



**DEPARTMENT OF  
COMPUTER SCIENCE  
AND  
ENGINEERING**



**2013 - 2014 ANNUAL REPORT**



**THE OHIO STATE UNIVERSITY**  

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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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THE OHIO STATE UNIVERSITY

COLLEGE OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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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

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## 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



*Ness Shroff, right, posed with Randy Moses, Associate Dean for 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.



*Radu Teodorescu (right) is congratulated by Jennifer Cowley Associate Dean for Academic Affairs and Administration.*

## 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 FUHRY

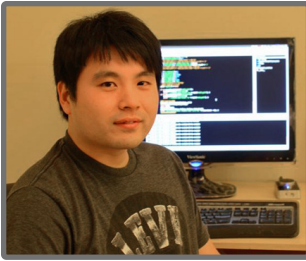
**Dave Fuhry**, a CSE Ph.D. student, was awarded an NSF East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI) Fellowship Award to do research in Singapore in summer 2013. He worked with Professor Ee-Peng Lim who heads the Living Analytics Research Center (LARC) at Singapore Management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



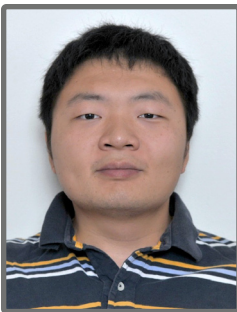
**Yin Huai** has been selected to become a software committer for the data warehouse software Hive project sponsored by the Apache Software Foundation. This is a high recognition to Yin's technical capability and his contributions to Hive. Yin has contributed multiple software patches to Hive. The major 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



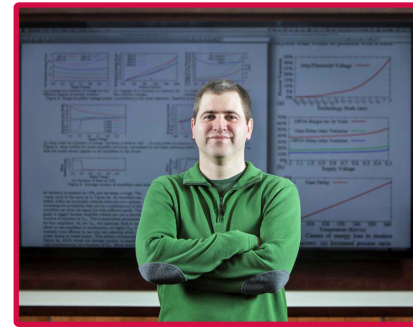
**Qihang Li**, CSE Ph.D. candidate, won the 2013 IEEE Scientific Visualization Contest. The goal of this year's contest is to develop new visualization methods for exploring the organization and function in a developing mouse brain. His team proposed an interactive visual analytic system based on Allen-Developing-Mouse-Brain-Atlas 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 (left) with Lisa Abrams, Interim Director of Diversity/Outreach of the COE Diversity and Outreach.*

**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.

*Mayya Malkiman (right), daughter of Igor Malkiman, accepts his Outstanding Teaching Award in his absence. The certificate is being presented by Bruce Weide.*



*Anaushka Narayanan, daughter of Arun Narayanan, is entertained by the comics in the Ohio Union Cartoon Room, location of the 18th Annual CSE Awards banquet.*



*Awaiting the start of the banquet are Performance Analysis research winner, Sreeram Potluri (second from right) with his parents, Dr. Gangadhara Rao Potluri (front left) and Dr. Sarada Potluri, (second left) and his advisor, D.K. Panda (right).*



# 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



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).

## 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



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



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.



# GRANT FUNDING 2013-2014

## 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

National Science Foundation (NSF)

*SHF: Small: Advanced Compiler Techniques for Meeting Fault Tolerance Needs of HP Systems*

PI: **Gagan Agrawal**

07/01/13 – 06/30/16    \$499,695

National Science Foundation (NSF)

*SI2-SSE: Collaborative Research: Software Elements for Analysis and Dissemination of Large Scale Scientific Data*

PI: **Gagan Agrawal**

09/01/13 – 08/31/16    \$400,000

### 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

Mellanox Technologies

*Research on High Performance and Scalable MPI over InfiniBand.*

PI: **DK Panda**

8/22/12 – 8/14/13    \$190,585

National Science Foundation (NSF)

*CSR: EAGER: HPC Virtualization with SR-IOV*

PI: **DK Panda**

10/1/13 – 9/30/14    \$98,291

### 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 net-  
worked storage*

PI: **Christopher Stewart**

10/1/13 – 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 Burghilea (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)

Co-PI: **Eric Fosler-Lussier, Rajiv Ramnath,** Kathleen Gallant (OSU College of Education & Human Ecology), Ralph Gardner III (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 – 02/14/14 \$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 run-time 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

## 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

## 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 Sadowszky (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

## 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 TraNational Science Foundation (NSF)ormation 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 & Aerospace 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 & Aerospace 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*

PI: **Ness B. Shroff**

Co-PI: Can Emre Koksall (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 Downscaling Tools For Scalable Security Experiments*

PI: **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*

PI: **Ness Shroff**

Co-PI: **Prasun Sinha**, Can Emre Koksall (OSU Dept. of Electrical and Computer Engineering)

9/1/08 – 8/31/13 \$500,000

**National Science Foundation (NSF)**

*Networking Technology and Systems (NeTS): Large: Collaborative Research: Foundations For Network Cooperation At Signal Scale*

PI: **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*

PI: **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*

PI: **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*

PI: 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*

PI: Can Emre Koksall (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*

PI: **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*

PI: **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*

PI: Ümit Özgüner

Co-PI: **Bruce Weide**, **Paul Sivilotti**, Ashok Kumar Krishnamurthy (OSU Dept. of Electrical and Computer Engineering), Füsün 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*

PI: **Neelam Soundarajan**

8/22/12 – 8/21/13 \$30,885

**National Science Foundation (NSF)**

*CPATH T: NEWPATH: Nurturing, Through Entrepreneurship, IT World Leaders*

PI: **Neelam Soundarajan**

Co-PIs: **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)

*SHF: Small: GOAL: Addressing the Challenges of Parameter Variation in the Design of Ultra-low Power Chip Multiprocessors Using Near-threshold Technology*

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

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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*

<b>Chris Murphy</b> <i>How Do You Test Non-testable Programs?</i>	University of Pennsylvania
<b>Daniel Peek</b> <i>A Short History of Facebook's User Data Storage System</i>	Facebook
<b>Brad Penoff</b> <i>Scale &amp; Performance team for Google Payments</i>	Google
<b>Louis-Noel Pouchet</b> <i>Research Challenges in Compiler Optimization</i>	University of California, Los Angeles
<b>David Race</b> <i>Supercomputing at Cray - Building Computational Tools That Help Change The World</i>	Cray Cluster Solutions
<b>Davide Rossetti</b> <i>Recent Developments in GPU Computing</i>	NVIDIA Corp
<b>Purnamrita Sarkar</b> <i>Link Prediction: Theory and Practice</i>	University of California, Berkeley
<b>Karsten Schwan</b> <i>pMem - Persistent Memory for Data-intensive Applications</i>	Georgia Technical Institute
<b>Vinay Sharma</b> <i>Making Smarter Devices using Computer Vision</i>	Apple
<b>Arrvindh Shriraman</b> <i>SQRL: Hardware Accelerator for Collecting Software Data Structures</i>	Simon Fraser University
<b>Hongning Wang</b> <i>Human-centric Big Data Mining: Humans as both Producers and Consumers of Big Data</i>	University of Illinois at Champaign – Urbana
<b>Yang Wang</b> <i>Separating Data from Metadata for Robustness and Scalability</i>	The University of Texas at Austin
<b>Adam Wierman</b> <i>Algorithmic Challenges for Greening Data Centers</i>	California Institute of Technology
<b>Xiaoru Yuan</b> <i>Urban Traffic Trajectory Visual Analysis</i>	Peking University
<b>Jianfeng Zhan</b> <i>BigDataBench: Benchmarking and Evaluating Big Data Systems</i>	Chinese Academy of Sciences and University of Chinese Academy of Sciences
<b>Yinqian Zhang</b> <i>Security Threats and Defenses in Multi-Tenant Public Clouds</i>	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

	AU 2002	AU 2003	AU 2004	AU 2005	AU 2006	AU 2007	AU 2008	AU 2009	AU 2010	AU 2011	AU 2012*	AU 2013
<b>Faculty</b>	29	31	31	32	33	35	35	35	36	36	34	38
<b>Course Enrollment/ Autumn Qtr.</b>	4,076	3,650	3,125	3,187	3,238	3,386	3,702	3,943	4,075	4,609	5,737	6,508
	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13*	13-14
<b>Students Taught</b>	13,878	12,208	10,623	10,844	10,641	11,185	12,209	12,689	13,744	14,523	12,457	14,463

*\*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.

	AU 2003	AU 2004	AU 2005	AU 2006	AU 2007	AU 2008	AU 2009	AU 2010	AU 2011	AU 2012*	AU 2013
<b>Graduate Students Enrolled</b>	174	169	188	184	235	239	303	304	339	305	327
	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13*	13-14
<b>Graduate Student Applications</b>	712	589	694	619	705	677	817	1,031	1,190	1,196	1,264
<b>Graduate Students Supported</b>	149	158	163	135	135	132	182	218	209	222	201
<b>M.S. Degrees Awarded</b>	31	27	21	33	37	39	64	40	37	86	93
<b>Ph.D. Degrees Awarded</b>	7	11	18	17	32	26	19	20	14	19	26
<b>Ph.D. Degrees (cumulative)</b>	332	343	361	378	410	436	455	475	489	508	534

*\*The term/year of the conversion to semesters.*

## DOCTORATES BESTOWED

Name Destination  
Advisor Home  
Dissertation  
Vita

### Dr. Tarun Bansal

Dr. Prasun Sinha

*Network-centric Mechanism for Performance Improvement in Dense Wireless Networks*

B.S., Indian Institute of Technology, Roorkee; M.S., University of Texas, Dallas; M.S., The Ohio State University

Google, Seattle, Washington, USA  
Dehradun, India

### Dr. Tekin Bicer

Dr. Gagan Agrawal

*Supporting Data-Intensive Scientific Computing on Bandwidth and Space Constrained Environments*

B.S. Honors, Izmir Institute of Technology; M.S., The Ohio State University

Argonne National Laboratories, Lemont, Illinois, USA  
Giresun, Turkey

### Dr. Abon Chaudhuri

Dr. Han-Wei Shen

*Geometric and Statistical Summaries for Big Data Visualization*

B.Eng., Jadavpur University; M.S., The Ohio State University

Intel Corp., Hillsboro, Oregon, University  
Srirampur, India

### Dr. Zhezhe Chen

Dr. Feng Qin

*System Support for Improving the Reliability of MPI Applications and Libraries*

B.S., Zhejiang University; M.S., Zhejiang University; M.S., The Ohio State University

Twitter Inc., San Francisco, California, USA  
Lonyan, Fujian, China

### Dr. Joshua Eckroth

Dr. John Josephson

*Anomaly-Driven Belief Revision by Abductive Metareasoning*

B.A., Humboldt State University; B.S., Humboldt State University; M.S., The Ohio State University

Stetson University, Deland, Florida, USA  
Columbus, Ohio, USA

### Dr. Fengtao Fan

Dr. Tamal Dey

*Computing Topological Features of Data and Shapes*

Bachelors, Hangzhou Dianzi University; M.S., Zhejiang University; M.A., University of Kentucky

Google, Mountain View, California, USA  
Pingxiang, China

### Dr. Preethi Jyothi

Dr. Eric Fosler-Lussier

*Discriminative and Articulatory Feature-Based Pronunciation Models for Conversational Speech Recognition*

B.Tech., National Institutes of Technology, India; M.S., The Ohio State University.

University of Illinois, Urbana-Champaign, Illinois, USA  
Bangalore, India

### Dr. Krishna Chaitanya Kandalla

Dr. Dhabaleswar Panda

*High Performance Non-Blocking Collective Communication For Next Generation Infiniband Clusters*

B.Tech., National Institutes of Technology, India.

Cray, St. Paul, Minnesota, USA  
Bangalore, India

### Dr. Onur Kucuktunc

Dr. Ümit Çatalyürek

*Result Diversification on Spatial, Multidimensional, Opinion, and Bibliographic Data*

B.S., Bilkent University; M.S., Bilkent University; M.S., The Ohio State University.

Google, Mountain View, California, USA  
Ankara, Turkey

### Dr. Dong Li

Dr. Prasun Sinha

*Enabling Smart Driving through Sensing and Communication in Vehicular Networking*

B.Eng., University of Science and Technology of China; M.S., The Ohio State University

LinkedIn, Mountain View, California, USA  
Taian, China



**Dr. Xinfeng Li** Google, New York, New York, USA  
 Dr. Dong Xuan LiShui, Zhejiang, China  
*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

**Dr. Zhixue Lu** Two Sigma Investment, New York, New York, USA  
 Dr. Prasun Sinha Handan, China  
*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  
 Dr. Yusu Wang Mianyang, China  
*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  
 Dr. Dhabaleswar Panda Beijing, China  
*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  
 Dr. Roger Crawfis Zhukovsky, Russia  
*Streamline Visualization Optimization Considering Information Theory, Textures and Semi-Transparency*  
 Diploma, Moscow Institute of Physics and Technology; Masters, State University of New York, Stony Brook

**Dr. Sreeram Potluri** NVIDIA, Santa Clara, California, USA  
 Dr. Dhabaleswar Panda Gudivada, India  
*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** Google, Mountain View, California, USA  
 Dr. Eric Fosler-Lussier Pune, India  
*Discriminative Articulatory Feature-Based Pronunciation Models with Application to Spoken Term Detection*  
 B.Engr., University of Pune; M.S., The Ohio State University

**Dr. Preethi Raghavan** IBM T J Watson Research Center, Yorktown Heights, New York, USA  
 Dr. Eric Fosler-Lussier Mumbai, India  
*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  
 Dr. Gagan Agrawal Zhengding, China  
*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  
 Dr. Ten-Hwang Lai Suita, Osaka, 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**

Dr. Srinivasan Parthasarathy

*Identifying Protein Functions and Biological Systems through Exploring Biological Networks*

B.Bus.Adm., National Taiwan University; M.S., The Ohio State University

American Express, New York, New York, USA

Paipei, Taiwan

**Dr. Hari Subramoni**

Dr. Dhabaleswar Panda

*Topology-Aware MPI Communication and Scheduling for High Performance Computing Systems*

Bachelor's, University of Kerala; M.S., The Ohio State University

The Ohio State University, Columbus, Ohio, USA

Trivandrum, India

**Dr. Aditi Tagore**

Dr. Bruce Weide

*Techniques to Improve Automated Software Verification*

B.S.Tech., West Bengal University of Technology; M.S., The Ohio State University

Bank of America, New York, New York, USA

Kolkata, India

**Dr. Sanket Tavarageri**

Dr. P. Sadayappan

*Compiler Techniques for High Performance Computing, Energy, Efficiency, and Resilience*

B.Tech, National Institute of Technology, Karnataka; M.S., The Ohio State University

Reservoir Labs, New York, New York, USA

Hubli, Karnataka, India

**Dr. Jin Teng**

Dr. Dong Xuan

*Efficient Collection and Retrieval for Large Heterogeneous Dataset*

B.Engr., Shanghai Jiao Tong University; Master's, Shanghai Jiao Tong University; M.S., The Ohio State University

Cisco Systems, Inc., San Jose, California, USA

Shanghai, China

**Dr. Ye Wang**

Dr. Srinivasan Parthasarathy

*Next Generation Outlier Detection*

B.Engr., Huazhong University of Science and Technology; M.S., The Ohio State University

Google, Mountain View, California, USA

Xinyi, Jiangsu, China



(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

### Name

Advisor  
Home  
Vita

### Sameh Mohamed Shohdy Ahmed Abdulah

Gagan Agrawal  
Shebin-Elkom, Egypt  
B.S., Minufiya University; M.S.,  
Minufiya University

### Manas Agrawal

Bruce Weide  
Jabalpur, India  
Bachelor's, University of Pune

### Michael David Andereck

Roger Crawfis  
Dublin, Ohio, USA  
B.S. Vanderbilt University

### Tarun Bansal

Prasun Sinha  
Columbus, Ohio, USA  
B.S., Indian Institute of Technology, Roorkee;  
M.S., University of Texas at Dallas

### Rohan Sudhir Benkar

Rajiv Ramnath  
Pune, India  
B.Engr., University of Pune

### Prasad Vijay Bhandari

Michael Bond  
Pune, India  
Bachelors, University of Pune

### Sandeep Chatra Raveesh

Jayashree Ramanathan  
Bangalore, India  
B.Engr., Visveswaraiah Technological University

### Wei Chen

Rajiv Ramnath  
Nanjing, China  
B.S., Nanjing Normal University;  
M.A., The Ohio State University

### Yinxiao Chen

Rajiv Ramnath  
Changzhou, China  
B.S., Nanjing University

### Zhaoyi Chen

Rajiv Ramnath  
Shenzhen, China  
B. Engr., Sun Yat-sen University

### Miao-Chen Chou

Anish Arora  
Taiohung, Taiwan, ROC  
B.Engr., National Taipei University

### Akshay Ajay Deshpande

Eric Fosler-Lussier  
Pune, India  
B.Engr., University of Pune

### Vaibhav Ramchandra Devekar

Luis Rademacher  
Thane, Maharashtra, India  
Bachelor's, University of Mumbai

### Piyush Dhar Diwan

Rajiv Ramnath  
Raipur, Chhattisgarh, India  
Bachelor's, Ravi Shankar University; Master's,  
Indian Institute of Technology, Guwahati

### Kripa Durgaprasad

Eric Fosler-Lussier  
Chennai, Tamil Nadu, India  
Bachelor's, Anna University

### Joshua Ryan Eckroth

John Josephson  
Columbus, Ohio, USA  
B.A., Humboldt State University; B.S.,  
Humboldt State University

### Jonathan Andrew Eisenmann

Richard Parent  
Columbus, Ohio, USA  
B.S.Cptr.Sci.Engr., University of Texas, Dallas

### Venmugil Elango

P. Sadayappan  
Tamil Nadu, India  
B.Engr., Anna University

### Kshitij Fadnis

John Josephson  
Thane, India  
B.Engr., University of Mumbai

### S. M. Faisal

Srinivasan Parthasarathy  
Khulna, Bangladesh  
B.S., Islamic University of Technology

### Michael Fritz

Kenneth Supowit  
Columbus, Ohio, USA  
B.S., The Ohio State University

**David Patrick Fuhry**

Srinivasan Parthasarathy  
Parkman, Ohio, USA  
B.S., Kent State University; M.S.,  
Kent State University

**Xiaoyin Ge**

Yusu Wang  
Shanghai, China  
B.S., Tongji University; M.S., The  
Ohio State University

**Gourab Ghosh Roy**

Brian Kulis  
Kolkata, WB, India  
Bachelor's, Jadavpur University

**George Michael Green**

Rajiv Ramnath  
Columbus, Ohio, USA  
B.A., The Ohio State University; M.A., The Ohio  
State University; J.D., The Ohio State University

**Michael Jay Herold**

Rajiv Ramnath  
Pickerington, Ohio, USA  
B.A., Capital University

**Dustin Hoffman**

Bruce Weide  
Columbus, Ohio, USA  
B.S., The Ohio State University

**Xin Huo**

Gagan Agrawal  
Columbus, Ohio, USA  
B.S., Beijing Institute of Technology;  
M.S., Beijing Institute of Technology

**Nitish Jindal**

Christopher Stewart  
Columbus, Ohio, USA  
B.Engr., University of Delhi

**Pacharmon Kaewprag**

Raghu Machiraju  
Bangkok, Thailand  
B.Engr., King Mongkut's Institute of Technology;  
Master's, Asian Institute of Technology

**Satya Sundeep Kambhampati**

Christopher Stewart  
Andhra Pradesh, India  
Bachelor's, Vellore Institute of Technology

**Krishna Chaitanya Kandalla**

Dhabaleswar Panda  
Bangalore, India  
B.Tech., National Institutes of Technology

**Mitesh Mukesh Kanjariya**

Jayashree Ramanathan  
Mumbai, India  
B.Tech., University of Mumbai

**Kishor Yadav Kommanaboina**

P. Sadayappan  
Chirala, India  
B.S., Indian Institutes of Information Technology

**Niranjan Konda**

Rajiv Ramnath  
Bangalore, India  
B.Tech., National Institutes of Technology, India

**Yuxiang Kou**

Han-Wei Shen  
Shaanxi, China  
B.S.Mech.Eng., Beijing Institute of Technology

**Royden Mark Jacob Lewis**

Srinivasan Parthasarathy  
Udupi, India  
B.Engr., Visveswaraiah Technological University

**Dong Li**

Prasun Sinha  
Taian, China  
B.Engr., University of Science  
and Technology of China

**Henan Li**

Rajiv Ramnath  
Beijing, China  
B.Engr., Beijing University of Posts  
and Telecommunications

**Xinfeng Li**

Dong Xuan  
LiShui, Zhejiang, China  
B.Engr., Tsinghua University;  
M.S., Tsinghua University

**Ye Liu**

Brian Kulis  
Dalian, China  
B.S. Elec.Cptr.Engr., The Ohio State University

**Akanksha Sagar Lonhari**

Rajiv Ramnath  
Pune, Maharashtra, India  
Bachelor's, University of Pune

**Zhixue Lu**

Prasun Sinha  
Handan, China  
B.S., Peking University; M.S., Peking University



**Arati Mahimane**

Jayashree Ramanathan  
Pune, India  
Bachelor's, University of Pune

**Rohit Sudhish Manaktala**

Jayashree Ramanathan  
Mumbai, India  
B.Engr., Rajiv Gandhi Institute of Technology

**Neha Mazumder**

Michael Bond  
Kolkata, West Bengal, India  
B.S.Tech., West Bengal University of Technology

**Nan Meng**

Raghu Machiraju  
Tianjin, Tianjin, China  
B.S., Hebei University of Technology

**Naman Mody**

Roger Crawfis  
Noida, Uttar Pradesh, India  
Bachelor's, LNM Institute of  
Information Technology

**Saravanan Mohan**

Rajiv Ramnath  
Columbus, Ohio, USA  
Bachelor's, P.S.G. College of Technology,  
Bharathiar University

**Aveek Mukhopadhyay**

James Davis  
New Delhi, India  
B.S.Tech., National Institutes of Technology

**Karthik Navaneethakrishnan**

Rajiv Ramnath  
Madurai, India  
B.Tech., Anna University

**Akshay Machhindra Nikam**

P. Sadayappan  
Aurangabad, Maharashtra, India  
B.S.Tech., University of Pune

**Qingpeng Niu**

P. Sadayappan  
Shenyang, China  
B.Engr., Northeastern University

**Sai Prathyusha Peddi**

Bruce Weide  
Columbus, Ohio, USA  
B.Engr., Birla Institute of Technology and Science;  
M.S., Birla Institute of Technology and Science

**Sreeram Potluri**

Dhabaleswar Panda  
Gudivada, India  
B.Tech., Jawaharlal Nehru  
Technological University

**Qichao Que**

Mikhail Belkin  
Jiande, Zhejiang, China  
B.S., Zhejiang University

**Sudharsan Rajagopalan**

Rajiv Ramnath  
Madurai, India  
Bachelor's, Anna University

**Divya Ravichandran**

Gagan Agrawal  
Chennai, India  
Bachelor's, Anna University

**Bin Ren**

Gagan Agrawal  
Zhengding, China  
B.Engr., Beihang University

**Yiye Ruan**

Srinivasan Parthasarathy  
Shanghai, China  
B.A., Peking University

**Juan Ignacio Santa Cruz Cosp**

Kannan Srinivasan  
Asunción, Paraguay  
Bachelor's, Universidad Católica  
Nuestra Señora de la Asunción

**Arunprasaath Selvadurai**

Rajiv Ramnath  
Thanjavur, India  
Bachelor's, Anna University

**Shubhanjan Shekhar**

Feng Qin  
Columbus, Ohio, USA  
Bachelor's, LNM Institute of  
Information and Technology

**Himanshu Shivhare**

Mikhail Belkin  
Ghaziabad, Uttar Pradesh, India  
B.S., Uttar Pradesh Technical University

**Abhijeet Kumar Singh**

Rajiv Ramnath  
Rukanpura, Bihar, India  
Bachelor's, Visveswaraiah  
Technological University

**Siddharth Singh**

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**Aditi Singhal**

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B.S., Uttar Pradesh Technical University

**Andrew Grady Slatton**

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**Gaurav Soni**

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**Atreya Srivathsan**

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Master's, Peking University

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**Fei Teng**

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**Sudheer Tumu**

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University of New York, Albany

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Srinivasan Parthasarathy  
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Bachelor's, National Institutes  
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**Ramiya Venkatachalam**

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College of William and Mary

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B.S.Cptr.Sci.Eng., The Ohio State University

**Nishita Yalamanchili**

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Atanas Rountev  
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B.S., Shanghai Jiao Tong University

**Shuai Ye**

Rajiv Ramnath  
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B.S., Zhejiang University of Technology

**Xi Yi**

DeLiang Wang  
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B.Engr., Beijiang Institute of Technology

**Diego Zaccai**

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

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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



*Dr. Christopher Stewart (far right) with Masters advisee, Sundeep Kambhampati (in cap & gown). Also shown are Sundeep's parents, Sarma (far left) and Bhavani (2nd left), and brother-in-law, Prasad Callyam (middle).*



*Masters' grads pose in the Garden of Constants outside Dreese Labs. Left to right are: Sundeep Kambhampati, Akshay Nikam, Naman Mody, Akanksha Lonhari, Aveek Mukharjee, Vaibhav Devekar, Vikram Wakade, and Gaurav Soni; 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.

	AU 2003	AU 2004	AU 2005	AU 2006	AU 2007	AU 2008	AU 2009	AU 2010	AU 2011	AU 2012*	AU 2013
<b>Undergrad Students Enrolled</b>	990	817	800	795	817	877	871	971	1,102	1,287	1,413
	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13*	13-14
<b>B.A., B.S. Degrees Awarded</b>	274	192	124	140	142	138	127	152	213	229	204

*\*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

### Name, DEGREE

Award (when applicable)  
Home

**Jesse Tyler Barron, BS**  
*Cum Laude*  
Milan, Ohio, USA

**Stephen Bedell, Jr., BS**  
Brecksville, Ohio, USA

**Brian W. Bradley, BA**  
Gahanna, Ohio, USA

**John William Brown, BS**  
Hilliard, Ohio, USA

**Ethan Michael Carroll, BS**  
Westerville, Ohio, USA

**Bradley David Chambers, BS**  
Centerville, Ohio, USA

**Aaron C. D'Amico, BA**  
Columbus, Ohio, USA

**Nicholas Alan Darrell, BS**  
Rockville, Maryland, USA

**Benjamin Andrew Davis, BS**  
Bexley, Ohio, USA

**Kyle Patrick Donovan, BS**  
Springfield, Ohio, USA

**Justin Alexander Edse, BA**  
Westerville, Ohio, USA

**Ryan Matthew Gibson, BS**  
Stow, Ohio, USA

**Alexander Mark Ginsberg, BA**  
Columbus, Ohio, USA

**Jules Sage Hausman, BS**  
Columbus, Ohio, USA

**David Carl Holmes, BS**  
Columbus, Ohio, USA

**Junfei Huang, BS**  
*Cum Laude*  
*with Honors in the Arts and Sciences*  
Linan, Zhejiang Province, China

**Daniel P. Jensen, BA**  
Chicago, Illinois, USA

**Eric John Kane, BS**  
*Magna Cum Laude*  
Perry, Ohio, USA

**Aaron Thomas Kaverman, BS**  
Ottoville, Ohio, USA

**Charles William King, BS**  
Dublin, Ohio, USA

**Mohamadou Koita, BS**  
Kaedi, Mauritania

**Andrew Joshua Krieger, BS**  
*Summa Cum Laude*  
*with Honors in the Arts and Sciences*  
Westerville, Ohio, USA

**Yen Nei Lee, BS**  
Kajang, Malaysia

**Gerard Louis, BS**  
Elyria, Ohio, USA

**Alexander Thomas Mapes, BA**  
Powell, Ohio, USA

**Rachel Alexa McIlrath, BS**  
Milan, Ohio, USA

**Michael James McNamara, BS**  
*Magna Cum Laude*  
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**John William Miller, BS**  
*Cum Laude*  
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Upper Arlington, Ohio, USA

**George Nicolas Moussi, BS**  
Upper Arlington, Ohio, USA

**Obinna Udechukwu Ngini, BS**  
*Cum Laude*  
*with Honors in the Arts and Sciences*  
Amawbia, Nigeria

**Nathaniel Andrew Niederkorn, BS**  
*Magna Cum Laude*  
Eastlake, Ohio, USA

**Blake Hunter Offord, BS**  
Gahanna, Ohio, USA

**Samuel N. Okin, BS**  
Highland Park, Illinois, USA

**Brian Paul Orchosky**, BS  
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**Joseph Angelo Pedicini**, BS  
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**Alexander Michael Perry**, BS  
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**David Douglas Pittenger**, BS  
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**Chelsey Leigh Salberg**, BS  
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**Elliot Paul Schumacher**, BS  
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Pandora, Ohio, USA

**Carrie Ann Scono**, BS  
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**Todd Michael Simmons**, BS  
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**Brandon Matthew Smith**, BS  
Beachwood, Ohio, USA

**Eric Michael Smith**, BS  
Eastlake, Ohio, USA

**Joel C. Sowers, III**, BA  
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**Franklin H. Sun**, BS  
Great Falls, Virginia, USA

**Raja Sekhar Tummala**, BS  
Hyderabad, Andhra Pradesh, India

**Jun Uzawa**, BS  
Pickerington, Ohio, USA

**Li Wei**, BS  
Wuhan, China

## UNDERGRADUATE DEGREES AWARDED: COLLEGE OF ENGINEERING

Name  
Award (when applicable)  
Home

**Joshua Sovanh Adams**  
Columbus, Ohio, USA

**Thomas W. Allenbaugh**  
Sidney, Ohio, USA

**Nicholas Penniman Alt**  
Miamisburg, Ohio, USA

**Eric Anthony Amador**  
Avon, Ohio, USA

**Timothy Alan Armstrong**  
*Magna Cum Laude*  
Columbus, Ohio, USA

**Mitchell James Arthur**  
Westerville, Ohio, USA

**Ian Scott Baker**  
Columbus, Ohio, USA

**James Michael Balata**  
Brecksville, Ohio, USA

**Kevin Robert Bhasin**  
Rocky River, Ohio, USA

**Ashley Elizabeth Biales Wise**  
*Magna Cum Laude*  
*with Honors in Engineering*  
Solon, Ohio, USA

**Kathryn Ann Blackburn**  
Salem, Ohio, USA

**Quentin C. Bloomfield**  
Lowell, Ohio, USA

**Matthew David Boatman**  
Lima, Ohio, USA

**Zachary Joseph Boerger**  
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**Michael David Boker**  
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Warren, Ohio, USA

**Kyle Matthew Brake**  
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**Benjamin Patrick Bricker**  
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**Duy Xuan Bui**  
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Bac Giang, Vietnam

**Sean Micheal Burke**  
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**Sean King Burkholder**  
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**Kyle Casey Callicoat**  
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**Emilio Cantu, Jr.**  
San Juan, Texas, USA

**Patrick William Carfrey**  
Grove City, Ohio, USA

**Benjamin Bergin Caruso**  
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**Joshua Patrick Cassidy**  
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**Vincent Yung-Chi Chen**  
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**Matthew Shane Daley**  
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**Shane Dorsey Dancy**  
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**Joel Edward Davis**  
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**Nicholas Beau Dean**  
Galion, Ohio, USA

**Evan Christopher DeLaubenfels**  
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**Matthew Demarest**  
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**Keegan Timothy Donnelly**  
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**Joseph Eric Echt**  
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**Nicholas A. Eckert**  
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**Michael Anthony Filiater**  
Smithfield, Virginia, USA

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**Jason George Flanders**  
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**Rocky T. Forehand**  
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**Angel Lashawn Pay**  
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**Alex Robert Pelletier**  
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WeiFang City, China

**Sankalp Sharma**  
Dehradun, India

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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**  
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**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

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## 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

Interests: High Performance Computing and Big Data Issues, Programming Models, Fault-Tolerance, Cloud Computing and Data Mining.

### **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

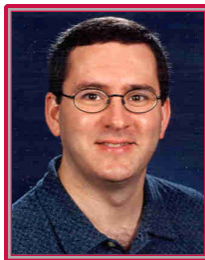
Interests: Developing Program Analyses and Software Systems that make Complex, Concurrent Software Reliable, Scalable, and Secure. Programming Languages, Software Systems, Runtime Systems, Program Analysis, Compilers, Security.

**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

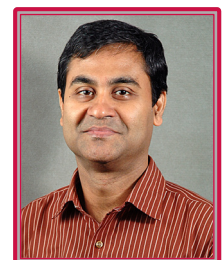
Interests: Computer Graphics; Video Game Technology; Serious Games; Scientific Visualization; Medical Imaging; and Volume Rendering.

**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.

## **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.

## **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.

## **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*



B.S., Electrical Engineering, Indian Institute of Technology, Kanpur, India, 1984; M.S., Electrical and Computing Engineering, Indian Institute of Science, Bangalore, India, 1986; Ph.D., Computer Engineering, University of Southern California, Los Angeles, 1991.

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

Interests: Mobile Networks, Wireless Networks, Mobile Systems, Sensing and Wearable Computing, and Network Security.

## **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*



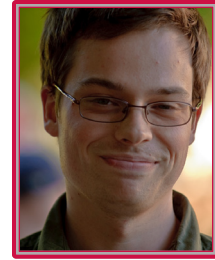
Bachelor in Engineering Sciences, Mathematics, Universidad de Chile; Santiago, Chile, 2002; Mathematical Engineering Title (Masters Equivalent) Universidad de Chile. Santiago, Chile, 2002; Ph.D., Applied Mathematics, Massachusetts Institute of Technology, 2007.

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

Interests: Information Extraction, Text Mining, Computational Linguistics, Machine Learning.

## **NICOLETA ROMAN**

*Assistant Professor,  
Lima Campus*



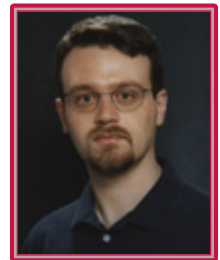
B.S., Computer Science, University of Bucharest, Romania, 1996; M.S., Computer Science, University of Bucharest, Romania, 1997; Ph.D., Computer Science and Engineering, The Ohio State University, Columbus, Ohio, 2005.

Department Research Area: ARTIFICIAL INTELLIGENCE

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

## **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.

## **P. (SADAY) SADAYAPPAN**

*Full Professor*



B.S., Electrical Engineering, Indian Institute of Technology, Madras, India, 1977; M.S., Electrical Engineering, State of University of New York, Stony Brook, 1978; Ph.D., Electrical Engineering, State of University of New York, Stony Brook, 1983.

Department Research Area: SYSTEMS

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



## **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.



## **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*

B.Sc.H., Computing Science, Mathematics & Biochemistry, Queen's University, Ontario, Canada, 1991; M.S., Computer Science, California Institute of Technology, 1993; Ph.D., Computer Science, California Institute of Technology, 1998.

Department Research Area: SOFTWARE ENGINEERING AND PROGRAMMING LANGUAGES

Interests: Distributed Systems; Software Engineering; and Tool-based Support for Testing Component Implementations.



## **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.

## **KANNAN 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

Interests: Wireless Networking, Low Power Wireless Systems, Communication Systems, Smartgrids and Wireless Security.

## **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

Computer Graphics, GPU Programming for High-performance Graphics and General-purpose Computation, Computer Vision, Feature Tracking, Optical Flow, 3D Reconstruction, Finite Element Method, Numerical Integration, Model Reduction, Motion Control and Design, Efficient Data Structures.

## **YUSU WANG**

*Associate Professor*



B.S., Computer Science, Tsinghua University (P. R. China), 1998; M.S., Computer Science, Duke University, 2000; Ph.D., Computer Science, Duke University, 2004.

Department Research Area: GRAPHICS

Interests: Computational Geometry, Algorithms, Computational Biology, Computational Topology, Graphics, Modeling, And Visualization.

## REPHAEL WENGER

*Associate Professor*



B.S.E., 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.

## 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.

## 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

## COURTESY APPOINTMENTS

Ümit 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.)*



B.Tech., Indian Institute of Technology, New Delhi, India, 1981; M.S., Computer & Information Science, The Ohio State University, 1983; Ph.D., Computer & Information Science, The Ohio State University, 1988.

Research Interests: Foundations of Adaptive Complex Enterprises, Enterprise Architecture and Engineering, Business-IT Alignment, Workflow and Work-Management Systems Enterprise Software Engineering and Computer Science Education, Wireless Sensor Network and Pervasive Computing Enterprise Applications, e-Government.

## EMERITUS APPOINTMENTS

### PROFESSOR EMERITUS

Balakrishnan Chandrasekaran  
Charles A. Csurí  
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

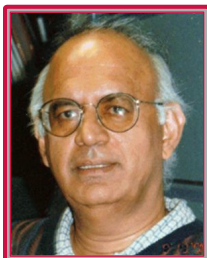
Fabrice Jean-Emile Rastello

### VISITING SCHOLARS

Miao-Chen Chuo  
Roshan Dathathri  
Wenshang Dou  
Qinghua Gu  
Wei Han  
Youquan Liu  
Hong Luan  
Abdullah Naralan  
Changqun Wang  
Fan Zhang  
Kai Zhang  
Xiaolei Zhang

## RESEARCH SCIENTISTS

**BALAKRISHNAN  
CHANDRASEKARAN**  
*Senior Research Scientist  
Professor Emeritus*



B.E., Electrical Engineering, Madras University, India, 1963; Ph.D., Electrical Engineering, University of Pennsylvania, 1967.

Research Interests: Artificial Intelligence and Cognitive Science, specifically Knowledge Systems, Diagrammatic Reasoning, Cognitive Architecture, and Decision Support Systems.

**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*

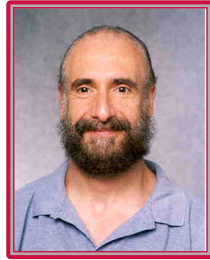


B.S. Electrical Engineering, Seoul National University, 1998; M.S. Biomedical Engineering, Seoul National University, 2002; Ph.D. Electrical Engineering, University of Pennsylvania, 2008.

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.

Research Interests: Distributed and Parallel Computing Systems, Database Systems and Data Integration Systems, Computer Architecture and Storage Systems.

## **MICHAEL MANDEL**

*Research Scientist*



B.S. Computer Science and Engineering, Massachusetts Institute of Technology, 2004; M.S. Electrical Engineering, Columbia University, 2006; M.Ph. Electrical Engineering, Columbia University, 2008; Ph.D. Electrical Engineering, Columbia University, 2010.

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

## LECTURERS



**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*

B.S., Business Administration, University of Phoenix, 1987; M.B.A., University of Denver, 1992.



**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.

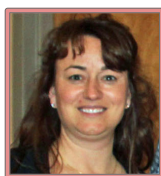


**CHRISTINE  
KIEL**

*Senior  
Lecturer*

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





**MICHELLE  
MALLON**

*Lecturer*

B.A., Psychology, The Ohio State University, 1991; M.S. Social Work, The Ohio State University, 1999.



**RAYMOND  
McDOWELL**

*Senior  
Lecturer*

S.B., Computer Science and Engineering, Massachusetts Institute of Technology, 1986; S.M., Computer Science and Engineering, Massachusetts Institute of Technology, 1986; Ph.D., Computer and Information Science, University of Pennsylvania, 1997.



**JEREMY  
MORRIS**

*Senior  
Lecturer*

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.



**KATHRYN  
REEVES**

*Lecturer*

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



**LORI  
RICE**

*Lecturer*

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



**NAEEM  
SHAREEF**

*Senior  
Lecturer*

B.S., Applied Mathematics & Computer Science, Carnegie Mellon University, 1990; M.S., Computer & Information Science, The Ohio State University, 1992; Ph.D., Computer Science & Engineering, The Ohio State University, 2005.



**ANATALA T.  
WOLF**

*Lecturer*

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**

### **SENIOR LECTURERS**

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

### **PART-TIME LECTURERS**

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

## **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.)*





**THE OHIO STATE UNIVERSITY**

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COLLEGE OF ENGINEERING

**DEPARTMENT OF  
COMPUTER SCIENCE  
AND  
ENGINEERING**

2015 NEIL AVENUE 395 DREESE LABS.  
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