Building on the excitement created by the move into the CIS building in January 2007, the Department of Computer Science had a solid year, making marked progress in teaching, research and service, as illustrated by the excerpts below.

In fall 2007, Option 2 (business option) in the computer science major was expanded to give students a choice of concentrations. The revision is meant to recognize the fact that practicing computer science professionals often find themselves applying computational principles in domains with which they may only have a passing familiarity. The changes to Option 2, which are effective fall 2008, allow computer science majors to choose a concentration in business, chemistry, biology, statistics or digital arts. Other examples of curricular innovation in the department can be found elsewhere in the newsletter.

2007 also marked a banner year for external grant funding in the department. With more than $1.4 million in external funding, the department was the fourth highest funded unit at UNCW. External grant funds play an important role in supporting faculty research, provide research and travel opportunities for students and can help underwrite outreach efforts within the department. Departmental research activities resulted in numerous publications and presentations that are detailed under Faculty Focus. This includes six publications which featured eight student co-authors and presenters.

NSF-funded activities resulted in the introduction of computer-based modeling using Squeak EToys in many middle-school classrooms in New Hanover, Pender and Brunswick Counties. Squeak EToys is a disarming, almost infectious approach to computer programming. As a measure of its ability to mesmerize children, consider the anecdote of a student in one of the participating schools who, when informed by the principal of impending disciplinary action, protested, “Please, not on Thursday. That is when we have Squeak!”

Looking forward, the 2008-09 academic year promises to be busy. Among other things, planning for a new undergraduate major in information technology is underway and the department anticipates making significant progress in its efforts to implement learning outcomes assessment. In summary, we are good, working hard to become better. As always, I invite you to be a part of this process in any way that you can.

Sridhar Narayan, Ph.D.
professor & chair
Faculty Focus

Clayton Ferner and Barry Wilkinson presented “New Developments in a State-wide Undergraduate Grid Computing Course,” at the SIAM Conference on Parallel Processing for Scientific Computing (SIAM PP08) in Atlanta, GA.

Curry Guinn attended two conferences where he made presentations: the National Conference on Environmental Science & Technology at North Carolina A&T State University and the IASTED Parallel and Distributed Computing and Systems (PDCS 07) in Cambridge, Mass. He was also involved with several student projects. (See Student Showcase below for details.)

David Berman presented “Brother Avoiding Round Robin Doubles Tournaments,” at the 38th Southeastern Conference on Combinatorics, Graph Theory and Computing in Boca Raton, Fla.

Ron Vetter presented “Interactive Services on Mobile Devices for Higher Education,” with Jeff Brown at the 2007 Southeast Educause Conference in Atlanta, Ga. and at the 2007 Educause Conference in Seattle, Wash. He also presented “Building Mobile Messaging Applications with SMS” at the University of Virginia Computer Science Department.


Student Showcase

Computer Science Students’ Accomplishments

Gulustan Dogan (MSCIS) was awarded a graduate summer research stipend from UNCW for summer 2008. Dogan’s winning research proposal, “An Experimental Design for Affective Computing Combining Facial Expression with Text Analysis,” outlines a collaborative effort with her advisor, Curry Guinn, Eric Patterson and Len Lecci (Psychology).

Ralph Harris (B.S., computer science) graduated with honors with a thesis titled “The TURBOCHARGE System: Translation Using Rule-Based Operations Combined with Hit-rate Analysis Results from Google™ Engine.” His thesis advisor was Curry Guinn.

Daniel J. Rayburn Reeves (MSCIS) presented his paper, “Improving Upon Semantic Classification of Spoken Diary Entries Using Pragmatic Context Information,” at the 2008 International Conference on Artificial Intelligence in Las Vegas. The paper is co-authored with Curry Guinn.

Bill Shipman (MSCSIS) co-authored a paper titled, “The Parallelization of Membrane Computers to Find Near Optimal Solutions to Cost-Based Abduction,” with Curry Guinn and Ed Addison. It will be presented at the 2008 International Conference on Genetic and Evolutionary Methods in Las Vegas.

Shawn Chivers (MSCIS), collaborated with Gene Tagliarini and professor Ashraf Abdelbar of the American University of Cairo (Egypt) in the publication of two papers. One was accepted for presentation at the IEEE Swarm Intelligence Symposium 2007 in Honolulu, Hawaii, and the other was accepted for the 2007 International Joint Conference on Neural Networks in Orlando, Fla. The papers are titled, “Finding Least Cost Proofs Using a Hierarchical PSO,” and “An Evolutionary Optimization Approach to Cost-Based Abduction, with Comparison to PSO,” respectively.
**New Course: CSC100**

CSC100, Orientation to Computer Science, was offered for the first time in fall 2007. Curry Guinn is the course coordinator and led the development and adoption of this course which was approved by the department to be a required course for all computer science majors and minors. Goals of the course include gaining understanding of what computer science is, what disciplines exist under computer science, what are career paths for students in computer science, and what are some of the research activities of the CSC faculty. The course consists mainly of a “guest lecture” each week by a difference faculty member. It represents a collaborative effort by the department and was well-received by students.

When asked the question, “How has your initial vision of computer science changed after CSC 100?”, student responses included the following:

“I now know that many more computer science applications exist in biology, education and other disciplines.”

“I know a lot more; it has helped me understand what certain classes are for and what is expected of me in order to graduate.”

“This class has shown me many different and interesting things that I can do with CSC. I’m excited to finish with the beginning programming languages and really get into some higher classes such as digital animations, graphic design and Web design.”

“I am much more enthusiastic because I have learned that it is more than just learning languages and programming.”

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**Summer Activities**

**Squeak Workshops**

Internationally renowned computer scientist, Alan Kay, helped kick off the first year of a three-year grant designed to help local school districts fight the national declining interest in science, technology, engineering and mathematics (STEM).

Kay’s visit in late July 2007, was part of the first of three, week-long workshops aimed at training teachers of grades 7-12 to use Squeak, Kay’s innovative software that helps students learn concepts through visual simulation. Squeak has been used successfully across the globe to pique students’ interest in the STEM fields at a much earlier age.

Sridhar Narayan and Gene Tagliarini, with Shelby Morge from the Watson School of Education, secured the a three-year, $1.18 million grant from the National Science Foundation (NSF).

Kay’s visit included a public lecture, “The Real Computer Revolution Hasn’t Happened Yet! Children, Powerful Ideas and Computers.”

Alan Kay (pictured below) is the recipient of the Alan M. Turing Award, the highest honor in the field of computing. He is considered to be one of the “trailblazers” of technology with contributions to products for Xerox, Atari, Apple, Disney and Hewlett-Packard.

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**Congratulations to the following faculty members for their promotions:**

- Eric Patterson: promoted to associate professor and tenured
- Gene Tagliarini: promoted to professor
- Sridhar Narayan: promoted to professor
Upsilon Pi Epsilon’s three officers for 2007-08 (pictured at left) inducted 11 new students into the local chapter of the international honor society.

Congratulations to Allen Rawls, Wade Grant, Ryan Renniger, Kevin Matthews, Mike Haizlip, Matt Traynham, Heather Jenkins, Josh Tobey, Dan Heywood, Beth Snead and Melea Williams (all pictured below.)

Laurie Patterson and Marni Ferner offered the first digital storytelling camp during summer 2008. The camp was developed through a grant from UNCW’s Information Technology Systems Division. Sixteen campers aged 10 through 12 spent their afternoons during this week-long session learning Storytelling Alice, a free program that introduces basic programming concepts through simple, 3-D animations. Storytelling Alice, a modified version of the regular Alice software used in high schools and colleges, is targeted towards middle-school aged students. Both versions are freely available at www.alice.org. Along with gifts donated by Mobile Education, LLC, each camper received his or her own flash drive and textbook at the end of the week. The flash drives were donated by the Department of Computer Science, and the books were donated by Cengage Learning. The campers showed their own animated movies to impressed parents on the last day of camp.
IAPR International Workshop in Singapore.


Eric Patterson participated in ACM’s Sandbox Computer Gaming Conference and the Special Interest Group on Graphics (SIGGRAPH) in Los Angeles, Calif.

Gene Tagliarini, Devon Simmonds and Royce Nobles had “Parametric Software Cost Estimation for the Solitary Programmer,” accepted for publication at the International Conference on Software Engineering, Theory and Practice.

Devon Simmonds’ Ph.D. dissertation, “Transforming UML Class Models,” was published.

Laurie Patterson presented “Color/Font/Text Size: Developing Standards for Video Podcasts” at the ACM Information Technology Education Conference (SIGITE) in Sandestin, Fla., and received a grant from the Partnership for Improving Mathematical Understanding of Students and Teachers (PIMUST) with Karen Shafer, Eleanor Pusey, Carol Midgett, Dargan Frierson and Gabriel Lugo.

Marni Ferner and Laurie Patterson conducted a summer camp for middle school-aged children called “Digital Storytelling with Alice,” (see p. 4 for details).

Marni Ferner celebrated her 20th year of teaching.

Gur Saran Adhar published “Parallel Algorithms for Chains and Anti-Chains of Points on a Plane” and received the following grants: 2008 Summer Research Initiative from College of Arts and Science, an international travel grant from the Office of International Programs for the ICPADS meeting in China and a travel grant from the Office of the Dean of CAS for travel to Umea, Sweden.

Ralph Bradley was selected to participate in the fall convocation where he met with a group of freshman and spoke with them about college life and how they might best survive it.

Jack Tompkins and wife, Lani, welcomed their new baby, Jonathan Hashimoto Tompkins, on March 4, 2008.

Congratulations to the proud new parents!

New Course (continued from page 1)

“I now know that computer science is a very broad and flexible field. Computer science can be associated to nearly every aspect of life. This broadness and adaptability really appealed to me.”

“Drastically. I now know what I can do with CS and all it has to offer.”

“Very interesting topic that goes way beyond programming, and it takes a lot of skill to be able to do a lot of the stuff such as voice recognition. I realized that is for everyone not just computer nerds.”

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“It has opened my eyes to what is actually consists of. It goes beyond just computers.”

“Very interesting topic that goes way beyond programming, and it takes a lot of skill to be able to do a lot of the stuff such as voice recognition. I realized that is for everyone not just computer nerds.”

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Thirteen CSC faculty and staff members were recognized by graduating seniors as having made a difference.

Congratulations!
Awesome Alumni

George (Eddie) Dunn ’03 returned to UNCW’s CSC department when he was hired in January 2008 to be the department’s new network administrator. Welcome back Eddie!

Ryan Wilkins MSCIS ’07 is working full time with PPD in Wilmington as a statistical analysis systems developer. Ryan also had an article accepted for publication and presentation in Spain with Karl Ricanek.

Kale Watkins ’06 was hired by PPD as a full-time associate programmer analyst after a nine month internship.

Brian English ’04 works for Spence Hackney Design, a small company that develops Web sites based on the Dot Net Nuke framework, a CMS system.

Chris Holtsford MSCIS ’07 is working for a Web development firm in Chicago called Ameri-caneagle.com. He reports that “things are blowing up here (in a good way).” He encourages recent CSC graduates to apply, saying, “Hiring fresh graduates and giving them the chance to become a senior programmer is preferred.”

Eric Harris MSCIS ’07 works for ATS, a corporation that provides an integrated software solution for electric utility cooperatives.

Squeak
(continued from p. 3)

He is co-founder of a non-profit organization, Viewpoints Research Institute, whose goal is to “improve ‘powerful ideas education’ for the world’s children and to advance the state of systems research and personal computing.” Kay is also involved with the One Laptop per Child initiative, which seeks to provide a $100 laptop to every child in the world. Squeak programs designed by local teachers could potentially be distributed with the computers. UNCW’s grant will engage 75 STEM educators and an estimated 150 students by the end of 2009.

Points of Pride

In recent years, our department:

- Had three faculty members inducted into the “Million Dollar Club” (grant awards totaling over one million dollars): Ron Vetter, Gene Tagliarini and Sridhar Narayan
- Achieved recognition for having the fourth highest externally funded research activity at UNCW
- Was featured in the UNCW re:search magazine on at least two occasions
- Was recognized for its summer robotics camp, an activity that has attracted the attention of the chancellor and the provost.
- Was recognized at a university event for successfully writing a “large” NSF grant proposal.

This is not an exhaustive list by any means. These are merely examples of our recent accomplishments that have been recognized at UNCW!
Congratulations to Our Recent Graduates!

Fall 2007 Graduates
Master’s Degrees: Shaun Ryan Border.
Bachelor’s Degrees: Jason Michael Forsythe, Ralph Harris (magna cum laude), Afshan Hina, Viet Do Pham, Thomas John Starr.

Spring 2008 Graduates

Bachelor’s Degrees: Brett Christopher Buddin (magna cum laude), Chance Leo Carroll, Ross Lewis Cranford, Michael Gene Faircloth, Daniel Lee Ferrell, Austin Robert Grimsman, Anthony Robert Habash, Daniel Feaster Heywood, Lyndon Kyle Holt, Micah Daniel Justad, Thomas Elliott Roberson, Uri Akeem Robinson, Thomas John Starr, Justin Dale Thompson (magna cum laude.)

Tech Talk

Trivia: Do You Know the Answers?
1) You’ve seen them: the boxes of distorted text that you have to be able to read and type correctly in order to proceed. Some people call them ransom notes, but do you know what the actual term for them is? (Hint: it’s an acronym.)

2) What does the acronym stand for?

Trivia answers:
1) CAPTCHAS (2) Completely Automated Public Turing test to Tell Computers and Humans Apart

Interesting Web Sites

Have you ever been on a computer that’s not yours and wished you had your bookmarks? If so, you should be using Delicious, http://del.icio.us/.

Have you ever been unsuccessful sending URLs because they are so long? Use http://tinyurl.com/ to create a permanent, shorter one that’s easier to share.

Edited by Google managers, engineers and team builders, http://googleblog.blogspot.com/ is a great way to get a sneak peek at some of Google’s newest tools and technologies.

Calling All Alumni

What are you doing now? Where are you living? Please send us news about yourself so that we may include it in the next newsletter! Professional and personal information is welcome. Send e-mail to mferner@uncw.edu.

Visit us on the Web:

www.uncw.edu/esc
Alumni and Friends:

Name: ____________________________________________

Dr./Mr./Mrs./Ms. First Middle Maiden Last Suffix

Home Address: _______________________________________________________

Street/PO Box City State ZIP + 4

Home Phone: ______________ Work Phone: __________ E-Mail ________________

Graduation date: ______________ Degree/Major: __________________________________

Employer: __________________________ Position: ____________________________

Spouse UNCW Graduate? Yes/No

Business Address: ______________________________________________________

Spouse: ______________________________________________________________

Dr./Mr./Mrs./Ms. First Middle Maiden Last Suffix

Spouse’s Employer: __________________________ Position: ______________________

Matching Gift Company? Yes/No

Enclosed is my gift of $__________ for the Computer Science Department Trust Fund (make checks payable to UNCW) or __________ charge my ___Visa or ___Mastercard Number: ____________________________ Expiration Date (mm/yyyy)_____

Name as appears on card: ________________________________________________

Signature: __________________________________________________________________

Return to: Advancement Services, University of North Carolina Wilmington, 601 South College Road, Wilmington NC 28403

This gift qualifies as a charitable donation. THANK YOU for your consideration and generosity!

News may be attached to this form, e-mailed to alumni@uncw.edu, or submitted electronically at www.uncw.edu/alumni.