Welcome Dr. Stan Kurkovsky

As the most recent addition to the Department of Computer Science at CCSU, I simply couldn’t miss an opportunity to introduce myself in this issue of Threads. My name is Stanislav Kurkovsky, but everybody calls me Stan. Originally, I am from Russia, from the wonderful city of Moscow, where I was born, grew up and lived for 22 years. And if you were curious – there are no bears walking on the streets, unless they manage to escape from the zoo or the circus. I graduated from Moscow Engineering Physics Institute, where I earned a BS and MS in Applied Mathematics. Actually, there was more computer science in the curriculum, but Russians have their own way of doing many things and giving different names to academic programs just happens to be one of them. While studying, I was also working as a freelance writer for a popular computer magazine and working part-time as a systems programmer mostly developing scientific software. Before moving to the US, I had a chance to work fulltime for a large consulting company working on a multimillion project and developing a payment and accounting system for a large banking corporation. My contract with that company called for frequent visits to the client located four hours of flight away from Moscow in Siberia (that’s where there are more bears!). That was fun, but I wanted a change of scenery, so I moved to the US, and had a chance to work fulltime for an

PhD in CS (University of Louisiana, 1999)
Research in distributed and pervasive computing
Upcoming book chapter on P2P applications

We would like to take this opportunity to thank our former secretary, Jeanne Phillips, for the past 11 years of faithful and tireless service to the faculty, staff, and students of the CS department. She has served us in so many ways. Her patience and willingness to help, even beyond the call of duty, has been very highly appreciated. Jeanne has certainly been a significant presence for the department during these past years.

And Jeanne, this we dedicate to you . . .

Some People

Some people come into our lives and quickly go. Some people move our souls to dance. They awaken us to new understanding with the passing whisper of their wisdom.

Some people make the sky more beautiful to gaze upon. They stay in our lives for a while, leave footprints on our hearts, and we are never, ever the same.

Author Unknown

We will miss you. All the best Jeanne, from all of us!

(cont’d page 5)
What is Accreditation?
Dr. Bradley Kjell

I once taught in a computer science department where some graduating seniors were still unsure about the difference between if-then-else statements and while statements. Most had never written a program of more than fifty lines. Courses in this department sometimes consisted of students copying code from the textbook to the computer and then clicking on buttons to watch it run. These seniors had spent an enjoyable four years in a department that made few demands. But their pleasure came to an abrupt end when they graduated and found themselves competing for jobs that required a solid education and extensive programming experience. Some did not find professional-level employment. Their education had not prepared them for their future.

Accreditation is a way of ensuring that a department prepares its students for life after graduation. An accredited program periodically undergoes rigorous, comprehensive reviews that determine if it meets the quality standards that have been set by professional organizations. These standards ensure that graduates have the education and skills needed for employment or for graduate study. Representatives from industry and academia work to keep the standards current and appropriate for university-level study.

There are two forms of accreditation: institutional accreditation and program accreditation. Institutional accreditation is for an entire university. CCSU is accredited by the New England Association of Schools and Colleges. Program accreditation is for a specific degree program such as our B. S. in Computer Science (Honors) degree. This type of accreditation shows that a degree program meets the standards of a specific field. Our B. S. in Computer Science (Honors) degree is one of only 200 programs that are accredited by the Computing Accreditation Commission of ABET, Inc. (CAC of ABET) (http://www.abet.org/). CAC is the only recognized organization for computer science accreditation.

How important is it to graduate from an accredited degree program? It is vital to graduate from an accredited university, and CCSU is certainly accredited. It is also important to graduate from a department that offers high quality courses, and preferably with an accredited degree. Some employers recruit only graduates from accredited programs. Some graduate schools prefer graduates of accredited programs. In some states, registration and licensure boards require accreditation.

The CS Department also offers a B. S. in Computer Science (Alternate). This program has fewer math and science requirements than are required for accreditation, and is not accredited by CAC. However graduates of this program should not worry. The courses that make up this program are the same courses that go into our accredited program, and graduates will be nearly as well prepared as with the Honors program. New students should plan on the Computer Science (Honors) degree since it provides the best preparation for a world where computers, mathematics, and science are increasingly important. These three subjects are the best possible preparation for employment in a rapidly changing world.

In the future, computer science accreditation is likely to become increasingly important. As the economy moves in the direction of a “knowledge economy,” greater numbers of competent computer scientists will be needed. Already in Connecticut, ten percent of workers are engaged in software or information technology, and this number is expected to increase (www.ctdol.state.ct.us). The CCSU Computer Science Department will work to maintain its accreditation to ensure that students are competently prepared to meet this demand.
ACM Programming Contest held at Western New England College
Dr. Irena Pevac

On Saturday, October 29, 2005 the CCSU Blue team participated at the Programming Contest organized and sponsored by ACM and held at Western New England College, Springfield, Massachusetts from 9:00AM – 4:00PM.

Computer Science Department students William Klein, Julie Miceli and Allan Willard were CCSU Blue team members. They were coached by students in the second team solved 5 out of 7 problems which was enough for second and third place. Simon’s Rock College students solved 4 problems and were fourth. Williams, Trinity College, and University Laval teams solved three problems and were ranked fifth, sixth and seventh.

Central Connecticut State University students solved two problems just like teams from UCONN, SCSU, Worcester Polytechnic Institute team 2, Siena College, Trinity team 2, and Bryant University. The CCSU team ranked 11th based on the timing of the completion. Ranking in the middle of the group of 19 strong teams confirms once again that the CCSU Computer Science program produces graduates with solid programming skills.

The CCSU Blue team ranked higher than Siena College team 1, Trinity team 2, Bryant team 1, Worcester Polytechnic Institute team 1, Plymouth State University, University of Bridgeport, Siena College team 2 and Bryant University team 2.

We hope that the CCSU Blue team will do even better in next years’ competition!

There were 19 teams from colleges and universities from the entire New England area.

Professor Irena Pevac. There were 19 teams from colleges and universities from the entire New England area. The actual competition lasted 5 hours and each team was given the same seven problems. Students had to produce an algorithm and then implement the algorithm in a programming language of their choice. Possible programming languages were C, C++, and Java. The last requirement was that the problem running on the computer had to be solved in a time frame of less than two minutes. This last requirement meant that only the best way of solving the problem was considered as an acceptable solution. Teams were ranked based on the number of solved problems whose solution run below two minutes. Those who solved the same number of problems were ranked based on the time when they submitted the last problem that was considered an acceptable solution.

The students from MIT solved all 7 problems an hour before the deadline. Harvard had two teams. Students in the first team solved 6 and

Issues in Clinical Engineering and Computing

On September 24, 2005, Brian M. O’Connell was a plenary speaker at a conference at the University of Stuttgart. His address to the conference was titled, “Patient Safety, the Ethical and Social Implications for Clinical Engineers” and included discussion of the increasing role of medical informatics within clinical engineering. The conference was co-sponsored by the International Federation of Medical and Biological Engineering and the World Health Organization.

Further information: http://www.bmt.uni-stuttgart.de/biomedea/biomedea_iii.htm

REMEMBER WHEN . . .

- An application was for employment and a program was a TV show.
- A website was a spider’s home and a virus was the flu.
- Log on was adding wood to the fire and a hard drive was a long trip on the road.

Ethics at IFIP

Brian M. O’Connell was an invited speaker at the International Federation of Information Processing (IFIP) conference on Computers and Social Accountability, held at the University of Turku in Finland. The conference took place on June 28, 2005. Dr. O’Connell spoke about the issue of privacy within computing and the contributions of professional societies in addressing these issues. Conference delegates came from Australia, Canada, Europe, South Africa, New Zealand and the United States.

Distinguished Honors

It is with great pleasure that we announce the following Computer Science majors who have obtained a GPA of 3.5 and higher:

CS-Honors Program
Andrew Sotzing
Steven Bazinet
Daniela Hristova
Anthony DeCusati

CS-Alternative Program
Sandra Andstrom
William Everett
Bao Le
Mariana Ormaechea-Lugones
Kenneth Pacileo
Le Phong
Jared Linde
David Maddock
John Beas
James Gleckler
David Raposa
Eric Larson
Daniel Bernier
Marilyn Marin
Matthew Mihic
Mitchell Miller
Louis Rychling

Congratulations to all and keep up the good work!

Social Implications of Computers and Medicine

On June 2, 2005, Brian M. O’Connell delivered an address to a plenary session of the International Council on Medical and Care Compunetics (ICMCC) Annual Event at the Hague, Netherlands. The topic was, "Understanding the Social Implications of ICT in Medicine and Health: The Role of Professional Societies". The ICMCC is a global professional organization comprised of academics and professionals within the health information and bio-engineering disciplines, with the mission “to promote enhanced health, well-being and empowerment for individuals and communities, through the creative interdisciplinary application of digital tools and technologies”. Dr. O’Connell was joined as a featured speaker by Michael Lightner, president-elect of the IEEE and Joachim Nagel, President of the International Federation of Medical and Biological Engineering.

Dr. O’Connell has been appointed scientific chair for an international conference on computer standardization and interoperability within healthcare that will be held in February of 2006 at the Hague in the Netherlands.

For further information: http://www.icmcc.org/

Thought for the day:

"To study and not think is a waste. To think and not study is dangerous."
- Confucius
Welcome Dr. Stan Kurkovsky
(cont'd from page 1)

US, where the University of Louisiana offered me a scholarship to study computer science. I couldn’t resist the offer when I figured out that I would be able to spend as much time as I want in New Orleans and if I’d become bored of that, I could always go fishing in the scenic Louisiana swamps.

As they say in the Cajun country, Laissez les bon temps rouler, or Let the good times roll! And did they roll! I cannot recall missing any Mardi Gras or St. Patrick’s day in New Orleans while I lived in Louisiana. While not in New Orleans, I went on countless fishing trips to swamps, bayous, lakes, river deltas, piers and oil rigs in the Gulf of Mexico. If fishing wasn’t enough fun, there were plenty of opportunities for crabbing – nothing really beats an ice chest full of blue crab that you just caught yourself.

Well, no, there is one thing and that’s a 40 pound bag of live crawfish (which you cannot really catch yourself) – and that’s a perfect recipe for a crawfish boil party with good friends. If you live in south Louisiana and fishing or crabbing isn’t your thing, you can always go into the swamps and get yourself a nice tasty alligator. That’s actually illegal without a special license, but very few people really care. Well, would you care if there were drive trough bars all around?! I actually did catch a gator on one occasion and here’s a picture with a documented proof. To save you from guessing – I am the one wearing glasses.

Having mentioned all the good things that life throws your way when you are working on your PhD and live in south Louisiana, there’s one more – that’s keeping your research advisor happy; otherwise the university would stop paying your stipend and tuition. So, I had to dedicate a small fraction of my busy schedule to that. The result was that after a long 3.5 years of suffering in the doctoral program I finally managed to write a thesis and convince my research advisor and the dissertation committee that it was worth of awarding me a PhD. After seeing my gator photo, they had no other chance but to agree.

My job hunt led me to the second largest city in Georgia where Columbus State University is located. There I learned what it really means to be on the other side of the fence – that is being a teacher. I found some great friends there, but I also felt that I am getting a serious overdose of southern hospitality, so when I received a job offer from Central, I accepted it with no hesitation. As of this summer, I am officially a Connecticut resident, thoroughly enjoying living and working here. On the first day of our house hunt, my wife and I found a great brick house in Newington, where we now spend our days working as faithful servants to our cat Tuna (yes, the gator had to stay back in Louisiana).

When my cat master allows me to, I am trying not to forget about my duties of Associate Professor at the CS department at Central. Besides teaching my current courses, I am looking forward to teaching Networks and Software Engineering in spring 2006 – I already have ideas for some great projects. I am also eagerly anticipating an upcoming trip to Japan to attend the International Symposium on Ubiquitous Intelligence and Smart Worlds, where I am serving on the Program Committee and will be presenting a research paper on context-aware mobile marketing applications. Currently, I am working with four graduate students from our CIT program on a project that is aimed at studying the performance of web services implemented on different platforms and tested under different levels of load stress. Now we are in the final phases of experiments and gathering statistical data. Given my research interests in pervasive and distributed computing, I have recently signed a contract with the publisher John Wiley and Sons to write a book chapter on peer-to-peer network applications, which will be included in the upcoming Handbook of Computer Networks.

As you can see, I am keeping myself fairly busy, but I am never too busy to speak to visitor who happens to wander into my office. I am usually hiding in Maria Sanford 203, so stop by and let’s have a chat about teaching, research or my favorite Cajun recipes.

Programming is 10% science, 25% ingenuity and 65% getting the ingenuity to work with the science.

“Virtual” means never knowing where your next byte is coming from.

There are two ways to write error-free programs, only the third one works.

“640K ought to be enough for anybody.” - Bill Gates, 1981

The best file compression around: “DEL *” = 100% compression.

Error: Keyboard not attached. Press F1 to continue.
From the Computing Research Association: The Status of Women in Computing Research
Dr. Joan Calvert

In addition to encouraging students to consider following the B.S. Computer Science Honors course of study, we also are very interested in inviting more women to consider majoring in computer science.

The following is an excerpt from the CRA-W website http://www.cra.org/Activities/craw/index.php:

CRA-W's goal is to increase the number of women participating in Computer Science and Engineering research and education at all levels.

The goal of the CRA Committee on the Status of Women in Computing Research (CRA-W) is to take positive action to increase the number of women participating in Computer Science and Engineering (CSE) research and education at all levels. For more information, read about CRA-W's background.

The Computer Research Association's Committee on the Status of Women in Computing Research (CRA-W) is an action oriented organization dedicated to increasing the number of women participating in Computer Science and Engineering (CSE) research and education at all levels.

In addition to increasing the number of women involved, we also seek to increase the degree of success they experience and to provide a forum for addressing problems that often fall disproportionately within women's domain. We are hopeful that the committee activities will also have a positive impact for other underrepresented groups in CSE and we are committed to improving the working environment for Computer Scientists and Engineers of both genders.

CRA-W is funded by the National Science Foundation which assists in travel to meetings and seed money for the committee's projects. Larger projects such as the Mentoring Workshops have successfully sought separate funding to support their efforts. CRA-W's sponsored projects have included the "Expanding the Pipeline" columns in Computing Research News, the Systems-Academia electronic network, the development and maintenance of a database of Ph.D. women in CSE, the Distributed Mentoring Project, and a series of Mentoring Workshops for women at various major Computer Science conferences. Larger projects such as Mentoring Workshops and Collaborative Research Experiences for Women have successfully sought separate funding from organizations such as the Education, Outreach, and Training Partnership for Advanced Computational Infrastructure (EOT-PACI) to support their efforts.

CS Faculty Publications & Updates

Dr. Irena Pevac's paper entitled Analyzing and Visualization of Time Complexity in Fractal Algorithms has been published by Athens Institute for Education and Research (ATINER). It will appear in their volume Computer Science and Information Systems, (PART VI: Computer Science Research in relation to Theoretical and Natural Sciences and Engineering), edited by Dr. Panagiotis Petratos & Dr. Demetrios Michalopoulos. pages 337-350 ISBN 960-88672-3-1

Dr. Pevac has published the book Recursive Examples in Java which is a supplement for Computer Science courses CS152, CS463 and CS501. It covers recursive examples on integers, arrays, linked lists, linked trees, and graphics. The publisher is XANEDU Original Works. ISBN 1-59399-212-2


Dr. Rathika Rajaravivarma's article titled ‘A Games-Based Approach to Teach the Introductory Programming Course’ is to be published in the December 2005 issue of the SIGCSE Bulletin—inroads.

Dr. Rathika Rajaravivarma has presented papers this year at the ASEE-NE, ISECON, and CCSCE05 conferences on varied topics. Dr. Rajaravivarma also participated in the Computer Network and Security workshops and the Supercomputing workshop this summer. Earlier in August she served in the NSF SBIR/STTR panel on NanoElectronics. She has also been chosen as a panelist for the NSF Graduate Research Fellowship program to be held in February 2006.
Tapia 2005: An Invaluable Experience for Students and Professionals

Dr. Mark A. Friedman reports that the 2005 Richard Tapia Celebration of Diversity in Computing Conference was a resounding success. Nearly 350 attendees, including 200 students, participated in over 20 technical talks, over 20 poster presentations, 10 panel discussions and several workshops and birds-of-a-feather sessions. Thanks to the generosity of the conference sponsors, including ACM, the IEEE Computing Society and CRA, and a grant from the National Science Foundation, over 100 attendees received scholarships which covered their registration as well as travel and hotel expenses. Invited talks from Dr. Mark E. Dean from IBM Almaden Research Center, Dr. Francine Berman of the San Diego Supercomputer Center, Dr. Jan Cuny representing the National Science Foundation, Dr. Thomas M. Guerrero from the University of Texas M. D. Anderson Cancer Center and Sandra Begay-Campbell of Sandia National Laboratories were excellent, well attended and well received. Attendees found the conference's keynote and plenary speakers quite approachable offering valuable information towards helping their careers move forward. Attendees had an opportunity to speak with representatives from over 30 universities and companies who participated in the Tapia Career Information Center, including Google, IBM and Microsoft.

Said Dr. Friedman, the 2005 Tapia Program Chair, "I had heard much acclaim towards past Tapia conferences. Still, as a first-year Tapia conference attendee, I did not anticipate the high level of energy at the conference, the quality of presentations and research activities, the opportunities to network with so many approachable and valuable people, and the commitment to work towards diversifying computing by conference attendees that I experienced at the conference.

Conferences such as Tapia and the Grace Hopper Celebration of Women in Computing are invaluable opportunities that clearly raise the education, research and careers of participants to new levels and should not be missed. When Tapia 2007 arrives, I plan to be much more proactive in encouraging individual students and professionals to participate, and I encourage other faculty and professionals to do the same." Dr. Friedman will continue on with the conference serving as Conference Chair for the 2007 Tapia Conference. Information on the Tapia conference is available at http://www.ncsa.uiuc.edu/Conferences/Tapia2005. Information on the Grace Hopper conference is available at http://www.gracehopper.org.

From the Chair’s Desk …

Advising Tidbits:
Be creative!

Given the increasing number of students that have come to my office lately with questions regarding our Computer Science Honors major, I thought it helpful to take this opportunity to respond. Those who are currently following the Computer Science Alternative course of study are encouraged and invited to consider changing to the Computer Science Honors major.

The BS CS Honors major has the additional recognition of being accredited by the Computing Accreditation Commission of ABET, Inc. (www.abet.org) the recognized accredditor for college and university programs in applied science, computing, engineering, and technology. Check our website http://www.cs.ccsu.edu for more information.

The additional requirements of the BS CS Honors major include two additional mathematics courses, two additional courses in the sequence of a Physics and Earth Science, Biology, or Chemistry major, a physics lab, and a course in ethics and technology. No additional concentration is required. Students self-select into the B.S. CS Honors program. There is no formal application or acceptance process.

CS ADVISORY BOARD

The Computer Science Advisory Board meeting will be held on November 18, 2005. The Advisory Board members include:

Art Adolfson—Tunxis Community College
Tim Davoll—Computer Sciences Corporation
Steven Demurjian—University of Connecticut
Earl DuBack—General Dynamics
Mark Friedman—The Richard J. Roman Institute
Linda Hirning—St. Paul Travelers
Clifford Pelletier—Professor Emeritus
Pat Sanders—Coastal Oceanographics, Inc.

Those who are currently following the Computer Science Alternative course of study are encouraged and invited to consider changing to the Computer Science Honors major.

(continuation on page 9)
I have had the privilege of taking Computer Science classes at three universities, Central CT State University, University of Connecticut and Northeastern University. Currently I am pursuing my Masters at Northeastern University. My studies have included mainly Computer Security classes along with a handful of general course studies, Algorithms, Programming Languages, and Parallel Computing. Some of the more notable projects and topics have included: writing languages and interpreters to mimic Scheme and Java, writing parallel programs using TopC, writing a secure Instant Messenger which encrypts messages using perfect forward secrecy, testing the Instant Messenger and our servers in the Network Security Lab during an all day hack fest in which each team tries to break/crack/smash the other team’s computers, and modifying Festival. Also, I am a Teaching Assistant for a class that is equivalent to CCSU’s CS 151.

Since life has afforded me the experience of course work at three different colleges and being involved as a teaching assistant, I have developed my own opinion as to what should and shouldn’t be taught in a Computer Science Program. I believe it is absolutely necessary to meet once a week for a lab session for introductory classes such as CS 151 and CS 152. This makes a dramatic difference in how swiftly a student can pick up the language and quickly reach more complex topics. At Northeastern University we use Scheme as the first language to teach. In lab we touch on such topics as HTML creation using Scheme, game design, divide and conquer techniques, and recursion, just to name a few.

I suggest a course on Testing be offered. I was discussing the subject with a PL PhD student in my program and we both have never heard of a course about Testing, yet it is one of the most important topics in Computer Science.

The Programming Language course should focus towards how to write and interpret a language. Doing so gives a much better idea of how languages are really compiled and executed. At the same time you can see how type checkers work, grammars are written, etc.

So what you get is the same topics covered as are currently covered yet you come away with a greater understanding of programming languages in general. If you understand the subject you can certainly simplify it to whatever point you need to. We actually had a very simple grammar that students were asked to write an interpreter for in the class in which I was a teaching assistant. It took a grammar such as set x 2, +(deref x) 3. This did all simple mathematical operations and allowed referencing and deferencing via a store. If you’re really trying to stress the idea of Computer Science rather than producing programmers this is a vital topic for students to understand. Once you understand how a programming language is written it opens up a whole new way of looking at how current languages operate and how to modify these languages to do what you want with them. The beauty of teaching a PL course in this method allows you to teach and emulate any language. Above all else programming projects must be stressed. You can’t learn any of this without writing code to do so.

My employment to date, which is roughly 15 months since graduating from CCSU, is:

**Teaching Assistant for NU** – teaching freshmen Scheme in a laboratory environment

**IBM** – I interned with IBM in Lexington, MA over the summer working to modify web pages to meet Microsoft’s handicap accessibility standard.

**CADLab Researcher** – Working on a project to modify Festival’s voice synthesizer. Currently we are being funded by NU and NSF. Through linguistic studies we have found that human’s change certain parameters of their voice when speaking in loud environments. We are adapting Festival to mimic these changes in hopes of making a more understandable synthetic voice.

www.cadlab.neu.edu
www.festvox.org

**Digital Mixer** – An updated and more stable release of my senior project is in the works. It will soon find a home here, hopefully: www.ccs.neu.edu/home/everettm/mixer

Besides being more stable and more user friendly, some of the more notable add ons include: knobs replacing Jsliders, LowPass and HighPass filters.
On November 4, 2005 Central CT State University had honored members of our teaching community for the nominations they received for excellence in teaching. There were a total of 42 faculty members chosen for the honor roll. After several other nominations, our very own Dr. Fatemeh Abdollahzadeh was nominated again. Congratulations, Dr. Abdollahzadeh, on a job well done!

When a student decides to switch from Alternate to Honors, a change of major form must be filled out and submitted to the CS office at which time an appointment would be set up with me to discuss the change of major and clarify any further questions.

Additionally, Computer Science is becoming increasingly popular as a field of concentration for students majoring in biology, chemistry, physics, criminology, psychology, and communication. Anthropology and computer science is a wonderful combination; in fact, just this afternoon I met with a first year student who intends to major in cultural anthropology with a computer science concentration. What excellent possibilities these different combinations present!

Excellence in Teaching Award

On November 4, 2005 Central CT State University had honored members of our teaching community for the nominations they received for excellence in teaching. There were a total of 42 faculty members chosen for the honor roll. After several other nominations, our very own Dr. Fatemeh Abdollahzadeh was nominated again. Congratulations, Dr. Abdollahzadeh, on a job well done!

The Gamma Chapter of Upsilon Pi Epsilon at Central Connecticut State University

About Upsilon Pi Epsilon
Upsilon Pi Epsilon (UPE) was founded at Texas A&M University in 1967. It is for students and faculty who exhibit superior scholastic and professional achievement in the computing and information disciplines. UPE is the only National Honor Society for the computing and information disciplines recognized for such by the Association for Computing Machinery (ACM) and IEEE Computer Society. They are a member of the ACHS (Associations of College Honor Societies) - the parent organization for all academic honor societies in North America. UPE is the founding sponsor of the International Collegiate Programming Contest in 1977 and the only continuous sponsor of the same. There are chapters at over 220 colleges and universities in the United States and overseas. Upsilon Pi Epsilon distributed over $44,000.00 in student awards in the year 2005.

Faculty advisor:
Dr. Rathika Rajaravivarma.

Past members are:
+ Paul Borysewicz
+ Denise Cordner
+ Michael Everett
+ Alan Fafard
+ Raul Filigrana
+ Greg Pawelczyk
+ Viral Shah
+ Todd Steinackle

Current members include:
- Steven Bazinet, President
- Julie Miceli, Vice President
- Donald Morrone, Treasurer
- Melissa Parmlee, Secretary
- Michael Kusek
- Stephen O’Brien
- Ross Pitman
- Daniel Reis
- Adam Sharp
- Mihai Smuliac

Computers and Libraries
The Connecticut Special Libraries Association meeting, which was held at the University of Connecticut School of Law on October 6, 2005, featured Dr. Brian M. O’Connell as the guest speaker. Dr. O’Connell spoke of the numerous issues raised by computers as they relate to libraries and scholarship.

From the Chair’s Desk...
(cont’d from page 7)
Student Competitions Showcase and Tune Academic Knowledge and Skills

Dr. Mark Friedman

Projections for career opportunities over the next decade in the computing and IT professions continue to far exceed those of engineering, physical sciences, biological sciences and mathematics -- despite fears of globalization and off-shore outsourcing regularly published in the press (US Department of Commerce, 2004). As Shirley Jackson, President of Rensselaer Polytechnic Institution (RPI) states, "The engine of our national economy, upon which our safety and security, our well-being, our quality of life, and our global competitiveness, indeed, our national preeminence depends, is powered by the technological and scientific discoveries and innovations made by scientists and engineers."

Still, to succeed today as a computing professional, students must prepare themselves beyond traditional studies and the academic classroom; develop skills beyond programming and technology including communication, teamwork and project management; demonstrate proficiency in technologies and tools needed in industry; and differentiate themselves as knowledgeable, adaptive and promising scientists and engineers. Student competitions, such as those sponsored by the Association of Computing Machinery and the IEEE Computer Society, provide a means through which students can tune and showcase the knowledge and skills they have acquired in their academic studies. The ACM International Collegiate Programming Contest (ACM-ICPC), the Computer Society International Design Competition (CSIDC) and the IEEE Computer Society 60th Anniversary History Competition (CHC60) are three prominent student computing competitions.

The 30th ACM International Collegiate Programming Contest (ACM-ICPC), sponsored by IBM, features thousands of teams competing in regional contests held from September to December 2005 world-wide.

Still, to succeed today as a computing professional, students must prepare themselves beyond traditional studies and the academic classroom; develop skills beyond programming and technology including communication, teamwork and project management; demonstrate proficiency in technologies and tools needed in industry; and differentiate themselves as knowledgeable, adaptive and promising scientists and engineers. Student competitions, such as those sponsored by the Association of Computing Machinery and the IEEE Computer Society, provide a means through which students can tune and showcase the knowledge and skills they have acquired in their academic studies. The ACM International Collegiate Programming Contest (ACM-ICPC), the Computer Society International Design Competition (CSIDC) and the IEEE Computer Society 60th Anniversary History Competition (CHC60) are three prominent student computing competitions.

The 30th ACM International Collegiate Programming Contest (ACM-ICPC), sponsored by IBM, features thousands of teams competing in regional contests held from September to December 2005 world-wide.

Awards, prizes, scholarships and bragging rights will be at stake for some of the world's finest university students of the computing sciences and engineering.

Seventy-five teams will advance to the World Finals in San Antonio, April 9 - 13, 2006. Awards, prizes, scholarships and bragging rights will be at stake for some of the world's finest university students of the computing sciences and engineering.

Increasingly, teams are using standards-based and open source technologies such as Java, Eclipse and Linux. These technologies used at the ACM-ICPC World Finals are being adopted at the preliminary contests. Last year, 57 percent of Regional Contests offered Linux as a programming platform; 97 percent offered Java; and 47 percent offered Eclipse. "Computer programming has changed dramatically over the last three decades, and this contest has become the arena at which the best and brightest programming students pit their skills and creativity against each other," said Douglas Heintzman, Director, Technical Strategy, IBM Software, and Sponsorship Executive of the ICPC. "This contest gives university students -- who are the technology innovators of tomorrow -- the chance to experience leading-edge programming environments, while honing skills they will need in their careers." Information on the ACM International Collegiate Programming Contest is available at http://icpc.baylor.edu/icpc/.

The goal of the 7th Annual Computer Society International Design Competition (CSIDC), sponsored by Microsoft, is to advance excellence in education by having student teams design and implement computer-based solutions to real-world problems. The theme of this year's CSIDC is Preserving, Protecting and Enhancing the Environment. Teams of four undergraduates and a faculty mentor participate in the competition. Teams are invited to design and construct a computer-based system to solve a problem of the team's own choosing.

The only restriction is that the project must have an environmental theme and the team's system should be of benefit to society. The spirit of the competition is ingenuity and originality in using PCs, hand-held computers or microcontrollers to create a computer-based system that performs a socially useful function. Teams must be able to create and demonstrate a working prototype of their project. Teams submitting the best ten reports will compete at the CSIDC World Finals where a Judging Panel will select the winning teams on the basis of a demonstration of their operational prototype and their team's formal presentation. First, second and third prize at CSIDC 2006 include an award of $20,000, $12,000 and $8,000, respectively. Additionally, the Microsoft Multimedia Award will be presented to the team whose presentation at the World Finals makes the most innovative, exciting and appropriate use of multimedia, and the

( cont'd page 11)
Microsoft Award for Software Engineering will be presented to the team whose project exemplifies the best use of good software engineering principles to the design and testing of their prototype. The application deadline for CSIDC is December 1, 2005. Information on the International Design Competition is available on the Computer Society’s website at http://www.computer.org.

The Computer Society’s 60th Anniversary Computer History Competition, CHC60, requires a team of four undergraduates to construct a website that covers a topic in the history of computing. Students may select their own theme; however, the judges are looking for depth rather than breadth. Teams should assume that their website will be viewed by computer professionals or students of computing; that is, a team can assume that the viewer will have a general knowledge of computing and its terminology but that the viewer will not be an expert in the subject of the website. The competition aims to encourage students to work together as a team to design, research, and implement a high-quality website; to stress the importance of transferable skills such as time management and the division of a major task between a group of people; to make students aware of the rich and exciting history of the computer and to encourage them to carry out research into computer history; and to teach students all aspects of the design of a website including usability, navigability and robustness. The first-prize in the competition is $10,000. The application deadline for CHC60 is February 6, 2006. The final date for the submission of URLs is July 14, 2006. Information on the Computer History Competition is available on the Computer Society’s website at http://www.computer.org.

From the successful mission of the Mars Rover to the commercial popularity of robot vacuum cleaners, the field of autonomous robotics has become one of the major areas of activity in both computing research and application. The Department has responded to this situation by providing its students with the opportunity to increase their knowledge and experience within this area. The Department’s Introduction to Autonomous Robotics course acquaints students with the theoretical and practical aspects of robotics. Students begin by learning about the dynamic history of robot development and the key theories of robotic intelligence. They then enter the Computer Science Lab to create autonomous, mobile robots that perform a number of activities, including navigation, advanced sensor detection and goal-based behaviors. Students who have completed the course are eligible to take an independent study that currently involves a large-scale robotic platform, similar to that of NASA’s Mars Rover. Students Tim Ouellette and Adam Sharp, working with Drs. Brian O’Connell and Bradley Kjell have already completed the groundwork for advanced motion and computer vision capabilities that will allow the robot to navigate around the campus grounds by next Spring. Another course graduate, Will Klein is currently exploring the capabilities of robotic processors in an independent study undertaken with Dr. O’Connell. Photos and movies of our robotic projects will soon be available through the Computer Science Web site. We also hope to take the completed robots to area high schools to encourage students to consider the exciting opportunities afforded by a Computer Science major.
The Computer Club is located in The Computer Projects Laboratory in room 314 of the Maria Sanford Hall. Our lab is composed entirely of dual booting Linux/Windows workstations to accommodate all academic Computer Science student projects. The room plays host to many of our club projects as well as classroom projects. Computer Club meetings are held regularly in the lab and occasionally IEEE meetings take place as well. Some of the other activities held by the Computer Club include:

♦ Student tutoring
♦ The Club Wiki web server
♦ Student web hosting that is free for all CS students, club members, and student organizations
♦ Nintendo DS development, is a hot new Club project and the subject of 2 senior project groups
♦ Robotics construction and programming projects
♦ The Annual ACM International Collegiate Programming Contest
♦ PS2 Development of Linux, cluster computing, applications, and game programming.
♦ Two clusters, both a Mac and PC Cluster.
♦ The IEEE Computer Society International Design Competition (CSIDC) is a multidisciplinary challenge to undergraduates to develop original and unique computer-based systems that perform a socially useful function.
♦ A Linux Gaming Server for gaming and other accessory applications.

There are also other competitions as well as trips. Come check out everything the Computer Club has to offer at http://club.cs.ccsu.edu. Our website is a great place to brainstorm with other CS majors!