CHAIR’S MESSAGE
A happy new year to all of you! We are pleased to announce the addition of many new members to the Department. Mauro Maggioni and Romit Roy Choudhury have joined the Department as secondary faculty members. Maggioni’s research interests lie in large-scale data analysis, and he moved here from Yale. An expert in wireless-networking, Roy Choudhury joined Duke after completing his PhD from University of Illinois, Urbana–Champaign. Rob Fowler, Director of High Performance Computing at Renaissance Computing Institute (RENCI), has been appointed an adjunct faculty member of the Department. Three new graduate students, Cahit Erel, Daniel (Ty) Fridrich, and Mathew Sayler, have joined the Department this semester. As we welcome the new students, we also congratulate our newest graduates and wish them all the best. Their successes made the Department a better place, and we are confident they will achieve great success.

As usual I am proud to share the achievements of our faculty and students. Bruce Donald was named the William and Sue Gross Professor of Computer Science and Biochemistry. Shivnath Babu and Richard Lucic each received a 2006 IBM Faculty Award. Susan Rodger has been reappointed as Associate Professor of the Practice. She is Program Chair of SIGCSE 2007 and Symposium Co-Chair of SIGCSE 2008, the premier conference on computer science education. Alexander Hartemink received a $2.4M grant, jointly with Randy Jirtle (Radiation Oncology & Pathology), from National Institute of Environmental Health Sciences for Identification and Characterization of Epigenetically Labile Genes. Two of our undergraduate students, Beth Trushkowsky and Daniel (Ty) Fridrich, were selected for honorable mention in the CRA’s Outstanding Undergraduate Award for 2007.

The Department was once again one of the sites of the ACM Mid-Atlantic Programming Contest in which 134 teams participated. The Duke teams Webhashi, Roboko, and Bawilee placed second, fourth, and sixteenth, respectively. Team Webhashi will be heading to the World Finals in Tokyo, Japan, on March 12–16, 2007. Since 1994 a Duke team has gone to the finals all but one year.

We were as usual busy with numerous events. In the annual meeting followed by picnic, new members of the Department were introduced and the graduate student achievement awards were presented. TechConnect 2006 brought students and employers together. The event was hosted by the Career Center, the Department of Computer Science, and the Pratt School of Engineering. The Department hosted the second annual Gamers’ Paradise, a student social event and fund raiser, on December 2. The annual holiday party was also held in December.

Be sure to check out our Web site to learn the latest news about the Department and to be part of our community. If you are in the RTP area, we hope you will stop by for a visit. We look forward to hearing from you.

Best wishes,
Pankaj K. Agarwal
Welcome New Faculty

Mauro Maggioni
Assistant Professor of Mathematics

Mauro Maggioni’s primary research is in harmonic analysis, spectral graph theory, multiscale analysis, stochastic dynamical systems, signal processing, applications to machine learning, and Markov decision processes. He is also interested in hyperspectral imaging, in particular in building automatic classifiers for discriminating normal from cancerous biopsies, and in the geometry of multiscale dynamical systems, and the construction of algorithms for the empirical construction of approximate equations for such systems.

Rob Fowler
Director of High Performance Computing Research
Renaissance Computing Institute (RENCI)

Rob Fowler is involved in high performance computing research projects, including efforts to analyze the effectiveness of high-end systems in serving the needs of scientists and to develop software tools that enhance the performance of grid-enabled applications. He was previously a senior research scientist in the Department of Computer Science and associate director of the Center for High Performance Software Research at Rice University.

Romit Roy Choudhury
Assistant Professor of Electrical & Computer Engineering

Romit Roy Choudhury is currently working on wireless networks, including supporting multiple users, managing mobility of users, providing reliable communication in the face of wireless channel fluctuations, routing, security, and privacy, among other challenges. He has worked on systems that exploit smart antennas to improve wireless network performance, location management, and on sensor network problems.

New Grants Awarded

Thom LaBean
Algorithms
SGER: Strategies for Increasing Stability of Self-Assembling DNA Nanostructures
Sponsor: National Science Foundation

Thom LaBean
International: Duke-Aarhus DNA Nanotech Collaboration
Sponsor: National Science Foundation

Thom LaBean, Jung Hwa Aura-Gimm (BME)
Algorithms
Integrating Nanoscale Systems & Design into the Undergraduate Engineering and Science Curricula
Sponsor: National Science Foundation

Alex Hartemink
Artificial Intelligence
Identification and Characterization of Epigenetically Labile Genes
Sponsor: National Institute of Environmental Health Sciences (NIEHS)

John Reif
Chair, 2007 Gödel Prize Selection Committee

John Reif has been named chair of the selection committee for the 2007 Gödel Prize for outstanding papers in the area of theoretical computer science. The Gödel Prize is sponsored jointly by the European Association for Theoretical Computer Science (EATCS) and the Association for Computing Machinery Special Interest Group on Algorithms and Computation Theory (ACMSIGACT).

This award is presented annually. The fifteenth presentation will take place during the annual ACM Symposium on Theory of Computing (STOC), in San Diego, California, in June 2007.

The prize is named in honor of Kurt Gödel in recognition of his major contributions to mathematical logic and of his interest, discovered in a letter he wrote to John von Neumann shortly before Neumann’s death, in what has become the famous “P versus NP” question.

Nominations are encouraged from the broadest spectrum of the theoretical computer science community.
BRUCE DONALD
AWARDED BASS CHAIR

BRUCE DONALD is the recipient of an endowed Bass Chair through the university’s Bass Program for Excellence in Undergraduate Education, a $40 million initiative that recognizes faculty members who are gifted teachers as well as scholars. His new title is William and Sue Gross Professor of Computer Science and Biochemistry. He is also a member of Duke’s Institute for Genome Sciences and Policy.

Donald was trained at MIT and came to Duke in Fall 2006 after eleven years as a professor in the Cornell Department of Computer Science and as the Foley Professor at Dartmouth. His background in automation and robotics led his lab to its current interest in structural genomics. His current research focuses on Computational Biology and Microelectromechanical Systems (MEMS).

SHIVNATH BABU AND RICHARD LUCIC
RECEIVE IBM FACULTY AWARD

SHIVNATH BABU AND RICHARD LUCIC each received a 2006 IBM Faculty Award. The IBM Faculty Awards program is a competitive worldwide program intended to foster collaboration between academic researchers and those at IBM, and fund exploratory research in areas important to IBM.

Babu’s award supports the Ques project where a complex networked computing system is treated as a rich source of data that is managed using innovative techniques to understand and query system activity, simplify system management, and enable automated system control. Ques targets a comprehensive range of system-management queries like health-monitoring, change and anomaly detection, root-cause diagnosis, forecasting, what-if analysis, and capacity planning.

Lucic’s award was for his work in broadening participation in computing (BPC). This effort is meant to attract women and minorities to the study of computer science, and the companies involved in the inDuke industrial relations program that Lucic co-directs have been very supportive of these efforts. “IBM in particular has been incredibly supportive of our BPC efforts,” says Lucic. A team of the Department’s education faculty including Owen Astrachan, Robert Duvall, Jeff Forbes, and Susan Rodger took advantage of this IBM support to conduct a workshop for high school teachers last summer to explore how the technologies of Web-based social networks might be used to increase interest in computer science among the cohort of women and minority high school students. The workshop, called HarambeeNet (Harambee is Swahili for “coming together as one”), helped establish promising concepts for social network modules that high school teachers in disciplines such as biology or economics might include in their existing courses. Support provided by Lucic’s IBM faculty award greatly enhances this important effort.

SUSAN RODGER REAPPOINTED

SUSAN RODGER has been reappointed as Associate Professor of the Practice for a five-year term. In addition, she was one of forty-nine recipients in 2006 named Distinguished Scientist, Engineer or Member of ACM.

Rodger’s research focuses on integrating interaction and visualization into computer science. She is widely known for developing the software JFLAP with over thirty of her students, www.jflap.org, to provide an innovative way for teaching automata theory and formal languages. JFLAP is used worldwide in over 160 countries.

Rodger is also known for her interactive style of teaching computer science. She integrates interaction into her lectures, and teaches her introductory computer science courses in a workshop format with computers in the classroom. To attract non-majors, she created an introductory programming course that allows students to build virtual worlds with 3D objects using the software Alice. The course enrollment doubled over the past year and has attracted a diverse group of students with over 50% women.

Rodger is a leader in the computer science education field, running numerous workshops/symposia for high school and college teachers on computer science education topics. In addition, she is Program Co-Chair of SIGCSE 2007 and Symposium Co-Chair of SIGCSE 2008, the premier conference on computer science education.
Forests cover approximately one-third of the earth’s land surface, account for 80% of terrestrial biomass, and affect local climatic properties of earth. Models of forest ecosystems are needed to understand how climate and land-use change can impact biodiversity, carbon storage, and forest resources at time scales of decades to centuries. When it comes to the processes responsible for maintaining the species diversity of natural ecosystems, ecological understanding has not provided much guidance. The factors likely to affect forest diversity over the next century are either absent from the models used to analyze and predict biodiversity, or they are too crudely parameterized to warrant detailed analysis.

Pankaj Agarwal (Computer Science), Jim Clark (Biology and the School of Environment), and their research groups have teamed up to address many of the shortcomings of the existing simulators. Over the last five years, in a multidisciplinary project funded by the National Science Foundation, they have been developing models that are on one hand sufficiently detailed to capture fine scale processes that affect the establishment of individual trees, and on the other hand are sufficiently broad to admit landscape and atmospheric processes. The researchers are using advanced statistical methods, so-called hierarchical Bayes models, to test assumptions of diversity mechanisms and to evaluate the differences among different species. They rely on computer simulations to test predictions of diversity mechanisms and to evaluate their contributions to overall forest dynamics. Because the underlying models are spatial, individual-based, and require long-term simulation at regional scales, new computational techniques are needed. Emerging tools that rely not only on approximation and clustering techniques and advanced spatio-temporal data structures, but also exploit the features of modern computer architecture, such as memory hierarchy and graphics processing unit (GPU) have been a key component of this collaboration.

Competition for resources (e.g. light availability) and dispersal of seeds are two crucial components in modeling forest dynamics that have long frustrated efforts to simulate responses to global change. It is therefore not surprising that much of their effort has also focused on these components. By exploiting a comprehensive statistical treatment of variability and uncertainty in the dispersal process, which is parameterized from field data as basis, the group has developed simple and fast approximation techniques for computing seed dispersal. Thanks to the computer game industry, modern-day PCs are equipped with highly sophisticated GPUs with amazing computing power. Since light computation is an important step in computer graphics, it is natural to utilize the computational power of GPU for computing the availability of light in a forest. These techniques have improved the computational efficiency of simulation of forest models by many orders of magnitude. Before the Duke team developed these techniques, one step of simulation for a typical 64x64 m² landscape took many hours, but now one step on a 1 km² plot takes less than five minutes.

An important product of the project is the creation and distribution of integrated software that is adaptable to a range of sampling designs and amenable to rapid assimilation of data collected under different designs. The success of these models and their ability to predict the forest dynamics relies heavily on the capability of data acquisition. Wireless sensing networks have the potential to revolutionize data acquisition and modeling of the environment, provided that systems can learn to dynamically respond to changing data needs and knowledge of evolving acquisition and transmission costs. Recognizing this potential, a few computer scientists, statisticians, and ecologists at Duke have recently begun collaborating with an engineer at University of Northern Arizona to develop modeling tools needed to control the wireless sensing networks. These networks can acquire data at relevant scales and drive models that aid understanding and anticipate change in environmental variables.
BEYOND VIRTUAL DATA CENTERS

DUKE’S INITIATIVE in shared cluster computing, funded by a 2003 NSF grant to build the Cluster-on-Demand (COD) system, has grown into an open service architecture for leasing “virtualized” networked resources to the Duke community. This project began when research staff member David Becker started experimenting with open-source software called Xen, which makes possible the running of multiple operating system instances in different “virtual machines” (VMs) on a physical server. “VMs are equivalent to real machines in that we can run our favorite operating system and application software on them and connect to them over the Internet, but we can also pause them, save them, clone them, or migrate them to a different server, even while the system is running,” says Becker. The Cisco network switches and Network Appliance filers used in the department’s Devil Cluster also let users create “virtual LANs” and “virtual filers” that can be accessed and controlled independently.

Becker and a team of graduate students working with Professor Jeff Chase innovated a system for managing a networked “cyberinfrastructure” of the future, where pools of such resources are offered by multiple providers and used for a defined period of time, subject to the terms of the contract, a concept borrowed from real-world economies.

The team has built a prototype distributed leasing system called Shirako, with continuing funding from a 2005 NSF grant to "make virtual distributed computing real." It lets the owners of resources control how they are used and shared, and the lease holders guide how they are configured. For example, in a cluster, the Shirako and COD control software determines how much computing capacity each virtual machine receives: for instance, it can "slice and dice" a shared pool of servers and storage and change the allocation on the fly, e.g., to handle sudden spikes in load.

The Shirako team is working with collaborators at the University of Chicago/Argonne National Labs and the Renaissance Computing Institute (RENCI) to promote a new model of grid computing, which allows computational users to tap into distributed computing resources. “Today’s grid systems are based on ‘middleware,’ in which the grid management software runs between the operating system and applications. Because Shirako operates below the operating system and applications, we refer to it as ‘underware’,” says Chase. “These virtualization technologies enable us to build underware that is more general, flexible, and powerful, but still compatible with the middleware used today.” The group has recently joined with NC State and other institutions in IBM’s Virtual Computing Initiative announced last month.

Chase explains, “We have invested over two years in developing the prototype. Now we have software we can use—both to manage our own systems and also as a platform for long-term research.” Team members Laura Grit, David Irwin, and Aydan Yumerefendi demonstrated the Shirako/COD software at two recent conferences (Supercomputing and OSDI). They also have an entry in the Duke Startup Challenge as Flywire Systems Inc., built around the Shirako/COD technology.

The team has published many papers along the way, but the meatiest research challenges are still ahead. What is the right way to create “virtual Internets” from a shared pool of networking resources, as proposed for NSF’s GENI testbed for next-generation Internet systems? What is the right way to manage the massive data generated to monitor the system, as well as by applications that can now run anywhere in the network? These problems raise many deep algorithmic challenges as well as new ways of thinking about networked systems.

“Our goal is to build systems that are ‘self-managing’ without adding to the burdens for users and administrators. Building software that ‘understands’ what is happening in the system and can plan how to respond to it is a very difficult challenge,” says Chase. To this end, the group is collaborating with Prof. Shivnath Babu, who is leading the NIMO project to use machine learning techniques to build models of applications, as a basis for planning resource managing and projecting performance impacts of various choices. Chase has also collaborated with researchers at HP Labs on applying machine learning techniques to systems problems, and is co-chairing a workshop on the topic (SysML) in April in Cambridge, MA.
SHIVNATH BABU is offering a new first-year seminar in Spring 2007 on the science behind Google, one of today’s most popular online search engines.

Babu is showing the exciting work being done in cutting-edge industries using very fundamental theories and concepts. The course closely examines the technologies that are employed by Google to manage the mass chaos of information over the Internet. Stimulating in-class discussions are combined with homework assignments to give the students a sense of how concepts in data management are directly applicable to developing services for the general public.

Babu’s research focuses on database management and the improvement of computer system performance. As a lead designer and developer of the Stanford Data Stream Manager for managing rapid time-varying data streams and author of numerous academic papers on data and system management, he is one of the key contributors to the upcoming book Data-Stream Management: Processing High-Speed Data Streams. Babu is currently developing a querying and controlling system called “Ques” to effectively monitor and diagnose the status of computer systems. To apply the results of his research to the real world, he is collaborating with companies like Microsoft and IBM in addition to working with other professors at Duke.

Babu’s personal association with Google dates back to his days at Stanford in 1999 as a Ph.D. student. At that time, Google was still in its infancy and many were unconvinced that money could be made from Web searches. Babu’s fellow classmates and friends at Stanford debated about joining Google, and the many who did are millionaires today. Babu too could have jumped on the bandwagon, but he opted for research in academia, as he wishes to see the products of his creation have a wider use in the near future.

The first-year seminar, entitled “Computer Technology: Google View,” is a starting block for what Babu hopes will become a fully developed course for upper classmen and graduate students. Although no previous knowledge of computer science is required for the seminar, the curriculum can be adapted depending on the enrolled students to arrange for special projects that involve programming. Students will come away from the course with a greater appreciation for the concepts of data management after seeing them at work in professional applications. As Babu said, “I wish for my students to develop a love for computer science.”
STUDENT PROFILE: LAURA GRIT

Laura Grit joined the Department of Computer Science in Fall 2001 after completing her undergraduate degree at Hope College. Laura was valedictorian at her high school; at Hope she was Phi Beta Kappa and a Hope Presidential Scholar. At Duke she is completing her dissertation research in the systems area under the supervision of Jeff Chase. She is funded by a National Physical Science Consortium graduate fellowship. She has interned at Sandia Labs, IBM Research, and HP Labs.

Laura’s research deals with dynamic resource management for Internet server utilities, in which network applications are hosted on a shared, distributed pool of servers and storage. Her work focuses on brokering architectures to mediate resource contracts between resource providers and hosted services. Laura is one of the lead architects of the Shirako leasing system described elsewhere in this issue. Shirako brokers implement the policies to arbitrate competing demands and coordinate adaptations to the dynamics of a shared environment, thus brokering is a key building block for a cyberinfrastructure resource economy. Laura is exploring various broker policies for hosted grid systems, adaptive services, and economic resource exchange.

Laura and her collaborators have published several papers in major conferences on operating systems and high-performance computing, and in recent workshops on virtual distributed computing and economics of distributed systems. This semester she has given talks, posters, and demos at IBM, Amazon, OSDI (a leading systems conference), and Supercomputing. Laura has also received two awards for her leadership in the Department. She has served as graduate student liaison to the faculty, and has assisted with department communications and recruiting activities. This spring she is teaching a course on intellectual property. Her hobbies include stained glass and riding roller coasters.

STUDENT PUBLICATIONS/PRESENTATIONS

Allister Bernard
DIMACS Workshop on Dialogue on Reverse Engineering Assessment and Methods (DREAM), New York, NY, Evaluating Algorithms for Learning Biological Networks

Emma Buneci
Supercomputing ’06, Tampa, FL, Qualitative Performance Validation and Diagnosis for Large Scale Scientific Workflows

Fred Bower
ACM SIGMETRICS/Performance 2006, St. Malo, France, Applying Architectural Vulnerability Analysis to Hard Faults in the Microprocessor (poster)

Laura Grit
IEEE/ACM International Workshop on Virtualization Technologies in Distributed Computing, Tampa, FL, Adaptive Virtual Machine Hosting

Adam Silberstein
23rd International Conference on Data Engineering (ICDE ’07), Istanbul, Turkey, Many-to-Many Aggregation for Sensor Networks

ACM SIGMOD International Conference on Management of Data (SIGMOD ’06), Chicago, Illinois, Constraint Chaining: On Energy-Efficient Continuous Monitoring in Sensor Networks

ACM SIGMOD International Conference on Management of Data (SIGMOD ’06), Chicago, Illinois, Energy-Efficient Monitoring of Extreme Values in Sensor Networks

Junyi Xie and Hai Yu
32nd International Conference on Very Large Databases (VLDB ’06), Seoul, S. Korea, Scalable Continuous Query Processing by Tracking Hotspots
APPROXIMATELY 1,300 women in computing for academia, industry and government came together in San Diego, California in October 2006 to share their knowledge with one another. Attending from Duke CS were Laura Grit, Angela Dalton, Tingting Jiang, Raluca Gordan, and Seda Vural.

The Grace Hopper Celebration of Women in Computing (GHC) 2006 was the sixth in a series of conferences designed to bring the research and career interests of women in computing to the forefront. GHC is the world’s leading technical conference for women in IT, computer science and related fields. The conference spotlighted the considerable achievements of technical women through an impressive line-up of keynote addresses, invited speakers and award presentations.

### GRADUATE AWARDS FOR THE 2005–2006 ACADEMIC YEAR

**OUTSTANDING PH. D. DISSERTATION AWARD**
Ke Yi
I/O Efficient Algorithms for Processing Massive Spatial Data
Co-advisors: Pankaj Agarwal, Lars Arge

**OUTSTANDING M. S. THESIS AWARD**
Constantin Pistol
Nanoscale Device Integration on DNA Self-Assembled Structures
Advisor: Alvin Lebeck

**OUTSTANDING PRELIMINARY EXAMINATION FOR PH. D. CANDIDACY AWARD**
Leeavati Norilkar
Towards a Complete Transcriptional Regulatory Code
Instructor: Alex Hartemink

**OUTSTANDING RESEARCH INITIATION PROJECT AWARD**
Urmia Majumder
Self-Assembly Across Scales
Advisor: Alex Hartemink

**OUTSTANDING TEACHING ASSISTANTSHIP AWARD**
Raluca Gordan
COMPSCI 160: Introduction to Computational Genomics, Spring 2006 semester
Instructor: Alex Hartemink

**OUTSTANDING DEPARTMENTAL SERVICE AWARD**
Jeff Phillips
For contributions to the Duke Computer Science community

**NATIONAL UNDERGRADUATE RESEARCH AWARDS**

TWO CS SENIOR undergraduate majors, Beth Trushkowsky and Daniel (Ty) Fridrich, were selected for honorable mention in the Computing Research Association’s Outstanding Undergraduate Award for 2007. The Outstanding Undergraduate Awards program recognizes students who have demonstrated excellence in computing research.

Trushkowsky, mentored by Jeff Forbes, is a Computer Science Undergraduate Research (C-SURF) fellow whose work has focused on the Collaborative Indexing and Annotation of Bibliographic Databases (CoBib) project. Fridrich is mentored by Xiaobai Sun and Nikos Pitsianis. His recent research efforts have focused on utilizing game processors for general purpose computing, especially scientific computing, with the research results presented at two national conferences: EDGE-2006 and HPEC-2006.
C-SURF

THE COMPUTER Science Undergraduate Research Fellows Program (C-SURF) is designed to provide undergraduates with an intensive research experience in a core computer science research-intensive project or an interdisciplinary project leveraging core concepts in collaborative ways. Fellows work on mentored research projects as part of a team of faculty, graduate students, and other C-SURFers. Fellows dedicate one summer and three linked independent studies in successive semesters as part of the program. Fellows receive course credit for their research work, a paid summer research experience, and graduate with distinction upon successful completion of the program. This competitive program not only capitalizes on the educational benefits of Duke’s capabilities as a premier research university, but also increases the connection of computer science students to the process of inquiry and discovery.

The projects from which applicants may select are listed at right. Project descriptions and additional information on the program can be found at http://www.cs.duke.edu/csurf/.

COMPUTER SCIENCE PROJECTS

Approximation Algorithms for Stochastic Decision and Control Problems
Advisor: Kamesh Munagala

Computational Issues in Markets, Elections, and Game Theory
Advisor: Vincent Conitzer

Distributed Self-Organizing Network Topologies for Nanocomputers
Advisor: Alvin Lebeck

Implementation of a Robotic Motion Planning Algorithm to Solve Mechanical Puzzles
Advisor: John Reif

Machine Learning and Computational Systems Biology
Advisor: Alexander Hartemink

Querying Systems as Data
Advisor: Shivnath Babu

Towards Automated Control of Computing Systems
Advisor: Shivnath Babu

INTERDISCIPLINARY COLLABORATIVE PROJECTS

Biomimetic Wireless Networks
Advisor: Romit Roy Choudhury

Computational Approaches to Understand the Regulation of Genes
Advisor: Uwe Ohler

DNA Self-Assembly and Computer Systems
Advisor: Chris Dwyer

Signal Processing/Pattern Recognition
Advisor: Bruce Donald

WELCOME NEW COMPUTER SCIENCE STUDENTS

M.S.
Cahit Erel
KOC University, Istanbul, Turkey
Systems, AI

Daniel (Ty) Fridrich
Duke University – Computer Science
Scientific Computing

Matthew Sayler
University of Texas-Austin Systems

UNDERGRADUATE
FIRST MAJORS
Jimin Choi
Robert Goodlatte
Lee Martin
Whitney Mickens

SECOND MAJORS
Dan Garrison
Quinn Gaumer
Niko Kurtzman
Roy Kwon
Zed Lamba
Rob Ocel
Andrew Perry
Luke Stewart
David Wagner
Aaron Wise

MINORS
Nathaniel Carter
Joohahn Cho

Beth Trushkowsky, a C-SURF Fellow, and Jeff Forbes
ACM GAMERS’ PARADISE

On December 2, the Duke Department of Computer Science hosted the second annual Gamers’ Paradise, a student social event and fundraiser. Organized by Duke’s student ACM chapter, DAGGER, and Psi Upsilon fraternity, Gamers’ Paradise 2006 raised over $250 for the charity Child’s Play. Child’s Play, established in 2003, gives 100% of their donations to their partner children’s hospitals. Created by the authors of the Web comic Penny Arcade, they send toys, video games, and money to sick children in hospitals around the world.

The day’s events included video gaming and various speakers. From 4–10 p.m., students listened to talks from Microsoft about XNA Studio Express, from EA games, and from Duke ISIS (Information Science and Information Studies). Interspersed between these talks, students participated in various tournaments, including Super Smash Brothers, Soul Calibur II, and Mario Kart. Students also had access to open play, including games such as Halo, Dance Dance Revolution and Guitar Hero. ISIS contributed Xbox 360 consoles for open play, and students had the chance to try out the new Nintendo Wii. Gamers also won many prizes, including those donated by Microsoft and EA games. The tournament, organized by Lauren Cohen (’08) and David Winslow (’07), encouraged computer science students to get to know each other, play video games, and donate to charity.

ACM PROGRAMMING CONTEST

ON SATURDAY, October 28, the Levine Science Research Center D-Wing was overflowing with computer science undergraduates attempting to solve as many programming problems as they could in a time limit of five hours. The ACM MidAtlantic Regional Programming Contest was held at eight sites from North Carolina to Pennsylvania, with 134 student teams battling it out. Duke hosted the largest site with thirty-one of the teams. This regional contest is part of the International Collegiate Programming Contest (ICPC), sponsored by IBM. The top team is automatically awarded a chance to compete in the world finals, which will be held this year in Tokyo, Japan on March 12–16, 2007.

Thousands of teams compete in regional contests from September to December worldwide, hoping to advance to the World Finals. Since 1994, a Duke team has advanced to the world finals each year except 1996. The Duke team Webhashi will be one of eighty-five teams in the world going to Japan for the world finals in March.

Three Duke teams competed with a strong showing receiving second, fourth, and sixteenth place. The Duke team "Webhashi," consisting of Everett Wetchler, Kshipra Bhawalkar, and Peng Shi, placed second. The Duke team "Roboko," consisting of Eric Rogstad, Jason Basko, and Nadeem Kolia, placed fourth. The Duke team "Bowlee," consisting of Aaron Wise, Jason Lee, and Mike Bauer, placed sixteenth. All the Duke teams were led by "Coach A," also known as Owen Astrachan, who has been coaching Duke programming teams for over ten years.

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TECHCONNECT 2006

INDUKE TECHCONNECT 2006, hosted by the Duke University Career Center, Department of Computer Science, and Pratt School of Engineering, was held September 19, the evening before the Duke Career Fair. At this annual event, designed to bring students and employers together, a panel of employers is selected to provide advice to students seeking internships and full-time jobs. Through this panel presentation, students get a good understanding of characteristics employers seek as well as a realistic view of the job market for engineering and computer science careers.

This year, panel sponsors included ExxonMobil, Bank of America, Lexmark, Microsoft, Newport, and GE. The panel discussion was followed by a vibrant networking event where students and employers connected in company-specific chat areas. This year, over thirty companies participated in the networking portion of the TechConnect event. This venue provides a less formal, more interactive environment than the traditional Career Fair, and the setting attracted more than 350 technology students seeking to connect with company recruiters.

STAFF AWARD GIVEN TO RICHARD BRAUN

THE OUTSTANDING Staff Award for 2005–2006 was given to Richard Braun, Systems Programmer, at the annual departmental meeting for his efforts in enhancing and streamlining the Department’s Web information, and for improving our use of the Web. Additionally, says Sr. Systems Programmer Joe Shamblin, Braun was acknowledged for his excellent job working with administrators and others to explain how to best use the Web as an effective medium.