Charles Csuri, Professor Emeritus, Awarded ACM SIGGRAPH 2011 Award for Lifetime Achievement in Digital Art

ACM SIGGRAPH, the Association for Computing Machinery’s Special Interest Group on Graphics and Interactive Techniques presented its Award for Lifetime Achievement in Digital Art to Charles Csuri for his visionary and creative merging of art and technology. Through his work, Csuri inspired generations to embrace computer imaging as a serious form of artistic investigation. An artist, computer graphics pioneer and professor emeritus at The Ohio State University, Csuri received the award at SIGGRAPH 2011 in Vancouver, BC, August 8.

ACM SIGGRAPH Art Award Chair Cynthia Beth Rubin said Csuri is a true visionary. “Decades ago he embraced the aesthetic potential of early computer imaging, and since then he has unfailingly worked in both teaching and aesthetic production, keeping us growing, discussing and moving forward.”

Csuri was instrumental in the establishment of Ohio State’s Advanced Computing Center for the Arts and Design (ACCAD), a leading center on the use and integration of emerging arts technologies, with funding from the National Science Foundation. "Chuck Csuri’s early and unique vision of an interdisciplinary collaborative, creative research center between the arts and sciences continues to permeate our culture,” said Maria Palazzi, director of ACCAD. “All of us who have had the privilege to study and work in this environment are profoundly grateful to Chuck for his vision, persistence and leadership in this field and at Ohio State. He has impacted the lives of generations of students who are now top professionals in graphics and animation throughout the world.”

Csuri began his work in intertwining art and computer science in the 1960s. He experimented with computer animation, winning awards and acclaim throughout Europe and the United States. As a painter, Csuri was immersed in the passionate discussions of his time, when abstract expressionists challenged everything from the purpose of art to the functions of abstract compositional elements. Through his personal network of colleagues, he was also aware of parallel discourses among scientists who debated the role of computers in society. His profound understanding of these two cultures put him in a unique position to merge aesthetics and computing, long before either group recognized the potential synergies. “We are so proud that digital art, having transformed the entire entertainment industries, traces back its root to Ohio State, to ACCAD and to CSE under the leadership of Professor Csuri,” said Xiaodong Zhang, chair of CSE.

With support from NSF, the US Navy and the Air Force Office of Scientific Research, Csuri directed research on computer graphics for over 22 years. The results of these studies have been applied to flight simulators, computer-aided design, architecture, magnetic resonance imaging, visualization of scientific phenomena and special effects for TV and film.

Csuri’s work is included in the collections of the Museum of Modern Art, the Zagreb Museum of Contemporary Art, the Victoria and Albert Museum, the ZKM Center for Art and Media and other important collections. He received BFA and MA degrees from Ohio State. Csuri is a Professor Emeritus in Computer Science and Engineering.

Left: SineCurve Man 1967; Right: Threads 2008 - Charles Csuri
Message from the Department Chair

Dear CSE Alumni, Parents, Friends and Colleagues,

Welcome to the Autumn 2011 CSE Newsletter. We have highlighted what many CSE faculty, students and alumni have accomplished and their impact to their fields and to society as scholars, inventors, entrepreneurs, and academic and industrial leaders. On the front page, we are proud to share with you the ACM announcement awarding CSE Emeritus Professor Charles Csuri the ACM SIGGRAPH Life Achievement Award in Digital Art. We are grateful to Professor Csuri's lifetime contributions to computer graphics that has transformed the entertainment and graphics communities around the world.

This year, CSE is undergoing an important evaluation. The Accreditation Board for Engineering and Technology (ABET) has visited us for a site-visit as part of the reaccreditation process for our program. The review, which includes a comprehensive self-study by the department, takes place every six years and is conducted by the Engineering Accreditation Commission and the Computing Accreditation Commission. I am glad to tell you that the evaluation of the CSE undergraduate program has been very well received.

In addition, the upcoming year brings us four new assistant faculty members which I am delighted to introduce to you. The department welcomes Brian Kulis, PhD University of Texas in machine learning, Arnab Nandi, PhD University of Michigan in databases, Kannan Srinivasan, PhD Stanford University in networking and Huamin Wang, PhD Georgia Institute of Technology in graphics.

I believe a key component in addressing the economic crisis of the country is to make strong efforts to maintain the world leadership of the U.S. in science and technology, in higher education, in medical research and practice, in entrepreneurial endeavors, and in the entertainment businesses. Information technology is the foundation of all these areas. A recent study based on the Apple business model published in the Journal of International Commerce and Economics by three professors shows that “most of the high-paying jobs in the iPod value chain are still in the United States, even though more jobs overall are offshore.” For example, the U.S. computer research and engineering team is a small portion of less than 15% of human resource in the iPod project, but their total earning is more than 50% of the salary budget. The Apple model is an example of how important and valuable the core computing technology is in U.S.

The Buckeye Blog opens a window to show how our faculty, students and alumni are working hard in various IT fields, which update the core-computing technologies and make positive impacts on all the areas of society. Please keep us informed about your exciting life and work details and we will communicate them again via the next issue of the Buckeye Blog.

Xiaodong Zhang
Chair and Robert M. Critchfield Professor
Computer Science and Engineering

The Department: By the Numbers

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<th>Faculty</th>
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<td>36 Regular Faculty</td>
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<td>2 Research Faculty</td>
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<th>Undergraduate Enrollment</th>
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<td>342 Computer Science and Engineering Majors</td>
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<td>165 Computer and Information Science Majors</td>
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<th>Graduate Enrollment</th>
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<th>Research Expenditures</th>
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<td>5,647 BS Alumni</td>
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<td>2,103 MS Alumni</td>
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CONTENTS

2 Message from the Chair
4 Featured Alumni
6 Alumni Notes
8 Focus on Research
10 Faculty Updates
12 Student News
14 Department News
15 New Faculty
16 Staff Updates
17 CSE Banquet
18 Development Matters
20 New Graduates
Featured Alumni

David Ebert
Silicon Valley Professor of Electrical and Computer Engineering, Purdue University

David Ebert, PhD ’91, is the Silicon Valley Professor of Electrical and Computer Engineering at Purdue University. He is the Director of Visual Analytics for Command Control and Interoperability Environments (VACCINE), a Department of Homeland Security Center of Excellence.

Ebert attributes much of his success to the education he received at Ohio State. Some of his favorite memories include “working on computer animated short-films with fellow student, now Academy award winner, Doug Roble, using all the computers in all the CIS labs during closed hours to generate our animation, and hoping for a ‘not bad’ from advisor Rick Parent,” he said.

Ebert stated that his time at Ohio State provided a solid foundation in research. “My education gave me a very good breadth of knowledge as well as depth in the field of computer science. More importantly, I learned how to find interesting research problems and how to perform research. I also learned a great appreciation for interdisciplinary research and expertise and how to collaborate with people from other disciplines,” he said.

Upon graduation, Ebert accepted a position as Assistant Professor of Computer Science at the University of Maryland, Baltimore County in 1993 and was promoted and tenured in 1998. He was a visiting associate professor at Stanford in 2000 and joined Purdue as an Associate Professor in the School of Electrical and Computer Engineering (ECE) in 2001. He was promoted to Professor in 2006, and named the Silicon Valley Professor of ECE in 2010.

Ebert’s projects include developing real-time artistic and photorealistic (physics-based) techniques for volumetric simulation of gases and clouds for both computer games and films. The technique has also been adopted for scientific visualization of atmospheric and weather data. Also, he developed real-time cloud modeling and rendering software used for all clouds in Disney’s movie, Valiant. The United States Patent and Trademark Office awarded him a patent for real-time volumetric procedural modeling of clouds techniques. He is active in the visualization community, serving on numerous ACM and IEEE Computer Society boards and committees. He has published over 150 papers on visualization, visual analytics and computer graphics.

He also serves on the Board of Governors for the Institute of Electrical and Electronics Engineer’s Computer Society. At VACCINE, Ebert directs over 80 researchers at 19 universities in four different countries. The center is an extended network of universities generating ground-breaking ideas, novel technologies and critical knowledge. The center works closely with academia and other industries to develop customer-driven research methods and to provide training for the next generation of homeland security experts. “Together with Rutgers University’s Data Sciences Center, we provide expertise and solutions to help DHS entities and first responders turn data into actionable information for public safety and public health (e.g., improving the search and rescue activities of the U.S. Coast Guard in the Great Lakes,analyzing crime activities and patterns in Lafayette, IN). There are only 9 DHS Centers of Excellence across a variety of application fields,” he said.

Ebert’s advice to CSE students is to adapt to the changes in their field. “Computer science is so dynamically changing based on technology that learning fundamental principles and techniques allows you to adapt to these changes. For students in graphics and visualization, my advice would be put the effort in to understand enough about the application and data so that you can solve the problem while getting amazing insights into the edge of the art of many disciplines. Also, remember the user and their problem and just not the paper you are thinking of publishing. You can actually impact a variety of fields if you do this,” he said.

Ebert believes the “next big thing” in his field is integrating visualization and analysis into the discovery and decision-making process. “This involves interactive simulations, predictive analytical models, visual cognition and the science of interaction as well as new techniques for visual representation. The challenges that I see are developing this effective partnership between human cognition and automated algorithms through integrated, interactive environments (visuals, interfaces, interaction). The other great challenge is providing solutions for the scale problems – massive scale of data, cross-system scale, cross-task scale, cross-device scale, and finding the natural problem scales of how humans can reason with complex systems, simulations, and systems of systems.”

Ebert has been married to 13 years to his wife, Sue, and they have one cat. He describes himself as an avid hiker, wine enthusiast, and a die-hard Springsteen fan.

CSE Alum on Fast Company Magazine’s 100 Most Creative People in Business List

Sitaram Asur, PhD ’09, made Fast Company Magazine’s list of 100 most creative people at number 26, along with Conan O’Brien, Oprah Winfrey and Tiny Fey. “It is a great honor to be recognized for my work along with luminaries from various other fields and from all over the world, especially given that I am only 2 years out of grad school. Being a fan of many of the people on that list, it felt absolutely wonderful to be recognized alongside them,” Asur said. The list honors the top creative people in businesses across the world. Asur has been a researcher in the Social Computing Group at HP Labs since October 2009. He received his PhD in Computer Science from OSU in 2009 as well. When he was at OSU, he was a part of the Data Mining Research Lab, advised by Dr. Srivivasan Parthasarathy.

“My first project at HP Labs was on predicting real-world outcomes using social media content. I used real-time chatter from Twitter to forecast box-office revenues for Hollywood movies. The predictions were better than the ones by the Hollywood Stock Exchange, which is the gold standard in the industry. This work was published in ACM Web Intelligence Conference in 2010,” Asur said.

Asur’s recent research includes predicting box-office revenue using social media, in other words, social media content to predict real-world outcomes. Another research project was measuring social influence in which Asur and his team proposed an algorithm that determines the influence and passivity of users on a social network based on their information forwarding activity. He also worked on a project about social media trends, where they conducted a study of trending topics on Twitter and theorized why trends form, rise and eventually decay. “The focus of our group is on methods for harvesting the collective intelligence of groups of people in order to realize greater value from the interaction between users and information. My job is to perform research on social media analytics and also contribute towards the development of useful products for HP,” he said.

Fast Company wrote that Asur “can predict the future” and that his crystal ball was Twitter. “One of the key findings of my research here at HP Labs is that the content that is generated on social media websites such as Twitter and Facebook are representative of the opinions and views of a large population of users,” he said. “And when tapped efficiently, as we showed, this ‘wisdom of the crowd’ can be used to effectively predict real-world outcomes, such as the future sales of a movie or the future popularity of a product. This translation of online content to a quantifiable estimate of a real-world outcome is a big step for research in this area. In the case of movies, we showed that merely using the content from social media, we could outperform industry standards which use a lot more information about the movies, the cast, demographics etc.”

Now that hundreds of millions of people use different forms of social media every day, this is the future of communication. “Given this growth, more and more companies are embracing the fact that the social nature of interactions needs to be given more importance and leveraged when developing products and services. Already for example, it is common for advertisers and recommendation engines to target friends of customers to improve their sales and for companies to have Twitter accounts to interact directly with their customers,” Asur said.

Twitter has affected his research quite vastly. “Apart from my work on predicting movie revenues using Twitter, other research I have performed involves developing an influence measure for Twitter users, and an intensive study of trending topics on Twitter with a theoretical basis for the formation, persistence and decay of trends,” Asur said.

Alumni: We Want to Hear From You!

Do you have an update to include in the next alumni newsletter? Do you have any suggestions for topics you would like to see covered? Do you have any photos from your college days or today that we can include? We want to hear from you! Email us your updates, photographs and suggestions to Carrie Stein at alumni@cse.ohio-state.edu or mail them in the attached envelope.
President Obama Appoints CSE Alum to Strategic Committee

Iridium CEO Matt Desch, BS ’90, was appointed to the National Security Telecommunications Advisory Committee by President Barack Obama. NSTAC’s goal is to provide recommendations, advice and expertise to assure vital telecommunications links through any event or crisis and to help the U.S. maintain a reliable national communications posture.

The committee is comprised of thirty individuals, including executives from Microsoft, McAfee and Twitter.

“The NSTAC committee was created by Ronald Reagan in response to the threat of nuclear war on the nation’s telecom infrastructure. It’s served four Presidents since then, and while nuclear war might be possible, the threats to our infrastructure are even more diverse today — including cyber-attacks, natural disasters and terrorism,” Desch said.

Desch became the Chairman and CEO of Iridium Satellite LLC in 2006. He received his BS in computer science from OSU in 1980 and an MBA from the University of Chicago. “I’m pleased to be working with the NSTAC committee at this time. It’s also great recognition for my education from OSU in 1980 and an MBA from the University of Chicago. “I’m pleased to be working with the committee at this time. It’s also great recognition for my education from OSU and Disney combined — in helping them in learning the ropes of the software industry. His education at OSU and in the CSE department was important in starting his company. “Learning computer science at OSU taught me the fundamentals about programming, algorithms, computer graphics, and the software lifecycle. I’ve used that knowledge throughout my career to build and support various kinds of software,” he said.

“Over the years I discovered that what I enjoy the most is employing technology as an enabler to solve problems and provide services. While the code is cool, seeing it in action is way cooler,” Gilicinski said. The app is available on Apple iOS devices.

Alum’s CSE Education Helped Him Create New Technology

Mark Gilicinski, BS ’90, created a company called MobilePhoto, along with Ohio State alum, Sean Boiarski. “Our platform takes our clients images and video, and puts them together in an app that can be used on phones or tablets. Using our tool, the focus can be on the storytelling and messaging while we worry about the delivery. To date, our software is used in places like museums, cruise ships, laboratories and trade shows to help people get information, to entertain and inform,” Gilicinski said.

The two men’s experiences at AOL and Disney combined have helped them in learning the ropes of the software industry.

Guoqing (Harry) Xu, PhD ’11, has accepted a position as an Assistant Professor in the Department of Computer Science at the University of California, Irvine. He received the IBM Research PhD Fellowship and the CSE Graduate Research Award in 2010 and an ACM SIGSOFT Distinguished Paper Award in 2008. While at OSU, he published 15 peer-reviewed papers, 11 of which he served as first author. While at UC, Irvine, Harry’s research will investigate static and dynamic program analyses and their use for compiler optimizations, runtime systems, and software engineering tasks. His current research is focused on techniques for analyzing large-scale object-oriented software in order to find, remove and prevent run-time inefficiencies.

Joseph Hollingsworth, PhD ’92, was selected to serve a three-year term as the Director of the Institute for Learning and Teaching Excellence (ILTE) at Indiana University Southeast. The ILTE’s job is to provide assistance to the faculty with instructional design, instructional technology, assessment, and other faculty-related issues such as FERPA, new faculty orientation, peer review and other matters. If there are other CSE alumni who would like to talk about teaching excellence-related topics, etc., please do not hesitate to contact Joe.

Steve May Named OSU College of Engineering Distinguished Alumni

Steve May, MS ’92 and PhD ’98, computer and information science, began his tenure at Pixar Animation Studios in 1998 as the shading and modeling technical director on Toy Story 2, working on the characters of Wheezy and Buster. On the film, Monsters, Inc., May worked as the simulation and effects sequence supervisor and helped pioneer the fur technology and overall look for the character named Sullivan. May then worked on the Academy Award-winning feature Finding Nemo, as the computer graphics supervisor for the shark characters and Sydney Harbor environment.

May was the effects supervisor on Golden Globe winner Cars, overseeing all of the film’s visual effects. His next role was as the supervising technical director for Disney Pixar’s Academy Award-winning feature film, Up. In 2010, May was promoted to chief technology officer at Pixar, where he oversees the development of visual effects tools and processes for the entire studio.

Fueled by a love of art and science and inspired by an image in a magazine created in 1984 by a future Pixar colleague, May decided to pursue a career in computer animation. Before finding his way to Pixar, May was a member of the research faculty at The Ohio State University. He taught computer animation and computer graphics courses at Ohio State’s College of the Arts and College of Engineering. Several of May’s former students are now employees at Pixar.

Born in Sarasota, Fla., May spent his childhood in Mansfield, Ohio. He currently resides with his wife and two children in San Anselmo, California.

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Raghu Machiraju
Research at the Crossroads of Computer Science and Biological Image Analysis

Interdisciplinary work is a lot more complicated than one might think, but it’s enlightening and immersive. Raghu Machiraju, CSE associate professor and researcher, is collaborating with other researchers at the OSU Medical Center to learn more about the basic mechanisms of disease, including cancer and to improve patient outcomes. “My current research in biological image analysis focuses on providing computational support for various topics of interest in the biological sciences. The main problem of interest in biology is the one-to-one association of genotypes to phenotypes and changes in the genome results in a plethora of phenomes. Imaging as currently practiced, allows for the characterization of phenomes. Thus, mutations of a gene can result in a different phenotype,” Machiraju said.

Translating computer science language into biological jargon is one of the biggest obstacles he faces when collaborating with the medical community. “While I find the long-standing problems of medical and biological image analysis intellectually stimulating, they are also very challenging and demanding. Most importantly, I find the ensuing work rewarding and socially relevant,” Machiraju said.

Machiraju works with Dr. Gustavo Leone, Associate Director for Basic Research, Comprehensive Cancer Center, and Vice Chair of Research in the Department of Radiology Dr. Michael Knopp at OSU. He also works with Dr. Michael Ostrowski, professor and Chair of the College of Medicine. “I began to focus on medical image analysis and imaging. My initial focus was on the processing and analysis of acquired images (MRI and microcopy) to extract white matter tracts and the analysis of histology images of mouse placenta,” he said.

In Dr. Leone’s lab, research shows that the inhibition of the Retinoblastoma gene (Rb) results in malformed placenta in the female mouse, which leads to fetal death. “Through the use of advanced imaging techniques, we showed how an infiltration in a specific layer of the placenta reduces the surface area required for adequate transport of nutrients of mother to child. This was our first foray into all things biological,” Machiraju said.

Admittedly, image analysis was a relatively smaller piece of the larger puzzle on basic mechanistic studies pertaining to molecular cell biology of the Rb gene. Different laboratories seek to learn the basic mechanisms underlying tumor initiation and progress.

“The Leone and Ostrowski laboratories have shown that we can delete PTEN and P53 genes in stromal fibroblasts (a specific cell) surrounding epithelial cell leads to tumor initiation and ultimately progression. Through imaging, statistical analysis and machine learning, we actually showed that many of the cell types in the microenvironment surrounding a mammary duct undergoes changes in morphology in addition to changes in the DNA. This work required us to create statistical models of the nuclear shape in both normal and mutant microenvironments. We especially focused on the changes that are likely to occur during tumor initiation. This subtle change is hard to detect. We are continuing to verify our findings using transgenic mice that fluoresce in a confocal or multi-photon microscope,” Machiraju said.

They work on deploying similar methods for the study of the endothelium in the formation of vasculature in normal and ischemic wounds. Oxygen-deprived ischemic wounds heal slower and the basic mechanisms are of interest to the laboratories of Drs. ChanDan Sen and Sashwati Roy at the Heart and Lung Institute. There’s a great interest in wound care, also given the higher incidence of obesity in the United States. They are also working with Anderson labs to better understand the dynamics of the immunological protein (IgG) transport in the placenta. Once again, imaging is being used in addition to methods of classical research to study an assembly of cells and study different patterns.

According to Machiraju, biology is very different from the traditional topics of computer science in many ways. “It is reduc-
tivist in nature and very different from computer science where abstraction and intuition are central. There is a need for encyclopedic understanding of processes and factors. Another challenge is the variability that exists at all levels. Although there is more use of computational methods, biology is certainly an observational science and is very much hypothesis driven. The latter aspect is very foreign to many computing researchers. Tools are built to explore and interact with data. Hypothesis driven research is the staple in biology,” he said.

Despite the major differences between the two sciences, the team has adapted and found ways to work with each other to learn more about the basic molecular mechanisms of cancer. In another body of work, Machiraju has focused on structures in the brain. “We also developed a slew of methods to extract white-matter tracts from diffusion weighted MRI images. This allows the cleaning of the white-matter connectivity in the brain. Our collaborators at NIH are pioneers in the development of this modality. Knowledge of connectivity facilitates superior surgical planning and treatment of neurological diseases,” the professor said.

He co-mentored doctoral dissertations on analysis of data from diffusion tensor images and functional magnetic resonance images. The fMRI data analysis included studies on Developmental Dyscalculia, an impediment which disallows afflicted children from excelling in mental arithmetic.

These collaborations also offer a great opportunity for CSE students. They allow a student to be embedded in the lab, working closely with his or her peers, knowing how instruments corrupt the basic signal, among other things. “All of my students know how to operate scanners and microscopes, know the subtleties of the processes (staining tissues for fluorescence) and are at home reading medical imaging, radiological and neuro-scientific journals. In an essence, they are receiving an inter-disciplinary training. As a result my students have been well placed. Over the last four years, I have placed two students at Harvard Medical School (Kishore Mosaaligant, research fellow at the Department of Systems Biology and Firdaus Janoos, a presidential fellow at OSU), one student at MIT/Harvard Broad Institute (Shantanu Singh, PhD candidate in the CSE department), and one student at NIH (Okan Infragounji, research assistant in Radiology),” Machiraju said. “All of them are really well-trained in an interdisciplinary fashion. They are well-versed in computer science, statistics and their domain of interest in biology. In addition, they are good programmers. It is just that we in CSE are training a different variety of students.”

Looking forward to the future, the professor says that it’s all about genetics now. “Through the involvement of Kun Huang, Associate Professor in the Department of Biomedical Informatics, we are including a more genetic focus. Analysis of phenotypes only makes sense if they are associated with genotypes. Our new students are being asked to include this focus.”

Machiraju served as the Conference Chair for Visualization 2008 conference held in Columbus and as paper chair in 2010 and 2011. He received his PhD in 1996 from Ohio State in computer science and served on the faculty at the NSF Engineering Research Center for Computational Field Simulation at Mississippi State University (MSU). He returned to OSU in 2000.
CSE Chairman Honored At Alma Mater

Xiaodong Zhang, who earned his master’s and PhD degrees in Computer Science at Colorado University-Boulder in 1985 and 1989, respectively, received the Distinguished Engineering Alumni Award at the 46th annual Engineering Awards banquet in two categories—Research and Invention, and Education. Robert Davis, the Engineering dean, presented the awards on April 29, 2011. Awards are made to distinguished alumni in the following categories: Education, Research and Invention, Government Service, Industry and Commerce and Private Practice.

The professor shared some memories of his time in Colorado, “University of Colorado at Boulder was my starting point of the American dream, where I had many beautiful memories besides receiving an excellent, graduate education. In my first two years of study at Boulder, I commuted from an off-campus apartment, four miles away, to school every day by bicycle. I had an enjoyable experience during spring, summer and autumn times at the foot of the Rocky Mountains, but there were some challenges during the snow storms in winter. I still vividly remember several unknown and good-willed Boulder citizens stopped their cars on the road and gave me and my bicycle a ride back home, which has always inspired me to help others in their critical times.”

Since 2006, Zhang has held the Robert M. Critchfield Professorship and chairs the Department of Computer Science and Engineering at Ohio State. His research in memory systems has contributed to the advancement of computer systems through several influential algorithms and their system implementations, which have been widely adopted in operating and database systems and commercial processors. His recent work on designs and implementations of scalable distributed systems for big data analytics have been adopted by production systems in Facebook and Yahoo!. He is a Fellow of the Institute of Electrical and Electronic Engineers (IEEE).

Before joining Ohio State in 2006, Zhang was the Chair of Computer Science at the College of William and Mary. From 2001 to 2004, he was on leave to serve as program director at the National Science Foundation (NSF), where he started several research initiatives, including effectively developing and utilizing the internet and distributed systems technology to significantly raise the level of high-performance computing at a much lower cost. He also served on two important national committees tasked with setting funding policies and focusing research directions to revitalized our high-end computing efforts while he was at NSF. He received his BS in Electrical Engineering from Beijing University of Technology, China.

The National Science Foundation awarded Radu Teodorescu a three year GAOLI award entitled Addressing the Challenges of Parameter Variation in the Design of Ultra-Low Power Chip Multiprocessors Using Near Threshold Technology. The project is a collaboration with Walleed Khalil in the OSU ECE Department.

Hevlett-Packard awarded Ness Shroff research funds to explore Energy and Labor Efficient Sensor Networking for Underground Data Acquisition. The project is in collaboration with Can Enre Kemal in the OSU ECE Department.

Srinivasan Parthasarathy received NSF funding for two new research projects. The first, in collaboration with Wright State University and CSE Alum Dr. Amit Sheth PhD ’15 and Dr. Valerie Shalin, is entitled Sensitive Play in Synthetic Worlds: Social Media Enhanced Organized Sensemaking in Emergency Response. The second, Towards New Scalable Stochastic Flow Algorithms is funded by an NSF program which supports high-risk, exploratory and potentially transformative research.

Software Helps Find Faces In A Crowd

There’s new software, called eShadow, which helps people find their friends in a crowd and gives directions to that friend. As described by Tamal Dey, CSE associate professor, his research group’s software will also build bridges between strangers who share personal or professional interests.

Since it enables face-to-face meetings, eShadow is a complement to online social networks like Facebook, which excel at connecting people who are far apart: “Today, online social networking has advanced dramatically, but our ability to meet people face-to-face hasn’t gotten any easier,” Xuan said. “We want eShadow to close social gaps and connect people in meaningful ways, while keeping the technology non-intrusive and protecting privacy.” The name eShadow comes from the idea that users input their interests into the software, and their Smartphone broadcasts these interests to other users of the software – but only within 50 yards of the phone. So as users move, the broadcast follows them around like a shadow. “Online, people can steal others’ identity, or lie easily without detection. It’s much harder to pull off a masquerade in person.”

Young people, Xuan said, are especially comfortable putting personal information online and could readily adapt to using the software. That said, people can be selective about who they wish to receive their eShadow signals. Users can select individuals from their phone’s contact list, and specifically de-select people as well. “Say you’re from Ohio State, and someone else is from the state up north, so I don’t want to talk to them. I just tell the software to ignore anyone who says they’re from that state,” Xuan said, laughing. The researchers’ biggest challenges concerned efficient use of wireless communication, explained doctoral student Jin Teng. He and his colleagues wrote algorithms that let Smartphone’s send and receive eShadow signals quickly, but without overwhelming a network. In outdoor tests on the Ohio State campus, they measured how fast the software could detect users who were 20, 30 and 50 yards apart. They tested different numbers of users. In all cases, the software was able to connect people within about half a minute.

Other engineers on Xuan’s team include CSE alumni Xiaole Bai, an assistant professor of computer and information science at the University of Massachusetts at Dartmouth, and Boiyang Zhang, Xinfeng Li and Adam Champion, all PhD students in CSE.

Misha Belkin received a three year research grant from the National Science Foundation entitled Algebraic and Spectral Structure of Data in High Dimension. Misha was also promoted to associate professor effective October 1.

Atanas (Nasko) Rountev was named to the Journal of Object Technology editorial board.

Rajiv Ramnath is part of a team of researchers from OSU, including faculty from AMD and the OSU School of Nursing, who have received an award from the Tri-Service Nursing Research Program to focus on the delivery of safe sex practices to women in the military.

Jim Davis and his Computer Vision Lab have recently up-graded their video surveillance camera network on campus. The upgrade included replacing their existing analog cameras with new Sony IP network-based pan-tilt-zoom cameras and extending the network to 13 cameras. The new camera network provides extensive coverage along W 19th Avenue and Neil Avenue (see below) and will be used to study comportation. Noga takes to monitor and understand the behavior patterns in these areas.

The College of Engineering awarded Dha-baleswarkar K. (DK) Panda the 2011 Innovator Award for his MPHCH software. He also received new research grants from Mellonax and a Department of Energy Phase II STTR award with RNET Technologies entitled HPC Energy Measurement and Optimization.

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This project isn’t the only one that was funded to help the visually-impaired. Along with the music notes application is Showcase Competition.

The software developments like this would allow students who have vision impairments to actively participate in music, school and social activities that are not usually accessible to them. Summer quarter, the team decided to bring on software engineers to develop an application that would show the type of features that could eventually be incorporated into their prototype. They created this application on the Android 3.0 platform. The application enables the music notes to scroll across the screen automatically and at the proper tempo, in scope to cyber security of physical information networks, as exemplified by wireless sensor networks,” CSE Professor Arsh Anorah said. “Our research on wireless sensor networks includes the following: The team was able to demo physical layer techniques for achieving security, which are a radical departure from the conventional use of keys (and passwords) for cryptographic security.

Grant Curell, a CSE senior, said that his major helped him decide that he wanted to go into this line of work. “It’s our job to attack enemy networks and defend our own networks. The Air Force is essentially attacking and defending networks in the Air Force and the military at large. Not just the Air Force, the Army and the Navy are a part of it.” Curell transferred here from the Virginia Military Institute, but decided that the Air Force was a better fit for him.

“IT’s our job to attack enemy networks and defend their networks as well as defending ours. They’re two very different sides of the game. I can tell you a lot about how to attack a network, I can tell you a lot about the systems that we’re attacking but I can’t tell you how to implement something like an OSU-wide security policy,” Curell said. “I was really torn between cyber warfare and being a pilot. My dad was a fighter pilot and my mom was also in the Air Force.”

Curell hasn’t just been taking OSU courses for certain kinds of certification for penetration testing, which is basically learning how to break into stuff. The idea is you have the network and you learn to footprint the network, which means to gather information.”

ORSC provide grants for projects that help the disabled community every year. This program will enhance an already-existing open source and free e-book reader to provide digital books for the visually impaired. CSE students qualify for the prestigious scholarship.

The students worked to install an aquaponics system for the community. The system is essentially a fish tank and a garden that work together for mutual benefit. The fish waste, in liquid form, is used to water and feed the plants, which in turn absorb the nutrients and filters the water which, now clean, flows back into the fish tank. It is a cost-effective way for the community to grow vegetables and raise fish, like tilapia, to supplement a more nutritious diet for the local residents. The implementation of an aquaponics system also enhances water resources for other needs, and promotes sustainable agriculture systems.

“We don’t really use any computers,” Jewitt said. “We have a computer lab at the vocational school, but they aren’t really used. The students aren’t really going to put their own life into perspective and have also opened up doors to future humanitarian engineering opportunities,” Jewitt reflected. While there, the team also helped set up a computer lab at the vocational school.

Student News

Interdisciplinary Student Project to Aid Visually Impaired

Three projects were given funding by the Ohio Board of Regents (OBOR) and the Ohio Rehabilitation Services Commission (ORSC) to help make the lives of visually-impaired people better. These projects pulled students from different minors in an interdisciplinary effort to help people. CSE students Michael Jewitt and Laura Housley worked as part of an interdisciplinary team of students to help create innovative, new software, “SeeSharp – A Sheet Music Application for the Visually Impaired,” in their CSE 75 Capstone Class.

This project was an interdepartmental effort, drawing students from mechanical engineering, biomedical engineering and industrial engineering to work with a physical therapist under the advisement of Dr. Peter Rogers, a professor in biomedical engineering. The students worked with clients and potential users from the Columbus Vision and Vocational Services (CVVS) and the Ohio State University to help develop the program. They were to gather requirements for a new, standalone device that would run software to project sheets music to musicians who suffer from permanent visual impairment and have visual acuity between 20/60 and 20/200.

Software developments like this would allow students who have vision impairments to actively participate in music, school orchestras and college courses in music that would otherwise be halted by the inability to read music effectively. Winter Quarter, the team decided to bring on software engineers to develop an application that would show the type of features that could eventually be incorporated into their prototype. They created this application on the Android 3.0 platform. The application enables the music notes to scroll across the screen automatically and at the proper tempo, in accordance with the MusicXML file. The user has the ability to jump to a specific measure, change the tempo, and ‘swift’ through the score at the touch of their finger. Features more specific to the visually impaired include the ability to change the size of the notes, the screen brightness, and the color of the notes and the background. The team was able to demo the application with several potential end users at Columbus Vision and Vocational Services and Ohio State and received a lot of positive feedback. Jewitt, Housley and their team placed 1st in the Engineering Education Innovation Center Capstone Showcase Competition and were among the teams awarded the “Best Capstone” award in the CETTE Capstone Showcase Competition.

This project isn’t the only one that was funded to help the visually-impaired. Along with the music notes application is Showcase Competition.

From Left: Michael Jewitt, Laura Housley, CSE, Alexi Sawyada - Occupational Therapy, Nicolas Campos - Mechanical Engineering, Erica Waite - Business Administration, Gunter Eckert - Biomedical Engineering, Emma Sanders - Industrial Design, Laura Chistobrek - Mechanical Engineering

Eleven engineering students traveled to Choluteca, Honduras. The trip was a part of a college of engineering service learning class taught by Dr. John Merrill, the Director of the First Year Engineering Program. Dr. Merrill, Jewitt and others worked with Larry and Angie Overholt, alumni of OSU, who currently reside in Columbus.

The groups of engineers were in Choluteca to identify, research and design solutions for the problems the community is facing. The area is mostly impoverished with 1 percent of the population living on less than $250 a month. Water shortages are also frequent. Water is provided by the government, but only runs through pipes to this community once every eight days. With infrequent water flow, the community can only provide two liters of water per person daily. Further, rudimentary housing and ventilation do not adequately protect from the tropical rain and harsh heat and other hazards. Angie, who works as a nurse practitioner and manages a clinic in the area, says many of the locals suffer from malnutrition, dehydration due to a poor diet, and asthma, which results from poor smoke ventilation from the stoves.

The students worked to install an aquaponics system for the community. The system is essentially a fish tank and a garden that work together for mutual benefit. The fish waste, in liquid form, is used to water and feed the plants, which in turn absorb the nutrients and filters the water which, now clean, flows back into the fish tank. It is a cost-effective way for the community to grow vegetables and raise fish, like tilapia, to supplement a more nutritious diet for the local residents. The implementation of an aquaponics system also enhances water resources for other needs, and promotes sustainable agriculture systems.

CSE Students Giving Back: Student Engineers Travel to Honduras

Featured Undergraduate: CSE Student Trained in the Art of Cyber Warfare

It’s been called the fifth domain of warfare, in addition to land, sea, air and space. Cyber warfare is political-ly-motivated hacking that is used to defend U.S. networks and attack for- strange. It results as a by-product of cyber security.

Organizations like the 0x security initiative, it’s the most in demand job for my year group in the Air Force. Cyber warfare is essentially attacking and defending networks in the Air Force and the military at large. Not just the Air Force, the Army and the Navy are a part of it.” Curell transferred here from the Virginia Military Institute, but decided that the Air Force was a better fit for him.

“It’s our job to attack enemy networks and defend our own networks. The Air Force needs people that can attack networks as well as defending ours. They’re two very different sides of the game. I can tell you a lot about how to attack a network, I can tell you a lot about the systems that we’re attacking but I can’t tell you how to implement something like an OSU-wide security policy,” Curell said. “I was really torn between cyber warfare and being a pilot. My dad was a fighter pilot and my mom was also in the Air Force.”

Curell hasn’t just been taking OSU courses for certain kinds of certification for penetration testing, which is basically learning how to break into stuff. The idea is you have the network and you learn to footprint the network, which means to gather information.”

CSE Student Awarded NSA Scholarship

The National Security Agency awarded Ryan Cutter a two-year scholarship. As part of the award, he will intern next summer in Charleston, South Carolina at the Space and Naval Warfare Command Center. Because CSE is a NSA National Center of Academic Excellence in Information Assurance Education, CSE students qualify for the prestigious scholarship.

CSE Students Giving Back: Student Engineers Travel to Honduras

During spring break of 2011, a group of engineering students traveled to Choluteca, Honduras. The trip was a part of a college of engineering service learning class taught by Dr. John Merrill, the Director of the First Year Engineering Program. Dr. Merrill, Jewitt and others worked with Larry and Angie Overholt, alumni of OSU, who currently reside in Columbus.

The groups of engineers were in Choluteca to identify, research and design solutions for the problems the community is facing. The area is mostly impoverished with 1 percent of the population living on less than $250 a month. Water shortages are also frequent. Water is provided by the government, but only runs through pipes to this community once every eight days. With infrequent water flow, the community can only provide two liters of water per person daily. Further, rudimentary housing and ventilation do not adequately protect from the tropical rain and harsh heat and other hazards. Angie, who works as a nurse practitioner and manages a clinic in the area, says many of the locals suffer from malnutrition, dehydration due to a poor diet, and asthma, which results from poor smoke ventilation from the stoves.

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Jewitt has been on the trip three times now. “I had an amazing time on this trip and have had the opportunity to help people, both members of the team, and doctors and clients. Each experience has been different and presented its own unique set of challenges, both technical and personal. I feel that opportunities such as these have helped me to put my own life into perspective and have also opened up doors to future humanitarian engineering opportunities,” Jewitt reflected. While there, the team also helped set up a computer lab at the vocational school.
Best Paper Awards

25th Annual ACM International Conference on Supercomputing

The 25th ACM International Conference on Supercomputing (ICS 2011) presented the Best Paper Award to Feng Chen, Per Kristian Lehre, David A. Koufaty (Intel Labs), and Xiaodong Zhang (CSE Department Chair) for their paper entitled: “Hystor: Making the best use of the solid state drives in high performance storage system”. The annual conference this year was held in Tucson, Arizona. The authors presented an effective storage-based solution to maximize the SSD performance in a scalable and large storage system at a low cost. Most existing solutions including commercial systems treat SSDs as buffer caches, which are easy to implement, but often not very cost and space efficient in practice.

20th International ACM Symposium on High-Performance Parallel and Distributed Computing

A team of researchers guided by Dr. Gagan Agrawal received the Best Paper Award at the 20th International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC ’11). In 2011, HPDC received more than 170 submissions. The paper “Supporting GPU Sharing in Cloud Environments with a Transparent Runtime Consolidation Framework,” was written by Agrawal, Vignesh Ravi (CSE graduate student), Michela Becchi (University of Missouri) and Srimat Chakradhar (NEC). GPUs were originally designed for games and other graphics applications, but they’ve been identified to be suitable for general purpose computations, essentially providing “supercomputing” at a very cheap price. This specific work from the group takes GPUs a step further, as each is now shown capable of scaling multiple general purpose computations at the same time.

31st IEEE Conference on International Conference on Distributed Computing Systems

The 31st IEEE Conference on Distributed Computing Systems (ICDCS 11) presented the Best Paper Award to Rubao Li (postdoctoral fellow, CSE), Tian Luo (CSE PhD student), Yin Hua (CSE PhD student), Xiaodong Zhang (CSE Chairman), Fuaheng Wang (research scientist at Emory University) and Yongqiang He (software engineer at Facebook) to their paper entitled: “GSmart: Yet another SQL-to-MAP-Reduce Translator” MapReduce has become a standard software framework for big data analytics in distributed systems. The authors of the paper demonstrate that the poor performance of these translators is caused by the framework of one-operation-to-one-job mapping, which does not consider correlations of input data and input keys among the queries. The annual conference was held in Minneapolis, Minn. in June.

17th International Symposium on Formal Methods

PhD student Derek Bronish was one of several authors on the paper, “The 1st Verified Software Competition: Experience Report” which earned the Best Paper win at the 17th International Symposium on Formal Methods in Limerick, Ireland. FM 2011 is an independent association whose aim is to stimulate the use of, and research on, formal methods for software development. This paper included 23 authors, including many distinguished scientists from both sides of the Atlantic. It summarized the experiences of several teams that were solving a set of problems for software verification.

CSE Welcomes Four New Faculty

Huaimin Wang recently finished his postdoctoral study in the department of Electronic Engineering and Computer Sciences, at the University of California, Berkeley. He received his PhD from Georgia Institute of Technology in 2009, MS from Stanford University in 2004 and B.Eng from Zhejiang University (Mixed Class 1998) in 2002. He was a recipient of the NVIDIA fellowship award in 2005. He works in the areas of computer graphics, computer vision, and image processing. He is interested in developing accurate and efficient animation techniques for digital entertainment and visualization applications, such as fast-clothing animation in video games and realistic water animation in movies and scientific visualization. He is particularly interested in combining real-world data acquisition with physically based simulation techniques, so that animations can be efficiently generated with high fidelity.

Brian Kulis is joining the CSE department, after spending three years as a postdoctoral fellow at UC Berkeley in the ECE department. He obtained his PhD in computer science from the University of Texas in 2008 and his BA degree from Cornell University in computer science and mathematics in 2003. For his research, he’s won three best paper awards: two at the International Conference on Machine Learning and one at the IEEE Conference on Computer Vision and Pattern Recognition. He’s the recipient of an MCD graduate fellowship and an Award of Excellence from the College of Natural Sciences at UT. Brian’s research focuses on large-scale machine learning. He’s interested in developing techniques for analyzing very large-scale data that are applicable to a wide range of problems. The goal of his research is to develop new approaches to core problems in this area, including online learning, content-based search and numerical optimization.

Arnab Nandi is a recent PhD in Computer Science from the University of Michigan, Ann Arbor. His research focuses on solving database system challenges encountered when building search engines over structured data. His dissertation addresses the problem of making search in databases easier, focusing on search interfaces, query understanding and result ranking.

During internships at Google, Microsoft Research and Yahoo! Research, Arnab has worked on various large-scale structured search systems, dealing with problems in search quality, data integration and analytics. Arnab received his Bachelors degree in Information Science from the University of Delhi, and his Masters degree in Computer Science from the University of Michigan, Ann Arbor.

Kannan Srinivasan received his PhD in Electrical Engineering from Stanford University in 2010 and is now a post-doctoral researcher at the University of Texas. His recent work on in-band wireless full-duplex, which was published in MohoCom 2010 and won the Best Demo Award. His dissertation work on quantizing spatial correlation of packet reception and its implications to protocol performance won Best Paper Award.

At Stanford, he won the Department Fellowship in 2005. At Oklahoma State University, he won the Presidential Award for academic excellence. He also worked as a Research Officer at the National Research Council of Canada. His research goal is to build solutions and architectures that improve wireless network performance and reliability. His work adapts mathematical models, tools and insights from information and communication theory, statistical signal processing and network theory to develop practical solutions.
Tom Fletcher started working for the CSE department in January of 1977, when he was 28. Since then, he has touched the lives of many people in the office with his quiet demeanor and hard-working attitude. “I started as a student helper, I had already graduated but I came back to take a few classes. That lasted a few months and then someone else hired me to work on a co-op program. That lasted for a couple years and then I came to the main office. “From then on I do odds and ends that no one else wants to do,” Tom said, laughing. He remembers his time at CSE very fondly, but said he decided it was time for him to retire. At the retirement lunch the department held in honor of Tom, faculty and staff expressed their sadness at Tom leaving and shared their memories of Tom over the years. He didn’t expect that, he said. “There’ve been a lot of good memories. Overall, it’s been a great experience. I didn’t realize so many people would miss me. It brings back a lot of memories.”

Tom talked about his plans after retiring saying, “I’m just going to relax and stay at home. I have writing to do. I’m writing a science fiction novel, set in the near future,” Tom received a liberal arts degree at OSU and will stay in Columbus after retirement. Although the employees of the CSE department will miss him, they wish him the very best in his future endeavors.

Behind the Scenes: Quarter to Semester Conversion

The advising office in the Computer Science and Engineering department works hard all-year round to help students with their courses and provide insight and advice for their future. Now the office is involved in one of the biggest and most important events in OSU’s history - the quarter-to-semester switch. Each adviser serves in this complicated project by making this switch go as smoothly as possible for students. The advising office even hired a part-time adviser to aid students with the semester transition.

“I think the biggest part of it is to get students to come in, whom we’ve identified as graduating in spring 2012 and we want to make sure that they can graduate and if they spill over, we have to work with them to figure how their courses will translate into the semester calendar. Summer and autumn quarter might not be too bad, but if a student has been here at least one year in quarters and then converts to semesters that takes a lot of time to figure out,” Peg Steele said.

Steele has been an adviser for about 25 years at OSU. She is a board member for the National Academic Advising Association (NACADA), a national organization that promotes professional development and help for academic advisers. She’s involved with strategic planning and establishing policies with the group. Over the years, members of the advising staff have been recognized as outstanding advisers, such as undergraduates academic advisor, Dr. Nikki Strader. She was voted Outstanding Adviser by the Academic Advising Association of Ohio State (ACADAOS). The purpose of this organization is to encourage better interaction and discussion among faculty and graduate students interested in advising issues at OSU.

The advisors are committed to ensure that the transition doesn’t cost a thing for the students and to help students who are on track to graduate in spring of 2012, right before the switch. Professor Bruce Weide said the office has sent emails to students and invited them to information sessions so they can learn how the transition will affect them. “We have meetings with students to inform them of the transition. We are trying to talk to people with the appropriate expected graduation date. You don’t lose a single credit hour in the transition. Our staff connected with the college of engineering to create tools to help with the transition;” he continued.

“For students graduating before the semester change, they will be told what classes they should take in order to achieve their goal of graduating on time. "We’re going to be very prescriptive about this. We want to make sure we’re being fair and helpful to the students because they’re paying to go here,” Steele said.

The only foreseeable downside of the semester transition is less variety in what students can take. They “will have fewer paths to follow and find smaller specializations within computing. Most of the courses will be redone significantly,” Professor Weide said. The difference between most departments in Arts and Science and CSE is that they took 5 credit hours and shrunk them down to 3 credit hours to fit the semester switch. “But that doesn’t work for our courses because they’re already 3 credit hours. So we had to revamp our entire curriculum. Core courses have been completely changed,” Professor Weide said. Despite the difficulty of the transition, the advising office staff is quick to assure that they’ll do everything in their power to make sure CSE students are not affected too much by the transition.

2011 CSE Annual Awards Banquet

The Computer Science and Engineering Department held their 15th Annual Awards Banquet on May 27, 2011 at the OSU Faculty Club. This is a departmental event to honor our students’ academic achievements and the successes of our faculty and staff.

The department wishes to thank those alumni and industry donors who helped make this event possible – either by contributing to the undergraduate scholarship awards or by sponsoring a table. Raytheon Company, Northrup Grumman Foundation, Bruce Finlonbaugh, Conleet PhD ‘90 and Christina “Coby” O’Connell, The Leggett Family, including Ester ‘45, Robert ‘72 and Susan Leggett ‘72, Matt Desch ‘80, Crowe Horvath, Silicon Valley CIO Award and James Cates ‘71 and the ACM Central Ohio Chapter all contributed financially to make this event a success.

Central Ohio Chapter of Association of Computing Machinery (ACM)
Ben Gilbert
The O’Connell Family Award
Stephen Glancy
Christopher Mayer
Adam Zirk
Matt J. Desch and Ann M. Murphy Award
Zachary Boerger
Jacqueline Telphahn
The Department of Computer Science Undergraduate Research Award
Marc Khoury
Crowe Horvath
Cherish Dean

Raytheon Corporation
Natalie O’Connell
Andrew Thayer
The Department of Computer Science & Engineering Scholarship
Alexander Bunch
Dillon Courts
Michael Diekema
Dorian Rahamin
Daniel Saunders
Ernest William Leggett, Jr. Scholarship: The Leggett Family Award
Andrew Balderas
Cheerian Blosse
Justin Harrison

Department Founders Scholarship
Marc Khoury

B. Chandrasekaran and Sandra Marmak Graduate Fellowship
Venu Sataluri
Mike Liu Graduate Research Fellowship Award
Teng-Yih Lee
Outstanding Teaching Award
J. Eric Fodor-Lusier
Paul Sklitz
Outstanding Service Award
Carolina Collins
Bruce Weide
Eleanor Quinlan Memorial Award
Anatole Wolf

Staff Updates

Long-time Friend and Employee of CSE Says Goodbye After 34 Years

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Development Matters

CSE Alumni Give Back With Founder's Fund

Founded in 1968, the Computer Science and Engineering Department recently celebrated its 40th year anniversary. Now, some of the students, faculty and administrators who worked during the early years to establish CSE want to give back. The Founders Fund was created with two goals in mind: to provide an endowed scholarship fund that allows CSE to award academic scholarships to undergrads based on achievement and to give a recognition award to a faculty member, adjunct appointee, lecturer or administrator that has made a major contribution to the development and growth of the department. “My motivation to start this scholarship was the small number of undergraduate scholarships in CSE, especially relative to other departments; and also the lack of recognition of the efforts of the department founders and those currently making an impact. It’s these people who worked very hard to found the department that need to be recognized and it’s the current people who go out of their way for the students of CSE,” alumnus Al Stutz said. He received in BS in 1972 and MS in 1975 from this department.

Stutz is currently the Chief Information Officer for the Advanced Virtual Engine Test Cell (AVETEC) in Springfield, Ohio. He’s been working with the CSE department for years and wanted to see a change in the amount of scholarships given to students. His experience as a student at Ohio State allowed him to understand what undergrads go through. “Why create the scholarship? Of course the easy thing to say is to give back. I just think that the department is 40 years old and needs to get active in assisting the undergraduates. We have so many great students who are struggling for funding and we have graduates of the department that need to help,” Stutz said. “College today cost much more and has a bigger impact on families and the students than in 1968 when the department was formed. The students today need our help more than ever.”

A percentage of the fund’s annual distributed income is to be used for scholarships to support undergraduate students. The goal is to allow for up to three awards per year. Winners will be chosen by a selection committee comprised of CSE alumni who will work with the Coordinator of Undergraduate Advising to assist in identifying candidates.

In addition to the undergraduate scholarships, the Recognition Award will honor the people who help drive the department to success. The candidates for the Recognition Award are selected and ranked by the selection committee and a recommendation is sent to the CSE chair who then announces the winner at the CSE Annual Awards Banquet. “The long-term goal for this fund is increasing scholarships. As the fund grows, additional scholarships will be added,” Stutz said. “We want to provide a way for us as a department to reach out to former undergraduates and encourage them to participate with us in educating the current students. The idea behind the selection committee is that we need to find undergraduates, who are successful in CSE workforce, to get involved in helping students.”

Xiaodong Zhang, CSE Chair, is “grateful for Al’s effort to create the Founders Fund Scholarship. Al is a CSE alumni and has been on our teaching faculty for many years. This fund will recognize the contributions of our founding members spanning forty years and the young CSE students today.”

If you are interested in helping with the Founders Fund, you may contact Al Stutz at Stutz.1@osu.edu or to contribute to the fund, you may visit https://www.giveto.osu.edu/give/OnlineGiving/fund_results.aspx?Source_Code=WAL&Fund=482111. You may also mail your donation with the attached envelope to the department.

Many Thanks to Our Alumni and Friends!

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