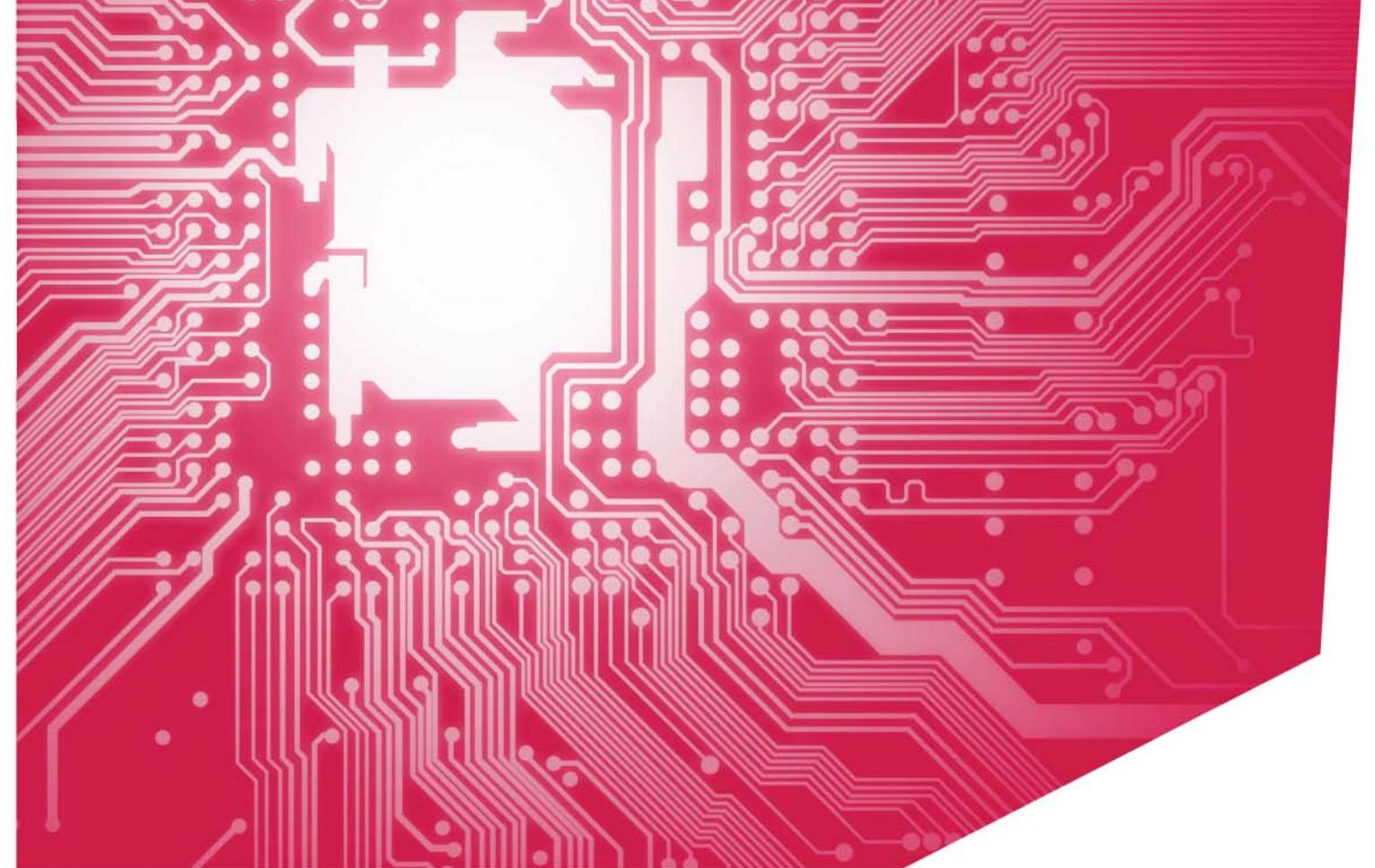


# 2014-18

Department of Computer  
Science and Engineering

Annual Report



**THE OHIO STATE UNIVERSITY**

COLLEGE OF ENGINEERING

## Our Mission

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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.

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Department of Computer Science and Engineering  
The Ohio State University  
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Dear Colleagues, Friends, Parents, and all the CSE family members,

I would like send you a farewell message before I step down in the end of August, 2018. I have been the Department Chair for 12 years in three terms, which is challenging, rewarding and enjoyable. I feel honored and privileged to have provided leadership for the faculty, staff, and students in our department.

Twelve years ago, I accepted the Chair position with a focused but challenging goal: to build a world-class Computer Science and Engineering Department at The Ohio State University. I am proud of what we have achieved during my chairmanship towards this goal. There are many challenges in daily operations to run the department. Addressing these administrative issues is not the goal but a vehicle for us to promote the excellence of human resources of both faculty and students, which is a key role for a world-class department.

We have worked hard to make a cultural change in the way to reward faculty to inspire students in classroom teaching, and to pursue research of high impact and significant contributions. I strongly believe that a world-class department has the following two common qualities. First, the faculty and students conduct high quality and high impact research. Second, the department provides an exciting learning environment for students, and many graduates distinguish themselves to become leaders in academia, industries and government.

During the last 12 years, we have hired 26 new faculty members, bringing young and new energy in diverse areas to the department. The department faculty has been well recognized in the nation and in the international research community, including 18 NSF Career Awards, 1 DOE Career Award, and 2 IEEE ICDE Raising Star awards for young faculty, 7 ACM and IEEE Fellows, and 3 University Distinguished Scholars for senior faculty. Our research expenditure has been more than doubled at an annual rate of \$11 million. Multiple research projects have made big impact by laying theoretical foundations and by advancing production and industrial systems. We have supervised more than 300 Ph.D. dissertations, which is more than half of the total number of Ph.D. graduates in 50 years of the CSE history.

Undergraduate enrollment has been more than doubled in three majors: CSE, CIS and the newly created major of data analytics. The annual number of graduates in these three majors are over 400. The extra curriculum activities are rich with the annual Hackathon event, the ACM-W group for women and under-representative minority students, and with many technical clubs. We have also raised \$1.5 million endowment funds, which have all been used for student scholarships. Our faculty has been excellent in teaching, with numerous distinguished teaching awards from the department, the college, the university and from foundations outside the university.



We have built a strong consensus for the main focus of the department: to spiritually, intellectually and technically prepare our students before they enter the real world, and to make research breakthroughs that advance the knowledge and technology in the fields. It has been a great 12 years, and all the accomplishments we have made come from our strong faculty, our dedicated and professional staff, and our excellent students. I thank the CSE faculty for giving me the opportunity to lead the department with the help of staff members in such a long term, and thank alums and friends for their strong support and care to me and to the department.

I look forward to becoming a regular faculty again devoting full-time on teaching and research. Please continue to stay connected with us, and keep us informed about your progress. Your support and your distinguished accomplishments are vital to the continuing success of CSE at Ohio State.



Sincerely,

A handwritten signature in dark ink, appearing to read 'Xiaodong Zhang', written in a cursive style.

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



### Professor Sadayappan named 2018 Ohio State Distinguished Scholar

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On March 3, 2018, during a full CSE faculty meeting, a group of University leaders from the Office of Research and the Office of Provost unexpectedly entered Drees Lab 480 and announced that CSE Professor Sadayappan had been selected to be one of the six University Distinguished Scholars this year. This annual award is given to a small number of top professors for their exceptional scholarly accomplishments. CSE faculty members were surprisingly pleased with this ceremony because they consider Saday truly deserves this award. Saday's wife and daughter came to join the celebration.

Two major products determine the distinguished level of a university: the impact of faculty scholarships and the excellence of the graduated students. Saday has made great contributions for these two products at The Ohio State University. Saday joined the CSE department in 1983 (35 years ago) as an assistant professor. He has graduated more than 40 Ph.D. students. Many of them are academic and industrial leaders including an Intel Fellow, an IBM Fellow, and a Distinguished University Professor. Saday is also an outstanding teacher, and has received several teaching awards. Saday is internationally renowned for his research on compilers for high-performance and parallel computing. His nomination was supported by a group of distinguished experts in his field. One expert says, "Saday has established a well-deserved reputation among his national and international peers as a stellar researcher in high-performance computing who pursues innovative approaches to persisting problems of productivity and programmability in the field." Another one states, "Saday has been one of the most highly influential, innovative and productive researchers in enhancing productivity while enabling a high level of performance in high-performance computing for over 30 years, in addition to outstanding teaching, mentoring and service to the profession and community."

Saday is the third Distinguished Scholar since 2014 within the CSE department after Leon Wang and DK Panda. In the ceremony, Department Chair Xiaodong Zhang commented on the three distinguished colleagues by three common traits: "First, all of them grew from the grass roots as assistant professors in this department. Second, each of them is best known in their fields for significant contributions. Finally, they are all working very hard in a persistent way because they aim for big impact." Congratulations to Saday on this honor.



Pictured from left to right: Dr. Leon Wang, Professor in CSE; Dr. Xiaodong Zhang, CSE Department Chair; Valli Sadayappan, wife of Saday; Dorota Grejner-Brzezinska, Assoc. Dean for Research; Shambavi Sadayappan, daughter to Saday; Janet Weisenberger, Senior Associate VP for the Office of Research Faculty; Dr. P. (Saday) Sadayappan; Kay Wolf, Vice Provost for Academic Policy and Faculty Resources; Dr. Randy Moses, Interim Senior VP for Research

## **NSF Faculty Early Career Development (CAREER) Award to Prof. Yinqian Zhang**

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The National Science Foundation has awarded CSE Assistant Professor Yinqian Zhang a Faculty Early Career Development (CAREER) Award for his research entitled Taming the Side-Channel Hazards in the Shielded Execution Paradigm. In conjunction with the award, Yinqian will receive \$500,000 to support his research --- an investment that according to the NSF will help young scholars build a foundation for “a lifetime of leadership in integrating education and research.”

Yinqian’s five-year project will explore novel ways to address side-channel threats in the emerging shielded execution paradigm, such as Intel’s Software Guard Extension (SGX). SGX is a hardware extension that provides software applications against compromised operating systems. However, recent studies have shown that SGX is vulnerable to side-channel threats, in which the system software measures the programs’ use of system resources or micro-architectural resources to infer their secrets. Yinqian’s research will develop novel principles and techniques to detect side-channel vulnerabilities in SGX software and thwart side-channel attacks at runtime. This research project will accelerate the broader acceptance of the shielded execution paradigm and the SGX technology. The research will also promote awareness of side-channel hazards to students, researchers, industry partners, and the general public, and hence motivate the adoption of the side-channel defense techniques in real-world applications.

Before joining the department in 2015, Yinqian received his Ph.D. in computer science from the University of North Carolina at Chapel Hill. His research focuses on system security, cloud security, and side-channel security.

The Faculty Early Career Development (CAREER) Program offers the National Science Foundation’s most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations. Such activities aim to build a firm foundation for a lifetime of leadership in integrating education and research.

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## **2018 IEEE Technical Committee on Data Engineering Early Career Award**

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Spyros Blanas, Assistant Professor in CSE, was awarded the 2018 IEEE Technical Committee on Data Engineering Early Career Award for his contributions to high-performance database management systems. The Computer Science and Engineering Department is the only department to receive two such awards.

This award is based on an individual’s whole body of work in the first 5 years after the PhD. The award aims to promote current database researchers as they create their career.



## Wei Xu Named CrowdFlower AI for Everyone Challenge Winner

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AI platform for data science and machine learning CrowdFlower announced on Wednesday the third round winners for its \$1 million “AI for Everyone” Challenge. Assistant professor Wei Xu in Computer Science and Engineering is named one of the two winners. Her winning project,

LanguageNet, will create multilingual data and enable deep learning techniques for cutting-edge natural language processing research. The other winning project is on studying hate speech by a team of researchers from multiple institutions, including Stanford and Cornell University.



Wei Xu’s research group will leverage crowdsourcing and deep learning techniques to build a database of synonymous expressions. As long, complex ideas can be stated in a variety of ways, current natural language processing algorithms have a tough time understanding them. But building a corpus of synonymous phrases and meaning representations will be a big step forward for understanding the ever evolving human language. Wei and her team have made some great progress on their algorithms and methodology already. The problem? --- Deep learning algorithms are data hungry. The LanguageNet project will crowdsource human annotations for different languages at a large scale, through the help of CrowdFlower, and then train deep learning models to identify semantic relations. More about the story: <https://www.crowdfLOWER.com/announcing-q4-ai-everyone-winners/>

The “AI for Everyone” Challenge was created by CrowdFlower to help advance cutting-edge Artificial Intelligence projects. The challenge is granting eight awards to companies, organizations or individuals using AI to solve critical problems. Selection is based on the innovation of the project, its importance to the advancement of AI and the overall potential impact of the proposed initiative.

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## Alum Elected Fellow of the Association for the Advancement of Artificial Intelligence (AAAI)

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Wright State University Professor Amit Sheth, Ph.D. ('85, MS '83), has been elected a Fellow of the Association for the Advancement of Artificial Intelligence (AAAI) for a decade or more of “significant and enduring contributions to semantics and knowledge-based techniques to transform diverse data into insights and actions.”

Sheth’s research has pioneered the development and use of knowledge graphs to enhance AI techniques of machine learning and natural language processing for making sense of Big Data. This research has impacted individual and public health, biomedicine, social good, finance, advertising/marketing, and manufacturing.

Sheth has been an educator, researcher, and entrepreneur who has been among the top 100 computer science and electronics researchers based on h-index. He has been a principal investigator of more than \$27 million in competitive grants and has founded three successful companies based on licensing his university research. He went to Wright State in 2007 as the LexisNexis Ohio Eminent Scholar and is the executive director of Kno.e.sis, the Ohio Center for Excellence in Knowledge-Enabled Computing.



## Fifth Annual Hackathon

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HackOHI/O, the largest of the OHI/O events, took place the weekend of October 21-22, 2017 and challenged students to 'build something amazing' during this 24-hour event, students worked together to code and create software designed to address ongoing issues in society.

Over 660 participants worked in groups and individually throughout the weekend, overflowing capacity of the Ohio Union ballroom. Over half of the participants classified themselves as "first time hackers". There were 132 women participants, demonstrating an increase over last year's event, nearly hitting the 20% mark.

There were 50 mentors on hand to assist students if they ran into technical problems, by using the HELPq app to help break the ice and encourage students to seek help instead of giving up. The 70 judges decided the top eight "Best Of" teams. These teams were judged on creativity, technical difficulty, functionality, impact and team work. Prizes were awarded by various sponsors of the event, such as JP Morgan Chase, Wexner Medical Center, Teradata, Root Insurance, Eaton and others.



This year's event was organized by new Program Director, Julia Armstrong, along with heavy student involvement from university groups including Buckeye Hackers, Open Source Club, Electronics Club, ACM-W, Mobile App Club, College of Engineering, Department of Computer Science & Engineering, Department of Electrical & Computer Engineering, University Libraries, Engineering Career Services, OCIO and the Office of Distance Education and eLearning, and Translational Data Analytics Institute. Other campus partners included the Innovation Studio, Department of Engineering Education, College of Education and Human Ecology, the STEP Maker Program, and the Toy Adaptation Program.



The two faculty advisors for this annual event are CSE professor Arnab Nandi and Library professor Meris Mandernach. CSE Chair Xiaodong Zhang gave the opening speech and started the 24-hour hack by lighting the countdown clock.

## Future Computing within and beyond CMOS

More than 100 years ago, Henry Ford asked his future customers about their expected transportation products. The consistent answer was that they wanted to have faster horses. If we consider conventional computers as the engine of horses, they are no longer running faster today for three reasons. First, the Moore's Law is ending due to the physical limit, thus the CPU speed would not be raised periodically. Second, Conventional processor chips are designed for general-purpose computing, which have shown their increasingly low efficiency in both performance and power. Finally, on top of the general-purpose microarchitecture, we have built a deep software stack from instruction set all the way to the programming interface. Although this stack creates a flexible programming environment for various applications, it also adds increasingly high and unnecessary processing overhead. Our computing ecosystem in both hardware and software is in a critical transition time from a general purpose of "one size fits all" platform to diverse, specialized, and customized platforms.

Professor Xiaodong Zhang moderated and participated in a panel of Future Computing and a dialogue with the public in the Future Forum Annual Conference in Beijing, China on October 28-29, 2017. The panel consists of a group of distinguished computing experts in both hardware and software and one venture capital investor from the US. CMOS is a powerful technology to build integrated circuits for various chips including processor chips. The discussions and presentations in the panel included new research and technology within CMOS, such as specialized hardware accelerations by GPU, FPGA, RDMA, ASIC and others, and research beyond CMOS, such as quantum computing and DNA storage. The panelists also conducted a dialogue with the public including high school students who are interested in science and computing.

More than 2,000 people attended the Future Forum, and over 7 million viewers watched the event online through 10 streaming platforms in China. More than a million K-12 students engaged in the online discussions, including the Future Computing panel.



Pictured Above: Future Computing Panelists from left to right: Xiaodong Zhang (Ohio State), Luis Ceze (University of Washington), Jason Cong (UCLA), Kai Li (Princeton), Margaret Martonosi (Princeton), Yuan Xie (UCSB), and Kui Zhou (Sequoia Capital).

## **CSE Professor named Vice Chair of IEEE Signal Processing Society Speech and Language Technical Committee**

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In this year's election for the IEEE Signal Processing Society Speech and Language Technical Committee, Professor Eric Fosler-Lussier was elected Vice Chair for 2018, rotating into the Chair position for 2019-2020. The committee has 50+ members and helps to organize all speech and language processing activities within the IEEE. Members of SLTC are elected by the committee among the most active and accomplished researchers and technologists in the field.

The Speech and Language Processing Technical Committee (SLTC) extends its influence to the technical areas of speech and language processing. Besides the typical activities in which all of TCs are involved, the main focus of the committee is the organization of technical sessions related to speech and language technologies at ICASSP. Other activities include the selection of proposals for workshops such as ASRU Workshop (Automatic Speech Recognition and Understanding), SLT Workshop (Spoken Language Technologies), and Odyssey, the Speaker and Language Recognition Workshop.

Speech and Language processing is assuming a very relevant role in today's industry. Speech recognition, text to speech synthesis, spoken language understanding, speech to speech translation, spoken dialog management, speech indexing, information extraction, and speaker and language recognition are only a few examples of the range of interests in this area of science and technology. Their applications are being adopted in different markets in a variety of industrial, scientific, and commercial contexts. Academic and industrial research is continuously pushing the state of the art forward to reach new heights of performance and accuracy in speech and language processing by machines, and to grow our knowledge of human spoken language.

As part of the IEEE Signal Processing Society, the Speech and Language Technical Committee (SLTC) promotes and influences all the technical areas of speech and language processing. Besides the typical activities in which all IEEE Technical Committees are involved, the main focus of the SLTC is the organization of the technical sessions in the related areas at the annual International Conference on Acoustics, Speech, and Signal Processing (ICASSP). As an example of the level of interest of the signal processing community in speech and language processing, 24% of the nearly 3000 papers presented at ICASSP 2007 were in technical areas of competence of the SLTC. Other committee activities include the selection of proposals and the organization of technical workshops such as ASRU (Automatic Speech Recognition and Understanding), SLT (Spoken Language technologies), and Odyssey, the Speaker and Language Recognition Workshop. Moreover, SLTC is actively involved in establishing liaisons with other non-IEEE organizations in related areas, such as ISCA and ACL.



## Side-Channel Security Research makes Impact in the Industry

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A paper, titled “OS-level Side Channels without Proofs: Exploring Cross-App Information Leakage on iOS”, authored by Xiaokuan Zhang, a CSE student and Prof. Yinqian Zhang (in collaboration with researchers at the Indiana University) was published at The Network and Distributed System Security Symposium (NDSS) 2018 on Feb 18th. The paper studied information leakage in iOS and show that a malicious iOS app can extract sensitive information from other apps. This attack violates Apple’s security policy of isolating apps in their own sandbox. The findings were discussed with Apple (before publishing the paper) several times during the second half of 2017. The issues identified in the paper have been acknowledged by Apple in CVE-2017-13852 (<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-13852>), CVE-2017-13873, CVE-2017-13877. Some countermeasures presented in the paper have been implemented in iOS 11 and MacOS High Sierra 10.13 and later versions. Contributions have been acknowledged by Apple: <https://support.apple.com/en-us/HT208112>.

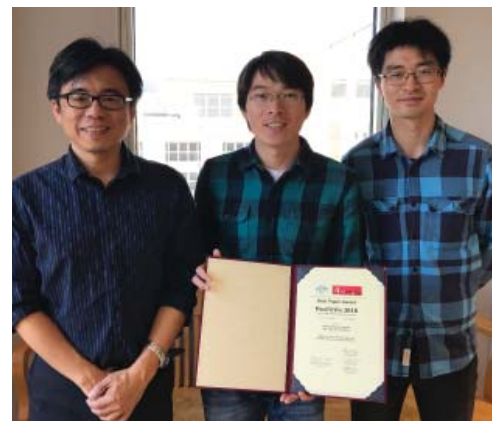
Students, Guoxing Chen, Sanchuan Chen, and Yuan Xiao, Prof. Yinqiang Zhang, Prof. Zhiqiang Lin, and Prof. Steve Lai, have posted a paper on Arxiv.org on a study of Spectre attacks against Intel SGX. The work has been broadly reported by many IT media (if you search SgxPectre attacks in Google) and the attack resulted in an update of the Intel SGX SDK on March 16, 2018. A CVE number is assigned to the problem: CVE-2018-3626. A security advisory has been posted on the Intel’s website: <https://security-center.intel.com/advisory.aspx?intelid=INTEL-SA-00117&languageid=en-fr>.

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## Two Best Papers from Prof. Shen’s Research Group

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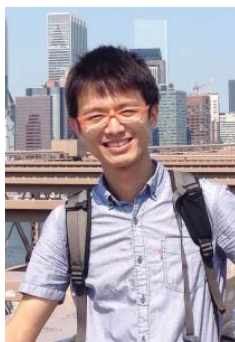
Prof. Shen’s research group has recently won two best paper awards in top visualization and data analytics conferences. One is the best paper award in IEEE Pacific Visualization 2018 conference, and the other is the best paper honorable mention award in ACM SIGGRAPH Asia Symposium on Visualization. The first paper entitled “GANViz: A Visual Analytics Approach to Understand the Adversarial Game”, authored by CSE Ph.D. student Junpeng Wang, Prof. Shen and their co-authors, proposed a visual analytics system, named GANViz. The system can open the black box of deep generative neural networks and help deep learning experts to effectively interpret their models. With the promising results demonstrated in the paper, their work made an important and practical step towards explainable artificial intelligence. In the second paper entitled “Winding Angle Assisted Particle Tracing in Distribution-Based Vector Field”, authored by CSE Ph.D. student Cheng Li and Prof. Shen, proposed a new method to trace particles in uncertain vector field. Using the Bayes Theorem, the tracing task treats the previous step as a prior condition, and computes a posterior distribution of the next tracing direction. The posterior distribution conducts better prediction of the particle, compared to baseline methods. Recently, Prof. Shen’s research group also won the best paper honorable mention award in IEEE Visualization 2017, the very top conference in his field.





## New Faculty Joining CSE

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**Wei-Lun (Harry) Chao** is a Computer Science PhD candidate at University of Southern California, working with Fei Sha. His research interests are in machine learning and its applications to computer vision and artificial intelligence. His recent work has focused on transfer learning towards vision and language understanding in the wild. His earlier research includes work on probabilistic inference, structured prediction for video summarization, and face understanding.

Professor Chao will be joining the CSE department in Fall 2019 as an Assistant Professor.



**Pooya Hatami** is a postdoc at the University of Texas at Austin, hosted by David Zuckerman. He has broad interest in theoretical computer science. His most recent works are in constructions of pseudorandom generators for various classes of Boolean functions. Pooya received his PhD in computer science from the University of Chicago advised by Alexander Razborov, where he was awarded the Bryan and Catherine Daniels Outstanding Student Fellowship and the McCormick Fellowship. He later spent two years as a joint postdoc between the Institute for Advanced Study at Princeton and DIMACS at Rutgers University before moving to Austin.

Professor Hatami will be joining the CSE department in the Fall of 2019 as an Assistant Professor.



**Yu Su** is a Ph.D. candidate in Computer Science at University of California, Santa Barbara. He obtained his bachelor's degree in Computer Science from Tsinghua University in 2012. His research intersects are in the areas of data mining and natural language processing, towards the overarching goal of enabling seamless access to massive and heterogeneous data. His recent research includes natural language interfaces (to knowledge bases, relational databases, APIs, etc.) and knowledge base construction from text. He has regularly published and served in top venues of both data mining and natural language processing. His recent service includes being PC co-chair of the first workshop on Knowledge Base Construction, Reasoning and Mining at

WSDM'18. He has interned at Microsoft Research Redmond, IBM T.J. Watson Research Center, and U.S. Army Research Laboratory.

Professor Su will join the CSE department in Fall 2018 as an Assistant Professor.

# 22nd Annual Departmental Awards

## Scholarships

### Central Ohio Chapter of Association of Computing Machinery (ACM)

Cerys Hughes

### Ernest William Leggett, Jr. Scholarship , The Leggett Family Award Endowment Fund

Hayden Conley  
Frank Meszaros

### Founders of the Computer Science and Engineering Department Scholarship Endowment Fund

Joel Wong  
Minrui Yang

### The Ganobcik Family/Genesis Endowed Scholarship Fund for Computer Science

Zachary Davis  
Zachery McGuckin  
Tyler Terbrack

### The O'Connell Family Award

Daniel Herr

### Ten-Hwang Lai Scholarship

Levi Klingler  
Logan McPherson

### Steve R. and Sarah O'Donnell Computer and Information Science Fund

Brandon Amdur  
James Finefrock  
Sina Lewis  
Swathi Pillalamarri  
Srinidhi Srinivas  
Michael Trunk

### Wael Bahaa-El-Din Scholarship

Jonathan Huang

### Women in Computer Science Scholarship

Sarah Flanagan  
Yiqing Zhang

### Nationwide Scholarship

Nicholas Male

### Michael and Dina Morell Scholarship Fund

Cody Craig      Bo Liu  
Stephen Wu      Danqi Yuan

### Alumni Undergraduate Scholarships

Michael Braun  
Yule Huang

### CSE Undergraduate Scholarship

Nathan Balli  
Haomin Gui  
Caleb Lehman  
Jarrod Manguiat  
Yifan Song

### Matt J. Desch & Ann M. Murphy Award

Nishant Rimal  
Vilas Winstein

### Crowe Horwath Scholarship

Jared Frees

### Undergraduate Research Award

Muhammad Akbar  
Mohit Deshpande

## Department Awards

### B. Chandrasekaran & Sandra Mamrak Graduate Fellowship

Jiongqian (Albert) Liang

### Wael Bahaa-El-Din Scholarship on Performance Analysis of Computer Systems

Peng Jiang

### Eleanor Quinlan Award

Robert LaTour

### Outstanding Teaching Award

Doreen Close  
Dr. Mike Bond  
Dr. Feng Qin

### Outstanding Service Award

Dr. Xiaodong Zhang

## Lutron Foundation

### Joel and Ruth Spira Excellence in Education Leadership Award from Lutron Electronics

Dr. Xiaodong Zhang

Pictured Right: Dana Vantrease, CSE Advisory Board Member, presents the Alumni Undergraduate Scholarships to Michael Braun, Yule Huang and Danqi Yuan



Pictured Left: Dr. Rafe Wenger presents the Outstanding Teaching Award to Doreen Close, Dr. Mike Bond and Dr. Feng Qin

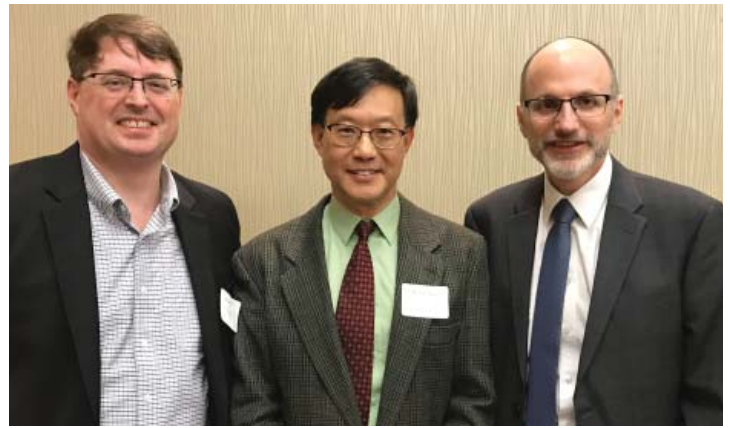
## Xiaodong Zhang received Joel and Ruth Spira Award for Excellence in Education Leadership by the Lutron Foundation

On April 19, 2018, at the annual CSE awards banquet, CSE Chair Xiaodong Zhang received Joel and Ruth Spira Excellence in Education Leadership Award. Lutron representative Will Howe presented the award to Xiaodong who is finishing his three terms of department chair and will return to his full-time faculty position.

Established with an endowment by the Lutron Foundation in honor of the company's founders, the award recognizes professors in a selected group of top universities with excellent engineering programs, including CMU, Cornell, Georgia Tech, Michigan, MIT, Notre Dame, Ohio State, Penn State, and Purdue, for their accomplishments in teaching and education leaderships.

Xiaodong was selected to chair the department in 2006 after a national search of two years. He joined the department from the College of William and Mary, where he was the Lettie Pate Evans Professor and Computer Science Department Chair. Since he became the Department Chair here, great changes have been taken place in CSE at Ohio State. In Mr. Howe's award presentation, he gave the following impressive numbers:

- 26 new faculty members have been hired since 2006, including several women and under representative minority members. More than half of the current tenure-track faculty in the department joined the department after 2006.
- 18 young faculty members received NSF Career Awards. The total number of the NSF Career awards in the department is 28, which is the highest record at Ohio State.
- 6 senior faculty members were elected to become Fellows of ACM and IEEE.
- Three senior faculty members are named as University Distinguished Scholars.
- Annual faculty research expenditure from external grants has been more than doubled and reached to \$11M in 2017-18.
- The department's graduate program is highly selective and is one of the largest in the college. More than 300 Ph.D. students have been graduated since 2006, which is more than half of the total number of Ph.D. graduates in the entire CSE history of 50 years.
- The Computer Science graduate program ranking and Computer Engineering graduate program ranking have been steadily improved. In 2006, the computer engineering ranking was #23 by a score of 3.3. In the most recent ranking, the computer engineering ranking is #17 by a score 3.6. In 2006, the computer science ranking was #34 by a score of 3.2. In the most recent ranking, the computer science ranking is #30 by a score of 3.4.



*Pictured Above: Will Howe, representative from Lutron; Dr. Xiaodong Zhang; Dr. Rafe Wenger, who made the nomination*

- Undergraduate enrollment has increased 122% (over 2,000 students in three majors: CSE, CIS, and Data Analytics) and annual undergraduate majors graduates increased 138% (over 400). The department has graduated more than 3,000 undergraduate majors since 2006, which is more than 40% of the total number of majors in the 50 year CSE history.

- \$1.5M endowment funds have been raised as named scholarships to support undergraduate and graduate students.

Xiaodong also received a department service award presented at the banquet and he thanked the support and the honor given by colleagues and the Lutron Foundation. He said "All these accomplishments come from the talents, leaderships, hardworking, and collaborations among the students, staff members and the faculty. Keeping the current momentum, CSE will move to another level in the next 5-10 years."

In addition to his busy administrative and professional service duties, Xiaodong has maintained a high profile research program. While the intellectual pursuit still maintains prominence in his research, Xiaodong also strives to transfer his research into advanced technology to impact general-purpose computing systems in both hardware and software. Several technical innovations and research results from his research group have been widely adopted in commercial processors, major operating systems and databases, and distributed systems. Among his list of Ph.D. graduates, 7 men and women have become faculty members in universities in the US, and 6 of them have received NSF Career Awards and DOD YIP award.

Xiaodong's scholarship and leadership have been well recognized in the fields. He was named as IEEE Fellow (Institute of Electronics and Electrical Engineers) for his contributions to computer memory systems in 2009, and was named as ACM Fellow (Association for Computing Machinery) for his contributions to data and memory management in distributed systems in 2012. He received a Distinguished Engineering Alumni Award from University of Colorado at Boulder in 2011.

# GRANT FUNDING 2016-2017

## New Grants Received in 2017-2018 Year

In order by name of CSE Investigator. CSE member names are in bold.

Legend:

CSE Researcher

Funding Source

*Grant Title*

PI: Principal Investigator

Co-PI: Collaborators (when applicable)Term of Grant

Total Funding

### **Spyros Blanas**

NSF

RIDIR: Survey data recycling: New analytic framework, integrated database, and tools for cross-national social, behavioral and economic research

09/01/2017- 08/31/2021

PI: Jenkins

Co-PI: Blanas, Dubrow, Shen, Slomczynski

\$1,402,259

NSF

SHF: EAGER: HI-HDFS - Holistic I/O optimizations for the Hadoop distributed filesystem

09/01/2017- 08/31/2018

PI: Blanas

Co-PI: Parthasarathy, Yang Wang

\$150,000

### **Jian Chen**

Transferred Awards:

Nat Inst of Standards & Tech

Understanding immersive metrology datasets; Scientific and information visualization integration and hybrid input

05/01/2018- 04/30/2019

PI: Chen

\$81,022.34

### **Jim Davis**

Battelle Memorial Institute (Air Force)

Context-based object classification

05/01/2017- 05/31/2018

PI: Davis

\$200,000

### **Tamal Dey**

TRIPODS: Topology, geometry, and data analysis (TGDA@OSU): Discovering structure, shape, and dynamics in data

10/01/2017-09/30/2020

PI: Dey

Co-PIs: Kahle, Kurtek, Memoli, Sivakoff, Yusu Wang

\$1,500,000

### **Eric Fosler-Lussier**

BETHA

Compact Browser-Based Reading Verification for Early Childhood Reading Fluency

07/01/2018- 06/30/2020

PI: Fosler-Lussier

\$55,682

### **Zhiqiang Lin**

Univ of Texas at Dallas (ONR subaward)

Final Second: Feature identification, neutralization, and automated de-Layering for securing code on demand

01/01/2018- 09/30/2020

PI: Lin

\$808,383

*Transferred Awards:*

NSF

TWC: Medium: Collaborative: Systems, tools, and techniques for executing, managing, and securing SGX programs

01/01/2018- 12/31/2018

PI: Lin

\$461,467

NSF

EDU: Collaborative: Using virtual machine introspection for deep cyber security education

04/01/2018- 08/31/2018

PI: Lin

\$110,883

NSF

CAREER: A Dual-VM Binary Code Reuse Based Framework for Automated Virtual Machine Introspection

01/01/2018- 08/31/2020

PI: Lin

\$487,970

NSF

SDI-CSCS: Collaborative Research: S2OS Enabling Infrastructure-Wide Programmable Security with SDI

01/01/2018- 08/31/2020



PI: Lin  
\$400,000

**Raghu Machiraju**

OH Department of Higher Education  
Mining and Mapping of Data Analysis Research  
at Ohio State University to determine alignment  
11/01/2017- 06/30/2018  
PI: Machiraju  
\$17,500

Haier Group  
Improving service quality with translational data  
analytics  
10/01/2017- 02/28/2018  
PI: Allen  
Co-PI: Machiraju, Parthasarathy, Ramnath  
\$51,902

NSF  
SCC-Planning: Using innovations in big data  
and technology to address the high rate of infant  
mortality in greater Columbus Ohio  
09/01/2017- 08/31/2018  
PI: Machiraju  
Co-PIs: Browning, Lynch, Volakis  
\$100,000

**Arnab Nandi**

Agency for Healthcare Res & Quality  
The institute for the design of environments  
aligned for patient safety (IDEA4PS)  
09/01/2018- 08/31/2019  
PI: Moffat-Bruce  
Project Personnel: Nandi  
\$3,963,276

Nat Inst of Allergy & Infectious Diseases  
Automation and multi-site validation of a person-  
alized empiric antibiotic advisor  
09/01/2018- 08/31/2019  
PI: Hebert  
Project Personnel: Nandi  
\$1,942,492

Honda R&D Americas, Inc  
Human-in-the-loop guided visualization and  
analytics  
01/08/2018- 01/01/2019  
PI: Nandi  
\$142,989

Oregon State Univ (NIH subaward)  
Biomedical data translator technical feasibility  
assessment of reasoning tool  
12/29/2017- 12/28/2018  
PI: Nandi  
\$54,477

Ohio Third Frontier Entrepreneurial Signature  
Program 2017-2019  
09/01/2017- 08/31/2018  
PI: Nandi  
\$100,000

**DK Panda**

Lawrence Livermore National Laboratory  
An infrastructure for performance engineering  
using the MPI tools interface  
11/03/2017- 11/02/2018  
PI: Panda  
Co-PI: Subramoni  
\$120,000

NSF  
Student Travel Support for MVAICH User  
Group (MUG) Meeting  
08/15/2017 – 7/31/2018  
PI: Panda  
Co-PI: Subramoni  
\$10,000

NSF  
SI2-SSI: Collaborative Project: FAMIL: High per-  
formance and scalable fabric analysis, monitor-  
ing and introspection infrastructure for HPC and  
Big Data  
07/01/2017- 06/30/2020  
PI: Panda  
Co-PIs: Lu, Subramoni, Tomko  
\$800,000

Univ of Texas at Austin (NSF subaward)  
Stampede 2: Operations and maintenance for  
the next generation of petascale computing  
10/01/2017- 09/30/2021  
PI: Panda  
\$600,000

Mellanox Technologies, Inc  
Research on high performance and scalable  
MPI over InfiniBand.  
04/01/2016- 03/31/2018  
PI: Panda  
\$216,070 (new funds not previously reported)

**Gifts**

NVIDIA Corporation  
\$161,000

Intel Corp  
\$64,741

Coventry Computer  
\$114,000

**Srinivasan Parthasarathy**

Haier Group/  
Improving service quality with translational data analytics  
10/01/2017- 02/28/2018  
PI: Allen  
Co-PI: Machiraju, Parthasarathy, Ramnath  
\$51,902

Honda North America, Inc  
Ladder logic fault analysis acceleration  
09/01/2017- 05/31/2018  
PI: Parthasarathy  
\$57,448

NSF  
SHF: EAGER: HI-HDFS - Holistic I/O optimizations for the Hadoop distributed filesystem  
09/01/2017- 08/31/2018  
PI: Blanas  
Co-PI: Parthasarathy, Yang Wang  
\$150,000

**Rajiv Ramnath**

Nationwide  
Integrating telematics data with other data sources to develop models of driver risk  
01/01/2018- 12/31/2018  
PI: Ramnath  
\$60,881

Astute Solutions  
Information retrieval techniques for social customer relationship management (CRM) systems  
01/01/2018- 12/31/2018  
PI: Ramnath  
\$54,431

Haier Group/  
Improving service quality with translational data analytics  
10/01/2017- 02/28/2018

PI: Allen  
Co-PI: Machiraju, Parthasarathy, Ramnath  
\$51,902

**Alan Ritter**

Leidos (Army subaward)  
Modeling the spread of information through social and knowledge graphs  
09/29/2017- 05/31/2019  
PI: Ritter  
Co-PI: Xu  
\$600,000

**P. Sadayappan**

Pacific Northwest National Laboratory  
Efficient tensor transposition and contraction on GPUs  
06/22/2017- 05/31/2018  
PI: Sadayappan  
\$50,000

**Han-Wei Shen**

Los Alamos Nat Lab (DOE subaward)  
Visual analytics for large scale scientific ensemble datasets  
02/05/2018-09/15/2021  
PI: Shen  
\$600,000  
  
UT-Battelle LLC (DOE subaward)  
A SciDAC institute for computer science and data  
02/26/2018- 0/30/2020  
PI: Shen  
\$299,000

NSF  
RIDIR: Survey data recycling: New analytic framework, integrated database, and tools for cross-national social, behavioral and economic research  
09/01/2017- 08/31/2021  
PI: Jenkins  
Co-PI: Blanas, Dubrow, Shen, Slomczynski  
\$1,402,259

**Ness Shroff**

Ulsan Nat Inst of Sci and Tech  
Low-latency streaming system for AR/VR applications  
01/01/2018- 12/31/2020  
PI: Shroff  
\$279,717

**Chris Stewart**

NSF

EAGER: Benchmarking autonomous unmanned aerial vehicles in agriculture applications

12/15/2017- 11/30/2019

PI: Stewart

\$224,993

NSF

II-EN: Collaborative research: Enhancing the parasol experimental testbed for sustainable computing

07/01/2017- 06/30/2020

PI: Stewart

\$13,797

**Huan Sun**

ARO

Advancing human and machine question answering via human-machine collaboration

09/25/2017- 01/24/2019

PI: Sun

\$498,526

Research Institute at Nationwide Children's (PCORI subaward)

Prime: Patient-Centered Outcomes Research Institute

03/01/2018 – 02/28/2021

PI: Sun

\$483,000

**DeLiang Wang**

NIH

Speech segregation to improve intelligibility of reverberant-noisy speech

01/08/2018-12/31/2022

PI: Leon Wang

\$1,502,811

**Yang Wang**

NSF

SHF: EAGER: HI-HDFS - Holistic I/O optimizations for the Hadoop distributed filesystem

09/01/2017- 08/31/2018

PI: Blanas

Co-PI: Parthasarathy, Yang Wang

\$150,000

**Yusu Wang**

NSF

AitF: Collaborative Research: Topological algorithms for 3D/4D cardiac images: Understanding complex and dynamic structures

09/15/2017- 08/31/2020

PI: Yusu Wang

\$273,072

TRIPODS: Topology, geometry, and data analysis (TGDA@OSU): Discovering structure, shape, and dynamics in data

10/01/2017-09/30/2020

PI: Dey

Co-PIs: Kahle, Kurtek, Memoli, Sivakoff, Yusu Wang

\$1,500,000

**Wei Xu**

Leidos (Army subaward)

Modeling the spread of information through social and knowledge graphs

09/29/2017- 05/31/2019

PI: Ritter

Co-PI: Xu

\$600,000

NSF

CRII: III: Learning a timely semantic resource from social media data

06/01/2018- 05/31/2020

PI: Xu

\$175,000

**Xiaodong Zhang**

NSF

Travel support for the 37th IEEE international conference on distributed computing systems (ICDCS 17)

06/01/2017- 05/31/2018

PI: Zhang

\$10,000

Huawei

High-performance database system over GPU devices and fast RDMA networks technology research collaboration project

06/30/2017- 06/27/2018

PI: Zhang

\$360,000

NSF

III: Small: Enabling the best utilization of GPUs  
for in-memory data management systems

09/01/2017- 08/31/2020

PI: Zhang

\$500,000

**Yingqian Zhang**

NSF

CAREER: Taming the side-channel hazards in  
the shielded execution paradigm

04/01/2018- 03/31/2023

PI: Y. Zhang

\$500,000

NSF

CSR: Small: Self-monitoring virtual machines for  
performance guarantees in public clouds

10/01/2017- 09/30/2020

PI: Y. Zhang

\$500,000



# GUEST SPEAKERS AND DISTINGUISHED GUEST LECTURERS

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**Peter Bartlett**     Simons Institute for Theory of Computing at the University of California at Berkley  
Distinguished Guest Speaker - *Representation, optimization and generalization in deep learning*

**Mark Bun**     Princeton University  
*Finding Structure in the Landscape of Differential Privacy*

**Wei-Lun (Harry) Chao**     University of Southern California  
*Transfer learning towards intelligent systems in the wild*

**Ken Clarkson**     IBM Research Almaden  
*Low-rank PSD Approximation in Input-Sparsity Time*

**Gautam Dasarathy**     Postdoctoral Fellow, Rice University  
*Closing the Loop on Learning and Acquisition: An Interactive Approach*

**Pawel Dlotko**     Swansea University  
*Applied and computational topology – from theory through algorithms to solutions of real problems*

**Dr. Ahmed Elmagarmid**     Executive Director of Qatar Computing Research Institute  
Distinguished Guest Speaker - *Challenges for US Higher Education and Opportunities Emanating from Computing and Data Sciences*

**Harvey Friedman**     The Ohio State University  
Distinguished Guest Speaker - *This Foundationalist Looks at  $P = NP$*

**Vijay Gadepally**     MIT Lincoln Laboratory at CSAIL  
*Data Management Tools to Enable Complex Applications*

**Pooya Hatami**     University of Texas at Austin  
*Pseudorandomness and Structure in Computer Science*

**Dr. D. Richard Hipp**     Independent Software Developer  
Distinguished Guest Speaker - *SQLite: The World's Most Widely Used Database Engine*

**Daniel Hsu**     Columbia University  
*Linear Regression without Correspondence*

**Oliver Kennedy**     University of Buffalo  
*Reliably Managing Unreliable Data*

**Hongfu Liu**     Northeastern University  
*Consensus Clustering and its Applications*

**Rosasco Lorenzo**     University of Genova and Visiting Professor at MIT  
*(Un)conventional regularization for efficient large scale machine learning*

**Wagner Meira Jr.**     Universidade Federal de Minas Gerais, Brazil  
*Characterizing, mining, and learning from social sensors*

- Dr. C. Mohan** IBM Researcher  
Distinguished Guest Speaker - *New Era in Distributed Computing with Blockchains and Databases*
- Junier Oliva** Carnegie Mellon University  
*Scalable Learning over Distributions*
- Ioannis Panageas** MIT postdoctoral Fellow  
*Optimization and Multiplicative Weights Update Algorithm under the Lens of Dynamical Systems*
- Georgios Portokalidis** Stevens Institute
- Qing Qu** Columbia University  
*Nonconvex Recovery of Low-Complexity Models*
- Karthik Ramasamy** Co-Founder of Streamlio  
*Next Generation Real Time Architectures*
- Daniel Reichman** Weizmann Institute  
*From algorithms and uncertainty to multitasking and beyond*
- Brian Sadler** IEEE Signal Processing Society Distinguished Lecturer for 217-2018  
*Deep Learning: A Signal Processing Perspective*
- Dr. Greg Shannon** CERT Division at Carnegie Mellon University's Software Engineering Institute  
*Efficient Cybersecurity*
- Thomas Steinke** IBM Almaden Research Center, San Jose, California  
*Protecting Privacy and Guaranteeing Generalization with Algorithmic Stability*
- Yu Su** University of California, Santa Barbara  
*Bridging the Gap between Human and Data with AI*
- Lyle Ungar** University of Pennsylvania  
Distinguished Guest Speaker - *Measuring Psychological Traits using Social Media*
- Colin Ware** Center for Coastal and Ocean Mapping at the University of New Hampshire  
*Visual Queries, Visual Thinking and Data Visualization*

# STUDENTS

## Ten Year Statistical History - Teaching Overview

	AU 2007	AU 2008	AU 2009	AU 2010	AU 2011	AU 2012*	AU 2013	AU 2014	AU 2015	AU 2016	AU 2017
Number of Faculty	35	35	35	36	36	34	38	40	40	42	43
Course Enrollment/ Autumn Qtr.	3,386	3,702	3,943	4,075	4,609	5,737	6,508	6,932	7,626	7,650	8,447
	07-08	08-09	09-10	10-11	11-12	12-13*	13-14	14-15	15-16	16-17	17-18
Students Taught	11,185	12,209	12,689	13,744	14,523	12,457	14,463	15,484	16,697	17,037	17,461

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

## The Graduate Program

With the economy in recovery and a job market demanding high-level computer skills, the Department of Computer Science and Engineering continues to grow even more. The 2016-2017 academic brought new records for the number of students enrolled and number of students taught. In particular, the Graduate Program saw new ten year heights in the records in enrollment, the number of students supported and number of Masters graduated, a return to the numbers seen prior to 2002.

	AU 2007	AU 2008	AU 2009	AU 2010	AU 2011	AU 2012*	AU 2013	AU 2014	AU 2015	AU 2016	AU 2017
Graduate Students Enrolled	235	239	303	304	339	305	327	347	329	298	308
	07-08	08-09	09-10	10-11	11-12	12-13*	13-14	14-15	15-16	16-17	17-18
Graduate Student Applications	705	677	817	1,031	1,190	1,196	1,264	1,218	1,205	1,385	1,242
Graduate Students Supported	135	132	182	218	209	222	201	231	203	245	200
M.S. Degrees Awarded	37	39	64	40	37	86	93	111	94	75	61
Ph.D. Degrees Awarded	32	26	19	20	14	19	26	28	32	31	26
Ph.D. Degrees (cumulative)	410	436	455	475	489	508	534	562	594	625	651

## PhD Degrees Granted

---

### Dr. Wenlei Bao

Dr. P. Sadayappan

Bachelor's., M.S., Harbin Institute of Technology; M.S., The Ohio State University

*Compiler Techniques for Transformation Verification, Energy Efficiency and Cache Modeling*

Software Developer Engineer, Microsoft, WA  
Shijazhuang, China

### Dr. Aniket Chakrabarti

Dr. Srinivasan Parthasarathy, Dr. Chris Stewart

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

*Scaling Analytics via Approximate and Distributed Computing*

Applied Scientist, Microsoft, WA  
Kolkata, India

### Dr. Adam Champion

Dr. Dong Xuan

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

*Unobtrusive, Pervasive, and Cost-Effective Communications with Mobile Devices*

Sr. Lecturer, The Ohio State University  
Columbus, OH

### Dr. Soumya Dutta

Dr. Han-Wei Shen

Bachelor's, Maulana Abul Kalam Azad University of Technology; M.S., The Ohio State University

*In Situ Summarization and Visual Exploration of Large-scale Simulation Data Sets*

Post Doc, Los Alamos National Lab, NM  
Kolkata, India

### Dr. Justin Eldridge

Dr. Misha Belkin, Dr. Yusu Wang

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

*Clustering Consistently*

Post Doc, The Ohio State University  
Columbus, OH

### Dr. Xiaonan Ji

Dr. Alan Ritter

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

*An Integrated Framework of Text and Visual Analytics to Facilitate Information Retrieval towards Biomedical Literature*

Post Doc, Washington University School of Medicine  
Xinzhou, China

### Dr. Lilong Jiang

Dr. Arnab Nandi

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

*Interactive Data Exploration using Gestures*

Software Engineer, Twitter, San Francisco, CA  
Columbus, OH

### Dr. Swaroop Ravindra Joshi

Dr. Neelam Soundarajan

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

*CONSIDER: A Novel, Online Approach to Conflict-Driven Collaborative-Learning*

Sr. Lecturer, The Ohio State University  
Columbus, OH

### Dr. Niranjana Kamat

Dr. Arnab Nandi

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

*Sampling-based Techniques for Interactive Exploration of Large Datasets*

Amazon Web Services  
Mumbai, India



**Dr. Jaimie Kelley** Assistant Professor, Dennison University, Granville, OH  
Dr. Christopher Stewart Westerville, OH  
B.S., Heidelberg University; M.S., The Ohio State University  
*Resource Allocation using Adaptive Characterization of Online, Data-Intensive Workloads*

**Dr. Joo-kyung Kim** Applied Scientist, Amazon, Seattle, WA  
Dr. Eric Fosler-Lussier Columbus, OH  
B.S., Sogang University; M.S., Seoul National University  
*Linguistic Knowledge Transfer for Enriching Vector Representations*

**Dr. Mingzhe Li** Research Scientist, Facebook, Menlo Park, CA  
Dr. D.K. Panda Columbus, OH  
Bachelor's Henan University of Economics & Law; M.S., San Jose State University  
*Designing High-Performance Remote Memory Access for MPI and PGAS Models with Modern Networking Technologies on Heterogeneous Clusters*

**Dr. Jiongqian Liang** Software Engineer, Google, Mt. View, CA  
Dr. Srinivasan Parthasarathy Columbus, OH  
B.Engr., Beihang University; M.S., The Ohio State University  
*Human-in-the-loop Machine Learning: Algorithms and Applications*

**Dr. Kayhan Moharreri** Post Doc, The Ohio State University  
Dr. Gagan Agrawal Columbus, OH  
Bachelor's, Shahid Behesti Univeristy; M.S., The Ohio State University  
*Augmenting Collective Expert Networks to Improve Service Level Compliance*

**Dr. Rajaditya Mukherjee** Cruise Automation  
Dr. Huamin Wang Kolkata, India  
Bachelor's, Jhadavpur University; M.S., The Ohio State University  
*Accelerating Data-driven Simulations for Deformable Bodies and Fluids*

**Dr. Do young Park** Assistant Professor, State University of New York at Old Westbury, NY  
Dr. Raghu Machiraju Pucheon, Korea  
B.S., B.Engr., Hongik University; M.S., Yonsei University; M. Divinity, Methodist Theological Seminary; M.S., Univeristy of Florida; Master's, Emroy University  
*Robust Detection, Visualization, Recognition, and Analysis of Cytoskeletal Structures in Fibrillar Scaffolds from 3-Dimensional Confocal Images*

**Dr. Prashant Rawat**  
Dr. P. Sadayappan Navi Mumbai, India  
B.Engr. University of Mumbai; Master's, Indian Insitute of Technology Bombay

**Dr. Alfred Rossi** Post Doc, The Ohio State University  
Dr. Tamal Dey Hilliard, OH  
B.S., M.S., The Ohio State University  
*Temporal Clustering of Finite Metric Spaces and Spectral k-Clustering*

**Dr. Anirban Roychowdhury**

Dr. Srinivasan Parthasarathy

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

*Robust and Scalable Algorithms for Bayesian Nonparametric Machine Learning*

Research Scientist, Facebook, Seattle, WA

Kolkata, India

**Dr. Dayu Shi**

Dr. Tamal Dey, Dr. Yusu Wang

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

*Computing Topological Features for Data Analysis*

Software Engineer, Google, Mt. View, CA

Shenyang, China

**Dr. Ankita Sikdar**

Dr. Dong Xuan

Bachelor's, Maulana Abul Kalam Azad University of Technology

*Depth based Sensor Fusion in Object Detection and Tracking*

Autonomous Driving Algorithm Engineer, Delphi, Troy, MI

Kolkata, India

**Dr. Suyi Wang**

Dr. Yusu Wang

Bachelor's, Beijing Normal University; M.S., The Ohio State University

*Analyzing data with 1D non-linear shapes using topological methods*

Research Programmer, University of Southern California, Los Angeles, CA

Tangshan, China

**Dr. Tzu-hsuan Wei**

Dr. Han-Wei Shen

B.S., M.S., National Central University; M.S., The Ohio State University

*Query-Driven Analysis and Visualization for Large-Scale Scientific Dataset using Geometry Summarization and Bitmap Indexing*

Columbus, OH

**Dr. Miaojun Yao**

Dr. Huamin Wang

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

*3D Printable Designs of Rigid and Deformable Models*

Research Scientist, Facebook, Menlo Park, CA

Columbus, OH

**Dr. Qiang Zhai**

Dr. Dong Xuan

B.S., Shanghai Jiao Tong University

*Human and Mobile Robot Tracking in Environments with Different Scales*

Engineer, Shanghai DeepCode LLC, China

Madison, WI



## Masters Graduates

---

Name  
Advisor  
Home  
Vita

### **Pragya Arora**

Dr. Anish Arora  
Gwalior, India  
B.Tech., Vellore Institute of Technology

### **Saad Asim**

Dr. Paul Sivilotti  
Galloway, Ohio  
B.S.Cptr.Sci.Eng, The Ohio State University

### **Dhanvi Athmakuri**

Dr. Misha Belkin  
Hyderabad, India  
B.Engr., Birla Institute of Technology and Science

### **Yiran Cao**

Dr. Eric Fosler-Lussier  
Dezhou, China  
B.Engr., Renmin University of China

### **Srividhya Chandrasekharan**

Dr. Chris Stewart  
hennai, India  
B.Engr., Anna University

### **Jorge Chang Cheng**

Dr. Deliang Wang  
Columbus, Ohio  
B.S., Morehead State University

### **Aaditya Chauhan**

Dr. P. Sadayappan  
Ghaziabad, India  
B. Engr, University of Delhi

### **Anant Chowdhary**

Dr. Steve Lai  
New Delhi, India  
B.Tech., Delhi Technological University

### **Shiuli Das**

Dr. Raghu Machiraju  
New Delhi, India  
B. Engr., Birla Institute of Technology and Science

### **Piyali Das**

Dr. Raghu Machiraju  
Kolkata, India  
B. Tech., Maulana Abul Kalam Azad University of Technology; M.S., University of Cincinnati

### **Frederick Deiderich III**

Dr. Rajiv Ramnath  
Hilliard, Ohio  
B.S.Cptr.Sci.Eng, The Ohio State University

### **Dushyanta Dhyani**

Dr. Huan Sun  
Dehradun, India  
B.Tech., National Institutes of Technology India

### **Ross Donatelli**

Dr. Raghu Machiraju  
Satellite Beach, FL  
B.S., Florida Institute of Technology

### **Huimin Du**

Dr. Han-Wei Shen  
Chengdu, China  
B. Engr., Southeast University

### **Soumyashree Gad**

Dr. Srinivasan Parthasarathy  
Dharwad, India  
B. Engr., Visvesvaraya Technological University

### **Sayam Ganguly**

Dr. Arnab Nandi  
Kolkata, India  
B.Tech., Maulana Abul Kalam Azad University of Technology

### **Aaditya Gavandalkar**

Dr. Michael Bond  
Pune, India  
B. Engr., University of Pune

### **Piyush Ghai**

Dr. Wei Xu  
New Delhi, India  
B.Engr., University of Delhi

### **Austin Gilliam**

Dr. Dong Xuan  
Columbus, Ohio  
B.S.Cptr.Sci.Eng., The Ohio State University

**Karan Grover**

Dr. Alan Ritter  
Gurgaon, India  
B.Engr., Univeristy of Delhi

**Frederick Gu**

Dr. Han-Wei Shen  
Gahanna, Ohio  
B.S.Cptr.Sci.Eng., The Ohio State University

**Harsh Gupta**

Dr. Misha Belkin  
Howrah, India  
B.Tech., Maulana Abul Kalam Azad Univeristy of Technology

**Zijian Hu**

Dr. Yang Wang

B. Engr., Central South University; M.S., Carnegie Mellon University

**Anirudh Jonnadulka**

Dr. DK Panda  
Hyderabad, India  
B.Tech., Indian Institute of Technology Bombay

**Niranjan Kamat**

Dr. Arnab Nandi  
Mumbai, India  
B.S., National Institute of Technology; M.S., State Univeristy of New York

**Ananth Viswa Sai Kalyan Khandrika**

Dr. Spyros Blanas  
Guntur, India  
B.Tech., Indian Institute of Technology Bombay

**Eric Lewantowicz**

Dr. Xiaodong Zhang  
Columbus, Ohio  
B.S.Elec.Eng., United State Air Force Academy

**Yuzhou Liu**

Dr. Deliang Wang  
Xi'an, China  
B. Engr., Xi'an Jiaotong University

**Dingying Lu**

Dr. Yinqian Zhang  
Guangzhou, China  
B.Engr., South China University of Technology

**Shijie Ma**

Dr. Gagan Agarwal  
Zhengzhou, China  
B.Engr., Nanjing Univeristy of Posts and Telecommunications

**Siyuan Ma**

Dr. Misha Belkin  
Columbus, Ohio  
Master's, Xi'an Jiaotong University

**Pravar Mahajan**

Dr. Wei Xu  
Bhilai, India  
B.Tech., National Institute of Technology Bombay

**Abhinav Mahalingam**

Dr. Srinivasan Parthasarathy  
Madurai, India  
B.Tech., National Institute of Technology Tiruchirappalli

**Venkata Mandadapu**

Dr. Chris Stewart  
Visakhapatnam, India  
B.Engr., M.S., Birla Institute of Technology and Science

**Christopher Menart**

Dr. Jim Davis  
Dayton, Ohio  
B.S.Cptr.Sci.Eng., The Ohio State University

**Prithvi Krishna Muntimadugu**

Dr. Srinivasan Parthasarathy  
Madanappale, India  
B.Tech., Vellore Institute of Technology

**Denis Newman-Griffis**

Dr. Eric Fosler-Lussier  
Columbus, Ohio  
B.A., Carleton College

**Ritika Ojha**

Dr. Misha Belkin  
Bhilai, CT  
B. Tech., National Institutes of Technology



**Loushang Pan**

Dr. Feng Qin  
Jiande, China  
Bachelor's, Zhejiang University

**Derek Plautz**

Dr. Alan Ritter  
Cranberry Township, PA  
B.S.Cptr.Sci.Eng., The Ohio State University

**Deepankar Purniya**

Dr. James Davis  
Haldwani, India  
B. Tech., National Institutes of Technology

**Samuel Roth**

Dr. Yinqian Zhang  
Piqua, Ohio  
B.S., Ohio Northern University

**Ajit kumar Sahoo**

Dr. DK Panda  
Jaipur, India  
B.Tech., National Institutes of Technology

**Joseph Shaffer**

Dr. Tamal Dey  
Columbus, Ohio  
B.S., University of Washington

**Kunal Singh**

Dr. P. Sadayappan  
Ranchi, India  
B.Engr., Vivesvaraya Technological University

**Vijay Siridhar**

Dr. Anastasios Sidiropoulos  
Chennai, India  
B. Engr., Birla Institute of Technology and Science

**Rohit Kumar Srivastava**

Dr. Rajiv Ramnath  
New Delhi, India  
B.Engr., University of Delhi

**Chuan Wei Sun**

Dr. Huamin Wang  
Taipei, Taiwan  
B.S., National Tsing Hua University; M.S., National Taiwan University

**Chandrasekar Swaminathan**

Dr. Nasko Rountev  
Chennai, India  
B.Engr., Anna University

**Vineeth Reddy Thumma**

Dr. P. Sadayappan  
Hyderabad, India  
B.Engr., M.S., Birla Institute of Technology and Science

**Benjamin Trevor**

Dr. Ken Supowit  
Columbus, Ohio  
B.A., Washington University; M.S., The Ohio State University

**Sankeerth Vyapamakula Sreeramachandra**

Dr. P. Sadayappan  
Bangalore, India  
B.Engr., Vivesvaraya Technological University

**Yan Wang**

Dr. Nasko Rountev  
Columbus, Ohio  
B.Engr., Tongji University

**Zhongqiu Wang**

Dr. Deliang Wang  
Columbus, Ohio  
B. Engr., Harbin Institute of Technology

**Haowei Wu**

Dr. Nasko Rountev  
Wuhan, China  
B. Engr., Huazong University of Science and Technology

**Chenyang Xu**

Dr. Yang Wang  
Hefei City, China  
B.Engr., Xi'an Jiaotong University

**Anu Yadav**

Dr. Srinivasan Parthasarathy  
Rewari, India  
B.Tech., Indian Institute of Technology Bombay

**Lingyan Yin**

Dr. Spyros Blanas  
Tianjin, China  
B.Engr., Master's, Tianjin University

**Xianxing Zhang**

Dr. Gagan Agarwal

China

Bachelor's, Xi'an Jiatong University

**Jiaqi Zhang**

Dr. Han-Wei Shen

Nantong, China

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

**Xiaohu Zhao**

Dr. Xiaodong Zhang

Tianjin, China

B.Engr., Zheijang University



# UNDERGRADUATE PROGRAM

The Undergraduate Programs in both CSE and CIS continue to grow even with enrollment management in place. Internship and employment opportunities abound, with recruitment from all areas increasing along with our student population.

	AU 2007	AU 2008	AU 2009	AU 2010	AU 2011	AU 2012*	AU 2013	AU 2014	AU 2015	AU 2016	AU 2017
Undergrad Students Enrolled	817	877	871	971	1,102	1,287	1,413	1,498	1,617	1,764	2,072
	07-08	08-09	09-10	10-11	11-12	12-13*	13-14	14-15	15-16	16-17	17-18
B.A., B.S. Degrees Awarded	142	138	127	152	213	229	204	244	292	333	337

\*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. As advising coordinator, she manages the day-to-day operations of the CSE Undergraduate Advising Office, verifies graduation eligibility for all CSE and CIS majors, is the main point of contact for students interested in the CIS and Computational Science minors, and serves as a resource for the CSE faculty as well as for advisors across the University. 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, with a Ph.D. in Music History from Ohio State.

**Leslie Dowler**, Academic Advisor and Staff Assistant, joined the CSE Advising team in September 2014 after several years as an advisor at OSU Newark. She earned a Master of Education degree in College Student Personnel from Ohio University in 2006.

**CA Wade**, Academic Advisor, joined the CSE Advising team in November 2015 after a year as an advisor in the Department of Mathematics at The Ohio State University. He earned a Master of Education in Secondary Education and a Bachelor of Arts in Mathematics from The Ohio State University.

**LaNorris Alexander**, Academic Advisor, joined the CSE Advising team in March, 2018 after working within OSU’s Office of Diversity and Inclusion as program manager with the Young Scholars Program. He is completing his Master of Education at The Ohio State University in Education: Teaching and Learning in the College of Education and Human Ecology with a focus on Adolescent, Post-Secondary, and Community Literacies. Prior to joining the Buckeyes, he has worked in higher education with keen focus on student learning, exposure and development, as well as, secondary instruction.

**Kami Westhoff**, Academic Advisor, joined the CSE Advising team in April 2018 after 11 years advising at OSU in the College of Arts and Sciences. She earned her Master of Fine Arts from The Ohio State University in 2006. Her previous advising experience was working with Art, Art Education, Music, Dance and Design. Her strengths as an adviser are in Degree Audit management, major change advising and working with distressed students. Kami was also a lecturer in the Department of Art for several years, is still a practicing glass artist making handblown glass buckeyes and is active in the local arts community.

## 2017 - 2018 Bachelors Graduates

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### College of Arts and Sciences

★ **Name, Degree**  
Home  
*Honors Earned*

★ **Drake Addis, BACIS**  
Pataskala, OH

★ **Cole Albers, BSCIS**  
Versailles, OH  
*Magna Cum Laude*

★ **Osman Ali, BACIS**  
Hilliard, OH

★ **Daniel Bodner, BACIS**  
Moreland Hills, OH

★ **Joseph Burkhart, BSCIS**  
Pickerington, OH

★ **Yemin Chen, BSCIS**  
Jinhua, China  
*Cum Laude*

★ **Wing Chung Chow, BSCIS**  
Middletown, OH  
*Cum Laude*

★ **Shicheng Chu, BSCIS**  
Beijing, China  
*Cum Laude*

★ **Jeremy Clark, BSCIS**  
Whitehall, OH  
*Magna Cum Laude*

★ **Eric Cornelius, BSCIS**  
*Cincinnati, OH*

★ **Paul Costinescu, BSCIS**  
Columbus, OH  
*Magna Cum Laude*

★ **Cole Coulter, BACIS**  
New Concord, OH

★ **Riley Coulter, BACIS**  
Columbus, OH

★ **Frank Dattalo, BSCIS**  
Lindenhurst, NY  
*Magna Cum Laude*

★ **Robert Ebright, BACIS**  
Columbus, OH

★ **Frank Evers, BACIS**  
Burton, OH

★ **Richard Feldtz, BSCIS**  
Cleveland, OH  
*Cum Laude*

★ **Connor Hall, BACIS**  
Columbus, OH

★ **Ian Hardgrove, BSCIS**  
Lisbon, OH

★ **Evan Harrell, BACIS**  
Hilliard, OH

★ **Stephanie Hayden, BACIS**  
Columbus, OH  
*Magna Cum Laude*

★ **Matthias Heinz, BSCIS**  
Hilliard, OH  
*Magna Cum Laude, with Honors Research Dist in Physics, with Honors in Arts & Sciences*

★ **Jonathan Hickman, BSCIS**  
New York, NY  
*Magna Cum Laude, with Honors in Arts & Sciences*

★ **Jake Hill, BSCIS**  
Galloway, OH

★ **Claudia Hinkle, BSCIS**  
Hudson, OH  
*Cum Laude*

★ **Ryan Ho, BSCIS**  
Columbus, OH

★ **Wei Huang, BSCIS**  
Wuhan, China

★ **Weicheng Huang, BSCIS**  
Dongguan, China

★ **Sami Ibrahim, BSCIS**  
Reynoldsburg, OH  
*Cum Laude*

★ **Alexander Kaps, BSCIS**  
Columbus, OH

★ **Haden Kersting, BSCIS**  
Bridgeport, WV  
*Cum Laude*

★ **Jackson Killian, BSCIS**  
Sicklerville, NJ  
*Summa Cum Laude, with Honors Rsrch Dist Comp Info Sys, with Honors in Arts & Sciences*



- ★ **Jason Kline, BSCIS**  
Oxford, OH  
*Cum Laude, with Honors in Arts & Sciences*
- ★ **Mason Koch, BSCIS**  
New Richmond, WI
- ★ **Jared Kohler, BSCIS**  
Mason, OH  
*Magna Cum Laude*
- ★ **Daniel Krajnak, BACIS**  
Columbus, OH  
Honors in Arts & Sciences
- ★ **Yuzhao Li, BSCIS**  
Luoyang, China
- ★ **Xiao Liang, BSCIS**  
Wuhan, China
- ★ **Jeffrey Liao, BSCIS**  
Upper Arlington, OH
- ★ **Raymond Liao, BSCIS**  
Dublin, OH
- ★ **Aron Lime, BSCIS**  
Columbus, OH
- ★ **Eric Lin, BSCIS**  
Dayton, OH
- ★ **Ziman Ling, BSCIS**  
Changsha, China  
*Magna Cum Laude*
- ★ **Paul Linville, BSCIS**  
Columbus, OH
- ★ **Momo Liu, BSCIS**  
Manzhouli, China  
*Cum Laude*
- ★ **Jacob Loeser, BSCIS**  
Toledo, OH
- ★ **Bo Lu, BSCIS**  
Beijing City, China  
*Magna Cum Laude*
- ★ **Kristen Marsh, BACIS**  
Atlanta, GA
- ★ **Mohamed Mayow, BSCIS**  
Hilliard, OH
- ★ **Kurt Metz, BSCIS**  
Maumee, OH
- ★ **Charles Morris, BSCIS**  
Marysville, OH
- ★ **Kurt Mueller, BSCIS**  
Columbus, OH
- ★ **Luke Neff, BSCIS**  
Dublin, OH
- ★ **Bradley Nelson, BSCIS**  
Plymouth, MI
- ★ **Ncebazikamdali Nyoni, BACIS**  
Columbus, OH
- ★ **Chenhui Pan, BSCIS**  
Nanjing, China
- ★ **Rachel Parker, BSCIS**  
South Vienna, OH  
*Cum Laude, with Honors in Arts & Sciences*
- ★ **John Phillips, BSCIS**  
Columbus, OH
- ★ **Manasa Punugu, BACIS**  
Dublin, OH
- ★ **Pegah Rashidnia, BACIS**  
Westlake, OH
- ★ **Robert Reilly, BSCIS**  
Columbus, OH
- ★ **Jeffrey Rolland, BSCIS**  
Valley City, OH  
*Cum Laude*
- ★ **Cole Shroyer, BSCIS**  
Marysville, OH
- ★ **Melinda Studans, BSCIS**  
Huron, OH  
*Magna Cum Laude, with Honors in Arts & Sciences*
- ★ **Hanzhi Su, BSCIS**  
Columbus, OH
- ★ **Kulraj Sumra, BSCIS**  
Dayton, OH
- ★ **Joshua Thomas, BSCIS**  
Lima, OH  
*Summa Cum Laude*
- ★ **William Thornton, BSCIS**  
Loveland, OH  
*Magna Cum Laude*
- ★ **Yuxuan Wang, BSCIS**  
Columbus, OH  
*Magna Cum Laude*

★ **Anthony Weston, BSCIS**

Ohio  
*Magna Cum Laude*

★ **Paul Williams, BSCIS**

Columbus, OH  
*Cum Laude*

★ **Haozheng Wu, BSCIS**

Hangzhou, China  
*Cum Laude*

★ **Songnan Wu, BSCIS**

Wujiang, China  
*Magna Cum Laude*

★ **Dikai Xiong, BSCIS**

Beijing, China

★ **Yao Xu, BSCIS**

Columbus, OH

★ **Jia Yang, BSCIS**

Nantong, China  
*Magna Cum Laude*

★ **Zhenyang Yu, BSCIS**

Hangzhou, China  
*Cum Laude*

★ **Chenchuan Zhang, BSCIS**

Shanghai, China  
*Summa Cum Laude*

★ **Jiachen Zhang, BSCIS**

★ Dalian, China

★ **Zicong Zhang, BSCIS**

Beijing City, China

**College of Engineering**

★ Name, (All degrees are Bachelors of Science in  
Computer Science and Engineering)

Home  
*Honors Earned*

★ **Rafah Asadi**

Columbus, OH

★ **Justin Adams**

Reedsville, PA  
*Cum Laude, with Honors in Engineering*

★ **Kathryn Adamsky**

Dublin, OH  
*Magna Cum Laude*

★ **Jennifer Alarcon**

Westerville, OH  
*Magna Cum Laude*

★ **Eid Al-rabadi**

Westerville, OH

★ **Jacob Alvord**

San Diego, CA

★ **Brett Arthur**

Hilliard, OH

★ **Rafah Asadi**

Columbus, OH

★ **Jared Axelrod**

Solon, OH

★ **Brent Baker**

Delaware, OH

★ **Brian Baker**

Avon, OH  
*Summa Cum Laude*

★ **Alexandra Barnes**

Thornville, OH

★ **Sandeep Battula**

Lewis Center, OH

★ **Michael Bayless**

Athens, OH  
*Magna Cum Laude*

★ **Eugene Begue**

Tiffin, OH

★ **Mason Bender**

Concord, OH

★ **Bereket Berhane**

Westerville, OH  
*Cum Laude*

★ **Benjamin Bloom**

Columbus, OH  
*Magna Cum Laude, with Honors Integrated  
Bus & Eng*

★ **Brett Boehmer**

Canal Winchester, OH

★ **Daniel Bond**

Bexley, OH  
*Magna Cum Laude*

★ **Jesse Buckley**

Barnesville, OH

★ **Thomas Burnett**

Magnolia, OH  
*Cum Laude*

- ★ **Alexandre Cabello**  
Cincinnati, OH
- ★ **Chen Cai**  
Wuhan, China
- ★ **Joseph Call**  
Stow, OH
- ★ **Runzhou Cao**  
Hangzhou, China  
*Magna Cum Laude*
- ★ **Justin Carruthers**  
Browns Summit, NC
- ★ **Shuming Chan**  
Columbus, OH  
*Magna Cum Laude*
- ★ **Ian Cheatwood**  
Columbus, OH
- ★ **Fan Chen**  
Nanjing, China  
*Cum Laude*
- ★ **Akash Chopda**  
Nashik, India  
*Magna Cum Laude*
- ★ **Benjamin Clarke**  
West Chester, OH  
*Cum Laude, with Honors in Engineering*
- ★ **Joshua Clyde**  
Liberty Township, OH
- ★ **David Cole**  
Dublin, OH  
*Cum Laude*
- ★ **Tyler Collison**  
Lancaster, OH  
*Summa Cum Laude*
- ★ **Derek Coventry**  
N. Canton, OH
- ★ **Christopher Crain**  
Niles, OH
- ★ **Michael Cristina**  
Mandeville, LA
- ★ **Daniel da Rosa**  
Merrimack, NH
- ★ **Aden Dahir**  
Columbus, OH
- ★ **Jin Dai**  
Jinan, China  
*Summa Cum Laude*
- ★ **Wesley Darvin**  
Beachwood, OH  
*Magna Cum Laude, with Honors in Engineering*
- ★ **Seth Delbridge**  
Floyds Knobs, IN
- ★ **Tommy Delgado**  
Grove City, OH
- ★ **Sophia DeRosa**  
Cincinnati, OH
- ★ **Mohit Deshpande**  
Beavercreek, OH  
*Magna Cum Laude, with Hon Rsch Dist Comp Sci & Eng*
- ★ **Joel Diener**  
Columbus, OH  
*Summa Cum Laude*
- ★ **Daniel Dillon**  
Solon, OH
- ★ **Jianyi Ding**  
Dublin, OH  
*Cum Laude, with Honors in Engineering*
- ★ **Zachary Dinsmore**  
Columbus, OH  
*Magna Cum Laude*
- ★ **Kayli Doll**  
Chesterland, OH  
*Cum Laude*
- ★ **Mitchell Domecq**  
Columbus, OH  
*Magna Cum Laude*
- ★ **Yihang Du**  
Columbus, OH  
*Cum Laude*
- ★ **Dakota Duncan**  
Seville, OH  
*Magna Cum Laude*
- ★ **Peter Edin**  
Columbus, OH
- ★ **Si Fang**  
Beijing City, China  
*Summa Cum Laude*

- ★ **Jeff Feldmann**  
Worthington, OH
- ★ **Shana Fishbein**  
Dayton, OH
- ★ **Daniel Flax**  
North Potomac, MD  
*Summa Cum Laude, with Honors in Engineering*
- ★ **Rory Flukes**  
Weymouth, MA  
*Summa Cum Laude*
- ★ **Nicholas Forquer**  
Westerville, OH
- ★ **Andrew Fox**  
Wellington, OH  
*Magna Cum Laude*
- ★ **Stefan Fraga**  
Wooster, OH
- ★ **Gary Fridenmaker**  
Centerville, OH
- ★ **Alfonso Frioni**  
Pittsburgh, PA
- ★ **Drew Gallagher**  
Kent, OH
- ★ **Allison Galuska**  
North Royalton, OH
- ★ **Krishna Ganesan**  
Glenmoore, PA
- ★ **Erin George**  
Mason, OH  
*Cum Laude*
- ★ **Morgan Gongwer**  
Mansfield, OH
- ★ **Jason Gorringer**  
Columbus, OH
- ★ **Tennison Gray**  
Columbus, OH  
*Magna Cum Laude*
- ★ **Matias Grioni**  
Twinsburg, OH  
*Summa Cum Laude*
- ★ **Brian Groenke**  
Cincinnati, OH  
*Cum Laude*
- ★ **Chuanjing Guo**  
Fuzhou, China
- ★ **Niharika Gupta**  
Mumbai, India
- ★ **Remington Hackbarth**  
Coldspring, KY
- ★ **Thomas Haight**  
Mentor, OH
- ★ **Sabrina Halkiu**  
Cincinnati, OH
- ★ **Nicholas Hallisy**  
Cleveland Heights, OH
- ★ **Michael Hamill**  
Columbus, OH
- ★ **Nathan Hammonds**  
Gahanna, OH
- ★ **Evan Hanawalt**  
Findlay, OH
- ★ **Shuming He**  
Beijing, China
- ★ **Eric Hemphill**  
Akron, OH
- ★ **Lamarr Henry**  
Dayton, OH  
*Cum Laude*
- ★ **Kevin Hernandez**  
North Canton, OH  
*Summa Cum Laude, with Honors in Engineering*
- ★ **Jonathan Herrera**  
Miami, FL
- ★ **Donald Herwig**  
Grafton, OH
- ★ **Elizabeth Heym**  
Columbus, OH  
*Summa Cum Laude, with Honors in Engineering*
- ★ **Blake Howard**  
Cincinnati, OH
- ★ **Haoqi Hu**  
Chengdu, China  
*Magna Cum Laude*
- ★ **Syed-Amad Hussain**  
Columbus, OH  
*with Honors Rsch Dist in Linguistics*



- ★ **Kyle Hutchinson**  
Twinsburg, OH
- ★ **Christopher Hutchinson**  
Columbus, OH
- ★ **Nathan Iarve**  
Colleyville, TX
- ★ **Omar Ibrahim**  
Dracut, MA  
*Cum Laude*
- ★ **Jeffrey Jarry**  
Powell, OH
- ★ **Jordan Johnson**  
Parkville, MD
- ★ **Joshua Kahn**  
Mukilteo, WA  
*Magna Cum Laude*
- ★ **Xiong Ke**  
Wuhan, China
- ★ **Vyyom Kelkar**  
Lewis Center, OH  
*Cum Laude, with Honors in Engineering*
- ★ **Daniel Kennon**  
Saint Clairsville, OH
- ★ **Jihyung Kil**  
Uiwang City, Korea
- ★ **Jae Dong Kim**  
Mason, OH
- ★ **Dylan Knaplund**  
Tiffin, OH  
*Summa Cum Laude, with Honors in Engineering*
- ★ **Mark Koozer**  
Westerville, OH
- ★ **Lane Kubicki**  
Medina, OH
- ★ **Kurtis Kuszmaul**  
Columbus, OH
- ★ **Ben Lall**  
Dublin, OH
- ★ **Daniel Lambert**  
Westerville, OH
- ★ **Joshua Lan**  
Beavercreek, OH
- ★ **Son Le**  
Lone Tree, CO
- ★ **Jeremy LeDonne**  
Columbus, OH  
*Summa Cum Laude*
- ★ **Yuping Liang**  
Changsha, China
- ★ **Sean Lima**  
Columbus, OH
- ★ **Charlette Lin**  
Columbus, OH  
*Summa Cum Laude*
- ★ **Adrien Lindner**  
Shalimar, FL  
*Magna Cum Laude*
- ★ **Hairuo Liu**  
Beijing, China
- ★ **Ryan Liu**  
Fremont, CA
- ★ **Phillip Loveland**  
Ottawa, OH
- ★ **Zachary Lucas**  
Woodville, OH  
*Cum Laude*
- ★ **Nicholas Luckenbach**  
Columbus, OH
- ★ **Brian Lutz**  
Chagrin Falls, OH
- ★ **Chance Lytle**  
Belpre, OH  
*Cum Laude, with Honors in Engineering*
- ★ **Owen Maher**  
Galena, OH
- ★ **Gabriella Marinescu**  
Berlin Center, OH
- ★ **Michael Mascolino**  
Columbus, OH
- ★ **Clayton Mason**  
Lowell, OH  
*Magna Cum Laude, with Honors in Engineering*
- ★ **Howell McCullough**  
Bexley, OH

- ★ **Maxwell McDavid**  
Canal Winchester, OH
- ★ **Johan McGwire**  
Columbus, OH
- ★ **Quinn McHugh**  
Columbus, OH  
*Magna Cum Laude*
- ★ **Emily McIntyre**  
Gahanna, OH
- ★ **Dillon Merritt**  
Mentor, OH
- ★ **Nicholas Meyer**  
Lewis Center, OH  
*Magna Cum Laude*
- ★ **Amy Miao**  
Columbus, OH  
*Cum Laude, with Honors in Engineering*
- ★ **Gabrielle Miguel**  
Kenosha, WI
- ★ **Lauren Miller**  
Sunbury, OH  
*Summa Cum Laude, with Honors in Engineering*
- ★ **Casey Miller**  
Baltimore, OH
- ★ **Brandon Minner**  
Cincinnati, OH
- ★ **Kyle Modlich**  
Columbus, OH
- ★ **Trevor Monteforte**  
*Seven Hills, OH*
- ★ **Shawna Moore**  
Galloway, OH
- ★ **Patrick Muller**  
La Grange, KY
- ★ **Leah Music**  
Columbus, OH
- ★ **Negash Negash**  
Columbus, OH
- ★ **Sean Nelson**  
Coppell, TX
- ★ **Sean Nemann**  
Crescent Springs, KY  
*Summa Cum Laude, with Honors in Engineering*
- ★ **Tony Nguyen**  
Washington, DC
- ★ **Adam Ovak**  
North Canton, OH  
*Summa Cum Laude*
- ★ **Patrick Pastore**  
Cleveland, OH  
*Magna Cum Laude, with Honors in Engineering*
- ★ **Shiny Patel**  
Columbus, OH  
*Cum Laude*
- ★ **Viral Patel**  
Marysville, OH  
*Magna Cum Laude*
- ★ **Sunny Patel**  
Northfield, OH  
*Magna Cum Laude*
- ★ **Austin Payne**  
Broken Arrow, OK
- ★ **Nicholas Perrin**  
Cincinnati, OH
- ★ **Brad Pershon**  
Delaware, OH  
*Magna Cum Laude*
- ★ **Steven Pidcock**  
Columbus, OH
- ★ **Anthony Pietrantozzi**  
Twinsburg, OH
- ★ **Justin Pinsky**  
Plainview, NY
- ★ **Andrew Pitrof**  
Dayton, OH
- ★ **Tytus Planck**  
West Chester, OH
- ★ **Evan Pliska**  
Columbus, OH  
*Cum Laude*
- ★ **Brennan Plowman**  
Columbus, OH
- ★ **Nicolas Pouliquen**  
Newport Coast, CA
- ★ **Maxwell Powell**  
Columbus, OH  
*Magna Cum Laude*

- ★ **Gerard Puhalla**  
Clinton, OH
- ★ **Lucas Puskaric**  
Mokena, IL
- ★ **Nianyun Qi**  
Hangzhou, China
- ★ **Kevin Quach**  
Reynoldsburg, OH  
*Magna Cum Laude*
- ★ **Babak Rafian**  
Gahanna, OH
- ★ **Trevor Rambacher**  
Miamisburg, OH
- ★ **Bobak Rashidnia**  
Westlake, OH
- ★ **Andrew Relyea**  
Chagrin Falls, OH  
*Magna Cum Laude*
- ★ **Richard Renner**  
Chagrin Falls, OH  
*Cum Laude*
- ★ **Siddartha Revur**  
Hilliard, OH  
*Cum Laude, with Honors in Engineering,*
- ★ **Riley Richards**  
Worthington, OH  
*Cum Laude*
- ★ **Lucas Rodriguez**  
Dublin, OH
- ★ **Adam Roller**  
Cincinnati, OH
- ★ **Kyle Rossman**  
Jenera, OH
- ★ **Luke Rouker**  
Columbus, OH  
*Magna Cum Laude*
- ★ **Jacob Ruth**  
Westerville, OH
- ★ **Akshat Saini**  
Mumbai, India
- ★ **Allison Salach**  
Alto, MI
- ★ **Joshua Sandvick**  
North Royalton, OH  
*Magna Cum Laude, with Honors Integrated  
Bus & Eng,*
- ★ **Alexander Sarrouh**  
Strongsville, OH
- ★ **David Sauder**  
Wauseon, OH
- ★ **Alex Schilling**  
Columbus, OH
- ★ **Eric Schirtzinger**  
Worthington, OH
- ★ **Joshua Schraivogel**  
Cincinnati, OH
- ★ **Jonathan Seaman**  
Ravenna, OH
- ★ **Mubasil Shamim**  
Dublin, OH
- ★ **Daniel Shawlson**  
Fairlawn, OH  
*Magna Cum Laude*
- ★ **Alexander Silk**  
Solon, OH
- ★ **David Sinchok**  
Columbus, OH
- ★ **Melissa Sjostrom**  
Albuquerque, NM
- ★ **Nicholas Skiljan**  
Chagrin Falls, OH  
*with Honors in Engineering*
- ★ **Benjamin Smith**  
Columbus, OH
- ★ **Dylan Smith**  
Strongsville, OH
- ★ **Tyler Snyder**  
Cincinnati, OH
- ★ **Yuanjia Song**  
Chengdu, China
- ★ **Gregory Sop**  
Columbus, OH
- ★ **Aishwarya Srivastava**  
Delhi, India  
*Magna Cum Laude*
- ★ **Kenton Steiner**  
Wooster, OH
- ★ **Jamie Steines**  
Warren, OH
- ★ **Adam Sturgeon**  
Columbus, OH

- ★ **Zeyang Su**  
Dongguan City, China  
*Summa Cum Laude*
- ★ **Allison Subtelny**  
Chicago, IL
- ★ **Jingyi Sun**  
Maineville, OH
- ★ **Alexander Tanchevski**  
New Albany, OH  
*Magna Cum Laude*
- ★ **Peiyuan Tang**  
Beijing, China  
Summa Cum Laude, with Honors in Engineering
- ★ **Alexander Tareshawty**  
Canfield, OH  
*Summa Cum Laude*
- ★ **Kyle Thompson**  
Canfield, OH
- ★ **Ryan Tomlinson**  
Portland, OR
- ★ **Kevin Truong**  
Columbus, OH
- ★ **Randy Tsai**  
Highland Heights, OH
- ★ **Alexander Turner**  
North Olmsted, OH  
*Magna Cum Laude*
- ★ **Rezeki Utomo**  
Jakarta, Indonesia  
*Summa Cum Laude*
- ★ **Cameron Utsman**  
Glen Allen, VA
- ★ **Ross Vasko**  
Strongsville, OH  
*Summa Cum Laude, with Honors Rsch Dist Comp Sci & Eng, with Honors in Engineering*
- ★ **Patrick Veith**  
Cincinnati, OH
- ★ **Nikhil Vinay**  
Delaware, OH
- ★ **Nabil Wadih**  
Cincinnati, OH  
*Cum Laude*
- ★ **Christine Walsh**  
Dublin, OH
- ★ **Zhuoer Wang**  
Huangshi, China  
*Cum Laude*
- ★ **Kevin Wang**  
Columbus, OH
- ★ **Yian Wang**  
Beijing, China
- ★ **Zachary Weatherly**  
Sandusky, OH  
*Cum Laude, with Honors in Engineering*
- ★ **Allen Wenzl**  
Avon, OH
- ★ **Sean Whitehurst**  
Kings Mills, OH
- ★ **Tavish Wille**  
Hilliard, OH
- ★ **Alexander Williams**  
Hudson, OH  
*Magna Cum Laude*
- ★ **Lee Winfield**  
Painesville, OH
- ★ **Connor Winton**  
Westerville, OH
- ★ **Kamari Wright**  
Palmetto, GA
- ★ **Keao Xu**  
Harbin, China  
*Cum Laude*
- ★ **Jingyuan Xu**  
Lewis Center, OH  
*Cum Laude*
- ★ **Michael Yamada**  
Columbus, OH
- ★ **Cheng-Han Yang**  
Taipei City, Taiwan
- ★ **Linxin Yang**  
Qingdao, China
- ★ **Stephen Yau**  
Cincinnati, OH
- ★ **Yuchen Ye**  
Columbus, OH
- ★ **Xuzhou Yin**  
Ji'an, China  
*Cum Laude*

- ★ **Samuel Yinger**  
Somerset, OH
- ★ **Ki Lam Yip**  
Avon, OH  
*Cum Laude*
- ★ **Lucas Yost**  
Marysville, OH
- ★ **Vincent Young**  
Ridgewood, NJ
- ★ **Cole Zavar**  
Plain City, OH
- ★ **William Zhang**  
Chappaqua, NY  
*Cum Laude*
- ★ **Lingfeng Zhang**  
Kunming, China  
*Cum Laude*
- ★ **Yifei Zhao**  
Shenzhen, China  
*Magna Cum Laude*
- ★ **Zheng Zheng**  
Wenzhou, China  
*Magna Cum Laude*
- ★ **Mary Zhou**  
Powell, OH  
*Cum Laude*
- ★ **Minghao Zhu**  
Tianjin, China  
*Magna Cum Laude*
- ★ **Yupeng Zou**  
Haining, China





# FACULTY, SCIENTISTS & STAFF

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## 2017-2018 Tenured & Tenure Track Faculty

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### **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



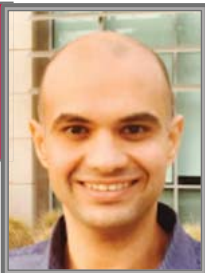
B. Tech., Computer Science and Engineering, Indian Institute of Technology, New Delhi, 1986; M.S., Computer Science, University of Texas, Austin, 1988; Ph.D., Computer Science University of Texas, Austin, 1992.

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.

### **RAEF BASSILY**

Assistant Professor



B.S. Electrical and Computer Engineering, Cairo University, 2003; M.S. in Engineering Mathematics, Cairo University, 2006; Ph.D. in Electrical and Computer Engineering, University of Maryland, 2012

Department Research Area: MACHINE LEARNING THEORY

Interests: Research focuses on tackling current challenges in data analysis and machine learning especially those of direct impact on society.

### **MIKHAIL BELKIN**

Full Professor



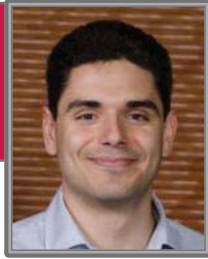
Hon.B.Sc. with High Distinction, Mathematics, University of Toronto, 1995; M.S., Mathematics, University of Chicago, 1997; Ph.D., Mathematics, University of Chicago, 2003.

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**

Associate 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: Programming Languages; Software Systems; Runtime Systems; Program Analysis;; Parallelism; Compilers; Security

## **JIAN CHEN**

Associate Professor



M.S. Mechanical Engineering, Tianjin University, 1999; M.S. Computer Science, University of Houston, 2002; Ph.D., Computer Science, Virginia Polytechnic Institute and State University, 2016

Department Research Area: GRAPHICS

Interests: interdisciplinary science of visualization and 3D interaction in virtual reality.

## **BRYAN CHOI**

Assistant Professor



B.A., Computer Science, Harvard College, 2003; J.D., Harvard Law School, 2007.

Department Research Area: PRIVACY

Interests: Property, Intellectual Property (Patent, Copyright, Trademark), Internet Law, Privacy, Torts

**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; 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 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**

Full 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.

**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; Parallel and Distributed Computing.

**ZHIQIANG LIN**  
Associate Professor



B.E. in Computer Science, Nanjing University of Posts and Telecommunications, 2002; M.S. in Computer Science, Nanjing University, 2006; Ph.D. in Computer Science, Purdue University, 2011

Department Research Area: NETWORKING and DISTRIBUTED COMPUTING

Interests: Computer systems security

**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**  
Associate 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**

Associate 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: Database Systems; Large-scale Data Analytics; Next-generation User Interfaces; Text Analysis; Interactive Visualization.

**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; Infiniband; Exascale Computing; Programming Models; GPUs and Accelerators; Big Data; Virtualization; Cloud Computing; High Performance File Systems and Storage.

**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.

**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; Storage Systems



**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.

**NASKO ROUNTEV**

Full Professor



B.S., Computer Science & Engineering, 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: Software Engineering; Programming Languages and Compilers; Static and Dynamic Program Analysis; Software for Mobile Devices; 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

### **PRASUN SINHA**

Full 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



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**

Associate 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**

Associate 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: Sustainable computing; Internet services; Data-intensive services; Distributed Systems; Performance Modeling..

**HUAN SUN**

Assistant Professor



B.S., Electronic Engineering and Information Science, University of Science and Technology of China, 2010; Ph.D., Computer Science, University of California, Santa Barbara, 2015

Department Research Area: DATA MINING

Interests: Data Mining and Machine Learning with emphasis on text mining and understanding, network analysis, and human behavior understanding.

**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**

Associate 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; Neurodynamics.

## **HUAMIN WANG**

Associate 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.

## **YANG WANG**

Assistant Professor



B.E., Computer Science and Technology, Tsinghua University, 2005; M.E., Computer Science and Technology, Tsinghua University, 2008; Ph.D., Computer Science, The University of Texas at Austin, 2014

Department Research Area: DISTRIBUTED COMPUTING

Interests: Fault Tolerance; Large-scale Storage System; Correctness and Performance Debugging.

## **YUSU WANG**

Full 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; Visualization.

## **REPHAEL WENGER**

Associate Professor and  
Associate Chairperson



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.

## **WEI XU**

Assistant Professor



B.S. and M.S., Computer Science, Tsinghua University, 2004/2007; Ph.D. Computer Science, New York University, 2017.

Department Research Area: MACHINE LEARNING, NATURAL LANGUAGE PROCESSING, BIG DATA, SOCIAL MEDIA, DATA SCIENCE

Interests:

## **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; 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;  
Distributed Systems

### **YINQIAN ZHANG**

Assistant Professor



B.Eng., Information Security,  
Shanghai Jiao Tong University,  
2006; M.Eng. Communication  
and Information Systems, Shanghai Jiao Tong  
University, 2009; Ph.D., Computer Science,  
University of North Carolina at Chapel Hill, 2014.

Department Research Area: NETWORKING AND  
DISTRIBUTING COMPUTING

Interests: Computer System Security; Cloud and  
Mobile Security; Privacy

## **Emeritus Appointments**

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### **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

## 2017-2018 Clinical Faculty

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### **RAJIV RAMNATH**

Full 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: Scientific Computing; Using Data to Understand Adaptive Complex Enterprises; Enterprise Architecture and Engineering; Human-Machine Systems; Workflow and Work-Management Systems Enterprise Software Engineering and Computer Science Education; Wireless Sensor Network and Pervasive Computing Enterprise Applications; e-Government.

### **JEREMY MORRIS**

Assistant Professor of Practice



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.

Research Interests: Artificial Intelligence, particularly as it applies to Automatic Speech Recognition (ASR) and Natural Language Processing (NLP).

### **DAVE OGLE**

Associate Professor of Practice



B.S., M.S., Ph.D., Computer Science, The Ohio State University

Research Interests: Distributed systems, networking, and blockchain as it applies to application domains like supply chain.

## Courtsey Appointments

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**Michael Knopp**, Professor and Vice Chair of Research, Dept. of Radiology

**Yoonkyung Lee**, Professor, Dept. of Statistics

**Xiaorui (Ray) Wang**, Associate Professor, Electrical and Computer Engineering

**Cathy (Honghui) Xia**, Associate Professor, Integrated Systems Engineering

**Alper Yilmaz**, Associate Professor, Civil Environmental & Geodetic Science

## 2017-2018 Research Scientists

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### 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.

### XIAOYI LU

Research Scientist



B.S. Electrical, Electronics and Communications Engineering, Huazhong University of Science and Technology, 2006. Ph.D. Computer Science, Institute of Computing Technology, Chinese Academy of Sciences, 2012.

Research Interests: Parallel Computing (MPI/PGAS) and Cloud Computing (Big Data, Hadoop Ecosystem).

### HARI SUBRAMONI

Research Scientist



B. Tech, Computer Science, University of Kerala, 2004. M.S., Computer Science and Engineering, The Ohio State University, 2009. Ph.D., Computer Science and Engineering, The Ohio State University, 2013.

Research Interests: High performance computer networks, Network based computing, Internet router and switch architectures.

### HAO WANG

Research Scientist



Ph.D. Computer Science, Institute of Computing Technology, 2008

## Post-Doctorate Researchers

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Justin Eldridge  
Alfred Rossi III  
Gang Li  
Kayhan Moharreri  
Amit Ruhela  
Karthik Vadambacheri Manian  
Mengbai Xiao

## Research Staff

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Mark Arnold, *Research Specialist*  
Jeffrey Smith, *Research Specialist*  
Aravind Sukumaran Rajam, *Senior Research Associate*  
Lokanath Burujupalli, *Research Assistant 2*  
Kaitlyn Spehr, *Research Assistant 1*

## 2017-2018 Lecturers

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**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, Universita' 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**

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..



**ALAN CLINE**  
Senior Lecturer

B.S., Mathematics, The Ohio State University; M.S., Physics, Akron University



**DOREEN  
CLOSE**

Senior  
Lecturer

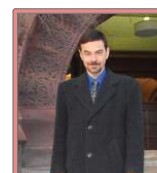
B.S., Computer and Information Science, The Ohio State University, 1979; M.S., Computer Science and Engineering, The Ohio State University, 1981.



**MICHAEL  
FRITZ**

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.



**MICHAEL  
GREEN**

Lecturer

B.A., Linguistics, Ohio State University, 1980; M.A., Linguistics, Ohio State University, 1982; J.D., Ohio State University College of Law, 1993; M.S., Computer Science and Engineering, Ohio State University, 2013.

**CINDY  
GRIMME**

Lecturer

B.S., Civil Engineering,  
University of Pittsburgh



**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.



**JEFF  
JONES**

Senior  
Lecturer

B.S. in Computer Science,  
Ohio University, 1981;  
M.S. in Computer and  
Information Science, The  
Ohio State University,  
1988; Ph.D. in Computer  
Science, Ohio University,  
2015.



**JANIS JONES**

Senior Lecturer

B.S. Mathematics, Ohio  
University, 1979; M.S.  
Computer Information  
Science, The Ohio State  
University, 1985



**SWAROOP  
JOSHI**

Senior Lecturer

B.E. Computer Engineering,  
National Institute of  
Technology Karnataka, 2005;  
M.Tech, Computer Science,  
Indian Institute of Technology,  
Bombay, 2010; M.S.  
Computer Science, The Ohio  
State University, 2016; Ph.D.,  
Computer Science, The Ohio  
State University, 2017



**CHRISTINE  
KIEL**

Senior  
Lecturer

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



**NEIL KIRBY**

Senior Lecturer

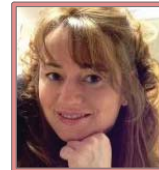
.B.S., Electrical Engineering,  
The Ohio State University;  
M.S. The Ohio Stae  
University



**LEON  
MADRID**

Lecturer

M. Sc. Computer  
Architecture, The Ohio State  
University

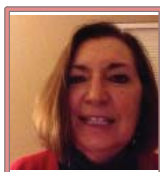


**MICHELLE  
MALLON**

Lecturer

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





**CATHERINE  
McKINLEY**

Lecturer

B.S. in CIS, DeVry University, 2002; MBA focus in MIS, Management Information Systems, Franklin University, 2004



**LORI  
RICE**

Lecturer

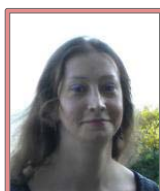
B.S., Information Systems, Ohio Dominican College; M.A., Workforce Development and Education, The Ohio State University.



**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.



**DIEGO  
ZACCAI**

Senior Lecturer

B.S., Computer Science and Engineering, The Ohio State University, 2009

## 2017-2018 Part-time Lecturers

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### Senior Lecturers

Kemal Aydin  
Thomas Bihari  
Lin Chiu  
Charles Estill  
Morteza Hashemi  
Khaled Jaber  
Praveen Kumar  
Scott Mills  
Bhuvaramur Narsimhan  
Andrew Plummer  
Perumal Ramasamy  
Angel Rivera  
Dauntrica Rodgers  
Alfred Rossi III  
Jason Van Hulse

### Part-Time Lecturers

Aaron Baxter  
Stephen Boxwell  
Michael Burkhardt  
Moez Chaabouni  
Laurie Crawford  
Jeffrey Eden  
Clair Farris  
Eric Frick  
Charles Giles  
Stephen Gomori  
Adam Grupa  
Shaikh Mohammed Zahid Hossain  
Roman Illin  
Mark Jackson  
Suribabu Jayanti

Jeremy Johnston  
Robert Joseph  
Diana Kline  
William Martin  
Steven Romig  
Richard Wagner  
Bryan Weaver  
Parker Wiksell

## 2017-2018 Visiting Scholars

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Lusaka Bhattacharya  
Jiongyi Chen  
Xiang Deng  
Vinicius Vitor dos Santos Dias  
Liang Geng  
Chengxin Guo  
Botong Ou  
Songquan Shi  
Yingxue Sun  
Dong Tian  
Chendong Wang  
Zhendong Wang  
Yanfeng Zhang

## Staff

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Julia Armstrong - Program Director  
Kathleen Babusci - Fiscal Officer  
Catreana Collins - Human Resources Generalist  
Tamera Cramer - Office Associate  
Donald Havard - Fiscal Officer  
Lynn Lyons - Office Admin Associate  
Tiffany McGough - Public Relations Coordinator  
Wendy Michel - Fiscal Associate  
Kitty Reeves - Instructional Development Specialist  
Christa Yandrich - Grant Funds Coordinator



At the Ohio Union during the Buckeython, Brutus Buckeye is always ready for a chat.  
~ photo by Elliot Gilfix, Engineering



Dreese Labs



Dreese's Garden of Constants

All photos on this page courtesy of the OSU "Image of the Day" webpage.



**THE OHIO STATE  
UNIVERSITY**

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COLLEGE OF ENGINEERING

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