Siebel Center Grand Opening

Photo by Mary E. Hosier

"Computer science contributions have changed the world in many ways," Tom Siebel said at the dedication of the building bearing his name. "People are healthier and living longer. There are more jobs and, through computer science, we are creating beauty, order, peace, and prosperity."

After a year of planning and two years of construction, the Thomas M. Siebel Center for Computer Science was officially opened on April 30, 2004. Three days of events were held to bring together department, campus, local, alumni, and industrial communities to share in the celebration.

The Cisco Systems Distinguished Women in Computer Science Symposium launched the festivities. Panelists Lynn Reedy (BS '77 Math & CS), Senior Vice President, eBay, Inc.; Noreen Iles (BS '83), Vice President, Sears,

Roebuck and Company; Cynthia Samuelson, Senior Fellow, LMI; Shaula Alexander Yemini, President and CEO, System Management Art; and CS professor Marianne Winslett shared stories from their academic and business backgrounds, and spoke for the need for diversity in both of these areas.

Alumni gathered for a breakfast meeting with the Executive Advisory Council. Tom Siebel (MS '85), Marc Snir, Siebel Center architect Peter Bohlin, and CS systems manager Chuck Thompson (BS '91, MCS '01) discussed the structure from each of their perspectives.

People streamed through the center for the open house, which included research laboratory tours and demonstrations, student projects from their classes and engineering open house, and a digital art exhibit.

Building communities with $1 million NSF grant

Rising to the challenge

"It was like a light going off in my head," said Pooja (PJ) Mathur, freshman in computer science. Her reaction came in response to a ChicTech presentation at her high school last year by a group of female students from the department.

"My friend was making fun of me, saying it was like the mothership calling me home," continued Mathur. "I seemed so much like them — I totally fit in with them and this seemed like something I would be interested in."

ChicTech is a traveling road show for girls who attend Illinois high schools. In response to low and falling numbers of women opting to pursue a career in computer science, the department's female students have taken to the street in a grassroots effort generate interest in the field. Treating high school girls across the state to pizza luncheons, groups of CS volunteers explain and demystify the burgeoning field. They give the girls a glimpse of life as a student and explore the exciting and challenging career options open to graduates. As with PJ Mathur, many of the new ideas that are presented resonate with the younger girls, sparking their interest and moving them toward further exploration.

In This Issue

Alumni

Department

Siebel opening   *continued from p. 1*

The BFG Competition brought many of the community members together in a student-designed immersive game. The lower level of Siebel Center was transformed into an archeological dig site of a million-year-old intelligent building that was not happy with the team's presence. Spectators could watch the players who were tracked using a state-of-the-art RFID system at the dig site, or from the command center where the action was controlled, or on the atrium wall screen that displayed avatars of the players.

The audience had much to deliberate after listening to the final panel discussion on computers, society, and the future. Panelists included John Unsworth, dean of the Graduate School of Library and Information Science; Michael Ross, director of Krannert Center for the Performing Arts; Timothy Bresnahan, professor of economics at Stanford University; and Daniel Reed, former CS department head and now director of the Institute for Renaissance Computing at UNC.

Siebel Center design wins IEC award

The Illinois Engineering Council (IEC) has selected the Thomas M. Siebel Center for Computer Science as one of their 2004 Outstanding Engineering Achievement award winners. Each year the IEC, which represents over 20 engineering societies throughout the state, recognizes outstanding engineering projects completed in Illinois, capturing the innovative and dynamic spirit of the profession, and demonstrating interdisciplinary engineering accomplishment and creativity.

The state-of-the-art building was designed by Peter Bohlin of the award-winning architectural firm Bohlin, Cywinski, and Jackson, Pittsburgh, Penn. The aesthetically pleasing environment combines high tech with beauty, warmth, and light. The architect of record was LZT Associates, Inc., Peoria, Ill.

Campbell named Abbasi Professor

Roy Campbell was named the first Sohaib and Sara Abbasi Professor in Computer Science in recognition of his accomplishments in research and teaching.

Roy Campbell

Campbell came to the department in 1976. Since that time he has had a significant influence on the areas of operating systems and security. He defined and implemented Path Pascal programming language for a variety of systems incorporating concurrency and synchronization. He designed Choices, one of the first object-oriented operating systems, showing how object orientation can be used to customize an operating system to different platforms and application requirements.

His current work on the Gaia system supports pervasive/context aware/ubiquitous applications that can adapt themselves to the available distributed resources in a new location and can be migrated with mobile users and groups of users.

He has been engaged in numerous cross-campus initiatives, and State of Illinois activities on cybersecurity, and is the driving force behind the creation of a new curriculum in information assurance. He has advised over 32 PhD students and 110 MS students, many of whom are in positions of influence in academia or industry.

Sohaib Abbasi, BS '78, MS '80, and his wife, Sara, established the Sohaib and Sara Abbasi Professorship to enable the department to maintain its stature as one of the nation's premier departments and give students the opportunity to learn from a world-renown computer scientist and educator. They have also endowed the Sohaib and Sara Abbasi Fellowship.

Sohaib Abbasi is the president and chief executive officer of Informatica Corporation, a leading provider of data integration software. He had been with Oracle Corporation for 22 years beginning in 1982.

From the Corner Office

This year has been very busy for our department. We moved into our new building in early spring and had our official opening ceremony in late April. The new building is all that we expected it to be: it is one of the most elegant buildings on our campus; it has many airy and well-lighted public spaces, numerous pleasant meeting spaces and seminar rooms, and well-equipped classes and labs. It even has an espresso bar, a facility all faculty thought to be essential to their productivity.… In short, it is both esthetic and functional — a rare combination. We are thankful to Tom Siebel for the huge improvement in our quality of life that his contribution enabled.

Of course, a new building is for many years an ongoing project. The building has very advanced technology: building automation, networking, and audio-video. Most of it works — no mean achievement for our technology team. But we want to do more: we want our building to be a living lab, where the technology in the building is used by students and faculty to perform their research and where the department is the first user of the fruits of this advanced research.

This is starting to happen: our networking research group is gathering data on traffic in the center for use in its research; the education technology group is developing technology that is used in our classrooms; the human-computer interaction group is working on technologies that will deployed in our public areas.… We are slowly learning how to best use our new environment, and enjoy the learning.

We had an outstanding recruiting season last spring: ten new faculty have accepted positions in the department and seven of them have already come. I am particularly happy with our new senior hires: Prof. David Forsyth, who joins us from Berkeley, and Prof. Carl Gunter, who moves from the University of Pennsylvania. The department continues to grow in new areas (security, HCI, formal methods, and software engineering…).

The new faculty are bringing to the department a new level of excitement and vibrancy and a healthy appetite for change; the quality of their work is outstanding. I think that the hiring over the last few years has laid a solid foundation for the continued excellence of CS at UIUC in the coming decades.

I would like to end by discussing a challenge that our profession is facing these days: the press is rife with news about unemployment in IT, due to slower growth and increased outsourcing. Some of you have experienced this in person. Many CS departments have seen a decrease in enrollments that is attributed to reduced employment outlooks as well as to the increasing difficulties that foreign students face in coming to the U.S. We have seen a decrease in the number of applicants but, as in other selective programs, this has not translated into a decrease in the number of students: we still have a sufficiently large pool of well-qualified applicants.

On the other hand, the changes raise two important questions about our education programs:
• First, how do we prepare our students to compete in the different world of tomorrow? Should we shift the balance between core CS foundation, practical skills in software design and implementation, broader personal skills, and foundations in other disciplines (business, application areas, etc.)? How do we prepare our students to thrive in a world where business is international?
• Second, how can we be more relevant to our alumni when they consider career changes? Can we help with short courses, education material, people networking opportunities, etc.?

I shall be glad to hear any suggestions or insights that you might have on these issues; please do not hesitate to communicate with me, or with our new alumni director, Tammy Nicastro (see p. 5).

- Marc Snir

1-on-1:   Mided maximizes opportunities

As Vice President of Engineering and Operation at Maxager Technology in San Rafael, Calif., Zach Mided, BS '92, not only draws upon his knowledge from his computer science degree but also his early experience designing software applications to streamline his family's produce business in the Chicago suburbs. In 1996 Zach joined Maxager, an enterprise software company that sells profit optimization solutions. He is currently responsible for product design and development worldwide, and oversees all technical operations in the company.

I recently had the pleasure of meeting with Zach in San Rafael. We discussed his career and how his degree with its emphasis on theoretical coursework helped him develop strong critical thinking skills needed in today's business world. To balance the theory courses, he took the senior project sequence, which is designed for students to analyze a real-world problem, select a suitable solution, and implement that solution.

Zach's group executed a small computer system for a company in Champaign. He feels this was an excellent business experience to prepare him for his first job as a software consultant with Chicago-based Lante Corporation. He helped manage, design, and develop custom software for use in a variety of industries including market research and analysis, advertising, and healthcare.

So what about his experience with the family's business before he arrived at the University of Illinois?

"My family's business is the wholesale produce business. They buy fruits and vegetables from farmers and then sell them to businesses that supply grocery stores and restaurants. The computer system I developed handles everything for the company, such as shipping and receiving, sales, pricing, invoicing, accounts payable, and accounts receivable," replied Zach.

"A key feature of the application is that it could be used by people who had never used a computer before. One of these users was my grandfather, who was in is seventies and had never made it past the sixth grade let alone used a computer. So, our main goal was to make the system 'Grandpa-proof' or 'Grandpa-friendly,' depending on your point-of-view," added Zach.

One could say this high school project for his family's business was the beginning to his career in enterprise software. When asked what he finds most rewarding about his duties at Maxager, Zach responded, "I really love being part of a small group of people working hard toward a common goal. I like having stock options and feeling like it is partially 'my company' as opposed to being 'the company I work for'."

"I enjoy being in a position where I can strongly influence my company. Because we are small I have been able to participate in almost all aspects of the business including management, software design, R&D, sales, marketing, customer support, and IT. My favorite job responsibility is designing the software. I have always been interested in business and technology. I love being given a 'soft' business problem and try to figure out the best way to address that problem with software," said Zach.

Not one to rest on his laurels, Zach recently has completed a course at Stanford on genetic programming (GP), which has piqued his interest. Again, when you trace the origin of this interest, the answer lies in his family.

"A few years ago, my father gave me a textbook called *Genetic Programming* by John Koza. The ideas in the book were really interesting to me and so I decided to take a graduate course with Professor Koza at Stanford to learn more about them and get some hands-on experience. My current job does involve using some AI technologies, though we are not currently using GP, but intend to explore that more in the future," said Zach.

"One of the big challenges with GP is that the results are very dependent on how the technique is applied to your problem, and it can often be very difficult to do this in an efficient way. The other difficulty with GP is that it often requires a very large amount of processing power, which can be too much for today's computers. I feel that GP needs to mature a bit before it can be a stronger contender, relative to other AI techniques, for real-world business applications. At that point, I may be able to include GP more in my everyday job," said Zach.

With all of the demands of his job, Zach still finds time for recreation. As a former Illini Rugby player, he knows all too well the danger associated with the sport. So he has moved on to a less painful game—amateur soccer. He also has become involved with meditation and Buddhism and is a member at the San Francisco Zen Center.

Zach stays connected to the department as a member of our Executive Advisory Council. He has provided a lot of input on our Industrial Affiliates initiative as well as suggestions on how to better accommodate our distant council members so that they can play more of a role in our meetings. Zach will be returning to campus this academic year to participate in our new Engineer in Residence program (see p. 7).

The most exciting news of all for this CS alumnus is the expansion of his own family. He and his wife, Liz Co, a former aeronautical scientist who works as a consultant in web design, their first child, a boy, in November.

by Tammy Nicastro

"It has been great to be part of this company since the beginning. I have been able to see all of the ups and downs, and how our business and the market have changed over the years. It has been a great learning experience."

Zach Mided

Alumni news

2000s

Kevin Gibbs, MS '03, married Jennifer Funk in January 2004 in Auburn, Ill. He is employed with Xetron Communication Solutions in Cincinnati, Ohio.

Derek Taubert, MCS '02, was awarded his first patent for improving network compatibility. He has been a software engineer at Cisco Systems in San Jose, Calif., since 1996. He is currently working for Redback Networks. In his free time he is number 18 on the Redback Spiders ice hockey team.

Matthew Hurlbut, BS '00, and Jennifer Nelson were married in July in Glenn Elyn, Ill. He is employed by DiamondCluster International in Chicago as an IT management consultant.

1990s

David Hoag, BS '91, was appointed director of clearing solution architecture for the Chicago Mercantile Exchange. He is responsible for developing the architectural standards for all clearing technology.

1980s

Thomas J. Keating, BS '88, was named an associate in Husch & Eppenberger in Kansas City, Mo. His practice is in the areas of computer software, biotechnology, and the mechanical arts. He holds a law degree and PhD in cell biology.

Constantine Polychronopoulos, PhD '86, is founder and CTO of Bytemobile, which offers a range of optimization solutions that improve the reliability, scalability, and manageability of data networks owned by mobile network operators, ISPs, and enterprises worldwide

Thomas M. Siebel, MS '85, was awarded the University of Illinois Board of Trustees' Distinguished Service Medallion their fall meeting. The award was created to recognize individuals for extraordinary service to the university.

Doug MacGregor, MS '80, is the new president of the ownership group of the Arena Football League's Austin Wranglers. MacGregor had been a partner in Eyes of Texas Partners LLC, a venture capital group that invests in early-stage technology companies.

1970s

Ray Ozzie, BS '79, was elected to the National Academy of Engineering for his conception and development of online collaboration products, including Lotus Notes.

Sohaib Abbasi, BS '78 and MS '80, was named president and CEO of Informatica Corp., Redwood City, Calif. Informatica Corp. is a leader in data integration software. He had been with Oracle Corporation for 22 years beginning in 1982.

Ronald Danielson, PhD '75, is CIO and associate professor of computer engineering at Santa Clara University in Calif.

Mary Jane Irwin, MS '75 and PhD '77, was presented with the Marie R. Pistilli Women in EDA Achievement Award to recognize her support of women in the EDA industry.

Barry Greenstein, BS '75, has won two major poker tournaments in less than a year, with winnings of more than $1 million each. This modern-day Robin Hood donates all of his tournament money to charities such as Children, Inc.

In Memoriam

Jeffrey Paul Blahut, age 34, died June 13, 2004, at Champaign. He was a student in the department. Memorials may be made a CS scholarship fund in his name.

Charles Richard Boyle, age 41, passed away June 21, 2004, in Seattle, Wash. He was a vice president of an information technology firm.

Yahiko Kambayashi, age 60, passed away February 6, 2004. He was a database research pioneer. While in the department in the early 1970s as a visiting research associate, he developed a logic design method called the transduction method, which is used by logic design software vendors.

Nicastro named alumni director

Tammy Nicastro

Computer Science welcomes Tammy Nicastro as its new Asso-ciate Director of Alumni Relations and Development. For the past 10 years she has worked in the fields of medicine and biomed-ical research. Most recently she was an account manager with Carl Zeiss, Inc., in biomedical research.

Nicastro, BS '95 in animal science, began her position at the end of August and has been on the road visiting alumni ever since.

"I would like to meet with as many alumni as possible so that I can update them on the activities of the department and learn about their work," said Nicastro. "Through these meetings I hope to create opportunities for our alumni to re-engage with CS through collaborations, recruiting new students, mentoring, or making asset contributions. I would also like to build a larger base of alumni who contribute to the annual fund (see p. 6). Finally, I am working toward increasing our endowed professor and chair positions, scholarships, and fellowships so that CS will be more competitive with other top-tier programs in recruiting faculty and students.

"When talking with alumni I am most impressed by the effect their work is having on society," continued Nicastro. "They represent a wide range of fields of work, but all of them share a commonality — they all express the same level of excellence that is expected of the CS students who are admitted to and graduate from Illinois."

Deb Israel was named Coordinator of External Relations and Develop-ment. She is focused on making connections with industry (see p. 7) and on student projects.

Your dollars at work

There are very few people who can afford to endow an entire scholarship or fellowship with personal funds. However, when we combine the small contributions made by our alumni over the past year, it adds up to more than $36,000.

You probably didn't realize that your donation to the annual fund can provide:

• funding for student travel to professional conferences to present their research and gain new perspectives

• scholarships and tuition waivers

• awards to recognize contributions made by the department's outstanding staff

Our annual fund is having a positive effect on our programs, but there is still an incredible amount of potential for growth.

The Computer Science department has one of the lowest alumni participation rates for annual giving of any department in the College of Engineering. Of the 5,761 engineering and 3,039 LAS alumni, only 116 (1%) contributed last year; a typical gift was between $50 and $500. Imagine the impact our annual fund could have if 10% our alumni made a contribution.

With state funding decreasing, we will be depending more and more on our alumni and friends for support to continue these programs and to create new programs that will meet the changing needs of our department.

A named endowment can be established for gifts greater than $10,000 to help support a number of special programs and activities.

Wherever you choose to direct your philanthropy, you should check to see whether your employer will increase your gift through a corporate matching gift program.

For more information on making a contribution to the department, contact Tammy Nicastro at alumni@cs.uiuc.edu.

Yes, I want to help computer science!

☐ $1,000　☐ $500　☐ $100　☐ Other _____

The gift is:　☐ unrestricted　☐ student scholarships　☐ Innovation Fund　☐ Other_____

I am enclosing my employer's matching gift form. Company name _____
　　will match my gift with $ _____.

I authorize the U of I Foundation to collect my gift in the amount above through:
　　☐ Visa　☐ MasterCard　☐ Amex　☐ Discover

Card no. _____　Expiration date _____　Signature _____

Name_____

Home address_____

City _____ State_____ Zip_____

Please make your check payable to UIF/CS Department.
Return form and your check to:

University of Illinois Foundation
P.O. Box 3249
Champaign, IL 61826-9916

New programs strengthen ties with industry and alumni

Through the years, the department has established long-term relationships with leading companies throughout the world. Generous contributions have been made either by the company directly or through the help of an alum within the company. These have been in the form of equipment, faculty research funding, and student scholarships and fellowships. Three programs have been developed that will help strengthen the connections among CS, industry, and our alumni.

Industrial Affiliates

The IDCSA program was designed to foster and encourage the ties between the department and industry that are a natural outgrowth of the department's extensive research program and its outstanding student body, the majority of whom will be hired by industry. Members can attend the annual affiliates conference, which features lectures and panels of experts in industry and the department, a reverse job fair, and tours and demonstrations of research labs.

Affiliates will also have access to student recruitment events, graduate students, and faculty consultants, publications resulting from non-proprietary research, and conference and workshop schedules. Members will also have priority in placing a research scientist or engineer to work on-site in the department and access to available facilities and equipment on cost-reimbursement basis.

Corporate Days

The Corporate Days program provides organizations with a high level of exposure to our faculty, researchers, and students. It involves a two-day, high-profile visit to the department by a small team of corporate representatives and includes opportunities to recruit our students; learn about our research, faculty, and facilities; deliver guest lectures and technical talks in our classes and to our student organizations; and dine with targeted groups.

The program centers on a presentation by a senior corporate executive as part of our Distinguished Entrepreneur Lecture Series. This series is a vehicle that keeps our department abreast of the most important issues and obstacles faced by the private sector.

Engineer in Residence

The Engineer in Residence program will begin in spring 2005. The goal of this program is to invite our alumni back to the department on an individual basis to stay "in residence" for one or more days. They will share their professional experience with our students and faculty, and expose students to the "real-world" applications of their academic work. They will also share their perspectives on how to leverage their degree to build a successful career.

Planned activities for the alum includes:
- Giving a seminar that covers the latest trends in their field.
- Private office for student appointments.
- An informal pizza lunch for student Q&A.
- Participation in a pertinent CS course.
- A dinner with faculty doing research relevant to their field.

The first Engineer in Residence will be David Burns, BS '93, who works at the IBM Innovation Center in Chicago. He will share his experience in human factor engineering.

Upcoming events

January
26-28 Cisco Days
February
TBD   Engineering in Residence - David Burns, BS '93
March
11-12 Engineering Open House
April
28-30 IDCSA Conference and CS Open House
30   Executive Advisory Council meeting
30   Awards ceremony for continuing students
May
14   Awards ceremony for graduates
15   Commencement

Staying connected @engineering.uiuc.edu

Do you know the easiest way to stay connected to the department, college, university, and anyone else important to you, without the hassle of giving out your new email address every time you move? Just sign up for a free engineering lifetime forwarding email address. It's very easy to register for a new account and to set up a forwarding address.

Visit https://engineering.uiuc.edu/email/signup.htm.

Alumni reception at IBM
A number of alums attended the fall reception and spoke with department head Marc Snir, on left. These included Mary Peterson Yost, BS '88, who works in autonomic computing; Eysha Powers, BS '03, in Z/OS software development; and Mike Powers, BS '01 in CE, in technology development.

Thomas M. Siebel Cente

Dedication and

April 29 - M

Tom Siebel with Marc Snir,
department head

Dedication ceremony

Peter Bohlin, BCJ, gives alums an
overview of the Center's architecture

Distinguished panels on
women in computer science
and technology

er for Computer Science
Grand Opening
May 1, 2004

The open house showcased student and faculty research projects to the alumni and university and local community.

The command center (above) gives instructions to their players (above left) located in the lower-level "dig".

The BFG was a student-developed and -run virtual reality game. Teams, comprised of alumni, corporate reps, faculty, and students, extracted packets of ancient wisdom as quickly as they could. Players were tracked using a state-of-the-art RFID system, which relayed their positions in a virtual 3-D environment.

The audience could watch all the action sites on the lobby wall screen.

Videos of Siebel Center, the history of the department, and the BFG competition can be found on the CS website.

Department Awards

We would like to recognize the following students, faculty, and staff members for their excellence and hard work.

Sohaib and Sara Abbasi Fellowship **Raja Afandi and Muhammad Awan**

Bronze Tablet **Shawn Lindberg, Michael Munie, Tejash Patel, Joshua Paul, Daniel Pozdol, and Curtis Yiu**

Roy J. Carver Fellowship **Geoffrey Levine**

Richard T. Cheng Fellowship **Chih-wei Hsu**

Sara & Louis Cohen Scholarship **Soumi Sinha**

Crow, Chizek & Co. LLP Outstanding Student Scholarship **Kristen Zhang**

CS Fellowship **Mark Hills and Lars Olson**

Department Staff Awards **Vicky Gress, Rick Henderson, Deb Israel, and Rick Van Hook**

Dunn Systems Scholarship **Dan Peterson**

C.W. Gear Outstanding Graduate Award **Anand Ranganathan**

C.W. Gear Outstanding Undergraduate Awards **Michael Januszyk and Michael Munie**

C.W. Gear Outstanding Faculty Award **Sariel Har-Peled**

Delta Sigma Omicron Distinguished Teaching Award **Roy Campbell**

GK-12 NSF Teaching Fellowship **Rebecca Hartman-Baker and Mike Mullan**

Graduate Service Awards **Jodie Patricia Boyer, Tony Y. Chang, Shamsi Tamara Iqbal, Kiran Subramanyam Lakkaraju, and Nathanael Austin Thompson**

Franz Hohn & J.P. Nash Scholarship **Jessica Schoen**

Outstanding contribution to Siebel opening

A. Antrim, M. Belcher, P. Bergschneider, O. Bernal, T. Chang, J. Chau, P. DeRose, T. Donarshi, C. Garver, H. Goffin, L. Guilamo, M. Hallock, E. Hauptmann, A. Hoesley, H. Izurieta, P. Le, S. Lee, Y. Li, T. Nguyen, S. Rios, P. Schlichting, D. Schmidt, J. Schranz, S. Severinghaus, R. Sharma, M. Stanislawski, L. Sturnfield, W. Su, M. Treaster, S. Yang, N. Ziemianska, with Prof. Roy Campbell, and Mike Woodley.

B. Flicker

E. Chen

J. Boyer

Michael Hughes Award **Galo Avila, Klaudiusz Baran, Neil Hiner, Tao Luo, Brian Neradt, Evgeni Peryshkin, Paul Stanton, and Natalia Ziemianska**

ILLIAC Fellowship **Changhao Jiang, Chao Liu, Deepak Ramachandran, Bin Tan, Abhishek Tiwari, and Jing Yu**

Intel PhD Fellowship **Ruchira Sasanka**

Kodak Fellowship **Won Jong Jeon**

Krell Institution Graduate Fellowship **Michael Wolf**

Andrew and Shana Laursen Fellowship **Zheng Shao and Jagadeesan Sundaresan**

R. Hartman-Baker

K. Lakkaraju

J.Yu

M. Marquissee

Duncan H. Lawrie Award **Bo Lu**

C.L. & Jane W.-S. Liu Award **Koushik Sen**

NSF Graduate Research Fellowship **Erin Wolf**

NVidia Fellowship J**esse Hall**

Ray Ozzie Fellowship **Changhao Jiang**

John R. Pasta Award **Christopher Cameron and Blair Flicker**

W.J. Poppelbaum Memorial Award **Jayanth Srinivasan and Pin Zhou**

Siebel Scholars **Ellick Chan, Trebor Donarski, Robin Dhamankar, Julia Dragan-Chirila, and Timothy Ericksson**

Daniel L. Slotnick Award **Joshua Paul**

James N. Snyder Awards **Rohit Puranik and Soumi Sinha**

Spyglass Scholarship **Jean He, Haley Miller, Anusha Priya, and Parisa Tabriz**

SURGE Fellowship **Jodie Boyer and Brian Davis**

Verizon Fellowship **Vartika Bhandari and Matthew Marquissee**

Vodafone Fellowship **Qixin Wang, Yuan Xue, Yaling Yang, and Honghai Zhang**

Vodafone Scholarship **Dan Peterson**

William & Ruth Witt Scholarship **Huong Nguyen**

Student news

Graduate students **Yixin Chen** and **Chih-Wei Hsu**, along with their advisor ECE Prof. Benjamin Wah, won two prizes at the fourth International Planning Competition held as part of the International Conference of Automated Planning and Scheduling. The team won first prize for the Suboptimal Metric Temporal Track and second prize for the Suboptimal Propositional Track.

Graduate students **Sathish Gopalakrishnan**, **Chi-Sheng Shih**, and **Chang-Gun Lee** received the best student paper award for "Finite Horizon Scheduling of Radar Dwell with Online Template Construction," at the Real-Time Systems Symposium.

Graduate student **Matthew Marquissee** was presented with the Illinois 2004 Muscular Dystrophy Association Personal Achievement Award. The honor recognizes the personal and professional accomplishments of individuals with any form of neuro-muscular disease.

One of two programming teams will be heading to Shanghai in April for finals of the 29th Annual ACM Programming Competition. This is the third team in as many years to make the finals. The team, **John Carrino** and **Jeffrey Tamer** from CS, and **Stephen Downing** from MIE, was one of the top 76 teams out of 4,100 that will advance to the programming finals. A second team consisting of CS students **Sean Monahan**, **Yisong Yue**, and **David Flint** placed ninth at the regionals.

S. Hanneke   *P. Meredith*

Steven Hanneke was named a finalist and **Patrick Meredith** was given an honorable mention in the Computing Research Association's (CRA) Outstanding Undergraduate Awards for 2005. They were cited for their outstanding research potential in an area of computing research. Hanneke's research was in machine learning and Meredith's was in program optimization.

Class redesign with HP help

HP is partnering with the department to redesign a course that incorporates the innovative use of mobile technology in the classroom. The award includes a $37,500 grant in addition to 21 wireless HP tablet PCs, 11 tablet PC docking stations, a portable digital projector, printer, and help desk support.

CS 173, an introductory course for discrete mathematics, was selected for this initiative. This highly mathematical course has been a difficult hurdle for some students and has a higher than average drop rate.

"We envision a learning environment where no student feels isolated and collaboration is encouraged, rewarded, and always available," said Cinda Heeren, instructor for this pilot section.

One course section will be piloted in spring 2005 for 40 students, with priority enrollment offered to women and minority students. Each student will be provided a tablet PC for the semester. The HP equipment will be used in conjunction with e-Fuzion software that was originally created by two CS undergraduates in 2001. e-Fuzion is a system that integrates the instructor's and students' displays, allowing text and images to be shared seamlessly.

The tablet PCs will document the experience of the learners in study groups. Notes from study sessions will be available to all students via a notes repository on the class website, so that all students benefit from other collaborations. The redesigned CS class will permit students to annotate the instructor's notes during class and save them for later perusal, provide messaging for remote collaboration between study groups, engage in group problem solving via shared desktops, and receive real-time feedback during lectures.

IMPRINT program leaves mark

Two freshmen CS students received a jump start on the fall semester by attending the Illinois Minority Pre-College Internship (IMPRINT) summer program offered by the College of Engineering. They attended classes and worked on a research project with professors Lenny Pitt and Cinda Heeren.

Jovany Chaidez and Luiz Mendes teamed with Alan Perez-Rathke, senior in CS, who served as their mentor. Their project was to create an innovative method to introduce a CS topic to young students. The trio brainstormed for ideas and came up with an arcade game, Logic Hunt.

A. Perez-Rathke   *L. Mendes*   *J. Chaidez*
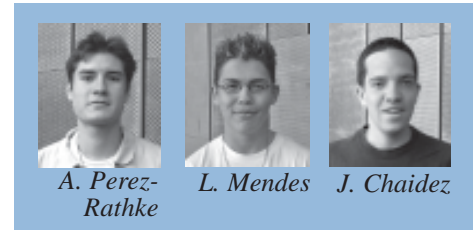
Their Tetris-like game teaches the player basic concepts of prepositional logic using animation and color. Logical expressions appear as blocks that can be controlled as they fall. As the player positions the blocks to form a true logical expression, they gain points and the blocks disappear.

Chaidez, who had taken a Visual Basic course while high school, came up with the idea of an arcade game as a vehicle for their learning program. Mendes, who had taken C++ during his sophomore year at high school and was taking a CS course in summer school, worked on the coding. Perez-Rathke, with many CS courses behind him, helped them with the structure and algorithms.

The freshmen enjoyed the experience of working as a team and agreed that this project would help them with future classes.

Test your logic skills at icarus.cs.uiuc.edu/LogicHunt/LogicHunt.html.

Faculty news

Professors **Brian Bailey** and **Marianne Winslett** were among six chosen as faculty fellows by the National Center for Supercomputing Applications (NCSA) for 2004. Bailey's research is in human-computer interactions and Winslett's research is in databases.

Kevin Chang, **Jiawei Han**, and **Yuanyuan Zhou** are recipients of the IBM Faculty Awards for 2004. The award provides $40,000 in funding to each outstanding faculty, for exploratory research in areas important to IBM. This highly competitive award may be renewed for up to three years, but awardees must be reselected in the annual competition.

AnHai Doan received the ACM Distinguished Doctoral Dissertation Award. The award is presented annually for the best doctoral dissertation in computer science and engineering in 2003.

Five computer science faculty members received National Science Foundation CAREER awards this year, the greatest number awarded in any one year for the department. The awardees were assistant professors **AnHai Doan**, **Robin Kravets**, **ChengXiang Zhai**, **Yuanyuan Zhou**, and **Craig Zilles**.
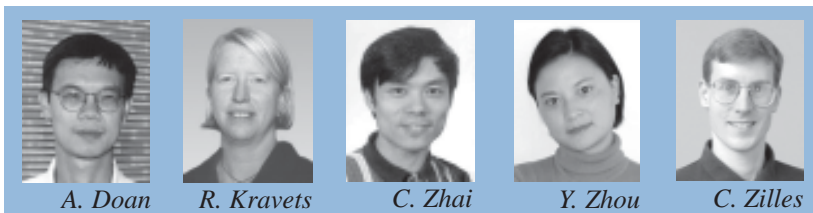
A. Doan   R. Kravets   C. Zhai   Y. Zhou   C. Zilles

Jiawei Han was presented with the ACM Innovations Award in 2004. Han is regarded as a pioneer researcher in data mining and knowledge discovery and has made many fundamental research contributions in the areas of novel and efficient algorithms for frequent pattern mining, attribute-oriented induction methods, spatial data mining and clustering, stream mining, and data warehousing.

Jiawei Han was also named an ACM Fellow for his contributions in knowledge discovery and data mining. Fellows are among the top 1% of ACM's 75,000 members.

The Emperor of Japan awarded The Order of the Sacred Treasure, Gold Rays to **Saburo Muroga**, professor emeritus. Muroga was recognized as "one of Japan's computer pioneers," and a globally significant leader in the extensive field of information processing since the early stages of Japan's computer era.

Lenny Pitt was named University Distinguished Teacher/Scholar, an honor held by only a handful of faculty. The program recognizes talented faculty members and gives them an opportunity to take an active role in enhancing teaching and learning on campus.

Josep Torrellas was named an IEEE Fellow for his for contributions to shared-memory multiprocessors. For 2004, 260 were elected members, which represents less than 0.1% of IEEE's 380,000 members.

ChengXiang Zhai and his students Hui Fang and Tao Tao received the SIGIR 2004 Best Paper Award for their paper "A Formal Study of Information Retrieval Heuristics."

Promotions

Jeff Erickson was promoted to associate professor. His research is in the areas of algorithms, data structures, and lower bounds; and computational and discrete geometry.

Steven M. LaValle was promoted to associate professor. His research focuses on robotics, motion planning, computational geometry, computer vision, computer vision and graphics, and computational biology.

New in CS

Ten new professors will join the ranks of the department faculty, bringing the total number to 57. There are now 6 research professors, 24 assistant, 11 associate, and 16 full professors.

Margaret Fleck, research associate professor, received her PhD from Yale University in 1982. Her recent work has centered on automatically understanding (e.g., via speech recognition) stories that people tell about their personal photograph collections, to create better user interfaces for these collections. She joins the artificial intelligence research area.

David Forsyth, professor, received his PhD from Oxford University in 1989. His research is at the forefront in the field of computer vision. He has been a professor at the University of California at Berkeley since 1994. His work in generic object recognition employs techniques not only from physics and mathematics but also from the fields of probability and machine learning theory. His work enhances the computer vision research area and will complement other areas such as machine learning and graphics.

Carl A. Gunter, professor, received his PhD from the University of Wisconsin at Madison in 1986. His research is in the areas of security, networks, software engineering, and programming languages. He has been a professor of computer and information sciences at the University of Pennsylvania since 1987 and was director of Penn Security Lab. He also served as chief scientific advisor to Probaris Technologies in 2001. He strengthens the department's security research area.

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Elsa Gunter, research associate professor, received her PhD from the University of Wisconsin at Madison in 1987. Her research interests focus on the design and application of tools for the verification of properties of protocols, programs, programming language semantics, and embedded systems. She joins the formal methods and software verification and validation research area.

Luddy Harrison, associate professor, received his PhD from the University of Illinois at Urbana-Champaign in 1989. His research includes the areas of programming models and tools for communication systems, optimizing compiler technology, hardware/software co-design, and processor architecture. He was founder of CCC, which developed and marketed portable optimizing compiler technology. He was most recently co-manager and chief architect of the Communications Compiler Team at Intel after their purchase of CCC.

Anil Hirani, assistant professor, received his PhD from the California Institute of Technology in 2003. He worked for six years as a software engineer for graphics at Sun Micro-systems and as a researcher at Sony Corporation before embarking on his PhD. His research goal is to bridge the gap between scientific computation and computational mathematics, and computer science. He would like to bring growth opportunities to computer science from scientific computing, and bring more realism in applications to scientific computing from computer science. He will join CS in fall 2005.

Karrie Karahalios, assistant professor, received her PhD from Massachusetts Institute of Technology in 2004. Her research focuses on the cultural, sociological, and technical features of communication. Her work pushes the edge of how we think about and use computers. Her expertise is an asset to the HCI research area is also an excellent fit with the educational technology and ubiquitous computing research areas.

Haiyun Luo, assistant professor, received his PhD from the University of California at Los Angeles in 2004. His research is in wireless and mobile networking, sensor networking, and wireless network security. His goal is to design and build scalable, efficient, and secure wireless systems to enable ubiquitous information and service availability. His work complements the current research in networking and distri-buted systems.

Darko Marinov, assistant professor, received his PhD from Massachusetts Institute of Technology in 2004. His research is in the areas of software engineering and programming languages. As part of his thesis, he developed a system for the systematic generation of test cases for programs that is currently being used for code testing at Microsoft. With his broad knowledge of compilers, theorem proving, and combinatorics, he strengthens the ties among many areas of research.

Madhusudan Parthasarathy, assistant professor, received his PhD from the University of Madras in 2002. His research interests are in software analysis; formal methods; control synthesis for timed and distributed systems; and theory of automata, games, logic, and concurrency. His goal is to develop techniques and tools that increase confidence in the systems. His breadth of skills will be an asset to the formal methods group.

Two retire

Retirement has not slowed down Denny Mickunas and Bob Skeel. They have traded their CS jobs for other endeavors. Mickunas is testing out the theory that the grass is always greener on the other side. For the next few years he will be a student in the university's College of Law, setting his sights on patent law. Skeel is now a professor at Purdue University.

In 1973 **Denny Mickunas** received his PhD from Purdue University in computer science and joined the department as an assistant professor. Through the years his research has focused on pro-gramming languages, compiler construction, technology transfer, and intellectual property rights for software. He has been actively involved in the NSF-funded Active Spaces research lab with his research in security and ubiquitous com-puting. He also helped establish the Center for Advanced Research in Information Security (CARIS). He became the associate department head in 2000.

Bob Skeel became an assistant professor in the department in 1974 after receiving his PhD in computer science from the University of Alberta that same year. His research has focused on physics-based models, numerical algorithms, and massive computation in collaboration with biophysicists. Skeel is also a developer of NAMD, a parallel molecular dynamics program, which received a Gordon Bell Award for high-performance computing in 2002.

We wish them the best in their "retirement."

Recent research grants

Adve, Vikram, Cooperative Hardware/Software Designs for Virtual Instruction Set Computers, NSF, $150,000

Amir, Eyal, Logical Filtering, DARPA, $880,000

DeJong, Gerald, Incorporating Prior Domain Knowledge into a Support Vector Machine Classifier with Explanation-Based Learning, NSF, $342,101

Doan, AnHai, Evolving and Self-Managing Data Integration, NSF CAREER, $500,000

Doan, AnHai, Privacy-Preserving Data Integration and Sharing, NSF ITR, $216,964.

Han, Jiawei, High-Performance Parallel Data Mining for Advanced Applications, Intel Corp., $42,000

Hou, Jennifer, A Component-Based Software Environment for Network Protocols in Next-Generation Networks, NSF, $347,000

Jennifer Hou giving a demo at open house

Kamin, Sam, HP Technology for Teaching Grant Initiative with Engineering/CS Retention, HP, $37,500

Kamin, Samuel, Building Communities: Recruiting and Retention of Underrepresented Groups in Computer Science, NSF, $1,000,000

Kravets, Robin, Pulsar: A Cross-Layer Approach to Energy Conservation in Mobile Ad Hoc Networks, NSF CAREER, $448,444

Ponce, Jean, 3D Object Modeling, Recognition and Classification from Photographs, Toyota, $73,744

Roth, Dan, Cross-Document Entity Identification and Tracing, ONR, $224,000

Roth, Dan, Kindle: Knowledge and Inference via Description Logics for Natural Language, DOI, $700,000

Roth, Dan, Natural Language Processing Technology for Guided Study of Bioinformatics, NSF, $270,000

Viswanathan, Mahesh, Monitoring and Checking of Distributed System with Respect to Formal Specializations, NSF, $270,000

Dan Roth (standing) with Kindle group Rodrigo de Salvo Braz, Mark Sammons, Vasin Punyakanok, and Roxana Girju

Zhai, ChengXiang, User-Centralized Adaptive Information Retrieval, NSF CAREER, $510,000

Zhou, Yuanyuan, Improving Storage System Performance, Dependability, and Manageability Using System Mining Techniques, NSF CAREER, $449,405

Zilles, Craig, A Framework for Dynamic Self-Tuning of General Purpose Programs, NSF CAREER, $410,000

## Info system analyzes social beehavior

Tagged bees

A $5 million, five-year grant from the National Science Foundation will enable a collaboration of researchers at the university in the fields of biology and informatics to create BeeSpace, a system to help scientists analyze all sources of information relevant to the mechanisms of social behavior.

The complex society of the Western honeybee, *Apis mellifera*, will drive the information system. "We will take a fresh look at the fundamental problem of the mechanism of behavior, whether behavior is caused by nature or nurture," said Bruce Schatz, professor of library and information science and director of the Community Architectures for Network Information Systems (CANIS) Laboratory, a campus resource for new information systems.

CS professor ChengXiang Zhai will lead a research team to develop scalable and robust techniques for analyzing and integrating all relevant information to the study of the honeybee's social behavior, including the recently sequenced bee genome, genomic and proteomic databases, and the complete scientific literature. New text-mining software will create a bee-focused thesaurus, or "concept space," to help navigate through the diverse database and literature sources.

"Information retrieval, natural language processing, and data mining techniques will be applied to elicit biology knowledge buried in the literature and discover patterns in genomes and gene expression information to help biologists formulate appropriate research hypotheses and design more effective experiments," said Zhai.
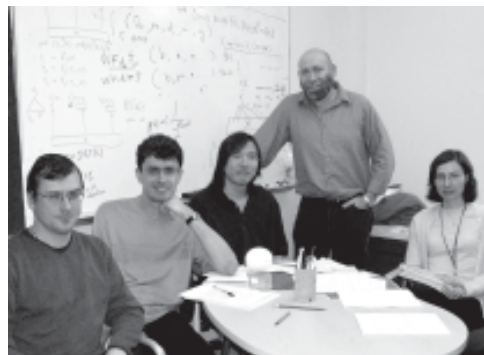
Communities *continued from p. 1*

ChicTech is an integral part of the University of Illinois Department of Computer Science's Building Communities initiative, which recently received $1 million in funding from the National Science Foundation to help recruit and retain more women and minority students in the information technology workforce.

Initiatives involving the formation of supportive communities have repeatedly demonstrated success in reducing the hesitancy of women to enter the discipline and the tendency, for those who do enter, to transfer out before graduating. These support networks reduce the all-too-real sense of gender isolation that plagues many female CS students. Professor Sam Kamin, Director of Undergraduate Programs and PI for the NSF grant, sees the ChicTech program as a 'double play.'

The Building Communities effort does not stop at recruiting. Before her fall computer science classes started, Mathur attended the Women in Engineering orientation, where she met other female students new to CS. There were a number of activities including the highly successful "low ropes" course that required groups of the new freshmen to work together in teams with older undergraduate and graduate women from the CS program to solve a series of team-building problems. Group facilitators guided them through each of half a dozen challenges.

This year's sophomore class includes a tightly knit group of

women that was formed during the challenge course conducted as part of last year's Freshman Orientation. "The challenge course was so much fun and it really did build a team spirit among the women in our class," said Olga Vinogradova. "I'm rooming with one of the women I met there, and our entire group of friends either met at Orientation or met as a result of it."

Many of these sophomores, all members of UIUC's Women in Computer Science student organization, are now active in the ChicTech Initiative, taking time out of their rigorous course schedule to evangelize the benefits of a computer science education.

The fall classes have started, and PJ Mathur has a busy schedule both in and out of the classroom. "Even though my CS homework is hard, I always have fun doing it. I am in CS 196, the honors course for my other class, CS 173. As a class project I am making a computer game that involves CS and what we have been learning in class. I don't always know what I am doing. It is a huge project but I am having fun doing it," said Mathur.

Mathur has come full circle this fall. She is part of the ChicTech team that returned to her high school to talk to a group of girls whose number had increased from the year before.

Freshmen orientation: forming bonds through activities and challenges

About the Building Communities Program

Through the National Science Foundation $1 million-funded project, the CS department is serving as the lead institution together with higher education partners—Eastern Illinois University, Illinois State University, Parkland College, Heartland Community College, and Bradley University — and a large public school district. Together they will create new initiatives while undertaking activities pioneered at Illinois. Current initiatives include:

• Java Engagement for Teacher Training (JETT) — workshop held in conjunction with the College Board to train high school teachers in Java.

• Online resources for high school CS teachers.

• Development of curricular materials for high schools to help introduce computer science to their students.

• Orientation for freshmen — team-building "challenge course," panel discussions, and mentoring by upper class women and graduate students.

• Women in CS club

• Technical Ambassadors Competition — teams of high school girls create projects and compete for prizes.

• Games for Girls — college women compete in the construction of computer games for K-12 girls.

Samuel Kamin

"ChicTech has been helpful in building a community spirit among our female undergraduates. As they go into the high schools to raise awareness about the discipline, our undergraduate women seem to be cementing their own commitment to CS, bolstering our retention figures," Samuel Kamin explained. "At the same time, they're reaching the younger girls we need in the pipeline, creating awareness of what computer science really is and building the interest in CS of high school students."

New online computer security certificate offered

To meet the growing demand for advanced education critical areas, the department has introduced the Computer Security Certificate as part of its Illinois Internet Computer Science (I²CS) program.

The online program is constantly evolving—anticipating the needs of the information technology field.

The certificate requires completion of three courses: information assurance, computer security architecture, and an advanced topics course. I²CS students receive the same high-quality lectures (captured live and streamed over the Internet), assignments, and exams as the on-campus students.

In addition, I²CS offers other certificates in information systems, system architecture networks and distributed systems, and software engineering.

Since its establishment in 1998, 114 I²CS students have graduated with a Master of Computer Science degree. During the fall 2004 semester, there were 60 degree students and 60 non-degree enrollments.

"Our goal is to provide I²CS students with as much of the on-campus experience as possible, while offering a flexible, convenient option for busy professionals who want to advance their careers through education," explained Mehdi Harandi, director of graduate programs.

For more information regarding online graduate degree and certificate programs, visit www.cs.uiuc.edu/i2cs.

DEPARTMENT OF COMPUTER SCIENCE

Thomas M. Siebel Center for Computer Science
University of Illinois at Urbana-Champaign
201 N. Goodwin Avenue
Urbana, IL 61801