The «SET» House – pg. 8
Graduate Program Updates – pg. 8
The CyberSecurity Certificate – pg. 9
Bioinformatics – pg. 10
Genome Annotation – pg. 11
Apple Teams Up for «CS at NIU» Logo Reveal – pg. 11
INTRODUCTION

This newsletter is published biannually by the Department of Computer Science at Northern Illinois University in conjunction with the CSCI Student Advisory Board (SAB) and the Student Chapter of the Association for Computing Machinery (ACM). The CSCI Advisor is the result of collaboration between departmental faculty, staff and students and is revised and assembled by MEG GARDNER, editor and undergraduate secretary to the department. The newsletter will help our students become more informed about our activities and projects, and is also sent to prospective students, alumni, and employers seeking information about our department. It is possible to access previous editions of the CSCI Advisor via the official departmental website at www.cs.niu.edu.

REGISTRATION INFORMATION

Students may access the Current Schedule of Classes via the Office of Registration and Records at http://www.reg.niu.edu/regrec under the heading “Course Information: Find Courses.” Current registration reference numbers for Computer Science courses can be found on the department’s homepage at www.cs.niu.edu under the “Course Offerings” listing, and are also posted on the bulletin board outside the Computer Science Department main office, Psychology/Computer Science Building (PM) Room 460.

PRE-MAJOR MEETINGS

Students taking courses during the summer who have not yet attended a mandatory Pre-Computer Science Major/Minor Declaration Meeting should make arrangements to do so. Such arrangements can be made during the early weeks of the current term by contacting the department’s receptionist, Meg Gardner, at PM 460, Psychology/Computer Science Building.

DECLARING A MAJOR/MINOR

If you have already attended a Pre-Computer Science Declaration Meeting and are eligible to declare a computer science major or minor but have not yet done so, please stop by the departmental office immediately for an application. Major/Minor applications should be submitted between June 25-July 13 for Summer 2007 and Sept 10-Oct 5 for Fall 2007.

THE CSCI MINOR

The Computer Science Department began offering an undergraduate Computer Science minor in Fall 2005. To be eligible for declaration, students must have completed or be enrolled in CSCI 240 and have credit for or be placed through MATH 110. The following courses are also required to complete the minor:

- CSCI 241: Int. Programming in C++
- CSCI 330: The UNIX System
- CSCI 360: Assembler
- One CSCI course numbered 400+

At least six of these semester hours must be taken at Northern. Interested students must sign up for and attend a Pre-Computer Science Declaration Meeting. Subsequently, prospective minors should submit their declaration applications to the department between June 25 and July 13, 2007 during the summer or between September 10 and October 5, 2007 in the fall.

SUMMER 2007 GRADUATES

Students who complete all requirements for their degrees during the summer semester are eligible to participate in the December Commencement Ceremonies later this year. Undergraduates wishing to do this must obtain permission from Dr. SUE W. DOEDERLEIN, Associate Dean, College of Liberal Arts and Sciences. Graduate students should address their petitions to Dr. BRADLEY BOND, Associate Dean, Graduate School.
ON-CAMPUS COURSES

► FOR UNDERGRADUATE STUDENTS

The SUMMER 2007 Computer Science on-campus undergraduate course offerings include CSCI 210: Elementary Programming, CSCI 240: Computer Programming in C++, CSCI 241: Intermediate Programming in C++, CSCI 330: The UNIX System, CSCI 360: Computer Programming in Assembler, CSCI 465: External Data Structures, CSCI 466: Database/Data Communications Software, CSCI 467: Systems Design and Analysis, and CSCI 475: Web Development. In addition to the above offerings and the previously listed online courses, the following topic courses are available for the summer semester:

CSCI 490B: TPC: AI Games
   Dr. Joel Jeffrey
CSCI 490K: TPC: PERL
   Dr. Ibrahim Onyuksel


CSCI 490N: TPC: Graphics
   Dr. Kirk Duffin
CSCI 490Q: TPS: Security Basics
   Dr. Neil Rickert

► FOR GRADUATE STUDENTS

The Department’s SUMMER 2007 semester on-campus 500-level graduate courses are CSCI 575: Client-Side Web Development and CSCI 589: Object-Oriented Design and Programming, in addition to the following topic courses:

CSCI 580A: TPC: AI Games
   Dr. Joel Jeffrey
CSCI 580C: TPC: PERL
   Dr. Ibrahim Onyuksel

FALL 2007 on-campus graduate courses will include CSCI 530: Computer Networks, CSCI 531: Network Applications Programming, CSCI 563: Systems Design and Analysis, CSCI 575: Client-Side Web Development, and CSCI 588: Database Concepts, in addition to the following topic courses:

CSCI 580A: TPC: Law & Ethic of Security
   Dr. Barnett Glickfeld
CSCI 580B: TPC: Graphics
   Dr. Kirk Duffin
CSCI 580E: TPC: Java
   Dr. Jim Henry
CSCI 580G: TPC: Bioinformatics
   To Be Announced
CSCI 580N: TPC: Genome Annotation
   Dr. Reva Freedman
CSCI 580V: TPC: .NET Programming
   Dr. Robert Zerwekh

Graduate students who would like to complete a reading course under CSCI 597: Graduate Reading in Computer Science, must secure permission from both the Computer Science Department and the individual professor with whom they wish to read.
ONLINE COURSES

The NIU CSCI Department began offering select courses online for the first time this spring. The following courses are available:

For SUMMER 2007:
- CSCI 210: Elementary Programming
- CSCI 330: UNIX
- CSCI 467: System Design & Analysis
- CSCI 476: Web Development
- CSCI 490Q/580U: TPC: Comp. Security
- CSCI 580K: TPC: CISSP Review

For FALL 2007:
- CSCI 205: Introduction to Computing
- CSCI 210: Elementary Programming
- CSCI 215: Visual Basic
- CSCI 275: Elementary Web Design
- CSCI 466: Database/Comm. Software
- CSCI 475: Client-Side Web Design
* CSCI 490Q: TPC: Security Basics
- CSCI 575: Client-Side Web Design
- CSCI 580D: TPC: Tele. Secur. & Network
- CSCI 580K: TPC: CISSP Review
- CSCI 490Q/580U: TPC: Principles of Security

*This course will transition to CSCI 350 this fall, and will be a more “hands-on” undergrad section, in contrast to the 490Q section cross-listed with 580U, which will not change. Please see the department for further details.

Please note that online courses require a very limited number of meetings for informational purposes and for the administration of exams. Students may wish to consult the Office of Registration and Records’ online Schedule of Classes at http://www.reg.niu.edu/regrec/ for the dates and locations of these meetings, as some of the upper-division courses will conduct them at one of our off-campus locations.

REGIONAL COURSES

The Northern Illinois University Computer Science Department’s Regional Courses are conducted at the Multi-University Center (MUC), Suite 200, 1010 Jorie Blvd., Oak Brook, IL; at NIU-Hoffman Estates (HEEC), 555 West Trillium Blvd., Hoffman Estates, IL; at NIU Rockford, 8500 East State, Rockford, IL; and at the Naperville campus, 1120 E. Diehl Rd., Naperville, IL. The graduate program is offered at the Oak Brook and Hoffman Estates sites; the undergraduate General Computer Science emphasis is offered in Rockford.

The SUMMER 2007 Regional Courses are:
- CSCI 470: Prog. in Java (NIU Rockford)
- CSCI 563: Syst. Des. & Analysis (MUC)

The FALL 2007 Regional Courses are:
- CSCI 440: Data Struct. (NIU Rockford)

More information about Regional Courses may be obtained from the Department of Computer Science (815-753-0378), or via the “LAS-CSCI” listing at http://www.outreach.niu.edu/rcc/. Information about graduate or student-at-large status can be obtained from NIU’s Graduate School – Telephone No. 815-753-0395 or website address http://www.grad.niu.edu/apply.htm.

TEACHING EVALUATIONS

Student evaluations of the department’s professors are scheduled for July 25 and 26 for the summer semester. Students are encouraged to participate responsibly in this exercise so that our teachers can obtain feedback on their teaching practices and performances. The department relies heavily on these evaluations in making administrative decisions. In addition, the results of the evaluations play an important role in selecting the department’s annual teaching excellence award winner.
SPECIAL OPPORTUNITIES FOR UNDERGRADUATES

UNDERGRADUATE TEACHING FELLOWS

Applications for Summer and Fall 2007 Teaching Fellowships should be filed by April 6, 2007. The criteria for these awards include a GPA of 3.0 or above in Computer Science coursework. Interested Computer Science majors can obtain applications from the department’s receptionist in PM 460.

GRADUATE OPPORTUNITIES FOR UNDERGRADUATES

Undergraduate students may be eligible to take a graduate course for undergraduate credit if they have:

1. a minimum of 90 credit hours
2. completed CSCI 440 or 464
3. at least a 3.0 GPA
4. departmental permission

Also, undergraduates who are scheduled to complete their graduation requirements in their final term without carrying a full load have the possibility for early admission into the Graduate School. This option allows students to combine both undergraduate and graduate studies in their last semester of undergraduate work.

See the department’s Director of Graduate Studies, Dr. GEORGE (JIM) HENRY, to investigate either of these possibilities if you are interested and believe that you are qualified.

In addition, undergraduates interested in attending graduate school in the field of Computer Science either at Northern or elsewhere are encouraged to speak with Dr. Henry about their plans.

INTERNSHIPS

Students will discover that there are numerous interesting, well-paid job opportunities available to declared Computer Science majors. Many of these internships are in the Chicago area, but there are also internship opportunities in San Jose, CA; Raleigh, NC; Minneapolis, MN; and other major metropolitan areas.

Academic credit can be earned for these jobs by registering for CSCI 390: Internship for undergraduates, and CSCI 590: Internship for graduate students. Earning credit for CSCI 390 is a convenient way to partially meet the three-hour 300-400 level elective requirements that declared undergraduate Computer Science majors must successfully complete. The reports filed to meet the requirements for internship credit are also useful documents to include in students’ job portfolios.

This year’s Spring Internship Fair was held on Wednesday, February 14, 2007 at the Convocation Center. There will be another Internship Fair during the fall semester on Wednesday, October 10, 2007. Information about internship opportunities can also be found at http://www.niu.edu/CareerServices/.

FULL-TIME JOB FAIRS

The NIU Office of Career Services will conduct its next Full-Time Job Fair on Wednesday, October 17, 2007. For more information about this important event you may consult their website at: http://www.niu.edu/CareerServices/.

Northern Illinois University’s fairs are among the largest campus-based job fairs in the country. In addition to these opportunities, the Career Services office posts announcements for job fairs held on other regional campuses. Interested students can obtain information about these fairs from the website mentioned above.
FULL-TIME JOB FAIRS (cont.)

Students exploring job opportunities should also visit the listing for Victor eRecruiting at the aforementioned website. In addition to job opportunities for alumni and current students, there are sample résumés as well as information about how to search for a position, places where previous graduates are employed, and other valuable services.

ACM NEWS

The Student Chapter of the Association for Computing Machinery (ACM) serves as a focal point for information regarding the advantages of association with this organization of computer professionals. The current NIU ACM officers for the 2006-07 academic year are as follows:

President: WILLIAM “ROB” LYMAN  
Vice President: STACEY ALDEN  
Secretary: TYSON STEELE  
Treasurer: ERIC HELSER

The ACM had to cancel and reschedule its first meeting of the spring semester, which was to involve a tour of the mainframe, due to snow. The organization convened for the first time, then, on March 6, 2007, when Career Services’ ROBERT HUFFSTUTLER and BOB NORWOOD presented once again the various services they offer to NIU students. During this important informational event, they also outlined a number of simple but practical (and extremely useful) tips regarding how to get the most out of career and internship fairs. On April 24, 2007, the NIU Chapter of the ACM will also be hosting a presentation on the history of computing by Dr. ROBERT RANNIE. In addition, the ACM will be electing officers for the next academic year and introducing new ACM faculty advisors, as Professors GEORGIA BROWN and AMY BYRNES are stepping down to give another faculty member (or members) the opportunity to get involved in this important academic organization.

In Fall 2006, the ACM welcomed KRISHNA KUMAR from Microsoft, who discussed XNA Game Studio Express, a new offering targeted at students and hobbyists for game development. XNA Game Studio Express is based on Visual C# Express 2005 and lets developers target both Windows and Xbox 360. Later in the semester, NIU alumni and Microsoft employee ANGELA BINKOWSKI spoke about her career and the impact of her coursework at Northern on the various jobs she has held. The ACM also took this opportunity to award prizes for the Fall 2006 programming contest, which drew in eighteen competing teams.

For details regarding past and upcoming ACM activities, please consult the following web address: http://www.cs.niu.edu/~niuacm.

COLLOQUIUM NEWS

PAMELA W. JORDAN, a researcher at the Learning Research and Development Center of the University of Pittsburgh, gave a colloquium talk on June 20, 2006. The LRDC is one of the preeminent locations in the world for the study of intelligent tutoring systems. Dr. Jordan is an expert in the use of natural language as an interactive modality in intelligent tutoring systems, as opposed to having to design yet another graphical user interface (GUI). “Natural language” is a term used by computer scientists for human languages to distinguish them from programming languages. Dr. Jordan’s lecture was entitled “Understanding Complex Natural Language Explanations in Tutorial Applications.” Her visit to Northern was sponsored by the Graduate Colloquium Committee. Dr. REVA FREEDMAN was the host for this visit; undergraduate and graduate students interested in more information about natural language processing or intelligent tutoring systems are invited to contact Dr. Freedman.
COLLOQUIUM NEWS (cont.)

Our spring semester colloquium speaker will be Dr. CHING Y. SUEN, an internationally renowned researcher and expert on pattern recognition from Concordia University in Montreal. His lecture, which will be on Tuesday, April 10 at 3:30 in PM 253, is entitled “Pattern Recognition and Applications.” In the business world, pattern recognition is often called “data mining” and is a popular and profitable technique. Pattern recognition is used in many areas of science, including bioinformatics and other fields, to find patterns in data. Dr. Suen’s visit is sponsored by the Graduate Colloquium Committee; his host will be Dr. JIE ZHOU. Students interested in taking a course in pattern recognition or doing research in the area are invited to contact Dr. Zhou.

MEET OUR MAJORS

A few of our Computer Science majors took the time out of their busy schedules to introduce themselves to our readers by responding to a brief Q&A. Here is what they said:

Name: Phani Dhar Adivi, 22
Hometown: Hyderabad, India
Degree I Am Seeking: M.S. in Computer Science
   (I have done my undergrad in MSVR Eng. College, in Computer Science Engineering.)
Current Job: T.A. (CSCI 295)
Favorite CSCI Course: 466 and 467
Hobbies: Playing cricket, web browsing, driving, partying and the remaining time, I try to spend that with my family and that’s most of my life.
Favorite Tunes: Green Day, Rolling Stones, Metallica
Book or TV Show Recommendation: I watch South Park, Friends, Family Guy, and Court TV.
Something you might not know about me is: Hmm, I am an open book and probably all who know me and are friends with me, I needn’t tell them more about me, ’cause they know everything about me.
Favorite Quotation: “Try and try ’til you succeed.”

Name: Stacey Alden, 22
Hometown: Mt. Morris, IL
Degree I Am Seeking: CSCI – General (Senior)
Current Job: I am an IT assistant for ITS Lab Operations, I do tech work for the computer labs and smart classrooms on campus. I am also a SET House leader on the Computer Science floor in Douglas.
Favorite CSCI Course: Tie between CS 466 and CS 490 (Linux).
Hobbies: Playing video games, listening to music.
Favorite Tunes: Anything by A Perfect Circle
Book or TV Show Recommendation: Arrested Development and Scrubs.
Something you might not know about me is: I am a huge Pink Floyd fan. (Lame, I know.)
Favorite Quotation: “I don’t want to alarm you, but...”

Name: Chris Peterlin, 20
Hometown: Wadsworth, IL
Degree I Am Seeking: CSCI – General (Junior)
Current Job: TA for CSCI 240
Favorite CSCI Course: CSCI 360 – Programming in Assembler
Hobbies: Working on cars, playing on the computer, hanging out with friends, watching movies.
Favorite Tunes: Audioslave, Theory of a Deadman, Nickelback, Maroon 5
Book or TV Show Recommendation: Family Guy, Mythbusters
Something you might not know about me is: I’m afraid of heights.
Favorite Quotation: None.

Name: Koushik Sridar, 25
Hometown: Elgin, IL
Degree I Am Seeking: M.S. in Computer Science
Current Job: Research Assistant, Office of Assessment Services
Favorite CSCI Course: Java Programming
Hobbies: --
Favorite Tunes: Smack That – Akon, Yeah! – Usher, We Be Burning – Sean Paul
Book or TV Show Recommendation: Law & Order, L&O SVU, 24
Something you might not know about me is: --
Favorite Quotation: “And in the end, it’s not the years in your life that count. It’s the life in your years.” - Abraham Lincoln
FEATURES

THE «SET» HOUSE
Prof. Georgia Brown

Stacey Alden, a Computer Science major and floor leader in the SET House (the Science, Engineering and Technology dormitory on campus) has designed a new website for the house. Prospective students can go to sethouse.cs.niu.edu to find out more information about living in this academic residential environment and participating in their numerous informal social gatherings and brief off-campus fieldtrips. Students can also access photos from recent activities on this website. Active involvement in the SET House is an excellent way for students to meet new people who share some of their interests.

The floor leaders and Community Advisors in the SET House, in conjunction with their academic mentors, plan various social and educational activities throughout the fall and spring semesters. In Fall 2006, for instance, they went to Argonne Laboratory. This Spring 2007, they attended Paleofest at the Burpee Museum. Currently, activities are in the works for the weeks before and after Earth Day to facilitate discussions about energy and the environment. Check out Stacey Alden’s new SET House website, mentioned above, as details will be posted as soon as they become available.

GRADUATE PROGRAM UPDATES
Dr. Jim Henry

For quite some time, there have been tentative website announcements and subtle whisperings about a new thesis option for those seeking a Master’s degree in Computer Science here at NIU. For a number of months, the CSCI department has been dutifully braving its way through the complicated process of university approval, which is now nearly complete. A number of exciting graduate program changes will soon be in effect. If you are a current graduate student, or are considering a graduate degree in CSCI, the following information may be of interest.

Completion of the Master’s degree in Computer Science at NIU requires 10 graduate-level courses totaling at least 30 credit hours. Of the 10 courses, no more than two may be from outside the department, and those courses must be closely related to and contain substantial content in Computer Science. The department will decide what outside courses might qualify toward the degree. Also, of these 10 required courses, no more than two may be transferred from other institutions. The acceptance of transfer courses rests at the department’s discretion and applies to graduate courses only. Students seeking admission to the Masters Program who do not have an undergraduate degree in Computer Science may be required to take from 1 to 4 courses to make up deficiencies, and must earn a grade of B or higher in these courses.

Students must select one or two areas of emphasis (for a total of 4 courses) as part of their studies as follows:

A. The Enterprise Computing Area (4 courses). If selected, this is the only area of emphasis the student need select:
   CSCI 540 – zOS Assembler and Data Struct.
   CSCI 565 - Survey & Topics in Ent. Computing
   CSCI 541 - Enterprise Operating Systems
   CSCI 542 – Ent. Networking Appl.& Services

B. System Design and Analysis (2 courses):
   CSCI 567T – Introduction to Software Engin.
   CSCI 563 - System Design and Analysis

C. Networking (2 courses):
   CSCI 530 - Computer Networks
   CSCI 531 - Network Applications Programming

D. Database (2 courses):
   CSCI 566 - Databases
   CSCI 588 - Database Concepts
E. **Contract Area** (2 courses). This area consists of courses selected by the student and a faculty advisor in cooperation with the Director of Graduate Studies. In addition, there are two “pre-defined” Contract Areas; one in Bioinformatics, and one in Security.

In addition, students may elect to pursue a Thesis option with the permission of a cooperating faculty member and the Department. This does not remove the areas of emphasis requirements described above. The Thesis option will require the student to enroll for two semesters of CSCI 599: Master’s Thesis.

Students not selecting the Thesis option will have 4 courses within area(s) of emphasis and 6 electives. Students who do select the Thesis option will have 4 courses within area(s) of emphasis, 2 courses of Thesis credit, and 4 electives.

Students who choose not to pursue the Thesis option will take a Comprehensive Exam near the end of their course of study. In the case of students electing the Enterprise Area, the exam will be in two parts, each covering two of the required 4 courses. In the case of students electing other areas (but not the Thesis option), each part of the exam will cover one area of emphasis. Contract area questions will be written by the student’s advisor for that specific area of study. The comprehensive examination cannot be attempted until all required graduate courses are completed in the specified emphasis areas. That is, they may not be attempted while the student is taking any of these courses.

In the case of the Thesis option, students will conduct a defense of their Thesis. This will serve as the student’s Comprehensive Exam.

Students must be enrolled in a CSCI course carrying at least two semester hours of credit during the term in which they are taking the examination. Comprehensive exams are administered at approximately the following dates, though exact dates vary by semester: November 1 in fall terms, April 1 in spring terms, and July 1 in summer sessions.

Please note that, in the event of any conflicts or contradictions between this article and the new Graduate Catalog, the new Graduate Catalog shall be the official version of the changes in our program.

In addition, please feel free to consult http://grad.cs.niu.edu for more up-to-date information regarding details pertaining to the Thesis option as well as to the transitions occurring in our course numbering system.

http://grad.cs.niu.edu/

**THE CYBERSECURITY CERTIFICATE**

*Dr. Raimund Ege, Chair*

The Computer Science Department is now offering a CyberSecurity track in NIU’s graduate certificate program in Homeland Security:

http://www.niu.edu/homelandsecurity

Homeland Security is a global issue affecting us at the local level. By completing one of NIU’s Homeland Security certificates, students gain the knowledge and skills necessary to handle disasters at our own front door or in the workplace.

Cybersecurity involves protecting information that is maintained and handled by computer systems by preventing, detecting, and responding to attacks. It seems that everything relies on computers and the Internet these days — communication (email, cell phones), entertainment (digital cable, mp3s), transportation (car engine systems, airplane navigation), shopping (online stores, credit cards), medicine (equipment, medical records), and the list goes on.
We have all heard the news stories about credit card numbers being stolen and email viruses spreading. Maybe you’ve even been a victim yourself. One of the best defenses is to understand the risks, what some of the basic terms mean, and what you can do to protect yourself against them.

Our new courses on Cybersecurity teach the risks and threats that exist in modern computer systems and networks and how to counteract and protect against them:

**CSCI 550: PRINCIPLES OF COMPUTER SECURITY** is a survey of security considerations as they apply to computer and information systems. Topics include access control, security models and architecture, physical security, networking security, cryptography, disaster mitigation and recovery, and legal and ethical issues. Computer security, privacy, and authentication are perennial problems in modern networked computer systems. This course will provide graduate students with an opportunity to study the nature of the threats, some of their technical details, prevention, recovery and countermeasures.

**CSCI 552: TELECOMMUNICATIONS AND NETWORKING SECURITY** is a survey of security threats and countermeasures as they apply to a telecommunication and networking system. Topics covered include: network security threats, security protocol and implementation, firewall design, wireless network security, and network security architecture. Telecommunications and networking use various mechanisms, devices, software, and protocols that are interrelated and integrated. Security professionals must know networking software, protocols, services, devices and interoperability issues in order to identify the vulnerabilities within a network.

**CSCI 554: COMPUTER SECURITY MANAGEMENT** is a survey of security considerations as they apply to the management of business processes and information. Topics include: planning, policies, protocols of security practices, access models and frameworks, incident response plans, asset protection and recovery. Information Security is no longer the sole responsibility of technology personnel. Business managers must be aware of the importance and impact of business models and their decisions with regards to the security of essential business processes and information.

CSCI 559: CISSP REVIEW prepares a student to sit for the Certified Information Systems Security Professional certification exam. The CISSP is the most prestigious worldwide security certification, and many companies and government agencies require it in order for one to work in security. Topics include the CISSP exam ten domain areas.

All CSCI courses in the certificate are being offered as online courses. CSCI 550 and CSCI 559 are scheduled for Summer 2007. CSCI 552 and CSCI 554 will be offered for the first time in Fall 2007. Check our department’s webpage for the latest course offering details.

The graduate certificate requires 18 credit hours. In addition to the 12 credit hours (3 per course) from CSCI courses, students will also have to complete “UNIV 510: Foundations in Homeland Security and Disaster Preparedness” and one more elective course from either the Biochemical Sciences, Environmental and Hazards Risk Assessment, Health Sciences or Manufacturing and Industrial Technology tracks of the NIU graduate certificate in Homeland Security.

**BIOINFORMATICS**

Dr. Reva Freedman

At the beginning of Spring 2007, the department started a new initiative in Bioinformatics. Bioinformatics is the use of computer science to advance science in biology. Techniques from artificial intelligence, algorithms, database, pattern recognition and data mining, natural language processing, and statistics are essential
to bioinformatics. In addition, a background in biology, especially genetics, biochemistry, and molecular biology is useful.

The first project undertaken by the new Bioinformatics initiative is the organization of a research course in genome annotation in concert with FIG (Fellowship for the Interpretation of Genomes) and Argonne National Laboratory. For more information about this course, see the separate article below entitled “Genome Annotation.”

The department is currently conducting a national search for a new faculty member specializing in bioinformatics. This person will also teach other undergraduate and graduate courses. In the fall the department hopes to offer an introductory graduate course entitled “Introduction to Bioinformatics.”

Students who would like more information about Bioinformatics or might be interested in taking Introduction to Bioinformatics are encouraged to contact Dr. Freedman. Students interested in pattern recognition in biology should contact Dr. Zhou for more information.

GENOME ANNOTATION

Dr. Reva Freedman

This semester the department has organized a research course on genome annotation. As a research course, the emphasis in the course is on finding new approaches to problems and writing research papers.

The genome of an organism refers to the sum total of its hereditary information. The genome of an organism is stored in its DNA. What makes bioinformatics possible from the point of view of computer scientists is that the genome can be represented as a character string. Only four characters—A, C, G, and T—are used, but string length can vary from three hundred thousand characters (some bacteria) to three billion (humans).

Genome annotation, one of the subfields of bioinformatics, deals with finding the substrings in the genome that represent genes. Once the genes are located, scientists try to identify the biological function of each gene.

The introductory lectures in the course were given by Dr. Ross Overbeek of the Fellowship for the Interpretation of Genomes (FIG). Dr. Overbeek was at one time a faculty member in our department; students studying IBM assembler may recognize his name as the author of their textbook. Dr. Gordon Pusch of FIG has also contributed his time and energy to making the course successful.

The course uses open source software and databases created by researchers at FIG and elsewhere. For historical reasons, most programming in bioinformatics is done in Perl.

Many participants in the course are faculty members, including Dr. Kirk Duffin, Dr. Joe Jeffrey, Dr. Jia Zhang, and Dr. Jie Zhou from Computer Science. Other faculty members come from Biological Sciences, Mathematics and Statistics. The course also includes students from each of these departments.

We plan to offer the course again in the fall, and hopefully in future semesters after that, to build on the knowledge we have acquired this semester. Dr. Freedman is the organizer for the course. Students with some research experience or background in biology who might be interested in taking the course in the future are encouraged to contact Dr. Freedman.

APPLE TEAMS UP FOR «CS AT NIU» LOGO REVEAL

Meg Gardner, Undergraduate Secretary

The NIU Department of Computer Science celebrated its recent curriculum enhancements and innovations by giving away two brand new iPods and a flash drive to student winners of the Fall 2006 campus-wide CS at NIU Logo Contest.
Apple Computer, Inc. headlined the Thursday, November 2nd Logo Contest Reveal where NIU CSCI alumni and Apple programmer PAUL WHITLOCK delivered a brief opening for Apple Consulting Engineer and overall Mac programming aficionado STEVE HAYMAN’S presentation, “Adventures in Software Development with Apple’s Mac OS X.” Steve Hayman demonstrated various aspects of applications such as Quartz Composer, one of the major Apple visual programming tools for building real time motion graphics, proving that Apple’s latest endeavors cater not only to iPod enthusiasts but to computer programmers, niche technology buffs and the creative forces of various artistic domains.

The Logo Contest, sponsored by the Computer Science Department in conjunction with Apple Computer, Inc., brought in seventy student submissions in the search for a logo that best represents the new image of CSCI. The winning logo, which you may find on the cover of this newsletter, appears on the www.CSatNIU.com marketing website, first introduced in Fall 2006 as an update billboard for all things academic and extra-curricular within the department, as well as in various other promotional materials. Logo Contest winner and Computer Science major NICOLAS BORG won a 30 GB video Apple iPod for his first place logo, followed by fellow CSCI major JOHN MINCHUK who went home with the 2nd place silver iPod nano. MILICA KOZOMARA, a graduate student, received a 4 GB flash drive for her third place win. The top five logo submissions can be viewed at www.CSatNIU.com, where you can also find constant updates about activities and curriculum developments within the Department of Computer Science.

Editor’s Note: Check out our new online course offerings on page 4!

ALUMNI NEWS


ANDREW FISCHER (B.S. 2000) is Chief Network Software Engineer for Rockford Public Library in Rockford, Illinois. He resides in Machesney Park, Illinois.

MARK GILBERT (B.S. 1982) is Senior Vice President of Bank of America in Atlanta, Georgia. He resides in Smyrna, Georgia.

ANNE HUNT (B.S. 1982) is the IT Director of Compliance at Marathon Oil Company in Houston, Texas. She currently resides in Pewaukee, Wisconsin.

DAVID SCHRADER (M.S. 1975) is Director of Strategy and Marketing for Teradata, a division of NCR in El Segundo, California. He currently resides in Hermosa Beach, California.

ABNER SNELL III (B.S. 1995) is Manager of Application Development for Discover Financial Services in Riverwoods, Illinois. He resides in Lombard, Illinois with his wife, Marisa, and two sons.

JOEL ST. JOHN (B.S. 1985) is self-employed as a contractor for Bank of America in Dallas, Texas. He resides in Whitney, Texas.

JOHN VOLMER (B.S. 1979; M.S. 1981) is Manager of Security Services for Argonne National
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