

# NEWS BYTES

## CSC Senior Receives Fulbright Award

**Julian Boyce**, a computer science major, received a prestigious Fulbright Award for academic study in Germany.

Boyce, the son of Philip and Rosita Boyce of Wilmington, is eligible to graduate in May. The Fulbright grant will fund an academic year of study at the Technical University in Munich from August 2001 through July 2002. Boyce said he plans to further his studies in computer science. Of particular interest is the development of graphical user interfaces, Internet technology, wireless computing and computer graphics, he said.

While at UNCW, Boyce began taking German classes in the Department of Foreign Languages and Literatures. He participated in the UNCW Summer Program in Bremen and spent his junior year at the University of Karlsruhe on the North Carolina/Baden Wuerttemberg Exchange Program. He received the 1999 Minority Academic

Achievement and Student Leadership Awards.

Boyce is the third UNCW student awarded a Fulbright Grant. Jennifer Head, a 1997 graduate who majored in biological sciences and French, is completing her second year as a Fulbright scholar at the L'Universite de Liege in Belgium. Teresa Krebs, who earned a

bachelor's degree in French and Spanish in 1998, received a Fulbright Teaching Assistantship to Korea.

The Fulbright Program, America's flagship educational exchange program, is sponsored by the U.S. Information Agency, an independent foreign affairs agency within the executive branch of the U.S. government. Established in 1946 under Congressional legislation by Sen. J. William Fulbright of Arkansas, the program is designed "to increase mutual understanding between the people of the United States and the people of other countries."



## From the Chair...

### Emerging Technologies for Teaching and Learning

UNCW is leading the way when it comes to developing and using new technologies for teaching and learning. Recently, several buildings on campus were equipped with wireless transmitters and receivers enabling several interesting educational applications.

One innovative project that I have been involved with is called Project Numina (<http://aa.uncwil.edu/numina>). The objective of Project Numina, a cooperative effort among faculty at UNCW, Pearson Education (Prentice-Hall), and Hypercube, is to use one seamless format to facilitate learning of abstract scientific and mathematical concepts by integrating media, interactive exercises, and hypertext materials into the classroom.

One of the project's many educational applications is a Web-based interactive student response pad developed at UNCW for use in large classroom settings. Numina's classroom environment consists of four Cisco Aironet wireless access points and 100 Hewlett-Packard Jornada H/PCs. Students use the H/PCs to respond to the instructor's questions, and the

system stores their responses in a database and displays the collective responses graphically at the front of the classroom.

The Student Web Answer Technology Template (or SWATT), a server-side Web application implemented as a Java servlet, drives the system. SWATT is completely Web-based and does not require any special software on the client side other than a Web browser. The instructor poses a question in a multiple-choice, true/false, or yes/no format and directs students to a Web site that generates a Web form on their computer screens through which they submit their responses. Multiple question-and-answer scenarios are possible. A back-end database stores only responses to questions, not information about the student, so responses are anonymous.

UNCW Computer Science students, **Sonya Pettit**, **Steve DaSilva**, and **Eli Herman**,

developed the SWATT software. We are currently adding additional student interfaces and improving the options available for the instructor to control the response pad and its representation on student screens. In addition, many controlled experiments are under way to study the technology's effect on student learning and comprehension.

*Ronald J. Vetter, Ph.D.  
Professor and Chair*



## New Course: CSC 475: Using Computer Graphics Tools



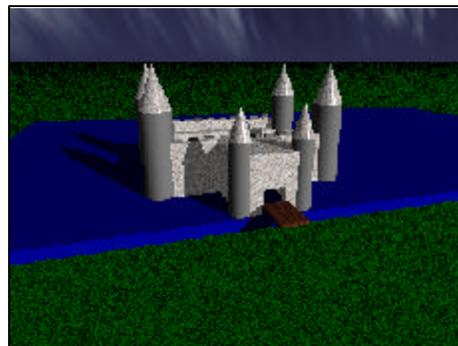
No matter how computer literate you might think yourself to be, taking a senior level computer science class as a communication studies major might seem to be a potentially intimidating experience. Surrounded by programmers and designers, the ball is in their court and you at best can only hope to keep up.

Actually, this may be true of some classes, but not CSC 475: Using Computer Graphics Tools. CSC 475 is a new addition to the computer science curriculum but is also listed in the film studies program. There are several departments represented, so the class moves at an acceptable level for newcomers into the world of computer graphics. As it is more of a 3D

graphics design class, there are virtually no prerequisites, such as math and lower level computer science courses.

The essence of the course consists of learning 3D modeling from a ground-up perspective via the use of various software packages ranging from amateur to professional in usage levels. The mastery of these applications entails the creation of various objects and scenes beginning with simple shapes such as cars to castles.

Types of programs used include POVRAY (Persistence of Vision Ray tracing) and RHINO. RHINO is available through the class or may be purchased separately, but POVRAY is



*From left to right, the images are by:  
Daniel Cloud, Jennifer Orrock, Hans Gelpke*



available to everyone. It may be downloaded from [www.povray.org](http://www.povray.org). You don't have to be an artist to create fantastic drawings and scenes from this ray tracing and rendering program. All you really need to succeed in this class is a basic understanding of everyday shapes. In this class you will be taking what we see as a complex 3D world and translating it into simple geometry on a 2D screen. Sound scary? Don't worry, it's not.

With the patient guidance of **Dr. Harry Smith**, you will be creating impressive works in no time!

*Alecia Mitchell  
Communications Major*

## ALUMNUS: Susan Harrell '98

**Susan Harrell** has been working at Intelligent Information Systems in RTP since graduation in December, 1998.

The company completes projects involving transformation of legacy systems for businesses or government. This could include implementing upgrades or changes in database systems, programming languages or hardware.

Harrell has been on one project converting COBOL code to include calls to a DB2 database on UNIX for an insurance company and another converting PL\SQL code for an Oracle Database to C with embedded SQL for DB2 on an IBM mainframe for a securities company. She has been involved in all phases of these projects from planning through coding and testing.

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## Faculty Publications, Presentations, and Awards

**Dr. Ronald J. Vetter** published the article "Teaching and Learning in the Wireless Classroom," with P. Shotsberger, IEEE Computer, Vol.34, No.3, March 2001.

**Dr. Ronald J. Vetter** published the article "A Frame of Emerging Mobile Commerce Applications," with U. Varshney, Proceedings of the 34<sup>th</sup> Hawaii International Conference on System Sciences (HICSS-34), Jan. 3-6, 2001, Maui, Hawaii.

**Dr. Clayton Ferner** and **Mr. Allen Randall** have been working with Dr. Ned Martin in chemistry on a project developing software to implement research that Dr. Martin has been conducting on predicting NMR Deshielding. This work is being supported by a grant from UNCW Information Technology Systems Division (ITSD). Results from this research are being presented in a talk entitled "Predicting Through-Space NMR Deshielding by Several Organic Functional Groups," by N.H. Martin, K.H. Nance, J.D. Brown, C.S. Ferner, and W.A. Randall, at

the 84<sup>th</sup> Canadian Society for Chemistry (CSC) Conference and Exhibition, Montreal, Canada, May 26, 2001.

**Drs. Sridhar Narayan** and **Gene A. Tagliarini** were recently awarded a grant from the Friends of UNCW to purchase a robot to add a Robotics component to the Artificial Intelligence course for the Fall 2001 semester.

**Dr. Gene A. Tagliarini** and **Mr. Jack A. Tompkins** received a Summer 2001 Curriculum Development Award "Teaching Digital Logic, Computer Organization, and Computer Architecture."

**Dr. Sridhar Narayan** presented "Web-based Travel Route Planning Subject to Transient Road Conditions" at the Information Technology Innovative Research Symposium.

**Dr. Gur S. Adhar** received a Charles L. Cahill Award for Faculty Research and Development entitled "Design and Test Platform for Embedded Digital Signal Processing Systems."

**Dr. David R. Berman** presented a research talk "Generalized Tournament Designs" at the 31<sup>st</sup> Southeastern Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, Florida, March 2001.

**Dr. David R. Berman** received a Summer Curriculum Development Initiative "Curriculum Development for Computer Science: Webwork, Team Work and Design Patterns," proposal for \$3000, July – August 2001. He also received a grant from UNCW Information Technology Systems Division for Summer 2001 research on high performance computing.

**Mr. Ralph Bradley** served as the department's Industrial Development officer and has coordinated student internships with various local industries such as Corning, Global Nuclear Fuel, Signal Design and Vision Software.

**Drs. Harry F. Smith, David R. Berman** and **Ms. Laurie Patterson** attended the ACM Special Interest Group on Computer Science Education (SIGCSE) conference in February 2001.

### Alumni and Friends:

Name: \_\_\_\_\_  
 Dr./Mr./Mrs./Ms.      First      Middle      Maiden      Last      Suffix

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Phone: Home (    ) \_\_\_\_\_ Work (    ) \_\_\_\_\_ E-Mail \_\_\_\_\_

Graduation date: \_\_\_\_\_ Degree/Major: \_\_\_\_\_ Spouse UNCW Graduate? Yes/No

Employer: \_\_\_\_\_ Position \_\_\_\_\_ Matching Gift Company? Yes/No

Business Address: \_\_\_\_\_

Spouse: \_\_\_\_\_  
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## Darby Mitchell '01

**J. Darby Mitchell**, a 2001 graduate of the Bachelor of Science in Computer Science, has been accepted to the Master of Software Engineering program at Carnegie Mellon University and the Master of Engineering in Computer Science program at Cornell University. Both schools are ranked in the top five Computer Science graduate programs in the world.

Darby has chosen to attend the M.S.E. program at Carnegie Mellon in the fall of this year. The Carnegie Mellon program is ranked the No. 1 Software Engineering program in the world, and admits 15-20 people per year. This 12-month program requires that applicants have two years of professional experience in addition to academic excellence and emphasizes the software engineering of large scale



software systems.

Darby has been working as an employee of Corning Inc. for four years, and will be taking a leave of absence to attend the program.

## Update: Fletcher Norris Scholarship Endowment Fund

Progress is evident in funding the endowment for the scholarship. Approximately \$12,000 of the \$25,000 goal is in hand! A reminder: **Dr. Norris** and alumnus **Kit Cosper** have pledged a matching gift for your gift! Consider making a tax deductible gift by sending your check made payable to UNCW today.

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