist, Dr. Williams responded that computer science was appealing because it is an emerging field with so much area left to explore. The problems faced as a computer scientist are harder because they are less concrete which makes the job more challenging. According to Dr. Williams, many women do not choose to study computer science because of the introverted intellectual stereotype that plagues the field. She sees female role models and innovations such as pair programming as ways to attract more women into making a career out of computer science.



### New Space in Venture I

The month of June brought about the move of four faculty members and graduate students to Venture 1. This new space will allow for collaboration between

the faculty members which include Dr. Singh and Dr. Wurman, along with those pictured. Pictured above is Dr. James Lester beginning to unpack the many boxes that filled his new office. Dr. Lester is the Co-director of IntelliMedia

Switching from a career in industry to a career in academia makes Dr. Williams feel as if she is challenging herself through her research and teaching activities. Her current research is focused on software engineering where she works with companies to implement and measure the effectiveness of pair programming. Dr. Williams believes that pair programming will produce a higher quality of software in a faster time period compared with that of programmers who work alone. Three main elements which point to the success of pair programming are Pair Pressure, where programmers who work together push one another harder and create more productivity, Pair Think, where both programmers use their combined knowledge to come up with a better solution, and Pair Review, where each programmer continuously reviews the code of his partner to catch mistakes immediately.

NC State is fortunate to have Dr. Williams as a new member of the Computer Science Department. Dr. Williams looks forward to being at a university that works closely with partners in industry to lend a practical nature to the courses that are taught. She is also very interested in exploring the area of e-commerce in her research and teaching which is an area that NC State has emerged as one of the world's leading experts. Students can look forward to working with Dr. Williams in the fall when she teaches a class titled Launching the e-Commerce Enterprise. The students will propose and implement prototypes for e-Commerce businesses. Local entrepreneurs and venture capitalists will review student business proposals and share their insights and experiences with the class.

Initiative which is a joint project with the College of Design. Visit Dr. Lester and learn more about his research at [www.csc.ncsu.edu/faculty/lester](http://www.csc.ncsu.edu/faculty/lester). On the right is Dr. Michael Young, busy working on the computer in his new office. Dr. Young is currently doing research with the Liquid Narrative Group which studies the computational models of narrative applied to a wide range of human-computer interactions. Visit [www.csc.ncsu.edu/faculty/young](http://www.csc.ncsu.edu/faculty/young).





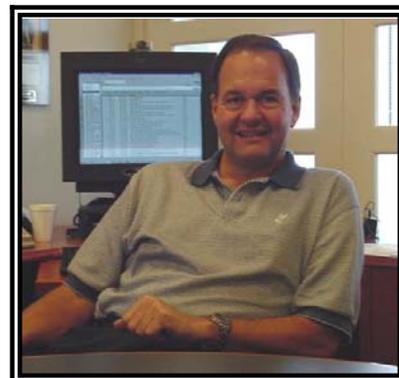
## Alumni Spotlight Rudy Puryear

Innovative, computer savvy, and on the cutting edge. Rudy Puryear is all of these things and more. After graduating from NC State in Computer Science in 1974, Puryear went on to become one of the top consultants in the world. Today Rudy is President and CEO of Lante Corporation, a leading Internet consulting company focused exclusively on creating eMarkets—powerful online communities that unite multiple buyers and multiple sellers within a market or industry segment. Since joining Lante in June 1999, Rudy has led Lante in becoming a nearly \$4 billion public company. With headquarters based in Chicago, Lante serves clients in thirteen offices in the United States and Asia, including an office in Charlotte.

Originally from Raleigh, Puryear became interested in computer science while he was a sophomore in high school. At 15 Puryear began working at Synergetics, an architectural engineering firm, where he became involved with programming. When the time came to go to college, computer science seemed the

obvious choice. While at NC State, Puryear worked full-time and maintained a full course load. Puryear described his typical day in college as taking back to back classes in the morning so that he could go to work at noon and put in a full day. He would then camp out at the computer center doing homework and projects, many times until midnight, before going home to get some sleep and do the same thing the next day. While this lifestyle may not sound like that of a typical college student, Puryear's accomplishments are a testament to the fact that he is far from typical. The experience he gained working at Synergetics from 1967–73 was only the beginning of a whirlwind ride of amazing strides in the consulting field.

After leaving Synergetics, Puryear became Stone School Supply's first Data Processing Manager. He converted the entire company to computers from 1973–75. He then went on to be the first Director of Information Systems for the NC Judicial Department from 1976–80 where he designed and built the first computer system for the Administrative Office of the Courts in NC. In



1981 he moved to Boston to work for Nolan, Norton & Company, an Information Technology strategy consulting firm. By 1983 he had moved to Chicago as the Managing Director running consulting for the company. Continuing to strengthen his experience and presence in the field, Puryear went to Andersen Consulting in 1991 as Managing Partner of IT strategy. He soon became the Global Managing Partner of e-Commerce responsible for the overall development and direction of Andersen's e-Commerce strategy. Under his direction the company grew to a \$425 million consulting practice.

Coming to Lante gave Puryear the opportunity to build something again. The nimbleness and responsiveness to the marketplace of a relatively small firm is very exciting, says Puryear, I have the opportunity to work with leading-edge companies to build leading-edge solutions to tackle leading-edge problems. The challenge in the business lies in leading (Continued on pg 13)



## Faculty Spotlight

### Injong Rhee



Not only is Dr. Injong Rhee known for his breakthroughs in multimedia networking research, he is also known for his energy and ingenuity inside the classroom. His students have been known to compare his high level of energy to

that of a nuclear reactor.

After receiving his BS in Electrical Engineering at Kyung Pook University in Korea in 1989, Dr. Rhee attended UNC Chapel Hill and was awarded his PhD in Computer Science in 1994. Dr. Rhee then went on to do Post Doctoral research at Emory University, Texas A&M, and the University of Warwick before accepting a position at NC State. Coming to NC State was like a homecoming, according to Dr. Rhee. While traveling many places doing post doctoral research, he could find no place he liked better than the Raleigh/Durham area. He saw NC State as having an up and coming Computer Science Department which had the support of the university. The large number of young faculty members also left Dr. Rhee with a feeling of high energy that had the potential to impact the scientific community in the future. As a PhD student, Dr. Rhee felt like his energy was focused on a specific course. Becoming a faculty member at NC State allowed him to put all of his ideas into real form.

Why did Dr. Rhee want to become a computer scientist? The appeal of being able to create something very quickly lured him into the field. He saw in computer science the opportunity to put your ability into your own art. One of the numerous areas of Computer Science which Dr. Rhee is doing research on is multimedia networking. He is trying to solve the problem of transmission losses that occur with the transmission of real time video over hand held devices. His research in this area also involves the problem being compounded when real time video is being broadcasted to a large audience at different locations. He, along with a team of graduate students are well on their way to coming up with a solution.

When teaching, Dr. Rhee prefers to work with students one on one. Even when students are working in groups, he requires that each group member be prepared to answer questions about every aspect of the project. Daily meetings with Dr. Rhee keep students on their toes and results in their success in the class.



Graduate Students work along with Dr. Rhee in the lab.

While his work takes up a large part of his time, Dr. Rhee does have interests outside of computer science. He enjoys playing tennis, swimming, and cooking. As he travels around the country attending conferences and working on his research, he makes a point to pick up a local cookbook and try his hand at creating the cuisine for his family when he returns home. His commitment to research and teaching makes Dr. Rhee a valuable asset to the Computer Science Department.

## Faculty News

### Promotions and New Appointments

Dr. Robert D. Rodman	Full Professor
Dr. Munindar P. Singh	Associate Professor
Dr. S. Felix Wu	Associate Professor
Dr. Laurie Williams	Assistant Professor
Mr. Frederick George	Visiting Lecturer
Mr. Ken Jarchow	Assistant to the Associate Head of the Dept.
Mr. Dana Lasher	Visiting Lecturer Director of Student Services
Mrs. Carmen S. Brennan	Director of ePartners

### Computer Scientists Lead the Way in E-commerce

Opening the business section of any newspaper leads many readers to headlines that boast of the success of e-commerce. While millions of customers buy and sell products and services over the internet everyday, most do not realize what work went on behind the computer screen. Several of the leading experts in e-commerce teach in the Department of Computer Science.

Dr. Munindar Singh, associate professor, recently led a project to create a shopping engine technology which is being used by a local company. In a recent news release, Dr. Singh said that this shopping engine not only can present information from several merchants but also offers a unified shopping cart and an integrated checkout. Dr. Singh serves as editor-in-chief of the prestigious IEEE Internet Computing and has won research awards from the National Science Foundation and from IBM.

Dr. Peter Wurman's current work focuses on online auctions. Dr. Wurman, whose graduate work at the University of Michigan received an award from IBM for the best e-commerce dissertation proposal in 1998, focuses on auction theory and automated negotiation, areas that combine the disciplines of artificial intelligence and economics.

Auction exchanges will be central to e-commerce, says Wurman. While many people only negotiate for fairly

large purchases, he sees auctions



being used for more things between businesses and consumers. There are many opportunities to make auctions faster, easier, and more accessible.

Wurman is also co-director of NC State's e-commerce partnership, an interdisciplinary initiative with the College of Management. This partnership allows NC State's business and computer science students to work on joint research projects with twelve high-tech companies.

Dr. Alan Tharp notes, We saw the e-commerce trend coming several years ago and focused our faculty hiring on such emerging areas. We offer three courses directly related to e-commerce now, and as we hire more faculty and resources, we'll add more courses. This year the e-commerce classes were so popular that many students were turned away. Look for the creators of tomorrow's Amazons, eBays, and Yahoo!s to emerge from the department, predicts Tharp.



Partners II

### Alumni Speak Out

Question #2: Where do you see the field moving to in the future?

Suzanne Gordon  
Director of MIS  
SAS Institute  
Board of Trustees at NCSU

More and more a part of everything we do, how we work, how we live, but always changing.

Brent Bischoff  
Wireless Development Engineer  
Lucent Technologies

Mobile, Mobile, Mobile. In the future there is no limit to what services will be offered over mobile devices. Only one's imagination can tell.

Mickey Bishop  
Applications Analyst Programmer  
System Office of the NC Community College System

Hopefully closer to what has been portrayed in Science Fiction and Star Trek in terms of technology. Computers easy enough for anyone to operate. Of course that will require highly skilled programmers and engineers to create them.

Matt Dailey  
Graduate Student Researcher in Artificial Intelligence at UCSD and a Research Scientist at Burning Glass Technologies in San Diego

I think one of the most exciting emerging fields is data mining. For better or worse, we are becoming better and better able to systematically extract knowledge from large databases. It doesn't excite me that this will enable advertisers and other entities to predict my behavior, but it does have important implications for other sciences. We seem poised to play major roles in advancing molecular biology, neuroscience, and cognition. So it's gonna be fun to be a computer scientist in the next few decades!

## Venture II Classroom Opens

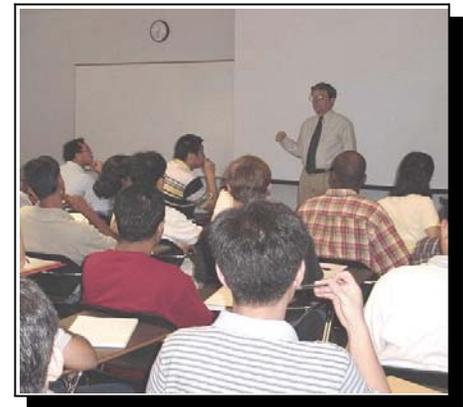
On August 21, 2000, the first Computer Science classroom on Centennial Campus opened. Students packed the eighty-six



Students wait for the first class in Venture II to get underway.

desks that fill the room. Making this classroom a reality was a direct result of support shown by companies such as Verizon and AT&T Solutions. Verizon funded the space which includes the classroom. AT&T Solutions funded much of the equipment in the classroom and adjacent networking lab. Classes are scheduled in Venture II from 8:35am until 10pm. Many of the classes are joint with the Department of Electrical and Computer Engineering.

Dr. Alan Tharp, Department Head, made an appearance at the first class held in the classroom and told the students how much hard work went into making this classroom happen. Now most



Dr. Alan Tharp tells students how the classroom was made possible.

graduate faculty and students are located on Centennial Campus.

## AURICS Attracts Top Students

To compete with top technology companies and other universities for outstanding students, NC State's Computer Science Department developed an innovative program designed to excite and challenge the brightest students as they enter the program. The Accelerated Undergraduate Research In Computer Science (AURICS) program involves students in research projects beyond those that they encounter in their normal classes. In a recent news release, Assistant Professor Dr. Robert St. Amant, who developed the idea of AURICS, stated that NC State's Computer Science program is the best in the state and near the top nationwide. But, for our very best students, courses alone aren't going to fully tap their potential. AURICS is meant to fill that gap, says Dr. St. Amant.

Becoming a part of AURICS is not easy. Students must have an SAT score of 1540 or higher. Last year 29 students were invited into the program, one of them having a perfect score of 1600. Once in the program, students are introduced to faculty members and the wide range of expertise that the department offers such as leading areas like e-commerce, graphics and animation, optical networking, and artificial intelligence.

AURICS students have their own research lab equipped with state-of-the-art equipment

including PCs with multiple flat-panel displays and high-speed graphics and networking cards, a Silicon Graphics workstation, a Sony Playstation programming environment, and industry-strength development software. Students also have access to more sophisticated equipment such as network testing equipment, a motion capture system, and a 44-inch stereo workbench that can produce realistic 3D images that appear to float in space in front of the viewer. Dr. Alan Tharp, Department Head, refers to this lab as a sandbox for the brightest students to play in and discover new areas of computer science. The lab also gives the students a place hang out and discuss what is going on in the field today. The hope is that when these students graduate they will have created a network among themselves that they can carry with them as they begin their careers.

The AURICS program allows students to expand their minds as well as gain real world experience before

graduation. Dr. Tharp sees the benefits of this program as being win-win for all of those involved. Students get a chance to see what they like before they graduate and companies have an opportunity to build a relationship with a highly skilled individual who may turn out to be a potential employee.



## Alumni Speak Out

Question #3: How did your experience in NC State's Computer Science program prepare you for your future?

Brent Bischoff  
Wireless Development Engineer  
Lucent Technologies

I highly believe in the CO-OP program. The work experience I gained proved invaluable. After working at a fortune 40 company for a year and a half now I have learned that you don't have to be the most technical person to succeed. More importantly know how to be professional. Be able to speak effectively with others. Know how to handle and conduct yourself. Excel at working as part of a team.

Terry Clapp  
Professor and Curriculum Advisor for  
Strayer University in Washington, D.C.

The preparation I received at NCSU dealing with IBM mainframes perfectly positioned me for the Air Force assignment I went into at the Pentagon in 1979.

Robin Seiler  
Solution Centers and Services Manager  
for Asia-Pacific-Singapore  
Intel Corporation

Most valuable class I took at NCSU was the MIS course where we had to do a real project in a real company. It is very important to understand how to apply what you are learning in college to real-life....What I wish I had taken: a few more business courses. Most people who start out technical need to grow their business skills as they will eventually be asked to use them.



Venture II

## NSF Career Award Winner Dr. Ana I. Anton



Dr. Ana (Annie) Anton, Assistant Professor in Software Engineering is the recipient of an Early Career Faculty Development Career Award from the National Science Foundation. This is the highest honor given by the NSF to young university faculty in science and engineering. The award provides Dr. Anton with \$220,000 in funding over the next four years. With the help of this award, she will continue her research project, Towards Estimating Requirements Coverage: Managing Scenarios and Goals in Requirements Evolution, which addresses important issues in the discovery, elaboration, and management of system use scenarios for the specification of software requirements.

Students at both the undergraduate and graduate levels, as well as industrial participants, will use the software produced through this research. A library of projects in various domains will lead to new materials such as techniques, methods and

cases for software engineering education, Anton said.

## A Student for the Record Books

Luke Zettlemoyer is a student that few professors see more than once in their career. This outstanding young man has more honors and awards associated with his name than one can imagine. They include the Computing Research Association Outstanding Undergraduate Award 2000" for most outstanding male undergraduate researcher; USA Today's All-USA Academic Team; Department of Computer Science Faculty Senior Scholar; Park Scholar; the Bitzer Creativity Award; Computer Science Honors Program; Mathematics Honors Program; Undergraduate Research Fellowship; University Scholars Program; NSF Graduate Research Fellowship; and the DOD Graduate Research Fellowship. He has also co-authored ten peer-reviewed research papers.

Luke is now the Director of Advanced Technologies for an Artificial Intelligence/ Internet start-up company called LiveWire Logic. The professors (at NCSU) are extremely accessible to undergraduates. It was primarily through personal interactions with faculty members that I learned about computer science and prepared to contribute to the field, said Zettlemoyer. His new job offers him many opportunities to put into use the knowledge he gained from his time at NC State. In the future Luke plans to attend graduate school to study for a PhD in Artificial Intelligence. The department wishes him luck and continued success!

### CSC Graduates Where are they now?

I became fascinated with computers at about the age of 12 and decided by the time I went into the 8<sup>th</sup> grade that I wanted to attend NCSU, major in Computer Science and then enter the Air Force. I graduated from NCSU May 12, 1979, received my commission the same day and spent the next 17 years in the Air Force. I am now a full time professor and the Curriculum Advisor for Strayer University here in the Washington, DC area.

Terry Clapp  
Class of 1979

I graduated in the spring of 1987 (BS EE, BS CSC). I worked 5 years for AT&T Bell Laboratories at which point I entered Duke University and received my MS in ECE in the fall of 1993 followed by my PhD in the spring of 1999. I currently work for a startup company in RTP called Reciprocal ([www.reciprocal.com](http://www.reciprocal.com)). We work in the area of Internet commerce.

Dr. William T. Rankin  
Class of 1987

I found a job teaching part-time at Forsyth Technical Community College in the Continuing Education Department. I taught all sorts of Computer courses for 1 1/2 years before finally getting a full-time position as the Department's Data System Specialist. In June of 1999, I accepted a position with the System Office of the North Carolina Community College System in Raleigh, NC as an Applications Analyst Programmer. I have now been here a little over a year, and continue to find my job challenging and rewarding.

Mickey Bishop  
Class of 1983

I am currently working at SAS Institute in Cary—in the PC R&D group as a Setup Developer using InstallShield and other tools to create the Install programs for various SAS software products.

Merri Jensen  
Class of 1999

I am currently working in Cairo University, Dept. of Communications Engineering, where I hold the position of Assistant Professor.

Khaled Elsayed  
Class of 1995 (PhD)

I am currently a programmer in Store Systems at the corporate offices of Lowe's Home Improvement Warehouse in North Wilkesboro, NC. My department is responsible for writing and maintaining all of the code that runs in nearly 600 Lowe's stores across the country. There is never a dull moment.

Joe Brock  
Class of 1998

I am the Solution Centers and Services Manager for Asia-Pacific, essentially running a business unit which is responsible to provide software/solution providers with consulting and technical services as they build their solutions on Intel Architecture.

Robin Seiler  
Class of 1993

I work at IBM within the Software Group as a Software Development Manager. My current focus is helping provide integrated solutions to complex e-Business customer scenarios. In addition to my day job, I serve as the NCSU Campus Relationship Manager for IBM Software Group. NCSU is one of the top schools for hiring technical talent into IBM...I want to keep it that way!

David George  
Class of 1984



Research II

My business experience combined with the strong technical background I received from NCSU have served me well. One of the most important things that happened during my undergraduate CSC program was meeting and marrying my wife and partner, Deborah, a fellow '72 CSC graduate. We have been married over 28 years and have a son, Charlie, who is a freshman at NCSU in mechanical engineering. I am a private investor and a partner in CI Partners, LLC. I am very active in the angel investment community working with Tri-State Investment Group and The Atlantis Group in helping to capitalize and mentor technology start-ups.

Ed Whitehorne  
Class of 1972



Venture III

Find out more about  
NC State Computer  
Science by visiting us  
on the web at  
[www.csc.ncsu.edu](http://www.csc.ncsu.edu)

Alumni Spotlight: Rudy Puryear  
people intensive company that is growing at 30% a quarter. The ever changing world of e-Commerce leaves many twists and turns awaiting on the road ahead. Puryear sees the future of e-Commerce being full of the wildest possibilities. At the present he believes the world is in the middle of a transition from an industrial economy to an electronic economy. Technology will be the tool that will enable us to move forward.

Puryear's accomplishments have made him a wanted man in a world of advancing technology. He regularly speaks before businesses around the world, and his insights on e-business have been featured in business



Reseller's Smart 100 companies.

publications such as Wall Street Journal, Fortune, Forbes and Financial Times. In June 2000 he was recognized as number 7 in Consulting Magazine's Top 25 Consultants in the World. Under his direction, Lante was recently ranked as number 7 in Sm@rt



Lante's headquarters in Chicago offers an incredible view of the city's skyline from the top floor of the Title Building.

What lies ahead for Rudy Puryear? There seems to be no limit to his innovative ideas and determination that continue to create new advances and improvements to e-business. NC State Computer Science is proud to be able to call Puryear one of its own.



Near Lante's office is one of Picasso's most famous masterpieces.

## WE WANT TO HEAR FROM YOU!

The CSC department is interested in creating a stronger relationship with its alumni who have grown to over 3600. We have a lot of exciting ideas! Please take a moment to email us with your responses to questions and new ideas.

### \*ALUMNI GET TOGETHER\*

We are currently planning a alumni get together in the Silicon Valley area. If you are interested in attending, please let us know so that we can send you an invitation. CSC alumni can be found in almost every state in the USA. The largest numbers are found in

NC, MD, VA, GA, FL, TX, CA, SC, IL, and MA. We would love to plan a get together in these states as well. Please let us know if you would be interested!

### \*ALUMNI NEWSLETTER\*

Now that we have a full-time Director of Alumni and Corporate Relations, Carmen Brennan, we would like to publish the alumni newsletter twice a year. We want to know what you want in your newsletter. Please give us your feedback on the following questions.

What types of articles are you interested in reading?

What are you doing now?

What new activities would you like us to provide for alumni?

Have you registered on the alumni directory online? If not, the address is [www.csc.ncsu.edu/cgi-bin/alumnidir.pl](http://www.csc.ncsu.edu/cgi-bin/alumnidir.pl)

\*How can ePartners help you?\*

ePartners will have an online database where undergraduate students, graduate students, and alumni can enter their resumes. Your resume will be looked at by our corporate partners. If you're interested, visit the ePartners web site at <http://epartners.ncsu.edu>

Email responses to [brennan@csc.ncsu.edu](mailto:brennan@csc.ncsu.edu)

WELCOME  
ePARTNERS !



The 75,000 people of Nortel Networks work @ the heart of the Internet revolution. We re delivering more reliable, secure, integrated networks that bring together data, voice and video services over wireless and wireline networks. Our Unified Networks serve a wide range of customers from global carriers to home businesses.

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John Deere Worldwide Commercial & Consumer Products Equipment Division, a business unit division of Deere & Company, is proud to be a co-sponsor of the ePartners initiative with North Carolina State University. The C&CE Division manufactures a full line of lawn care products for residential, commercial, and golf and turf applications. These products are distributed through its network of independent retailers.

The Division s international offices are currently based in Raleigh, NC with new headquarters under construction (completion expected in late 2001) in Cary, NC. The Division also has 11 North American locations and two in Europe.

For more information about John Deere and the C&CE Division, including employment specific material, please visit our web site [JohnDeere.com](http://JohnDeere.com)



Southeast Interactive ([www.seinteractive.com](http://www.seinteractive.com)) is headquartered in the Research Triangle Park of North Carolina. The company manages three technology funds, and has a capital base in excess of \$180 million. Southeast Interactive was the first venture capital group south of the Washington/ Baltimore area with an exclusive focus on information technology. Southeast has led or co-invested in the financing of 25 companies to date.

Southeast Interactive's focus is to invest in companies located in the Southeast portion of the United States that are involved in the fields of telecommunication, enterprise management, Internet infrastructure, business-to-business, bandwidth enablement and e-commerce. The funds' management team looks for companies with strong, entrepreneurial management, who generally have a product generating revenues or advances on royalties and who have strategic partnerships in place or in negotiation. Its value-added leadership has placed the Research Triangle's IT industry on the global radar screen and it continues to attract technology partnerships from across the world to its portfolio of companies.

Southeast Interactive companies include BuildNet, OpenSite, KOZ.com, Nitronex, AllConnect, HAHT, Wave Systems (NASDAQ:WAVX), Arsenal Digital Solutions and Virtus Entertainment. Southeast Interactive is the only venture fund in the country to produce a nationally branded technology conference. The national IT-focused event promotes the region and its businesses.

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