DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2013 - 2014 ANNUAL REPORT

THE OHIO STATE UNIVERSITY COLLEGE OF ENGINEERING
Picture of the stadium is courtesy of the OSU Image of the Day. It was taken by new alumnae, Sara Valentine.
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Our Mission

The Department of Computer Science and Engineering will impact the information age as a national leader in computing research and education. We will prepare computing graduates who are highly sought after, productive, and well-respected for their work, and who contribute to new developments in computing. We will give students in other disciplines an appropriate foundation in computing for their education, research, and experiences after graduation, consistent with computing’s increasingly fundamental role in society. In our areas of research focus, we will contribute key ideas to the development of the computing basis of the information age, advancing the state of the art for the benefit of society, the State of Ohio, and The Ohio State University. We will work with key academic partners within and outside of OSU, and with key industrial partners, in pursuit of our research and educational endeavors.
2013-2014 NEWS & HIGHLIGHTS

Shroff Receives IEEE INFOCOM Achievement Award

Dr. Ness Shroff, the Ohio Eminent Scholar Chaired Professorship of Networking and Communications, received the IEEE INFOCOM Achievement Award for his seminal contributions to scheduling and resource allocation in wireless. The INFOCOM Achievement Award, from the Institute of Electronics and Electrical Engineers (IEEE), was created in 2007 for recipients whose body of work (or a single paper) has had a significant impact on the networking research community.

Dr. Shroff’s research interests span the areas of communication, social, and cyber-physical networks. He is especially interested in fundamental problems in the design, control, performance, pricing, and security of these networks. He is a past editor of IEEE/ACM Trans. on Networking and the IEEE Communications Letters, and currently serves on the editorial board of the Computer Networks Journal, IEEE Network Magazine, and the Networking Science journal. He has served on the technical and executive committees of several major conferences and workshops. For example, he was the technical program co-chair of IEEE INFOCOM‘03, the premier conference in communication networking, the technical program co-chair of ACM Mobihoc 2008, the general co-chair of WICON’08, and the conference chair of IEEE CCW’99. He has served as a keynote speaker and panelist at several major conferences in the networking area. Dr. Shroff was also a co-organizer of the NSF workshop on Fundamental Research in Networking in 2003, and the NSF workshop on the Future of Wireless Networks in 2009.

Ness is a Fellow of the IEEE, and a National Science Foundation CAREER awardee. His papers have received numerous awards at top-tier venues. For example, he received the best paper award at IEEE INFOCOM 2006 and IEEE INFOCOM 2008, runner-up awards at IEEE INFOCOM 2005 and IEEE INFOCOM 2013, and the best paper of the year in the journal of Communication and Networking (2005) and in Computer Networks (2003). His papers have also received the best student paper award (from all papers whose first author is a student) at IEEE WIOPT 2013, IEEE WiOPT 2012, and IEEE IWQoS 2006.

Shroff received his Ph.D. from Columbia University in 1994. He joined Purdue University immediately thereafter as an assistant professor. At Purdue, he became professor of the school of Electrical and Computer Engineering in 2003 and director of CWSA in 2004, a university-wide center on wireless systems and applications. He joined the Ohio State University ECE and CSE departments in 2007. From 2009-2012, he also served as a guest chaired professor of wireless communications at Tsinghua University, Beijing, China, and currently holds an honorary guest professor position at Shanghai Jiaotong University in China.

D. Wang Recognized for Scholarship

Dr. DeLiang (Leon) Wang received one of six University Distinguished Scholar Awards. This award, established in 1978, is bestowed upon senior faculty with exceptional scholarly accomplishments who have compiled a substantial body of research. The award is supported by the Office of Research. Recipients are nominated by their departments and chosen by a committee of senior faculty, including several past recipients of the award.

Dr. Wang has become one of the most prominent researchers in his field, making ground-breaking contributions to oscillatory correlation theory and solving the speech segregation problem.

Professor Wang’s best-known work is perhaps his analysis of neural oscillator networks and his more recent endeavor in segregating the target speech from its acoustic inference. His research team has developed a variety of algorithms in machine perception that have advanced the state-of-art performance by large margins. His algorithms on pitch tracking, dereverberation, singing voice separation, mask estimation and localization-based separation are widely used in the research community.

DeLiang’s scholarly work includes more than 100 articles in leading journals and numerous papers in
conference proceedings and edited books. His papers are widely quoted in the literature. He has been continuously funded throughout his career, and currently leads a multimillion-dollar National Institutes of Health effort to help listeners with hearing loss better understand speech in noise.

Wang is an elected Fellow of the Institute of Electrical and Electronics Engineers. He is a recipient of the Office of Naval Research Young Investigator Award and the Helmholtz Award from the International Neural Network Society. He currently serves as co-editor-in-chief of Neural Networks, a premier journal in his field.

Dr. Wang began his academic career at Ohio State in 1991 arriving from University of Southern California where he received his Ph.D. He gained his BS and MS from Peking University.

**Two Careers Recognized by the National Science Foundation**

This year, two junior faculty members received the respected National Science Foundation (NSF) Faculty Early Career Development (CAREER) Award. This award supports junior faculty who exemplify the role of teacher-scholars by combining outstanding research, excellent education, and integrated education and research. These make the 26th and 27th CAREER awards earned by members of the CSE faculty while at The Ohio State University.

**Dr. Luis Rademacher** was given the CAREER award for his work in computer theory.

Rademacher is currently focusing on the analysis and exploration of data, including classification, inference, and retrieval. Generally this involves the extraction of features that are relevant to a particular goal. In the design of algorithms for the analysis and exploration of data, feature extraction techniques act as basic building blocks or primitives that can be combined to model complex behavior using a variety of tools. Data rarely satisfies the precise assumptions of these models and feature extraction tools, and combining these tools amplifies errors. Luis is tackling the challenging task of designing new algorithms that are robust against noise and can be combined as building blocks while keeping the error propagation under control.

Dr. Rademacher came to CSE in 2009 after doing post-doctorate research at Georgia Tech. In 2007, he received his Ph.D. in Applied Mathematics from Massachusetts Institute of Technology. Prior to that he received from the Universidad de Chile, Santiago, Chile, a Mathematical Engineering Title (Masters Equivalent) and a Bachelor in Engineering Sciences, Mathematics.

**Dr. Christopher Stewart** of the Systems area is the second person receiving a CAREER.

Currently, Professor Stewart studies the responsiveness, cost effectiveness, and carbon footprint for next-generation cloud computing systems. Most systems today excel in only one of these dimensions, often at the expense of the others, risking the long term economic and environmental sustainability of cloud computing. Professor Stewart’s research employs performance modeling and autonomic computing to prototype cloud systems that are sustainable, scalable, and high performance.

In his present project, Greening as a Service, Professor Stewart addresses a common issue facing cloud systems: dirty, carbon-intensive energy is cost effective but not environmentally sustainable. Greening as a Service exposes this issue to end users, allowing them to route requests through sustainable datapaths. The challenges are to track datapaths across multiple geographically distributed datacenters, move them to clean energy (e.g., via carbon offsets), and keep response times and costs relatively low. Professor Stewart has set up https://www.datagreening.com, a prototype greening service that powers email with clean energy. Through this service, he hopes to gather data on the carbon footprint of popular email providers while providing a useful service to hundreds of users.

Professor Stewart is the Editor of IEEE Sustainable Computing Register. He received his Ph.D. from the University of Rochester in 2008 and attended Morehouse College in Atlanta, Georgia for his undergraduate degree.
**Staff Member’s Service Recognized by University**

On Friday, April 11, 2014, Carrie Stein was presented with the University Distinguished Staff Award. In recent years, Carrie has received the College Distinguished Staff Award as well as several Outstanding Service Awards from the CSE department.

The Distinguished Staff Award at The Ohio State University is a very prestigious honor especially considering there are only twelve staff members who receive this award per year. The award “recognizes staff members, who have had five years of continuous service, for exceptional accomplishments, leadership, and service to the university community by significantly improving or enhancing the quality of work life in ways that make a substantial difference for their colleagues; contributing to outstanding and sustained improvements in customer services; and developing creative solutions to problems that result in significantly more effective and efficient university operations.”

The CSE department has significantly enhanced its research activities since Carrie was hired as the Grant Funds Administrator in 2005. She plays a critical role in the management of funded projects by keeping the faculty informed of the many funding sources in the country and assisting faculty with the writing and submitting of proposals. Her above and beyond attitude extends to providing support for faculty search and alumni relations along with the addition of being the writer/editor of the CSE Buckeye Blog.

In the Faculty nomination letters, Carrie was praised for her excellent performance as follows: “Carrie has universal trust among the CSE faculty with her positive attitude and hard work ethic; she is a creative, diligent, and enthusiastic person, completely dedicated to her work.” Dr. Xiaodong Zhang, the CSE department chair, describes her thusly: “With her efficiency, effectiveness, initiative, enthusiasm, effort, and a genuine interest in helping others, she has created a high standard for those around her to follow.”

**College Awards Faculty for Mentoring and Research**

One of the first Faculty Mentoring Awards for the College of Engineering was given to Dr. Ness Shroff. The award, just established in 2013, is presented to an individual faculty member in the College of Engineering for demonstrated excellence in the mentoring of one or more early-career faculty members within the College.

Dr. Radu Teodorescu received a 2013 College of Engineering Lumley Research Award. The award, established by John H. and Mildred C. Lumley, recognizes the research contributions and productivity over the last five years of faculty and research scientists.

**Faculty Promotion**

Congratulations may also be given to Dr. Radu Teodorescu for his promotion to Associate Professor.

**OSU Game Design Program Ranked #15 in Nation**

The Ohio State University has earned a #15 ranking on The Princeton Review’s recently published list saluting the best graduate schools to study video game design for 2014.

Compiled by The Princeton Review, one of America’s best-known education and admission services companies, the 2014 list names 25 graduate schools in rank order (1 to 25).

The Princeton Review chose the schools based on a survey it conducted in Fall 2013 of 150 programs at institutions offering video game design coursework and/or degrees in the United States, Canada, and some countries abroad.

The company’s 50 question survey asked schools to report on a range of topics, from academic offerings...
and faculty credentials to graduates’ employment and professional achievements. Among the criteria The Princeton Review weighed to make its selections: school curriculum, faculty, facilities, and infrastructure, plus career services and technology. The Princeton Review developed its “Top Schools To Study Game Design” project in 2009 with assistance from a national advisory board that helped design the survey instrument and methodology. Board members included administrators and faculty from respected game design programs, and professionals from some of the top gaming companies.

**CSE Game Design Team at Games for Change**

A team of CSE game designers, led by Cheng Zhang, made the finals in the Games For Change $25,000 Shoot for the Moon game design competition. The competition is held in partnership with the Schusterman Philanthropic Network. Founded in 2004, Games for Change facilitates the creation and distribution of social impact games that serve as critical tools in humanitarian and educational efforts.

The Moon Experience is an interactive and immersive virtual reality system based on the historic Apollo Program (1961-1972). The goal of this project is to demonstrate how to create an effective learning experience in a virtual space, which would otherwise be impossible to realize in the real world.

**IBM’s Watson to Share Knowledge with Buckeyes**

Beginning in Autumn 2014, students in the Knowledge-Based Systems Capstone course will have access to the IBM Watson Cognitive Computing Cloud Architecture for Natural Language Question Answering. This is the same technology that underlies the Watson Jeopardy! Champion. Ohio State is one of seven schools granted this unique opportunity.

Accessing Watson’s cloud, student teams will program to develop prototype applications and business plans using the fields of retail, travel or health-care for the structure. Examples might be a personalized shopping application or simplified applicant-screening for clinical drug trials. The hope is that the students’ work will teach Watson a means to analyze documents more deeply so the machine can make improved connections people make instinctually from a natural language context.

**Singapore Summer for Fuhrly**

Dave Fuhrly, a CSE Ph.D. student, was awarded an NSF East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI) Fellowship Award to do research in Singapore in summer 2013. He worked with Professor Ee-Peng Lim who heads the Living Analytics Research Center (LARC) at Singapore Management University in Singapore.

The title of their work is “Interactive Visualization of User Communities and Interests in Social Networks,” and it is based on finding groups of people in social networks with commonalities, such as what they write and/or what places they visit, and visualizing those groups and the relationships between them. Their work will allow an exploring user to specify whether they are fully, partially, or not at all interested, in each group and restructure the group configuration to match the specified “soft” interest thresholds. The restructured grouping is presented to the user in an intuitive dynamic visualization interface which can be again refined based on user preference. This work bridges both Dave’s work in Ohio State’s CSE Data Mining Lab — directed by his advisor Srinivasan Parthasarathy— on rapid visual and interactive data mining, and LARC’s strength in analysis of social network groups through topic modeling.

**Grad. Y. Wang Named Ohio State Presidential Fellow**

Yuxuan Wang, a CSE Graduate student, received an Ohio State University Presidential Fellowship, the most prestigious award given by the graduate school. Yuxuan is a Ph.D. candidate working with Professor
DeLiang Wang. Yuxuan’s work focuses on developing machine learning techniques applied to the speech separation problem, also known as the cocktail party problem. Additionally, Yuxuan is interested in robust automatic speech recognition and optimization.

The goal of Yuxuan’s research is to improve the performance of speech separation systems in adverse environments by integrating spectrotemporal structures of speech into learning algorithms. The fellowship will fund 12 months of his study towards the completion of a doctoral dissertation.

Prior to joining Ohio State, Yuxuan earned an undergraduate degree in Network Engineering from Nanjing University of Posts and Telecommunications, China.

**Undergrad LeDonne receives DoD Scholarship**

Jeremy LeDonne, a CSE, math, and electrical engineering triple major, was awarded the Information Assurance Scholarship from the Department of Defense (DoD). This scholarship is for individuals with specializations in information assurance, which focuses on defending critical systems and infrastructures from cyber threats and attacks. The scholarship will allow Jeremy to pursue his interests in computer security and artificial intelligence. Jeremy was eligible for this award because The Ohio State University is designated National Center of Academic Excellence in Information Assurance Education.

**Student Becomes Apache Committer**

Yin Huai has been selected to become a software committer for the data warehouse software Hive project sponsored by the Apache Software Foundation. This is a high recognition to Yin’s technical capability and his contributions to Hive. Yin has contributed multiple software patches to Hive. The major effort he has recently made is to merge YSmart to Hive, significantly improving the productivity of data processing. YSmart is an SQL-to-MapReduce translator with powerful optimizations.

Yin is a co-author of the YSmart paper that received the Best Paper Award at the 2011 International Conference on Distributed Computing Systems. Being a committer, Yin will have a high responsibility for the future direction, innovation, and quality of Apache Hive.

Apache Hive is a production open source software for big data analytics, which has been widely used in major organizations, including Facebook, LinkedIn, Microsoft, Netflix, and Taobao. Yin Huai is a Ph.D. candidate under supervision of Professor Xiaodong Zhang, working on data management in distributed systems.

**Visualization Team Earns Prize**

Qihang Li, CSE Ph.D. candidate, won the 2013 IEEE Scientific Visualization Contest. The goal of this year’s contest is to develop new visualization methods for exploring the organization and function in a developing mouse brain. His team proposed an interactive visual analytic system based on Allen-Developing-Mouse-Brain-Atlas data to enable clear and insightful observations of the spatiotemporal patterns of gene expression in the mouse brain development. Qihang is co-advised by Kun Huang and Raghu Machiraju.
CAREER Earned by Alum

Timothy Miller, (Ph.D. ’12) a professor at Binghamton University, was recently awarded the NSF Faculty Early Career Development (CAREER) award.

Miller’s research focuses on CPU, GPU, and memory architectures that are robust to the challenges of today’s ever-shrinking transistors, such as process variation, circuit aging, hard faults, and soft errors. Additionally, Miller is interested in open-architecture GPU research infrastructure with simulator, compiler, and synthesizable logic. The success of Miller’s research efforts will lead to a substantial reduction in energy wasted by semiconductor devices for the purpose of improving battery life, environmental impact, and operating costs. It will also encourage continuous self-adjustment and adaptation across an array of computing technologies.

Alum Receives COE Recognition

Ray Harishankar (MS ’90) received a The Ohio State University College of Engineering Distinguished Engineering Alumnus Award. This award recognizes “distinguished achievement on the part of alumni in the field of engineering or architecture by reason of significant inventions, important research or design, administrative leadership, or genius in production.” Harishankar received this honor for his work at IBM Research and Software divisions in making significant contributions in the area of asset strategies, cloud computing, service oriented architecture, actionable business architecture, reference architectures, enterprise technology architectures, and creation of scalable architecture solutions. Ray is also actively engaged with clients across multiple industries and has developed a recent focus on Smarter Cities.

Ray, who joined IBM in 1999, is an IBM Fellow (2006) and serves as vice president of technology and innovation within IBM’s Global Business Services. Since 2003, Ray has received three Outstanding Technical Achievement Awards within IBM. Ray has played important roles in both external industrial advisory committees of the Ohio State College of Engineering and the Department of Computer Science and Engineering, and has been instrumental in Ohio State-IBM collaborations on big data R&D projects. Ray was named the 2009 Asian American Engineer of the Year by the Chinese Institute of Engineers USA.

NIH Recognizes Alum’s Research

Kishore Mosaliganti (Ph.D. ’08) has been awarded a prestigious National Institute of Health (NIH) K Award for his work “In Toto Analysis of Tissue Mechanics During Vertebrate Ear Development.” The project explores the origin and role of cellular and tissue forces in embryonic development.

Dr. Mosaliganti is working as a research fellow in the Department of Systems Biology at Harvard Medical School. His research is on microscopy image analysis topics and, currently, is working with a team of computational scientists to develop a software package called GoFigure2.

Alum Named CSAB Fellow

Allen Parrish (M.S. ’87, Ph.D. ’90), Computer Science Professor and Director of the Center for Advanced Public Safety at The University of Alabama, was recognized as a Fellow of the Computing Sciences Accreditation Board (CSAB), a society for accreditation of degree programs in computer science, information systems, software engineering, and information technology.

Dr. Allen Parrish’s research interests include law enforcement, homeland security and traffic safety informatics; software engineering; data mining; federated database systems; software testing and verification; software specification; and programming languages and technologies.
DoE Early Career Award Granted to 2008 Alum

Sriram Krishnamoorthy (Ph.D. '08) was recently awarded $2.5 million over five years as part of the 2013 Department of Energy Early Career Research Program Award. Sriram is a research scientist with Pacific Northwest National Laboratory. He will continue his work on Concrete Ingredients for Flexible Programming Abstractions on Exascale Systems. His research will fundamentally transform exascale programming models and runtime systems for scientific applications via the design and characterization of algorithms that automate concurrency, data movement, and resilience management. Exascale computing will provide a thousand-fold increase in computing capability that can be applied toward solving crucial energy and environmental problems.

Intel Awards Alumnus with Highest Honor

Dr. Karthikeyan Vaidyanathan (Ph.D. '08) is a research scientist in Parallel Computing Labs, Intel, Bangalore. He received an Intel Achievement Award for his contributions in Top500 and Green500, and for delivering Intel’s first manycore product (Intel Xeon Phi) to market and exceeding all expectations at SuperComputing 2012 in Salt Lake City, Utah. The Intel Achievement Award is Intel’s highest recognition bestowed on its employees.

Karthik’s research interests include high performance computing, high-speed interconnects & storage, performance optimizations in parallel computer architecture. He has published more than 10 papers in conferences and journals related to these areas.

Best Paper & Poster Awards Earned

Rong Shi, CSE PhD candidate, was awarded a Best Student Paper Award at the IEEE Cluster ’13 Conference alongside his co-authors Sreeram Potluri, Khaled Hamidouche, Xiaoyi Lu, Karen Tomko, and DK Panda. His paper, entitled A Scalable and Portable Approach to Accelerate Hybrid HPL on Heterogeneous CPU-GPU Clusters, proposes a simple yet elegant approach for modern clusters to fully utilize all computing resources including all CPU nodes and GPU nodes.

Shengbo Chen, Tarun Bansal, Yin Sun, Prasun Sinha, and Ness Shroff were awarded best paper at WiOPT 2013. The paper, Life-Add: Lifetime Adjustable Design for WiFi Networks with Heterogeneous Energy Supplies, discusses a solution to decreased battery performance on handheld devices caused by WiFi usage. The paper proposes “Life-Add”—a Lifetime Adjustable design for WiFi networks. Using this technology, a device turns off its radio to save energy when the channel is sensed to be busy, and sleeps for a random time period before sensing the channel again.

Yinxuan Shi, with Roger Crawfis received the Best Paper Award for Design and Serious Games at the Conference on the Foundations of Digital Games 2013. The paper, Optimal Cover Placement Against Static Enemy Positions developed a framework and solution for placing objects within a scene that the player could use to seek refuge. The concept of optimal paths through the scene allowed for optimizing towards a desired “fun” profile (e.g. easy then surprise hard, several moments of intensity, etc.).

Sai Prathyusha Peddi, CSE MS student, received the Best Poster Award at the ACM/IEEE International Conference on Cyber-Physical Systems. Her poster, Real-Time Adaptive Signaling for Isolated Intersections focuses on how to bound the amount of lost time, distance, and/or fuel that could be saved if traffic-signal control algorithms used full knowledge of the positions, velocities, and accelerations of vehicles in the vicinity of the intersection. This information about the vehicles would be available if already feasible vehicle-to-infrastructure communications were fully implemented.

Wenjie Zeng, Anish Arora, and Kannan Srinivasan were awarded the Best Paper Runner Up-Spots Track for their paper Low-Power Counting via Collaborative Wireless Communications, at the 12th ACM/IEEE Conference on Information Processing in Sensor Networks. The core idea is to exploit simultaneous communications in 802.15.4 radios to parallelize a node’s calculation of the number (or set) of its neighbors where some condition of interest holds. The paper presents two methods for the calculation, thereby enabling low power estimation of metrics which are frequently used in wireless sensor networks.
Dr. Igor Malkiman, Sr. Lecturer, Passes Away

One of CSE's most respected Senior Lecturers, Dr. Igor Malkiman passed away, Sunday, June 1st, 2014.

Dr. Malkiman emigrated from Russia to escape difficult circumstances and built a new life here in Columbus, Ohio. He worked many years at Qwest (now Century Link) and taught CSE’s numerical analysis/linear algebra course starting in 1996. More recently, he made great contributions to the Capstone program, including teaching the Capstone Design: Software Applications course. Malkiman received a 2014 Outstanding Teaching Award.

Dr. Rajiv Ramnath said of his colleague, “Igor was one of the most caring and helpful educators I have seen. His students will never forget his stern voice and big heart.” He will be missed by his colleagues and students alike.
**2013-2014 CSE DEPARTMENTAL AWARDS**

### Scholarships

**Atharva Kaushik Scholarship**  
Derek David DiCillo  
Alan Ashton Thornburg

**Central Ohio Chapter of Association of Computing Machinery (ACM)**  
Caitlin Anne Van Gundy

**Ernest William Leggett, Jr. Scholarship**  
The Leggett Family Award  
David Ryan Siegal  
Zachary David Wein  
David Michael Wright

**Matt J. Desch & Ann M. Murphy Award**  
Philip Colin Allen  
Zakariya A. Bainazarov

**Steve R. and Sarah O’Donnell Computer and Information Science Fund**  
Adam Joseph Wheeler  
Blake Edward Williams

**The O’Connell Family Award**  
Alexandra Marie Beigel  
Kaitlyn Elizabeth Spehr

**Raytheon Corporation**  
Brandon Timothy Mills  
Qi Zhou

**Wayne Clark Undergraduate Scholarship**  
Maxwell Roseman

**CSE Undergraduate Scholarships**  
Olga Lucia Benson  
Glen Lee Gainer  
Lisa Lau  
Protiva Rahman  
Charles Graydon Reitz  
Brandon F. Rogers  
Grace L. Wannermacher  
Michael Alan Zoller

### Department Awards

**B. Chandrasekaran & Sandra Mamrak Graduate Fellowship**  
Dr. Fengtao Fan  
Dr. Arun Narayanan

**Mike Liu Graduate Fellowship Award**  
Tarun Bansal  
Yin Huai

**Wael Bahaa-El-Din Scholarship on Performance Analysis of Computer Systems**  
Sreeram Potluri

**Eleanor Quinlan Memorial Award**  
Robert Finn

**Outstanding Teaching Award**  
Dr. Igor Malkiman  
Dr. Ken Supowit

**Outstanding Service Award**  
Aaron Jenkins  
Dr. Srinivasan Parthasarathy

**Chair’s Service Awards**  
Christa Yandrich

**Joel and Ruth Spira Excellence in Teaching Award from Lutron Electronics**  
Dr. Han-Wei Shen

**Founders Recognitions**  
Dr. Marshall Yovits

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Cindy Heckman from Raytheon corporation presents a scholarship to Brandon Mills.

In photo to the left Jim Cates of the Industry Advisory Board presents a Leggett Award to David Michael Wright. Above, Bruce Flinchbaugh, also of the Board congratulates scholarship recipients Alan Thornburg (left) and Derek DiCillo (right).

Leon Wang gives his advisee, Arun Narayanan, his certificate for outstanding research.
NEW FACULTY HIRES FOR 2014-2015

In January 2015, Dr. Yang Wang and Dr. Yinqian Zhang will join CSE as tenure track and in Autumn 2014, and Dr. Louis-Noel Pouchet will become a Research Assistant Professor.

Dr. Yang Wang joins CSE after receiving his Ph.D. from University of Texas at Austin where his advisors were Drs. Mike Dahlin and Lorenzo Alvisi. His research interests are in Distributed Systems and Fault Tolerance. In particular, his research explores new ways to get extremely high levels of reliability for modern scalable storage systems with reasonable costs. His future work will include investigations into new consistency, performance, and security issues in large-scale distributed systems. Dr. Wang received the Google Ph.D. Fellowship in Distributed Computing for 2013.

Dr. Yinqian Zhang, our second new faculty member, was advised by Professor Michael Reiter at the University of North Carolina, Chapel Hill. His primary research interests are computer systems and security. He also has a keen interest in user authentication and password security. His thesis work revolves around cloud computing security, which particularly aims to identify and address the threats of side channels in multi-tenant public clouds. A Google U.S./Canada Fellowship in Security supported Dr. Zhang’s most recent endeavors. After joining the faculty, Dr. Zhang will continue his research in cyber security, with a focus on the security of cloud, mobile and distributed systems.

Returning to CSE after a stint at the University of California, Los Angeles, Dr. Louis-Noel Pouchet is looking forward to continuing his work with Dr. P. Sadayappan’s group in CSE, on high-performance computing and polyhedral compilation techniques. Dr. Pouchet’s research includes software and hardware customization techniques for high-performance / low-energy execution of scientific programs. He is also the author of several software packages for polyhedral compilation such as the PolyBench test suite, and the PolyOpt and PoCC compilers. Dr. Pouchet received his Ph.D. in 2010 from INRIA / University of Paris-Sud, France, and his research is currently supported in part by the US National Science Foundation, the US Department of Energy, and Intel.

Above, a panoramic view of students participating in Ohio State’s first Hack-a-thon, a 24-hour programming event culminating in project presentations and a contest. First prize went to Ross Johnstal and Ritvik Vasudevan (right) for their project Atmosphere: Music your friends like. This app allows the user to search through a group of friends’ musical tastes based on their “likes” at a specific social media site. The app then creates a playlist based on the musical likes of the group as a whole, not just those of the user. In the picture, Ross and Ritvik are posed with their prizes, a pair of Parrot AR Quadcopters. Prizes were paid for by the corporate sponsors, Google, Hortonworks and Teradata.
## New Grants Received in 2013-2014 Year

In order by name of CSE investigator. CSE members are in bold.

### Legend:
- **CSE Researcher**
- **Funding Source**
- **Grant Title**
- **PI: Principal Investigator**
- **Co-PI: Collaborators (when applicable)**
- **Term of grant**
- **Total funding**

### Gagan Agrawal
- **Department of Energy Small Business Innovation Research (DOE-SBIR) (with RNET Technologies)**
- **A MapReduce-like Data-Intensive Processing Framework for Native Data Storage and Formats**
- **PI: Gagan Agrawal**
- 02/15/14 – 11/14/14 $48,000

### Jim Davis
- **Air Force Research Laboratory**
- **CATR Task 0006**
- **PI: James W. Davis**
- 11/16/10 – 9/28/14 $139,893

### Tamal Dey
- **National Science Foundation (NSF)**
- **AF: Small: Topological Data Analysis for Big and High Dimensional Data**
- **PI: Tamal Dey**
- 09/01/13 – 08/31/16 $496,321

### Eric Fosler-Lussier
- **National Science Foundation (NSF)**
- **CI-ADDO-NEW: Collaborative research: The Speech Recognition Virtual Kitchen**
- **PI: Eric Fosler-Lussier**
- 9/1/13 – 8/31/16 $382,082

### DK Panda
- **Cray, Inc.**
- **PMI2 Support in MVAPICH2 and Tight Integration with SLURM**
- **PI: DK Panda**
- 1/1/14 – 12/31/14 $182,820

### Feng Qin
- **National Science Foundation (NSF)**
- **SHF: Small: Collaborative Research: Towards Automated Model Synthesis of Library and System Functions for Program-environments and Co-analysis**
- **PI: Feng Qin**
- 9/1/13 – 8/31/15 $150,000

### Luis Rademacher
- **National Science Foundation (NSF)**
- **CAREER: Transforming Data Analysis via New Algorithms for Feature Extraction**
- **PI: Luis Rademacher**
- 7/1/14 – 6/30/19 $464,191

### Rajiv Ramnath
- **National Science Foundation (NSF)**
- **EXP: GeoGames – Online Map Games for Teaching and Learning through a Real World Spatial Perspective**
- **PI: Ola Ahlqvist (OSU Dept. of Geography)**
- **Co-PIs: Rajiv Ramnath**
- 10/01/13 – 09/30/14 $249,999

- **OCLC Online Computer Library Center, Inc.**
- **Evaluating Quality of Open Access Journals**
- **PI: Rajiv Ramnath**
- **Co-PI: Jay Ramanathan**
- 1/1/14 – 8/31/14 $45,000

- **Astute Technologies**
- **Research in Data Mining and Information Retrieval**
- **PI: Rajiv Ramnath**
- 9/1/13 – 9/1/14 $42,000
JAY RAMANATHAN
Nationwide Mutual Insurance Company
Information Retrieval Tools for Gathering Insights from Help Desk Information
PI: Jay Ramanathan
Co-PI: Rajiv Ramnath
1/1/14 – 12/31/14 $52,000

NASKO ROUNTEV
National Science Foundation (NSF)
SHF: Small: LeakDroid: Exposing Leaks and Jank in Android Applications
PI: Nasko Rountev
09/01/13 – 08/31/16 $465,133

P. SADAYAPPAN
Pacific Northwest National Lab (Department of Defense subcontract)
Integrated Compiler and Runtime Autotuning Infrastructure for Power, Energy and Resilience
PI: P. Sadayappan
8/9/13 – 8/8/15 $240,000

PRASUN SINHA
National Science Foundation (NSF)
NeTS: Medium: Collaborative Research: Leveraging Physical Layer Advances for the Next Generation Distributed Wireless Channel Access Protocols
PI: Prasun Sinha
Co-PI: Srinivasan Parthasarathy, Kannan Srinivasan
09/01/13 – 08/15/16 $745,000

NEELAM SOUNDARAJAN
National Security Agency
Department of Defense (DOD) Information Assurance Scholarship Program
PI: Neelam Soundarajan
9/6/13 – 9/5/14 $35,075

CHRIS STEWART
National Science Foundation (NSF)
CAREER: Carbon Footprint Modeling and Elastic Caching for Greening Services
PI: Christopher Stewart
1/1/14 – 12/31/18 $462,813

National Science Foundation (NSF)
CSR: SHF: SMALL: Efficient, low-latency networked storage
PI: Christopher Stewart
10/1/14 – 9/30/16 $400,000

National Science Foundation (NSF)
PSC The 6th workshop on Diversity in Systems Research (Diversity ’13)
PI: Christopher Stewart
10/1/13-9/30/14 $4,000

DeLiang (Leon) Wang
Starkey Hearing Technologies
A Supervised Learning Approach to Combat Reverberation Effects in Speech Understanding
PI: DeLiang Wang
06/01/13 – 05/31/14 $55,000

Yusu Wang
National Science Foundation (NSF)
AF: Small: Geometric Data Processing and Analysis via Light-weight Structures
PI: Yusu Wang
06/01/13 – 05/31/14 $481,393

Xiaodong Zhang
Samsung Electronics Co, Ltd.
Embracing SSDs with Effective System Interfaces for High Performance and High Reliability of Data Processing
PI: Xiaodong Zhang
01/15/14 – 01/14/15 $100,000

Grants Established Prior to July 1, 2013

Gagan Agrawal
National Science Foundation (NSF)
DC: Small: Data Intensive Computing Solutions for Neuroimage Analysis
PI: Gagan Agrawal
Co-PI: Raghu Machiraju
9/15/09-8/31/13 $488,000

RNET Technologies
Simplified Access to Massive Climate Modeling Data Sets to Support End Users
PI: Gagan Agrawal
02/19/13 – 11/18/13 $48,000

Anish Arora
Air Force Research Laboratory
CATR Task 0006
PI: Anish Arora
11/16/10 – 11/19/14 $125,000
National Science Foundation (NSF)
PC3: Collaborative Research: Wireless Sensor Networks for Protecting Wildlife and Humans
PI: Anish Arora
10/01/11 – 08/31/14  $262,212

Raytheon BBN Technologies
GENI Educational Kits for Wireless Sensor Networks
PI: Anish Arora
Co-PI: Rajiv Ramnath
10/01/11 – 09/30/14  $204,884

MIKHAIL BELKIN
National Science Foundation (NSF)
RI: Small: Algebraic and Spectral Structure of Data in High Dimension
PI: Mikhail Belkin
7/1/11 – 06/30/14  $450,000

Public Works and Government Services, Canada
Compendium Interface
PI: Mikhail Belkin
5/10/13 – 8/31/13  $28,459

MICHAEL BOND
National Science Foundation (NSF)
CAREER: Practical Language and System Support for Reliable Concurrent Software
PI: Michael Bond
3/1/13 – 2/28/18  $535,143

National Science Foundation (NSF)
CSR: Small: Making Software Transactional Memory More than a Research Toy
PI: Michael Bond
9/1/12 – 8/31/15  $400,000

ROGER CRAWFIS
Patient Centered Outcomes Research Institute Pilot Grants Program
A Low-cost Virtual Reality Gaming Platform for Neurorehabilitation of Hemiparesis
PI: Lynne Gauthier (OSU Dept. of Physical Medicine and Rehabilitation)
Co-PI: Roger Crawfis, Linda Lowes (OSU Health and Rehabilitation Services), Lise Worthen-Chaudhari (OSU Dept. of Physical Medicine and Rehabilitation)
6/1/12-5/31/14  $653,014

JAMES DAVIS
Air Force Research Laboratory
CATR Task 0006
PI: James Davis
11/16/10 – 9/28/14  $343,000

TAMAL DEY
National Science Foundation (NSF)
AF: Medium: Collaborative Research: Optimality in Homology – Algorithms and Applications
PI: Tamal Dey
08/01/11 – 07/31/15  $352,896

National Science Foundation (NSF)
AF: Small: Analyzing Spaces and Scalar Fields via Point Clouds
PI: Tamal Dey
Co-PI: Yusu Wang
08/01/11 – 07/31/14  $499,761

National Science Foundation (NSF)
MCS: Reconstructing and Inferring Topology and Geometry From Point to Point Cloud Data
PI: Tamal Dey
Co-PI: Dan Burghelea (OSU Dept. of Mathematics)
9/1/09-8/31/13  $462,000

BRIAN KULIS
National Science Foundation (NSF)
RI: Small: Hard Clustering via Bayesian Nonparameters
PI: Brian Kulis
6/1/12 – 5/31/15  $439,689

ERIC FOSLER-LUSSIER
National Board of Medical Examiners
Virtual patients simulations to assess data-gathering and clinical reasoning
PI: Douglas R. Danforth (OSU Dept. of Obstetrics & Gynecology)
Co-PI: Eric Fosler-Lussier
7/1/12 – 6/30/13  $149,861

National Institutes of Health (NIH)
National Library of Medicine
An Information Fusion Approach to Longitudinal Health Records
PI: Albert Lai (OSU Dept. of Biomedical Informatics)
Co-PI: Fosler-Lussier, Peter Embi (OSU Dept. of Biomedical Informatics)
9/1/12 – 8/31/17  $1,536,793
Institute of Education Sciences
Reducing Special Education/Reading Risk Through an Oral Reading Fluency Intervention for Urban Learners
PI: Gwendolyn Cartledge (OSU College of Education & Human Ecology)
7/1/12 – 6/30/14 $479,053

International Computer Science Institute (ICSI)
(Intelligence Advanced Research Projects Activity (IARPA) subcontract)
SWORDFISH: Spoken Wordsearch with Rapid Development and Frugal Variant Subword Hierarchies
PI: Eric Fosler-Lussier
03/05/12 – 06/30/14 $819,764

RAGHU MACHIRAJU

National Science Foundation (NSF)
G&V: Medium: Collaborative Research: Large Data Visualization Using an Interactive Machine Learning Framework
PI: Raghu Machiraju
Co-PI: Han-Wei Shen
6/1/11 – 5/31/15 $542,002

DK PANDA

Dept. of Energy (DOE) STTR Phase II (with RNET Technologies)
HPC Application Energy Measurement and Optimization
PI: DK Panda
02/15/12 – 02/14/13 $325,000

Mellanox Technologies
High Performance and Scalable Design of HDFS over InfiniBand
PI: DK Panda
8/15/12 – 8/14/13 $200,000

Mellanox Technologies, Inc
Research on High Performance and Scalable MPI over InfiniBand.
PI: DK Panda
4/4/04-8/14/13 $1,323,221

National Science Foundation (NSF)
CC-NIE Integration II: Innovations to transition a campus core cyberinfrastructure to serve diverse and emerging researcher needs
PI: Caroline Whitacre (OSU Dept. of Internal Medicine)
Co-PIs: DK Panda, Umit Catalyurek (OSU Dept. of Biomedical Informatics), Paul Schopis (Ohio Academic Resources Network (OARnet))
10/1/12 – 9/30/14 $987,019

National Science Foundation (NSF)
SHF:Large: Collaborative research: Unified runtime for supporting hybrid programming models on heterogeneous architecture
PI: DK Panda
Co-PI: Karen Tomko (Ohio Supercomputer Center)
7/1/12 – 6/30/15 $1,045,822

National Science Foundation (NSF)
SI2-SSI: Collaborative Research: A Comprehensive Performance Tuning Framework for the MPI Stack
PI: DK Panda
Co-PI: Karen Tomko (Ohio Supercomputer Center)
6/1/12 – 5/31/15 $1,251,374

National Science Foundation (NSF)
Topology-Aware MPI Collectives and Scheduling for Petascale Systems with InfiniBand
PI: DK Panda
09/15/06-09/30/13 $920,000

NVIDIA Corporation
High-Performance MPI Design for InfiniBand Clusters with GPUs
PI: DK Panda
07/01/11 – 03/31/13 $115,237

University of Texas at Austin (National Science Foundation (NSF) subaward)
Enabling, Enhancing and Extending Petascale Computing for Science and Engineering
PI: DK Panda
3/1/13 – 2/28/17 $600,000

University of Texas at Austin (National Science Foundation (NSF) subaward)
World-Class Science Through World Leadership in HPC
PI: DK Panda
10/1/10 – 9/30/13 $172,616
**Srinivasan Parthasarathy**

**National Science Foundation (NSF)**

**CCF: EAGER: Collaborative research: Scalable graph mining and clustering on desktop supercomputers**

PI: Srinivasan Parthasarathy  
9/1/12 – 8/31/13  $75,000

**National Science Foundation (NSF)**

**Collaborative Research: Serious Play in Synthetic Worlds: Social Media Enhanced Organized Sensemaking in Emergency Response**

PI: Srinivasan Parthasarathy  
09/01/11 – 08/31/14  $270,000

**National Science Foundation (NSF)**

**Global Graphs: A Middleware for Data Intensive Computing**

PI: Srinivasan Parthasarathy  
Co-PI: P. Sadayappan  
9/1/09-8/31/13  $515,997

**National Science Foundation (NSF)**

**SHF: Small: Collaborative Research: Elastic fidelity: Trading-off Computational Accuracy for Energy Reduction**

PI: Srinivasan Parthasarathy  
8/1/12 – 7/31/15  $182,000

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**Feng Qin**

**Hewlett-Packard**

**Exploring the Behavior of Modern Storage Systems under Failure**

PI: Feng Qin  
9/1/12 – 5/31/14  $35,000

**National Science Foundation (NSF)**

**SHF: CSR: Small: Collaborative research: Automated model synthesis of library and system functions for program-environment co-analysis**

PI: Feng Qin  
9/1/12 – 8/31/13  $90,000

**National Science Foundation (NSF)**

**CAREER: Building Immunity to Memory Management Bugs During Production Runs**

PI: Feng Qin  
3/1/10-2/28/15  $420,000

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**Rajiv Ramnath**

**Ohio Department of Health**

**Stage 1: Application for asthma management and education (AAME)**

PI: Rajiv Ramnath  
7/9/12 – 5/31/13  $34,000

**National Science Foundation (NSF)**

**EXP: GeoGames – A Virtual Simulation Workbench for Teaching and Learning Through a Real-world Spatial Perspective**

PI: Ola Ahlqvist (OSU Dept. of Geography)  
Co-PIs: Rajiv Ramnath  
10/01/11 – 09/30/13  $374,772

**Uniformed Services University Health Sciences – Tri-Service Nursing**

**Effectiveness and Benefit of Two STI Prevention Delivery Methods for Military Women**

PI: Nancy Ryan-Wenger (OSU College of Nursing)  
Co-PI: Elizabeth Barker (OSU College of Nursing), Maria Palazzi (OSU Advance Center for Art & Design), Rajiv Ramnath, Victoria Von Sadovszky (OSU College of Nursing)  
8/1/11 – 7/31/14  $660,959

**Capstone Partners**

**Capstone Partnerships**

PI: Rajiv Ramnath  
1/1/11 – 12/31/14  $39,250

**Jay Ramanathan**

**National Science Foundation (NSF)**

**II-EN: Infrastructure to support desktop virtualization experiments for research and education**

PI: Prasad Calyam (Ohio Supercomputer Center)  
Co-PI: Jay Ramanathan, Albert Lai (OSU Dept. of Biomedical Informatics)  
6/1/12 -5/31/15  $396,311

**Nationwide Mutual Insurance Company**

**Data Mining, Information Retrieval from Unstructured Data Streams**

PI: Jay Ramanathan  
Co-PI: Rajiv Ramnath  
1/1/13 – 12/31/13  $200,000

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**Nasko Rountev**

**National Science Foundation (NSF)**

**SHF: Small: Algorithms for Dynamic Analysis of Run-time Bloat**

PI: Nasko Rountev  
9/15/10 – 8/31/13  $356,531
P. Sadayappan
Department of Energy (DOE)
A Fault-Oblivious Extreme Scale Execution Environment
PI: P. Sadayappan
9/1/10 – 8/31/13 $469,254

Department of Energy (DOE)
A Polyhedral Transformation Framework for Compiler Optimization
PI: P. Sadayappan
Co-PI: Nasko Rountev
9/1/10 – 8/31/13 $399,842

Department of Energy (DOE)
Domain Specific Language Support for Exascale
PI: P. Sadayappan
Co-PI: Nasko Rountev
9/1/12 – 8/31/15 $880,907

National Science Foundation (NSF)
Collaborative Research: An Environment for High-Productivity High-Performance Computing using GPUs/accelerators
PI: P. Sadayappan
9/15/09-8/31/13 $468,492

National Science Foundation (NSF)
Collaborative Research: Petascale Simulations of Quantum Systems by Stochastic Methods
PI: P. Sadayappan
9/1/09-8/31/14 $639,952

National Science Foundation (NSF)
Customizable Domain-specific Computing
PI: P. Sadayappan
Co-PI: Nasko Rountev
9/1/09-8/31/14 $749,998

National Science Foundation (NSF) (University of Illinois subaward)
Enhanced Intellectual Services - Direct PRAC support - Super Instruction Architecture for Petascale Computing
PI: P. Sadayappan
7/1/12 – 9/30/13 $34,597

National Science Foundation (NSF)
Large-Scale Computation of the Phonon Boltzmann Transport Equation
PI: Sandip Mazumder (OSU Dept. of Mechanical & Aerospace Engineering)
Co-PI: P. Sadayappan
09/15/12 – 08/31/15 $400,000

RNET Technologies
Scalable Multi-tiered CFD and CSD Codes for Kestrel
PI: P. Sadayappan
Co-PI: Jack McNamara (OSU Dept. of Mechanical & Aerspace Engineering)
1/1/13 – 12/31/14 $320,000

RNET (AFOSR STTR)
Highly-Scalable Computational-Based Engineering Algorithms for Emerging Parallel Machine Architectures
PI: P. Sadayappan
Co-PI: Sandip Mazumder (OSU Dept. of Mechanical & Aerspace Engineering)
01/01/12 – 12/31/14 $47,097

Han-Wei Shen
Department of Energy (DOE)
An Information Framework for Enabling Extreme-scale Science Discovery
PI: Han-Wei Shen
9/1/10 – 8/31/13 $462,095

Department of Energy (DOE)
Scalable data-management, analysis, and visualization (SDAV) institute
PI: Han-Wei Shen
02/15/12 – 02/14/17 $750,000

Department of Energy (DOE)
Very Large 3D Flow Field Visual Analysis
PI: Han-Wei Shen
10/28/10 – 8/31/14 $461,074

National Science Foundation (NSF)
G&V: Small: Collaborative Research: An Information Theoretic Framework for Large-scale Data Analysis and Visualization
PI: Han-Wei Shen
9/1/10 – 8/31/14 $292,147

Ness Shroff
Army Research Office: Multidisciplinary University Research Initiative
Multivariate Heavy-Tail Phenomena: Modeling and Diagnostics
PI: Ness B. Shroff
6/1/12 – 5/31/17 $600,000

Army Research Office: Multidisciplinary University Research Initiative
Stochastic Control of Multi-Scale Networks: Modeling, Analysis And Algorithms
PI: Ness B. Shroff
5/1/08 – 03/28/14 $6,456,625
Hewlett Packard
Energy and Labor Efficient Sensor Networking
For Underground Data Acquisition
Pl: Ness B. Shroff
Co-PI: Can Emre Koksal (Dept. of Electrical and Computing Engineering)
09/01/12 – 08/31/15 $300,000

National Science Foundation (NSF)
CT-ISG: Collaborative Research: Router Models And Downsizing Tools For Scalable Security Experiments
Pl: Ness B. Shroff
10/1/08 – 9/30/12 $125,000

National Science Foundation (NSF)
NeTS-NECO: A new resource management paradigm for sensor networks with energy replenishment
Pl: Ness Shroff
Co-PI: Prasun Sinha, Can Emre Koksal (OSU Dept. of Electrical and Computer Engineering)
09/1/08 – 8/31/13 $500,000

National Science Foundation (NSF)
Networking Technology and Systems (NeTS): Large: Collaborative Research: Foundations For Network Cooperation At Signal Scale
Pl: Ness B. Shroff
07/01/10 – 06/30/15 $330,000

National Science Foundation (NSF)
Networking Technology and Systems (NeTS): Medium: Collaborative Research: Mobile Content Sharing: Networks: Theory To Implementation
Pl: Ness B. Shroff
Co-PI: Dong Xuan
7/1/11 – 6/30/15 $628,946

National Science Foundation (NSF)
Networking Technology and Systems (NeTS): Medium: Collaborative Research: Unifying Network Coding And Cross-Layer Optimization For Wireless Mesh Networks: From Theory To Distributed Algorithms To Implementation
Pl: Ness B. Shroff
09/01/09 – 08/31/13 $350,000

National Science Foundation (NSF)
Toward Efficient and Distributed Cyber-Physical Systems Design for the Smart Electric Power Grid
Pl: Cathy Xia (Dept. of Integrated Systems Engineering)
Co-PI: Ness B. Shroff
9/1/12 – 8/31/15 $396,222

Qatar University
Information Theory Enabled Secure Wireless Networking: Scaling Laws, Network Control, and Implementation
Pl: Can Emre Koksal (Dept. of Electrical & Computer Engineering)
Co-PI: Ness B. Shroff
11/15/12-11/14/15 $279,890

Prasun Sinha

National Science Foundation (NSF)
EAGER: WideSpot: Enabling Predictable Wide-Area Coverage Over Scattered Hotspots
Pl: Prasun Sinha
9/15/12 – 8/31/14 $100,000

National Science Foundation (NSF)
NeTS: Medium: Collaborative Research: Enabling Cellular Services over Unplanned Femto-Cell Deployments: From Theory to Implementation
Pl: Prasun Sinha
6/1/12 – 5/31/15 $380,000

Paul Sivilotti

National Science Foundation (NSF)
CPS: Medium: Autonomous Driving in Mixed-traffic Urban Environments
Pl: Ümit Özgüner
Co-PI: Bruce Weide, Paul Sivilotti, Ashok Kumar Krishnamurthy (OSU Dept. of Electrical and Computer Engineering), Füsun Özgüner (OSU Dept. of Electrical and Computer Engineering)
9/1/09-8/31/13 $1,296,683

Neelam Soundarajan

Department of Defense (DOD), National Security Agency
Information Assurance Scholarship Program
Pl: Neelam Soundarajan
8/22/12 – 8/21/13 $30,885

National Science Foundation (NSF)
CPATH T: NEWPATH: Nurturing, Through Entrepreneurship, IT World Leaders
Pl: Neelam Soundarajan
Co-Pls: Bruce Weide, Rajiv Ramnath, Dong Xuan, Han-Wei Shen, Waleed Ali Muhanna (Fisher College of Business), Eylem Ekici (OSU Dept. of Electrical and Computer Engineering), Stephen Camp (Center for Entrepreneurship)
7/1/07 – 6/30/14 $622,822
KANNAN SRINIVASAN
Department of Defense (DOD), National Security Agency
Building a Practical Wireless In-Band Full Duplex System Existing Awards
PI: Kannan Srinivasan
7/12/12 – 12/31/13 $722,011

National Science Foundation (NSF)
CAREER: Together We Rise: A Unified Multi-input Multi-output (MIMO) - Full Duplex Network Architecture
PI: Kannan Srinivasan
3/1/13 – 2/28/18 $546,604

CHRIS STEWART
National Science Foundation (NSF)
EAGER: Design and Implementation of a Renewable Adaptive Cluster
PI: Chris Stewart
7/1/12 – 6/30/14 $200,000

RADU TEODORESCU
Defense Advanced Research Projects Agency (DARPA)
Parameter Variations at near Threshold Voltage: The Power Efficiency Versus Resilience Trade-off
PI: Radu Teodorescu
9/25/12 – 3/24/18 $941,240

National Science Foundation (NSF)
CAREER: An integrated treatment of voltage noise and process variability in many-core and GPU systems with microarchitectural solutions
PI: Radu Teodorescu
2/1/13 – 1/31/18 $520,000

National Science Foundation (NSF)
PI: Radu Teodorescu
Co-PI: Khalil Waleed (Dept. of Electrical and Computer Engineering)
7/1/11 – 06/30/15 $400,000

DeLiang (Leon) Wang
Air Force Office of Scientific Research (AFOSR)
Speech Segregation Based on Binary Classification
PI: DeLiang Wang
5/1/12 – 4/30/16 $932,284

Kuzer Co.
Air Force Office of Scientific Research Small Business Technology Transfer (AFOSR STTR)
An Auditory Scene Analysis Approach to Speech Segregation
PI: DeLiang Wang
01/01/12 – 12/31/13 $300,000

National Institutes of Health (NIH)
Speech Segregation to Improve Intelligibility of Noisy Speech
PI: DeLiang Wang
Co-I: Eric Healy (OSU Dept. of Linguistics)
1/1/13 – 12/31/17 $1,791,143

YUSU WANG
National Science Foundation (NSF)
CAREER: Geometric and Topological Methods in Shape Analysis, with Applications in Molecular Biology
PI: Yusu Wang
2/1/08 – 1/31/13 $420,000

DONG XUAN
National Science Foundation (NSF)
NeTS: Small: Integrating Electronic and Visual Signals for Accurate Localization
PI: Dong Xuan
Co-PI: Yuan F. Zheng (OSU Dept. of Electrical and Computer Engineering)
7/1/12 – 6/3/15 $430,000

National Science Foundation (NSF)
U.S.-China Workshop on Environmental Monitoring for Public Health and Disaster Recovery
PI: Dong Xuan
5/15/12 – 4/30/13 $60,558

XIAODONG ZHANG
National Science Foundation (NSF)
CSR: Medium: Collaborative research: On Closed-loop and Cross-layer Design and Implementation of Data Storage Systems Utilizing Extremely Scaled NAND Flash Memory Technologies
PI: Xiaodong Zhang
7/1/12 – 6/30/14 $225,000

National Science Foundation (NSF)
SI2-SSE: A Unified Software Environment to Best Utilize Cache and Memory Systems on Multicores
PI: Xiaodong Zhang
6/1/12 – 5/31/15 $500,000
National Science Foundation (NSF)  
Travel Support for the 32nd IEEE International Conference on Distributed Computing Systems  
PI: Xiaodong Zhang  
04/01/12 – 03/31/13  $10,000

National Science Foundation (NSF)  
Travel Support for the 33rd IEEE International Conference on Distributed Computing Systems  
PI: Xiaodong Zhang  
5/1/13 – 4/30/14  $10,000

National Science Foundation (NSF)  
Basic Research for Developing SSD-based Caching and Hybrid Storage Systems  
PI: Xiaodong Zhang  
8/1/09-7/31/13  $400,000

2013- 2014 GIFTS BY FACULTY

Arnab Nandi  
NEC Research Gift  
$20,000

Arnab Nandi & Srinivasan Parthasarathy  
Google Award Gift  
$49,003.04

DK Panda  
NVIDIA Corporation  
$66,300

Nasko Rountev  
Google Faculty Award  
$48,286

Prasun Sinha  
Toyota Gift  
$16,000

Kannan Srinivasan  
Toyota Gift  
$10,000

Huamin Wang  
Adobe Research  
$20,000

The structural home of CSE is Dreese Labs II and the fun and evocative Garden of Constants is a favorite place for pictures.  
(Photos courtesy of OSU: Image of the Day)  
(Above taken by Digbijoy Nath - Postdoctoral Researcher, Electrical Engineering)  
(Left taken by Ben Ebel, BSCSE, 2011)
2013-2014 COLLOQUIA

Name From Title

Carlos Avendano, David Pearce, and John Woodruff Audience Inc. An Introduction to Audience Inc: Commercial Applications of Auditory Scene Analysis

Berkant Barla Cambazoglu Yahoo! Labs Query Processing Optimizations for Multi-Site Web Search Engines

Deepayan Chakrabarti Facebook Large-scale Learning of Personalized Models with a Social Prior

Zhigang Deng University of Houston Accurate Decomposition and Sparse Compression of Linear Blend Skinning

Rebecca Fiebrink Princeton University Interactive Machine Learning in Music Performance and Composition

Mark L. Gillenson University of Memphis Advances in Software Testing

Kanchi Gopinath Indian Institute of Science, Bangalore A Systems’ Perspective on Software Bloat

William Harris University of Wisconsin-Madison Secure Programming Via Game-Based Synthesis

Tian He University of Minnesota-Twin City Exploring Link Correlation for Performance Improvements in Non-Cooperative Wireless Networks

Rob High IBM Software Group The Rise of Cognitive Computing; IBM Watson and the Emerging Era of Cognitive Computing

Amir Houmansadr The University of Texas at Austin The Cyberspace Battle for Information: Combating Internet Censorship

Farnam Jahanian National Science Foundation Innovating for Society: Realizing the Transformative Impact of Computing and Communication in a Data-Driven World

Abhishek Jain Massachusetts Institute of Technology Computing on Private Data

Ramakrishnan Kazhiyur Mannar LinkedIn Unified Social Content Platform at LinkedIn

Ramakrishnan Kazhiyur-Mannar LinkedIn Only As Smart As Your Data

Tomoya Kitani Shizuoka University Bikeinformatics: A Concept for Two-Wheeled Vehicles With Information Science and Technologies

Anurag Kumar Indian Institute of Science Bangalore Co-Evolution of Influence and Content Spread in Mobile Opportunistic Networks

Santosh Kumar University of Memphis Understanding Data Yield in Mobile Health User Studies with Wearable Sensors

Lei Li University of California, Berkeley Scalable Probabilistic Inference for Complex Dynamical Models

Damon McCoy George Mason University Data-Driven Security: A Socio-Economic Approach to Disrupting Cybercrime
Chris Murphy
How Do You Test Non-testable Programs?
University of Pennsylvania

Daniel Peek
A Short History of Facebook’s User Data Storage System
Facebook

Brad Penoff
Scale & Performance team for Google Payments
Google

Louis-Noël Pouchet
Research Challenges in Compiler Optimization
University of California, Los Angeles

David Race
Supercomputing at Cray - Building Computational Tools That Help Change The World
Cray Cluster Solutions

Davide Rossetti
Recent Developments in GPU Computing
NVIDIA Corp

Purnamrita Sarkar
Link Prediction: Theory and Practice
University of California, Berkeley

Karsten Schwan
pMem - Persistent Memory for Data-intensive Applications
Georgia Technical Institute

Vinay Sharma
Making Smarter Devices using Computer Vision
Apple

Arrvindh Shriraman
SQRL: Hardware Accelerator for Collecting Software Data Structures
Simon Fraser University

Hongning Wang
Human-centric Big Data Mining: Humans as both Producers and Consumers of Big Data
University of Illinois at Champaign – Urbana

Yang Wang
Separating Data from Metadata for Robustness and Scalability
The University of Texas at Austin

Adam Wierman
Algorithmic Challenges for Greening Data Centers
California Institute of Technology

Xiaoru Yuan
Urban Traffic Trajectory Visual Analysis
Peking University

Jianfeng Zhan
BigDataBench: Benchmarking and Evaluating Big Data Systems
Chinese Academy of Sciences and University of Chinese Academy of Sciences

Yinqian Zhang
Security Threats and Defenses in Multi-Tenant Public Clouds
University of North Carolina, Chapel Hill

Guest Speaker Mark Gillenson (center) poses with Bruce Weide, (left) Professor Emeritus, and Neelam Soundarajan (right), Associate Chair. As a 1974 alumni, Dr. Gillenson was able to share many stories of the early days of the Department.
STUDENTS

Ten Year Statistical History - Teaching Overview

<table>
<thead>
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<td>11-12</td>
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<td>Students Taught</td>
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<td>12,208</td>
<td>10,623</td>
<td>10,844</td>
<td>10,641</td>
<td>11,185</td>
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<td>12,689</td>
<td>13,744</td>
<td>14,523</td>
<td>12,457</td>
<td>14,463</td>
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*The term/year of the conversion to semesters.

The Graduate Program

The CSE graduate program continues to expand. Each year for the past five has seen substantial increases in the number of applications received which has led to a natural increase in enrollment. Additionally the Admissions Committee has been particularly pleased to see the quality of applicants also improving, thus allowing the committee to become more selective of their offers. In the 2013-14 year, 1,196 applications were received, and 438 were admitted, of which 113 enrolled; 25 of those received the honor of department support to help them thrive as individuals.

This year brought a personnel change. Kathryn Reeves has reduced her teaching obligations and will take on the role of Assistant Director of Academic Programs and Student Services, expanding her previous duties to include more graduate advising.

<table>
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*The term/year of the conversion to semesters.
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<tr>
<th>Name</th>
<th>Destination</th>
<th>Advisor</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Tarun Bansal</td>
<td>Google, Seattle, Washington, USA</td>
<td>Dr. Prasun Sinha</td>
<td>Dehradun, India</td>
</tr>
<tr>
<td>Dr. Tekin Bicer</td>
<td>Argonne National Laboratories, Lemont, Illinois, USA</td>
<td>Dr. Gagan Agrawal</td>
<td>Giresun, Turkey</td>
</tr>
<tr>
<td>Dr. Abon Chaudhuri</td>
<td>Intel Corp., Hillsboro, Oregon, University</td>
<td>Dr. Han-Wei Shen</td>
<td>Srirampur, India</td>
</tr>
<tr>
<td>Dr. Zhezhe Chen</td>
<td>Twitter Inc., San Francisco, California, USA</td>
<td>Dr. Feng Qin</td>
<td>Lonyan, Fujian, China</td>
</tr>
<tr>
<td>Dr. Joshua Eckroth</td>
<td>Stetson University, Deland, Florida, USA</td>
<td>Dr. John Josephson</td>
<td>Columbus, Ohio, USA</td>
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<tr>
<td>Dr. Fengtao Fan</td>
<td>Google, Mountain View, California, USA</td>
<td>Dr. Tamal Dey</td>
<td>Pingxiang, China</td>
</tr>
<tr>
<td>Dr. Preethi Jyothi</td>
<td>University of Illinois, Urbana-Champaign, Illinois, USA</td>
<td>Dr. Eric Fosler-Lussier</td>
<td>Bangalore, India</td>
</tr>
<tr>
<td>Dr. Krishna Chaitanya Kandalla</td>
<td>Cray, St. Paul, Minnesota, USA</td>
<td>Dr. Dhabaleswar Panda</td>
<td>Bangalore, India</td>
</tr>
<tr>
<td>Dr. Onur Kucuktunc</td>
<td>Google, Mountain View, California, USA</td>
<td>Dr. Umit Çatalyürek</td>
<td>Ankara, Turkey</td>
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<tr>
<td>Dr. Dong Li</td>
<td>LinkedIn, Mountain View, California, USA</td>
<td>Dr. Prasun Sinha</td>
<td>Taian, China</td>
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</table>

**Dissertation Titles**

- **Network-centric Mechanism for Performance Improvement in Dense Wireless Networks**
- **Supporting Data-Intensive Scientific Computing on Bandwidth and Space Constrained Environments**
- **Geometric and Statistical Summaries for Big Data Visualization**
- **System Support for Improving the Reliability of MPI Applications and Libraries**
- **Anomaly-Driven Belief Revision by Abductive Metareasoning**
- **Computing Topological Features of Data and Shapes**
- **High Performance Non-Blocking Collective Communication For Next Generation Infiniband Clusters**
- **Result Diversification on Spatial, Multidimensional, Opinion, and Bibliographic Data**
- **Enabling Smart Driving through Sensing and Communication in Vehicular Networking**
Dr. Xinfeng Li  
Google, New York, New York, USA  
Time-Sensitive Information Communications, Sensing, and Computing in Cyber-Physical Systems  
B.Engr., Tsinghua University; M.S., Tsinghua University; M.S., The Ohio State University

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Two Sigma Investment, New York, New York, USA  
Deployment, Management, and Access Acquisition of Small-Cell based Networks  
B.S., Peking University; M.S., Peking University; M.S., The Ohio State University

Dr. Chuanjiang Luo  
Google, New York, New York, USA  
Laplace-based Spectral Method for Point Cloud Processing  
B.Engr., University of Science and Technology of China; Mech. Engr., Shenyang Institute of Automation

Dr. Miao Luo  
Intel Corp., Hillsboro, Oregon, USA  
Designing Efficient MPI and UPC Runtime for Multicore Clusters with InfiniBand, Accelerators and Co-Processors  
B.Engr., Beijing University of Posts and Telecommunications; M.S., The Ohio State University

Dr. Oleg Mishchenko  
Schlumberger, Houston, Texas, USA  
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Diploma, Moscow Institute of Physics and Technology; Masters, State University of New York, Stony Brook

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Enabling Efficient Use of MPI and PGAS Programming Models on Heterogeneous Clusters with High Performance Interconnects  
B.S. Tech., Jawaharlal Nehru Technological University; M.S., The Ohio State University

Dr. Rohit Prakash Prabhavalkar  
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Discriminative Articulatory Feature-Based Pronunciation Models with Application to Spoken Term Detection  
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Dr. Preethi Raghavan  
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Medical Event Timeline Generation from Clinical Narratives  
B.Tech., Shreemati Nathibai Damodar Thackersey Women’s University; M.S., The Ohio State University

Dr. Bin Ren  
Pacific Northwest National Laboratory, Richland, Washington, USA  
Supporting Applications Involving Dynamic Structures and Irregular Memory Access on Emerging Parallel Platforms  
B.Engr., Beihang University; M.S., The Ohio State University

Dr. Kazuya Sakai  
Tokyo Metropolitan University, Tokyo, Japan  
Security and Privacy in Large Scale RFID Systems  
B.S., Kansai University; M.S., Kansai University; M.S., Auburn University
Dr. Yu-Keng Shih  American Express, New York, New York, USA
Dr. Srinivasan Parthasarathy  Paipei, Taiwan
*Identifying Protein Functions and Biological Systems through Exploring Biological Networks*
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Dr. Aditi Tagore  Bank of America, New York, New York, USA
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(Above) New graduates from the NOWLAB pose with their advisor, DK Panda. They are (l-r) Dr. Miao Luo, Dr. Krishna Kandalla, Prof. DK Panda and Dr. Hari Subramoni.

Dr. Ümit Çatalyürek congratulates his mentee, the new Dr. Onur Kucuktunc.
2013 - 2014 New Masters of Science

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Shuai Ye  
Rajiv Ramnath  
Yichang, Hubei, China  
B.S., Zhejiang University of Technology

Xi Yi  
DeLiang Wang  
Hunan, China  
B.Engr., Beijiang Institute of Technology

Diego Zaccai  
Bruce Weide  
Buenos Aires, Argentina  
B.S.Cptr.Sci.Eng., The Ohio State University

Daniya Zamalieva  
James Davis  
Columbus, Ohio, USA  
B.S., Hacettepe University; M.S., Bilkent University

Yang Zhang  
Srinivasan Parthasarathy  
Taizhou, Jiangsu, China  
B.S., Zhejiang University

Farhang Zia  
Srinivasan Parthasarathy  
New Delhi, India  
B.Tech., Uttar Pradesh Technical University

Masters’ grads pose in the Garden of Constants outside Dreese Labs.  
Left to right are: Sundeep Kambhampati, Akshay Nikam, Naman Mody, Akanksha Lonhari, Aveek Mukherjee, Vaibhav Devekar, Vikram Wakade, and Gaurav Sani; kneeling is Nitish Jindal.
The Undergraduate Program

The Undergraduate Advising Office has been busy keeping up with the students. CSE and CIS continue to grow in popularity as more students than ever apply to the majors and pursue the minors. Altogether, almost 400 students were accepted into the BSCSE, BSCIS, and BACIS majors during the 2013-14 academic year. Enrollment management is in full swing, with the current minimum GPA now at 3.0 (up from 2.5), and it will increase to 3.2 effective May 2015.

Students who may be seeking an alternative to Computer Science now have a new option with the addition of the Data Analytics major, which was approved in Spring 2014. The first group of students enter the program in Autumn 2014.

<table>
<thead>
<tr>
<th>Undergrad Students Enrolled</th>
<th>Undergrad Students Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.A., B.S. Degrees Awarded</td>
<td>B.A., B.S. Degrees Awarded</td>
</tr>
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</tr>
</tbody>
</table>

*The term/year of the conversion to semesters.

The Undergraduate Advising Staff

**Dr. Nikki Strader**, Academic Advising Coordinator, has been with the department since 2003. She is an active member of ACADAOS (Academic Advising Association at Ohio State), for which she was President from 2006 to 2008 and from which she received one of two “Outstanding Advisor” awards in 2007. She is also a musicologist, having presented and written about the composer Benjamin Britten. Her most recent paper, which was presented at the international conference “Britten at 100: An American Centenary Symposium Celebration,” held in October 2013 at Illinois State University, will be archived and available in Ohio State’s Knowledge Bank later in 2014.

**Chelsea Norris**, Academic Advisor. Chelsea has been advising in CSE since January 2013. She previously worked as an advisor at Ohio University after earning her Masters of Arts in Higher Education and Student Affairs at the University of Connecticut. She serves as the primary contact for all first year pre-CSE students, instructor for CSE survey classes and facilitator for orientation.

**Mary Jo Deerwester**, Academic Advisor & Staff Assistant. Mary Jo graduated from OSU in 1971 with a Bachelor of Science degree in Education. (Major: English; Minor: Psychology) She followed that in 1983 with a Master’s Degree in Guidance and Counseling. Mary Jo previously worked as an Academic Advisor at Columbus State Community College and as an Academic Advisor/Staff Assistant for the OSU College of Engineering.

**Jeff Walsh**, Graduate Advising Assistant, recently completed his Master’s degree in Computer Science & Engineering, graduating in Spring semester 2014. His study focus was on computer graphics. Jeff is now working for Harris Corporation in Florida.

Left to right: Nikki Strader, Jeff Walsh, Chelsea Norris, and Mary Jo Deerwester.
### Undergraduate Degrees Awarded: College of Arts & Sciences

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Award (when applicable)</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jesse Tyler Barron</td>
<td>BS</td>
<td>Cum Laude</td>
<td>Milan, Ohio, USA</td>
</tr>
<tr>
<td>Stephen Bedell, Jr.</td>
<td>BS</td>
<td></td>
<td>Brecksville, Ohio, USA</td>
</tr>
<tr>
<td>Brian W. Bradley</td>
<td>BA</td>
<td></td>
<td>Gahanna, Ohio, USA</td>
</tr>
<tr>
<td>John William Brown</td>
<td>BS</td>
<td></td>
<td>Hilliard, Ohio, USA</td>
</tr>
<tr>
<td>Ethan Michael Carroll</td>
<td>BS</td>
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<td>Westerville, Ohio, USA</td>
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<tr>
<td>Bradley David Chambers</td>
<td>BS</td>
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<td>Centerville, Ohio, USA</td>
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<tr>
<td>Aaron C. D’Amico</td>
<td>BA</td>
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<td>Columbus, Ohio, USA</td>
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<tr>
<td>Nicholas Alan Darrell</td>
<td>BS</td>
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<td>Rockville, Maryland, USA</td>
</tr>
<tr>
<td>Benjamin Andrew Davis</td>
<td>BS</td>
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<td>Bexley, Ohio, USA</td>
</tr>
<tr>
<td>Kyle Patrick Donovan</td>
<td>BS</td>
<td></td>
<td>Springfield, Ohio, USA</td>
</tr>
<tr>
<td>Justin Alexander Edse</td>
<td>BA</td>
<td></td>
<td>Westerville, Ohio, USA</td>
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<tr>
<td>Ryan Matthew Gibson</td>
<td>BS</td>
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<td>Stow, Ohio, USA</td>
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<tr>
<td>Alexander Mark Ginsberg</td>
<td>BA</td>
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<tr>
<td>Jules Sage Hausman</td>
<td>BS</td>
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<tr>
<td>David Carl Holmes</td>
<td>BS</td>
<td></td>
<td>Columbus, Ohio, USA</td>
</tr>
<tr>
<td>Junfei Huang</td>
<td>BS</td>
<td>Cum Laude, with Honors in the Arts and Sciences</td>
<td>Linan, Zhejiang Province, China</td>
</tr>
<tr>
<td>Daniel P. Jensen</td>
<td>BA</td>
<td></td>
<td>Chicago, Illinois, USA</td>
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<tr>
<td>Eric John Kane</td>
<td>BS</td>
<td>Magna Cum Laude</td>
<td>Perry, Ohio, USA</td>
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<tr>
<td>Aaron Thomas Kaverman</td>
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<tr>
<td>Charles William King</td>
<td>BS</td>
<td></td>
<td>Dublin, Ohio, USA</td>
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<tr>
<td>Mohamadou Koita</td>
<td>BS</td>
<td></td>
<td>Kaedi, Mauritania</td>
</tr>
<tr>
<td>Andrew Joshua Krieger</td>
<td>BS</td>
<td>Summa Cum Laude with Honors in the Arts and Sciences</td>
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<tr>
<td>Yen Nei Lee</td>
<td>BS</td>
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<td>Kajang, Malaysia</td>
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<tr>
<td>Gerard Louis</td>
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<td>Elyria, Ohio, USA</td>
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<tr>
<td>Alexander Thomas Mapes</td>
<td>BA</td>
<td></td>
<td>Powell, Ohio, USA</td>
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<tr>
<td>Rachel Alexa McIlrath</td>
<td>BS</td>
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<td>Michael James McNamara</td>
<td>BS</td>
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<td>Toledo, Ohio, USA</td>
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<tr>
<td>John William Miller</td>
<td>BS</td>
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<td>Upper Arlington, Ohio, USA</td>
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<tr>
<td>George Nicolas Moussi</td>
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<tr>
<td>Obinna Udechukwu Ngini</td>
<td>BS</td>
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<td>Amawbia, Nigeria</td>
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<td>Nathaniel Andrew Niederkorn</td>
<td>BS</td>
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<tr>
<td>Blake Hunter Offord</td>
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<td>Samuel N. Okin</td>
<td>BS</td>
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<td>Highland Park, Illinois, USA</td>
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<td>Joshua Sovanh Adams</td>
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<td>Thomas W. Allenbaugh</td>
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<td>Sidney, Ohio, USA</td>
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<td>Nicholas Penniman Alt</td>
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<td>Timothy Alan Armstrong</td>
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<tr>
<td>Mitchell James Arthur</td>
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<td>Ian Scott Baker</td>
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<td>James Michael Balata</td>
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<td>Kevin Robert Bhasin</td>
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<td>Rocky River, Ohio, USA</td>
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<td>Ashley Elizabeth Biales Wise</td>
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<tr>
<td>Kathryn Ann Blackburn</td>
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<td>Salem, Ohio, USA</td>
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<tr>
<td>Quentin C. Bloomfield</td>
<td></td>
<td>Lowell, Ohio, USA</td>
<td></td>
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<tr>
<td>Matthew David Boatman</td>
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<td>Lima, Ohio, USA</td>
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<td>Zachary Joseph Boerger</td>
<td>Cum Laude</td>
<td>Perrysburg, Ohio, USA</td>
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<tr>
<td>Michael David Boker</td>
<td>Cum Laude</td>
<td>Warren, Ohio, USA</td>
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<tr>
<td>Kyle Matthew Brake</td>
<td>Magna Cum Laude</td>
<td>Reynoldsburg, Ohio, USA</td>
<td></td>
</tr>
</tbody>
</table>
Benjamin Patrick Bricker
Massillon, Ohio, USA

Duy Xuan Bui
Magna Cum Laude
Bac Giang, Vietnam

Sean Micheal Burke
Columbus, Ohio, USA

Sean King Burkholder
Pandora, Ohio, USA

Kyle Casey Callicoat
Westerville, Ohio, USA

Emilio Cantu, Jr.
San Juan, Texas, USA

Patrick William Carfrey
Grove City, Ohio, USA

Benjamin Bergin Caruso
Columbus, Ohio, USA

Joshua Patrick Cassidy
Cum Laude
Columbus, Ohio, USA

Vincent Yung-Chi Chen
Potomac, Maryland, USA

Andrew Robert Cuthbert
Magna Cum Laude
Mentor, Ohio, USA

Matthew Shane Daley
West Jefferson, Ohio, USA

Shane Dorsey Dancy
Berlin Heights, Ohio, USA

Seth Alexander Darbyshire
Summa Cum Laude
Hillsboro, Ohio, USA

Joel Edward Davis
Magna Cum Laude
Columbus, Ohio, USA

Nicholas Beau Dean
Galion, Ohio, USA

Evan Christopher DeLaubenfels
Magna Cum Laude
Columbus, Ohio, USA

Matthew Demarest
Magna Cum Laude
Lexington, Ohio, USA

Brett Elliott Dickson
Summa Cum Laude
Lisle, Illinois, USA

Keegan Timothy Donnelly
Magna Cum Laude
Hudson, Ohio, USA

Joseph Eric Echt
Mason, Ohio, USA

Nicholas A. Eckert
Delta, Ohio, USA

Amasi Sadeg H. El Bakush
Columbus, Ohio, USA

Ahmad Khaled Farag
Powell, Ohio, USA

Coleman Craig Fennel
Magna Cum Laude
with Honors in Engineering
Middletown, Ohio, USA

Michael Anthony Filliater
Smithfield, Virginia, USA

Andrew Caldwell Fitzgerald
Columbus, Ohio, USA

Jason George Flanders
Chagrin Falls, Ohio, USA

Rocky T. Forehand
Tiro, Ohio, USA

Spencer David Foulkes
Celina, Ohio, USA

Ian Alexander Freshwater
Magna Cum Laude
Plain City, Ohio, USA

Frank Steven Fulajtar, Jr.
Mentor, Ohio, USA

Richard Michael Geoffroy, III
Powell, Ohio, USA

Bharat Gogineni
Lewis Center, Ohio, USA

Keith Trinidad Gonzalez Bonzo
Franklin Furnace, Ohio, USA

Chelsea Rianne Gross
Gahanna, Ohio, USA
Richard Salvatore Gullo, Jr.  
*Magna Cum Laude*  
Powell, Ohio, USA

Abigail Nicole Hahn  
Columbus, Ohio USA

Zachary Todd Hall  
North Lawrence, Ohio, USA

Stephen Trevor Hara  
Kitts Hill, Ohio, USA

Shaun Arthur Hardin  
*Magna Cum Laude*  
Warren, Ohio, USA

David Timothy Hazlett  
Springfield, Ohio, USA

Scott Bradley Hegman  
Cincinnati, Ohio, USA

Trevion S. Henderson  
Missouri City, Texas, USA

Maxwell Jameson Henry  
*Magna Cum Laude*  
Gahanna, Ohio, USA

John Robert Heyneman  
Whitehouse, Ohio, USA

Feng Hong  
*Cum Laude*  
Guangzhou, China

David Michael Householder  
*Cum Laude with Honors in Engineering*  
Bidwell, Ohio, USA

Xiaoran Hu  
Nantong, China

Tyler Reed Hugenberg  
Cincinnati, Ohio, USA

Mitchell David Humke  
Cincinnati, Ohio, USA

Jacob Edward Hundley  
Marion, Ohio, USA

Asma Ul Husna  
Columbus, Ohio, USA

Mohamed Hassan Ali Hussein  
Columbus, Ohio, USA

Richard Glenn Hutcheson, IV  
*Cum Laude*  
Dresden, Ohio, USA

Nathan D. Jacobs  
Toledo, Ohio, USA

Xing Jin  
Columbus, Ohio, USA

Alexander Steven Jones  
Sherwood, Ohio, USA

Nicholas Pirooz Joodi  
Dublin, Ohio, USA

Kislaya Kanan  
Patna, India

Santosh Kantharaj  
*Magna Cum Laude*  
Avon, Ohio, USA

Matthew Austin Kershaw  
Reynoldsburg, Ohio, USA

Shantanu Khemani  
*Cum Laude*  
Indore, India

Ratul Khosla  
New Delhi, India

Jacob Brian Kiley  
Milan, Ohio, USA

Hyuk Jin Kim  
Seven Hills, Ohio, USA

Gerrit Brett Kitts  
Pikeville, Ohio, USA

Jacob Allen Klingler  
*Cum Laude*  
Stow, Ohio, USA

Zachary Adam Knickerbocker  
*Summa Cum Laude*  
Columbus, Ohio, USA

Benjamin David Kracker  
Canton, Ohio, USA

Aneeth Krishnamoorthy  
*Cum Laude with Honors in Engineering*  
Dublin, Ohio, USA
Depak Kumar
*Magna Cum Laude*
Colombo, Sri Lanka

Alexander James Lee
*Magna Cum Laude*
Green, Ohio, USA

Hsien-ming Lee
Taipei, Taiwan, ROC

Shawn Jason Lee
Zanesville, Ohio, USA

Bryan James Lewis
*Magna Cum Laude*
Newark, Ohio, USA

Anna Jie Lin
Mason, Ohio, USA

Boyu Liu
*Summa Cum Laude*
Shanghai, China

Mei Liu
Columbus, Ohio, USA

Bradley David Lybarger
*Summa Cum Laude*
Reynoldsburg, Ohio, USA

Vivek Mandan
Columbus, Ohio, USA

Arathi Mani
*Summa Cum Laude*
with Honors in Engineering
Dublin, Ohio, USA

Chirag Masekar
Beavercreek, Ohio, USA

Eric Theodore Mathews
San Diego, California, USA

Michael David McCarrick
*Magna Cum Laude*
Galena, Ohio, USA

Gwendolyn May McDonald
*Cum Laude*
Blacklick, Ohio, USA

Geoffrey Steven McGinnis
Uniontown, Ohio, USA

William Charles McGowan
Columbus, Ohio, USA

Andrew James McKain
*Cum Laude*
Hilliard, Ohio, USA

Samuel Arthur Meier
Columbus, Ohio, USA

Brett Andrew Mugglin
Heath, Ohio, USA

Tremayne Tapiwa Mushayahama
Chitungwiza, Zimbabwe

Benjamin Ng
West Chester, Ohio, USA

Tien Dong Ngo
Lewis Center, Ohio, USA

Tracy Andrew Parsons
Kent, Ohio, USA

Jay B. Patel
Chicago, Illinois, USA

Brandon Ryan Patridge
Columbus, Ohio, USA

Angel Lashawn Pay
Akron, Ohio, USA

Alex Robert Pelletier
Columbus, Ohio, USA

Mariel Lee Penkowski
Mentor, Ohio, USA

Mark Scott Porter
Whitehall, Ohio, USA

Matthew Allen Radosavljevic
Brunswick, Ohio, USA

Michael Brandon Rauh
Akron, Ohio, USA

Barry Robinson, Jr.
Cleveland, Ohio, USA

Robert Andrew Rohweder
*Magna Cum Laude*
Westlake, Ohio, USA

Eric Joseph Rose
Brecksville, Ohio, USA

William Raymond Ruck, III
Beavercreek, Ohio, USA
Michelle Renee Rush  
_Magna Cum Laude_  
_with Honors in Engineering_  
Manlius, New York, USA

Aaron F. Russell  
Akron, Ohio, USA

Andrew Zook Santarelli  
Steubenville, Ohio, USA

Erik Petersen Schilling  
_Magna Cum Laude_  
_with Research Distinction in Computer Science and Engineering_  
Columbus, Ohio, USA

Brandon Louis Seich  
Powell, Ohio, USA

Zachary Lewis Serafini  
East Sparta, Ohio, USA

Pengyin Shan  
Weifang City, China

Sankalp Sharma  
Dehradun, India

Jacob Raymond Shields  
_Summa Cum Laude_  
Baltimore, Ohio, USA

Bryan Anthony Skippers  
Solon, Ohio, USA

Emily Rose Smith  
Cleveland, Ohio, USA

Matthew Scott Smith  
Dayton Ohio, USA

Daniel Joseph Steck, III  
Fairborn, Ohio, USA

Michael Alexander Steen  
Newark, Ohio, USA

Michael Steven Steger  
Columbus, Ohio, USA

Ian Blackwell Stitzlein  
Orient, Ohio, USA

Xiaokai Sun  
Yantai, China

Michael E. Sustarsic  
Dublin, Ohio, USA

Zachary Joseph Tangeman  
_Magna Cum Laude_  
Marysville, Ohio, USA

Senait Eyayu Tesfahun  
Canal Winchester, Ohio, USA

John Sebastian Thimmig  
Chagrin Falls, Ohio, USA

Stanley Ngo To  
Westerville, Ohio, USA

Igor Georgievich Tolkachev  
St. Petersburg, Russia

Michael David Urban  
Strongsville, Ohio, USA

Gautham Krishna Vemulapalli  
Vijayawada, India

Joshua P. Ventura  
_Cum Laude_  
Ashland, Ohio, USA

Steven Augustus Vignos  
Massillon, Ohio, USA

Derek Michael Visner  
_Cum Laude_  
Chagrin Falls, Ohio, USA

Chau Vo  
Copley, Ohio, USA

Kyle Wesley Voisard  
Cincinnati, Ohio, USA

Shi Ho Wang  
Toledo, Ohio, USA

Curtis Michael Wilson  
Sandusky, Ohio, USA

Alexander Runyang Xu  
_Magna Cum Laude_  
Dublin, Ohio, USA

Rengao Zhou  
Wuxi, China

Chenghan Zou  
_Magna Cum Laude_  
Chengdu, China
FACULTY, SCIENTISTS & STAFF

Tenured & Tenure Track Faculty

Gagan Agrawal

Full Professor

B.S., Computer Science & Engineering, Indian Institute of Technology, Kanpur, India, 1991; M.S., Computer Science, University of Maryland, College Park, Maryland, 1994; Ph.D., Computer Science, University of Maryland, College Park, Maryland, 1996
Department Research Area: SYSTEMS

Anish Arora

Full Professor

B. Tech., Computer Science and Engineering, Indian Institute of Technology, New Delhi, 1986; M.S., Computer Science, University of Texas, Austin, 1988; Ph.D., Computer Science University of Texas, Austin, 1992.
Department Research Area: NETWORKING and DISTRIBUTED COMPUTING
Interests: Wireless Sensor Networks; Cyberphysical Systems; Fault-tolerant, Secure And Timely Computing; Distributed Systems and Networks; Component-Based Design; Formal Methods; Concurrency Semantics.

Mikhail Belkin

Associate Professor

Hon.B.Sc. with High Distinction, Mathematics, University of Toronto, 1995; M.S., Mathematics, University of Chicago, 1997; Ph.D., Mathematics, University of Chicago, 2003.
Department Research Area: ARTIFICIAL INTELLIGENCE
Interests: Machine Learning And Statistical Analysis Of Natural Data; Manifold And Spectral Methods For Machine Learning; Algorithms For Semi-Supervised Learning And Clustering; Understanding The Value Of Unlabeled Data In Pattern Recognition; Theoretical analysis of algorithms, particularly in high dimension; Connections to Human Cognition.

Spyros Blanas

Assistant Professor

Engineering Diploma (5-year B.Sc.), Electronics & Computer Engineering, Technical University of Crete, Greece, 2006; M.Sc., Computer Science, University of Wisconsin–Madison, 2009; Ph.D. in Computer Science from the University of Wisconsin–Madison, 2013.
Department Research Area: SYSTEMS
Interests: Database Management Systems.
**MICHAEL BOND**  
*Assistant Professor*

B.S., Computer Science, University of Illinois at Urbana-Champaign, 2002; M.C.S., Computer Science, University of Illinois at Urbana-Champaign, 2003; Ph.D., Computer Sciences, The University of Texas at Austin, 2008

Department Research Area: SOFTWARE ENGINEERING AND PROGRAMMING LANGUAGES


---

**ROGER CRAWFIS**  
*Associate Professor*

B.S., Computer Science and Applied Mathematics, Purdue University, 1984; M.S., Computer Science, University of California, Davis, 1989; Ph.D., Computer Science, University of California, Davis, 1995.

Department Research Area: GRAPHICS

Interests: Computer Graphics; Video Game Technology; Serious Games; Scientific Visualization; Medical Imaging; and Volume Rendering.

---

**JAMES W. DAVIS**  
*Full Professor*

B.S., Computer Science, University of Central Florida, 1994; M.S., Media Laboratory, Massachusetts Institute of Technology, 1996; Ph.D., Media Laboratory, Massachusetts Institute of Technology, 2000.

Department Research Area: ARTIFICIAL INTELLIGENCE

Interests: Computer Vision; Automatic Visual Surveillance and Monitoring; Human Activity Recognition; Video Understanding; and Human-Computer Interaction.

---

**TAMAL K. DEY**  
*Full Professor*

B.E., Electronics, Jadavpur University, 1985; M.Tech., Computer Science, Indian Institute of Science-Bangalore, 1987; Ph.D., Computer Science, Purdue University, 1991.

Department Research Area: THEORY, GRAPHICS

Interests: Computational Geometry; Computational Topology; Geometric Modeling; Meshing; Data Analysis.
**Eric Fosler-Lussier**  
Associate Professor

B.A., Linguistics, University of Pennsylvania, 1993; B.A.S., Computer and Cognitive Science, University of Pennsylvania; 1993; Ph.D., Computer Science, University of California, Berkeley, 1999

Department Research Area: ARTIFICIAL INTELLIGENCE

Interests: Automatic Speech Recognition; Computational Linguistics; Machine Learning.

---

**Raghu Machiraju**  
Full Professor

B.Sc., Electrical Engineering, Delhi University, 1982; M.S., Automation, Indian Institute of Science, Bangalore, 1984; Ph.D., Computer Science, The Ohio State University, 1996.

Department Research Area: GRAPHICS

Interests: Data Visualization; Imaging; Bioinformatics; Computational Biology.

---

**Brian Kulis**  
Assistant Professor

B.A., Computer Science and Mathematics, Cornell University; Ph.D., Computer Science University of Texas at Austin, 2008.

Department Research Area: ARTIFICIAL INTELLIGENCE

Interests: Machine Learning, Statistics, Large-Scale Data Analysis, Numerical Optimization, Data Mining, Computer Vision.

---

**Ten-Hwang (Steve) Lai**  
Full Professor

B.S., Mathematics, Fu-Jen University, Taiwan, 1972; M.S., Mathematics, Fordham University, 1976; Ph.D., Computer Science, University of Minnesota, 1982.

Department Research Area: NETWORKING and DISTRIBUTED COMPUTING

Interests: Cryptography; Network Security; and Parallel and Distributed Computing.

---

**Eric Fosler-Lussier**  
Associate Professor


Department Research Area: NETWORKING and DISTRIBUTED COMPUTING

Interests: Cryptography; Network Security; and Parallel and Distributed Computing.
R. Facundo Mémoli
Assistant Professor

B.S. Electrical Engineering, Universidad de la Republica, Uruguay, 2000; M.S. Electrical Engineering, Universidad de la Republica, Uruguay, 2001; PhD Electrical and Computer Engineering, University of Minnesota, 2005.

Departmental Research areas: THEORY
Research interests: Metric geometry, shape and data analysis, computational topology.

Arnab Nandi
Assistant Professor

Bachelors in Information Science, University of Delhi, India, 2005; M.S., University of Michigan, Ann Arbor, 2007; Ph.D., University of Michigan, Ann Arbor, 2011.

Department Research Area: SYSTEMS
Interests: Structured Search and Large-scale Data Analysis Efficient Interaction with Databases and the Management of Large, Diverse Data Collections.

DK Panda
Full Professor


Department Research Area: SYSTEMS
Interests: Parallel Computer Architecture; High Performance Networking; Network-Based Computing; Cluster Computing; High Performance File/Storage Systems; Lan-Wan Interfacing and Communication; and Resource Management.

Srinivasan Parthasarathy
Full Professor

B.E., Electrical Engineering, University of Roorkee, India, 1992; M.S., Electrical Engineering, University of Cincinnati, 1994; M.S., Computer Science, University of Rochester, 1996; Ph.D., Computer Science, University of Rochester, 2000.

Department Research Area: SYSTEMS
Interests: Data Mining; Database Systems; Network Analysis; Bioinformatics; High Performance Computing Systems.
Chunyi Peng
Assistant Professor

B.E., Automation, Tsinghua University, 2002; M.E., Automation, Tsinghua University, 2005; Ph.D., Computer Science, University of California, Los Angeles, 2013.

Department Research Area: NETWORKING & DISTRIBUTED COMPUTING

Feng Qin
Associate Professor

B.E., University of Science and Technology of China, 1998; M.E., Chinese Academy of Sciences, 2001; Ph.D., the University of Illinois, Urbana-Champaign, 2006.

Department Research Area: SYSTEMS
Interests: Operating Systems; Software Reliability; Security and Distributed Systems.

Luis Rademacher
Assistant Professor

Bachelor in Engineering Sciences, Mathematics, Universidad de Chile; Santiago, Chile, 2002; Mathematical Engineering Title (Masters Equivalent) Universidad de Chile. Santiago, Chile, 2002; Ph.D., Applied Mathematics, Massachusetts Institute of Technology, 2007.

Department Research Area: THEORY
Interests: High Dimensional Geometry; Random Structures; Matrix Approximation; Optimization.

Alan Ritter
Assistant Professor

B.S./M.S., Computer Science, Western Washington University 2006; Ph.D., Computer Science and Engineering, University of Washington 2013.

Department Research Area: ARTIFICIAL INTELLIGENCE
P. (Saday) Sadayappan  
**Full Professor**


Department Research Area: SYSTEMS
Interests: Compiler/Runtime Systems For High-Performance Computing; Performance Optimization; High-Productivity, High-Performance Scientific Computing.

Nasko Rountev  
**Associate Professor**

B.S., Computer Science & Engineering, Technical University, Sofia, Bulgaria, 1995; M.S., Computer Science, Rutgers University, 1999; Ph.D., Computer Science, Rutgers University, 2002.

Department Research Area: SOFTWARE ENGINEERING AND PROGRAMMING LANGUAGES
Interests: Static and Dynamic Program Analysis; Programming Languages and Compilers; Software Understanding and Testing; High-Performance Computing.

Han-Wei Shen  
**Full Professor**

B.S., Computer Science, National Taiwan University, 1988; M.S., Computer Science, State University of New York, Stony Brook, 1992; Ph.D., Computer Science, University of Utah, 1998.

Department Research Area: GRAPHICS
Interests: Computer Graphics; Information Visualization; Parallel Visualization Scientific Visualization; Visual Analytics.

Nicoleta Roman  
**Assistant Professor, Lima Campus**

B.S., Computer Science, University of Bucharest, Romania, 1996; M.S., Computer Science, University of Bucharest, Romania, 1997; Ph.D., Computer Science and Engineering, The Ohio State University, Columbus, Ohio, 2005.

Department Research Area: ARTIFICIAL INTELLIGENCE
Research interests: Computational Auditory Scene Analysis; Binaural sound localization and separation; Automatic Speech Recognition; Machine Learning.

P. (Saday) Sadayappan  
**Full Professor**


Department Research Area: SYSTEMS
Interests: Compiler/Runtime Systems For High-Performance Computing; Performance Optimization; High-Productivity, High-Performance Scientific Computing.

Nasko Rountev  
**Associate Professor**

B.S., Computer Science & Engineering, Technical University, Sofia, Bulgaria, 1995; M.S., Computer Science, Rutgers University, 1999; Ph.D., Computer Science, Rutgers University, 2002.

Department Research Area: SOFTWARE ENGINEERING AND PROGRAMMING LANGUAGES
Interests: Static and Dynamic Program Analysis; Programming Languages and Compilers; Software Understanding and Testing; High-Performance Computing.

Han-Wei Shen  
**Full Professor**

B.S., Computer Science, National Taiwan University, 1988; M.S., Computer Science, State University of New York, Stony Brook, 1992; Ph.D., Computer Science, University of Utah, 1998.

Department Research Area: GRAPHICS
Interests: Computer Graphics; Information Visualization; Parallel Visualization Scientific Visualization; Visual Analytics.
Ness B. Shroff
Ohio Eminent Scholar of Networking and Communications Endowed Chair Professor
B.S., University of Southern California, 1988; M.S.E., University of Pennsylvania, 1990; M.Phil, Columbia University, 1993; Ph.D., Columbia University, 1994.
Department Research Area: NETWORKING and DISTRIBUTED COMPUTING
Interests: Wireless Networks; Next Generation Internet; Sensor Networks; Cloud Computing; Network Optimization; Network Design and Dimensioning; Network Security; Information Theoretic Security; Queueing Theory; Dynamic Control; Network Coding; Scaling Laws; Distributed Algorithms; Complexity and Approximability; Game Theory; Pricing.

Prasun Sinha
Associate Professor
B. Tech., Computer Science and Engineering, Indian Institute of Technology, Delhi, India, 1995; MS, Computer Science, Michigan State University, 1997; PhD, Computer Science, University of Illinois, Urbana-Champaign, 2001.
Department Research Area: NETWORKING and DISTRIBUTED COMPUTING
Interests: Sensor Networking; Ad-hoc Networking; Mobile Computing; Wireless Networking.

Paul A.G. Sivilotti
Associate Professor
Department Research Area: SOFTWARE ENGINEERING AND PROGRAMMING LANGUAGES
Interests: Distributed Systems; Software Engineering; and Tool-based Support for Testing Component Implementations.

Anastasios Sidiropoulos
Assistant Professor
Professor Diploma, Computer Science, University of Patras, 2002; MS, Computer Science, Massachusetts Institute of Technology, 2005; PH.D., Computer Science, Massachusetts Institute of Technology, 2008.
Department Research Area: THEORY
Interests: Graph Algorithms, Computational Geometry, Metric Embeddings, Approximation Algorithms, Computational Topology.
Neelam Soundarajan  
Associate Professor and Associate Chairperson

B.S., Physics, Bombay University, India, 1970; M.S., Physics, Bombay University, India, 1972; Ph.D., Computer Science, Bombay University, India, 1978.

Department Research Area: SOFTWARE ENGINEERING AND PROGRAMMING LANGUAGES

Interests: Software Engineering; Reasoning about Program Behavior; Specification; Verification; Testing; Issues in Engineering Education.

Kennan Srinivasan  
Assistant Professor

B.S., Electronics & Communications Engineering, University of Madras, Chennai, India, 2000; M.S., Electrical & Computer Engineering, Oklahoma State University, 2002; Ph.D., Electrical Engineering, Stanford University, Stanford, CA, USA, 2010.

Department Research Area: NETWORKING and DISTRIBUTED COMPUTING


Christopher Stewart  
Assistant Professor

B.S., Computer Science, Morehouse College, 2003; M.S., Computer Science, University of Rochester, 2005; Ph.D., Computer Science, University of Rochester, 2008.

Department Research Area: SYSTEMS

Interests: Operating Systems; Distributed Systems; Performance Management; and Power Management.

Kenneth J. Supowit  
Associate Professor

B.A., Linguistics, Cornell University, 1978; Ph.D., Computer Science, University of Illinois, 1981.

Department Research Area: THEORY

Interests: Combinational Algorithms.
Radu Teodorescu  
*Assistant Professor*

Dipl. Eng. in Computer Science, Technical University of Cluj-Napoca, Romania, 2002; M.S., Computer Science, University of Illinois at Urbana-Champaign, 2005; Ph.D., Computer Science, University of Illinois at Urbana-Champaign, 2008.

Department Research Area: **SYSTEMS**

Interests: Computer Architecture, with a Focus On Designing Energy Efficient and Reliable Microprocessors and Systems.

DeLiang (Leon) Wang  
*Full Professor*

B.S., Computer Science, Beijing University, 1983; M.S., Computer Science, Beijing University, 1986; Ph.D., Computer Science, University of Southern California, Los Angeles, 1991.

Department Research Area: **ARTIFICIAL INTELLIGENCE**

Interests: Machine Perception and Neurodynamics.

Huamin Wang  
*Assistant Professor*

B.Eng., Computer Science and Engineering, Zhejiang University Hangzhou, China, 2002; M.S., Computer Science, Stanford University Stanford, CA, USA, 2004; Ph.D. in Computer Science Georgia Institute of Technology Atlanta, GA, USA, 2009.

Department Research Area: **GRAPHICS**


Yusu Wang  
*Associate Professor*


Department Research Area: **GRAPHICS**

**Rephael Wenger**

Associate Professor

B.S., Computer Science, Princeton University, 1984; Ph.D., Computer Science, McGill University, 1988.

Department Research Area: GRAPHICS

Interests: Computational Geometry; Computer Visualization; Isosurface Reconstruction; and Image Processing.

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**Dong Xuan**

Full Professor

B.S., Electronic Engineering, Shanghai Jiao Tong University, China, 1990; M.S., Electronic Engineering, Shanghai Jiao Tong University, 1993; Ph.D., Computer Engineering, Texas A&M University, 2001.

Department Research Area: NETWORKING and DISTRIBUTED COMPUTING

Interests: Distributed Computing, Computer Networks and Cyber Space Security.

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**Xiaodong Zhang**

Chairperson of Computer Science & Engineering

Robert M. Critchfield Professor

B.S., Electrical Engineering, Beijing University of Technology, 1982; M.S., Computer Science, University of Colorado at Boulder, 1985; Ph.D., Computer Science, University of Colorado at Boulder, 1989.

Department Research Area: SYSTEMS, NETWORKING and DISTRIBUTED COMPUTING

Interests: Data Management in Computer and Distributed Systems

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**Courtesy Appointments**

**Umit V. Çatalyürek**

Biomedical Informatics

**Kun Huang**

Biomedical Informatics

**Michael Knopp**

Radiology

**Albert M. Lai**

Biomedical Informatics

**Tao Shi**

Statistics

**Xiaorui (Ray) Wang**

Electrical and Computer Engineering

**Cathy (Honghui) Xia**

Integrated Systems Engineering

**Alper Yilmaz**

Civil, Environmental Engineering & Geodetic Science
CLINICAL FACULTY

JAY RAMANATHAN
Research Associate Professor
Director of Research of Center for Experimental Research in Computer Systems

B.S., Computer Science, Purdue University, 1970; M.S. in Computer Science, Purdue University, 1972; Ph.D. Computer Science, Rice University, 1977.

Research Interests: Analysis and Engineering of the Complex Adaptive Environments to achieve overall objectives, performance and Business-IT alignment. Related applications include Serious Gaming and technology-mediated collaborative platforms. Tools and methods of interest include knowledge mining, complexity theory, autonomic computing; technologies such as OWL, Middleware, Workflow, Mobile Computing, and Web Services.

RAJIV RAMNATH
Associate Professor of Practice
Director, Collaborative for Enterprise Transformation and Innovation (C.E.T.I.)


EMERITUS APPOINTMENTS

PROFESSOR EMERITUS
Balakrishnan Chandrasekaran
Charles A. Csuri
Ming-Tsan (Mike) Liu
Sandy Mamrak
Mervin E. Muller
Bruce Weide
Stuart Zweben

ASSOCIATE PROFESSOR EMERITUS
Clinton R. Foulk
Douglas S. Kerr
Timothy Long
William F. Ogden
Rick Parent
Anthony E. Petrarca

FACULTY EMERITUS
James B. Randels

VISITING ASSOCIATE PROFESSOR
Fabrice Jean-Emile Rastello

VISITING SCHOLARS
Miao-Chen Chuo
Roshan Dathathri
Wensheng Dou
Qinghua Gu
Wei Han
Youquan Liu
Hong Luan
Abdullah Naralan
Changqun Wang
Fan Zhang
Kai Zhang
Xiaolei Zhang
Balakrishnan Chandrasekaran
Senior Research Scientist
Professor Emeritus


Virginia A. Folcik-Nivar
Research Scientist

B.S., Biology, Cleveland State University, 1988; Ph.D., Regulatory Biology, Cleveland State University, 1993; B.S., Computer Science and Engineering, The Ohio State University, 2005.

Interests: Behavior of individual agents representing the basic cell types of the immune system leads to normal (protective) and pathological (injurious) behavior from the immune system as a whole.

Lei Guo
Research Scientist

Bachelor in Space Physics, University of Science and Technology of China; Masters in Computer Science, University of Science and Technology of China; Ph.D. in Computer Science and Engineering, The Ohio State University, 2007.

Research Interests: Distributed Systems, Measurement and Modeling Of Internet Services, and Big Data Analytics.

Jihun Hamm
Research Scientist

B.S. Electrical Engineering, Seoul National University, 1998; M.S. Biomedical Engineering, Seoul National University, 2002; Ph.D. Electrical Engineering, University of Pennsylvania, 2008.

Research Interests: Machine Learning, Computer Vision, Medical Imaging.
John Josephson
Research Scientist

B.S., Mathematics, The Ohio State University, 1968; M.S., Mathematics, The Ohio State University, 1970; Ph.D., Philosophy, The Ohio State University, 1982.

Research Interests: Artificial Intelligence; Computational Epistemology, Abductive Inference, Causal Reasoning, Multiple Criteria Decision Making, Perception, Information Fusion, Diagnosis, Theory Formation, Logic of Investigation and Foundations of Science.

Rubao Li
Research Scientist

B.S., Mechatronics, Jingdezhen Ceramic Institute, 2000; M.S., Computer Science, Beijing University of Technology, 2003; Ph.D., Computer Science, Chinese Academy of Sciences, 2008.


Michael Mandel
Research Scientist


Research Interests: Machine Listening, Signal Processing, Machine Learning, Speech Recognition, Psychoacoustics.

Post-Doctorate Researchers
Khaled Hamidouche
Jia Liu
Miao Luo
Andrew Plummer

Research Staff
Mark Arnold - Systems Manager
John M. Eisenlohr - Research Specialist
Xiaoyi Lu - Senior Research Associate
Jonathan L. Perkins - Systems Administrator
Hari Subramoni - Senior Research Associate & Engineer
Gojko Babic  
*Senior Lecturer*

B.S., Electric Engineering, University of Sarajevo, 1972; M.S., Computer Science, Florida Institute of Technology, 1975; Ph.D., Computer Science, The Ohio State University, 1978.

Bettina Bair  
*Senior Lecturer*


Matthew Boggus  
*Senior Lecturer*

B.A., Computer Science and Mathematics, Hiram College, 2006; Ph.D., Computer Science and Engineering, The Ohio State University, 2012.

Paolo Bucci  
*Senior Lecturer*

Laurea in Scienze Dell’ Informazione, Università’ Degli Studi di Milano, Italy, 1986; M.S., Computer & Information Science, The Ohio State University, 1989; Ph.D., Computer & Information Science, The Ohio State University, 1997.

Adam Champion  
*Senior Lecturer*

B.S., Computer Science and Engineering (with distinction), The Ohio State University, 2007; M.S., Computer Science and Engineering, The Ohio State University, 2012.

Doreen Close  
*Senior Lecturer*

B.S., Computer and Information Science, The Ohio State University, 1979; M.S., Computer Science and Engineering, The Ohio State University, 1981.

Michael Fritz  
*Senior Lecturer*

B.S., Psychology, The Ohio State University, 1997; B.S., Mathematics, The Ohio State University, 2005; M.S., Computer Science and Engineering, The Ohio State University, 2013.

Wayne Heym  
*Senior Lecturer*

B.Phil., Miami University, 1978; M.S., Cornell University, 1980; M.S., Computer & Information Science, The Ohio State University, 1989; Ph.D., Computer & Information Science, The Ohio State University, 1995.

Christine Kiel  
*Senior Lecturer*

B.A., Spanish, Ohio Wesleyan University, 1977; M.S., Computer and Information Science, The Ohio State University, 1986.
Michele Reeves
Lecturer

Kathryn Reeves
Lecturer

Lori Rice
Lecturer

Naeem Shareef
Senior Lecturer

Part-time Lecturers

Senior Lecturers

Thomas Bihari
Moez Chaabouni
Matt Curtin
Roman Ilin
Praveen Kumar
Robert Mathis

Raymond McDowell
Senior Lecturer

Jeremy Morris
Senior Lecturer

Anatula T. Wolf
Lecturer

Michelle Mallon
Lecturer

Kathryn Reeves
Lecturer

Lori Rice
Lecturer

Naeem Shareef
Senior Lecturer


B.S., Information Systems, Ohio Dominican College; M.A., Workforce Development and Education, The Ohio State University.


B.CPE, Computer Engineering, Auburn University, 1986; M.S., Computer Science, Auburn University, 1991.

B.S., Information Systems, Ohio Dominican College; M.A., Workforce Development and Education, The Ohio State University.

B.S., Mathematics and Computer Science, Bowling Green State University, 1996; M.A., Education, The Ohio State University, 1998; M.S., Computer Science and Engineering, The Ohio State University, 2007; Ph.D., Computer Science and Engineering, The Ohio State University, 2010.

B.A., Psychology, University of Illinois, Springfield; B.S., Computer Science, The Ohio State University; M.S., The Ohio State University, 2013.
**Part-time Lecturers**

Michael H. Burkhardt  
Peter J. Dohm  
Christopher P. Domas  
Clair Farris  
Charles Giles  
George Michael Green  
Steve Gomori  
Cindy L. Grimme  
Suribabu Jayant  
Perumel Krishnasamy  
Leon Jairo Madrid  
Igor Malkiman  
William Thomas Martin  
G. Beth McGrath  
Catherine McKinley  
Bhuvarahamur Narasimhan  
Robert Pavkovich  
Stephanie S. Preston  
Perumal N. Ramasamy  
Steven Romig  
David J. Stucki  
D. John Thomas  
Parker C. Wiksell

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**STAFF**

**Administrative Staff**

Catrena Collins - Human Resources Generalist  
Tamèra Cramer - Public Relations Coordinator  
Don Havard - Fiscal Officer  
Michelle Janney - Reception and Travel Coordinator  
Z. Lynn Lyons - Graduate Admissions and Graduate Studies Coordinator  
Kathryn Reeves - Academic Program Administrator  
Carrie Stein - Grants Administrator

**Computing Services Staff**

Joseph Coe - Operations Specialist  
Michael Compton - Director, Computing Services  
Aaron Jenkins - Network Operations Specialist  
Bob Joseph - Software Specialist  
Tami King - Software Specialist  
Dave Kneisly - Computer Operations/ Network Manager  
Todd Lucal - Systems Manager  
Jeff Moser - Windows Administrator  
Shaun Rowland - Manager, Software Support and Development  
Ted Welch - Systems Manager
Neil, a 2nd year, Molecular Genetics student, caught this double rainbow display over the Ohio Union.

(image courtesy of OSU: Image of the Day.)