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FROM THE DEPARTMENT HEAD

As we kick off our inaugural issue of CS@K-STATE, we start with an appropriate theme: the new computer science department. This last year was an amazing time of change and renewal for the department.

You'll probably first notice the change in our name. Computing and information sciences is out and computer science is back in. Those of you truly old-school alumni, will recognize the name from the early years of the department. The change came from that fact that we are aligning and streamlining our programs. We've effectively merged the information systems and computer science degrees into a single computer science degree that will make life easier for the students and faculty, and allow us to better focus our advertising and recruitment to future students.

The other big change is the department's move from Nicholas Hall to our new facilities. Our home is now Engineering Hall, with its 108,000 square feet of instructional, research and office space in the heart of the university's engineering campus. The building provides a flexible environment to inspire and support interdisciplinary learning and collaboration. It provides much needed laboratory spaces, state-of-the art classrooms and bright new offices. It is a great new facility, so if you're ever in town, please stop by and see us on the second floor.

Amidst these changes, the department has continued to grow in enrollment. We entered fall 2015 with 498 undergraduate, 42 M.S. and 35 Ph.D. students. This coming fall, we expect those numbers to be well over 500 undergraduate and 40 Ph.D. students.

Thank you for your continued support of our programs.

Scott DeLoach
Interim department head and professor
Computer science

BOEING INVESTMENT DEVELOPS
COMPUTER SCIENCE SCHOLARS PROGRAM

> "When corporate partners step forward like this, we know we are on the right track in developing a program that adds real value to industry."
>
> — Scott Deloach

An exciting new program in the department of computer science is gaining traction, thanks to generous investments from corporate partners like The Boeing Company.
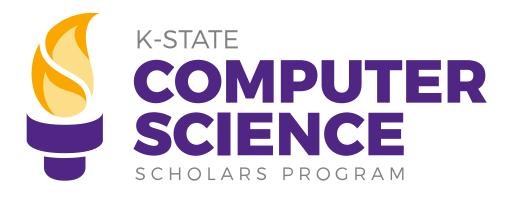
"We wanted to invest in student success while promoting our brand to the next generation of talented professionals," said Steve Wade, director of F-15 Middle East Sustainment Programs for Boeing. "Boeing teams can bring a lot of value to the educational experience, and likewise we can benefit from student perspectives."

Computer Science Scholars is designed to provide more in-depth application of computer science theory, smaller class sizes and enhanced opportunities for scholarships, internships and professional development.

By investing in the program, Boeing representatives will have the opportunity to mentor, hire and network with students.

"We are grateful for The Boeing Company's investment as we develop Computer Science Scholars," said Scott DeLoach, head of the department of computer science. "When corporate partners step forward like this, we know we are on the right track in developing a program that adds real value to industry."

Gifts to support the department of computer science also advance Innovation and Inspiration: The Campaign for Kansas State University. To learn how your gift can make a difference, contact engineering development at engineering@found.ksu.edu or 785-532-7519.

K-STATE
COMPUTER SCIENCE
SCHOLARS PROGRAM

TWO NEW FACULTY JOIN DEPARTMENT

NSF CAREER award supports cyber-physical systems work of new CS faculty member

The National Science Foundation has issued a CAREER award to a Kansas State University computing and information sciences researcher for her work that can develop better transportation, health care and energy systems.

Pavithra Prabhakar, an assistant professor who recently joined the computer science department, has received a five-year $446,000 CAREER award for her project "Robust Verification of Cyber-Physical Systems."

"Cyber-physical systems are an important part of modern society and they have transformative applications in the transportation, health care and energy sectors," Prabhakar said. "This research will bridge an important gap in the existing methodologies for the analysis of cyber-physical systems through the novel paradigm of robust verification, which will enable the development of high-confidence cyber-physical systems, particularly automotive and aerospace systems."

The National Science Foundation's Faculty Early Career Development Program is one of the foundation's most prestigious awards for supporting early career faculty who effectively integrate research and education in the context of their institution's mission.

"We are thrilled that Pavithra has received the CAREER award for her important research on systems that are becoming more prevalent in our lives," said Darren Dawson, dean of the College of Engineering. "Prestigious faculty recognition at this level is a crucial part of Kansas State University's plan to be a Top 50 public research university by 2025."

Read more at http://cis.k-state.edu/node/3258.

Software engineering a specialty for Ranganath

Venkatesh-Prasad Ranganath, previously a visiting professor here, joined the computer science faculty at K-State as an assistant professor in 2015. He is primarily interested in software engineering and programming languages, working on problems related to program dependences and slicing of concurrent programs, model-driven development of component-based systems, cache-based web-service optimization and software testing. His resulting techniques have been published at various venues and been captured in various open source tools that have been cumulatively downloaded more than 100,000 times, and used in both academia and industry.

Recently, Ranganath began exploring problems in the space of developing loosely coupled systems composed of devices and apps in the domain of medical systems, and combining program analysis and numerical/empirical approaches.

He has a bachelor's degree in computer science and engineering from Bangalore University, Bangalore, Karnataka, India; and both master's and doctorate degrees in computer science from K-State.

Before returning to the computer science department at K-State, Ranganath had been a software engineer for both Wipro Technologies in India and Agitar Software in the U.S. He was also a researcher for Microsoft in India.

COMPUTER SCIENCE MOVES INTO NEW HOME

The department of computer science officially moved into Engineering Hall on Jan. 7, 2016. Since then, faculty, staff and students have come to enjoy their new home, which boasts more than 19,000 square feet of space.

State-of-the-art laboratories currently accommodate 66 graduate students and 16 undergraduate researchers, with plans to eventually grow to support 90 graduate and 750 undergraduate computer science students.
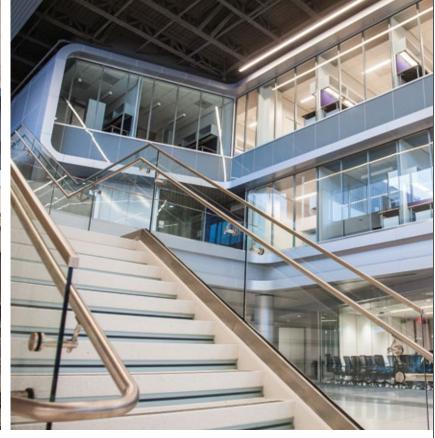
In addition, all computer science classes and research now take place within the Engineering Complex, which provides faculty and students with greater opportunities for collaboration with other engineering departments.

The new space has also increased the capacity of computer-based classrooms. The main computer science teaching lab, the Thin Client Lab, can now accommodate 50 students comfortably. The new classrooms also feature built-in multimedia capabilities to support online courses with advanced video and audio support.

Beocat, one of the largest freely available research clusters in the Midwest, with more than 3,800 cores, also moved to Engineering Hall.

According to Seth Galitzer, systems coordinator, the new data center "gives Beocat room to grow significantly in the coming years." Fundraising is underway to expand the current space to 1600 square feet and 500 kilowatts of power.

Student study tables and collaboration rooms are located throughout the complex. These areas offer charging stations, complementary Wi-Fi, flat-screen televisions for student collaboration and a world-class coffee shop with premium snacks served fresh daily.

As industry demands continue to grow, Engineering Hall will help the computer science department accommodate the increasing number of students interested in this discipline.

ABOVE, FROM LEFT: OUTSIDE VIEW OF ENGINEERING HALL, NEW COMPUTER SCIENCE CLASSROOM, AND INSIDE VIEW OF STAIRS LEADING TO CS DEPARTMENT

LEFT: COLLABORATING SPACE FOR FACULTY AND STUDENTS

RIGHT: PROF. DANIEL ANDRESEN WITH BEOCAT

EVENT HONORS CAREER OF
BETH UNGER

The computer science department hosted an event April 29 to celebrate the career of Professor Emeritus Beth Unger and her many contributions to the field of computer science, women in computing, and the growth and recognition of Kansas State University. Plans for the festivities were headed by Pratap Chillakanti, M.S. 1989, and many other of Unger's former students, as well as K-State faculty and alumni.

The day was filled with former students honoring Unger and her commitment to them and the university. Many of these are now industry leaders, researchers, and faculty members at Kansas State University, University of Kansas, University of Tulsa, University of Nebraska and Virginia Tech. They shared about Unger's influence on their lives and how she inspired them to make contributions to the next generation of scientists.

Unger continues to be very active in and around K-State, providing guidance and support to the department of computer science as well as the greater university.

HONORING **BETH**

Look at how far we've come! Join us in honoring the career and contributions of Beth Unger.

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"I was honored to participate in the recognition of Dr. Beth Unger, or Beth, as we all know her. I was an undergraduate student in the early years of Beth's K-State tenure and only had one class with her, but have applied what I learned from her throughout my lifetime. She had — and continues to have — an information technology vision that saw the potential and value of computing far beyond the simplistic automation we were doing at the time. Perhaps of even more value was her grasp of what was required to be successful in the 'real' world — not only in the information processing arena, but in life in general. Careers in this field were just developing, but she innately understood and imparted skills critical to our success. Her eyes are those of the visionary seeing well into the future, but her feet are planted firmly in the real world.

— Connie Phillips Jaynes, B.S. 1971
vice president, client services
First Data Corporation, retired

ABOVE: ELIZABETH UNGER WORKING IN COMPUTER DATA CENTER IN 1961

RIGHT: EMERITUS CS FACULTY MEMBER DAVID SCHMIDT WITH ELIZABETH UNGER AND CS ALUM PRATAP CHILLAKANTI AT HONORING BETH EVENT

CS ALUMNUS NAMED INTERIM CIO

Kansas State University has named Rob Caffey as interim chief information officer and vice provost for information technology services. He had served as director of Kansas State University's Office of Mediated Education since 2005.

"In addition to a wealth of IT knowledge, Rob Caffey is an accomplished communicator, collaborator and relationship builder among faculty, staff and students," said April Mason, Kansas State University provost and senior vice president. "His skill sets and experiences will move the university's information technology services forward as we continue on the path to become a Top 50 public university by 2025."

Caffey will lead information technology services, which has supervision of the university's communications, networking and server/storage infrastructure and services; academic, administrative and instructional technologies and support services; desktop support; technology training; information and technology security; infrastructure for research computing; and data and information management.

"I am excited to work with faculty, staff, students and our talented IT professionals in this interim role," Caffey said. "My focus will include establishing a rapport and communication with the university community to set and achieve K-State's goals as they relate to information technology services."

Caffey served Kansas State University's Global Campus as associate director of information system from 2001-2005 and information systems administrator from 1997-2001.

Caffey received the Outstanding Online Leadership Award in 2004 and the Professional Progress Award from Kansas State University's College of Engineering in 2016. He has a bachelor's degree in information systems from Kansas State University and a graduate certificate in business administration. Caffey also is completing his MBA from Kansas State University.

SIX CS STUDENTS WIN PHILLIPS 66 SHIELD SCHOLARSHIPS

Phillips 66 and Kansas State University have selected the new SHIELD Scholars for the 2016-2017 academic year.

The SHIELD Scholarship, sponsored by Phillips 66, is available for students in select majors in the College of Business Administration or the College of Engineering who have an interest in the energy industry. SHIELD Scholars receive $3,500 annually in scholarship money. Additional funding is provided for enrichment activities to help develop the scholars as students, young professionals and contributing members of the community.

Mentoring relationships with Phillips 66 professionals also are developed. The scholarship is renewable as long as the student meets the 3.25 minimum GPA requirement and participates in enrichment activities.

SHIELD Scholars for 2016-2017 at Kansas State University in computer science are Christian Hughes, senior, Leawood; Geordy Williams, junior, Prairie Village; Reagan Wood, junior, Shawnee; Adam Seiwert, senior, Pittsburg; Olivia Baalman, junior, Wichita; and Matt Hixon, junior, Bartlesville, Oklahoma.

COMPUTER SCIENCE 2015-2016 GRADUATES

B.S graduates

Alsayyari, Mohammed Khalid M.	Computer Science	Wilson, Hayden	Computer Science
Baldwin, William James	Computer Science	Woodburn, Ryan Alan	Computer Science
Bhatnagar, Vibhore	Computer Science	Yang, Huichen	Computer Science
Burch, Alexander Michael	Computer Science	Zhou, Jingyi	Computer Science
Donnelly, Christopher Jacob	Computer Science	Meierer, David William	Information Systems
Donnoe, Joshua B.	Computer Science	Schaefer, Jared Dean	Information Systems
Erdwien, Maxwell James	Computer Science	Lespierre, Oneil	Information Systems
Evans, Kyle Andrew	Computer Science	Leverich, Matthew Robert	Information Systems
Grier, Montana Robert	Computer Science	Matchanov, Batirbek	Information Systems
Howze, James Dean	Computer Science	Abejero, Japsh V.	Computer Science
Kelly, McKenna Rene	Computer Science	Barnes, David Edwin	Computer Science
Kim, Joung	Computer Science	Beahm, Alexander Joseph	Computer Science
Korinek, Haddon Joseph	Computer Science	Bennett, Joseph	Computer Science
Novelly, Simon Trent	Computer Science	Eichman, Staton	Computer Science
Ptacek, Kyle David	Computer Science	Green, Austin David	Computer Science
Su, Yuan	Computer Science	Merriam, Brett Riley	Computer Science
Unruh, Grant James	Computer Science	Neises, Alexander Michael	Computer Science
VanderLeest, Joshua Pearce	Computer Science	Pino, Sean Patrick	Computer Science
Ward, Ryan Christopher	Computer Science	Pruitt, Jacob Lynn	Computer Science
Webb, Matt	Computer Science	Speer, Ian	Computer Science

M.S graduates

Ali, Yusuf	Rayapati, Navya
Chakravaram, Vijay	Sharan, Smita
Challa, Abhishek	Throneburg, Zachary William
Courtney, Chaney Lee	Vanteddu, Satyasagar
Kothakapu, Aravind Reddy	Wang, Wenbo
Krishna, Ashwin	Yadavalli, Siri Chandana
Malladi, Rajavardhan Reddy	
Mathukumalli, Sravya	
McCall, Michael John	
Mothekani, Sowmya	
Namburi, Sruthi	
Pulipaka, Mohana Saketh	

PhD graduates

- Bardas, Alexandru Gavril
- Procter, Samuel C.
- Qian, Hao
- Yang, Ming
- Zhang, Zhi
- Zhuang, Rui

CONGRATULATIONS!

GOLDEN KEY RECOGNIZES CS GRADUATE ASSISTANT

Fifteen of K-State's graduate teaching assistants and graduate research assistants were nominated by faculty to be recognized for their outstanding leadership and diligence at the Golden Key International Honour Society's GRA and GTA Awards Ceremony and Reception, April 24, at the K-State Student Union.

Among those honored was Dhananjay Mehta, computer science, nominated by Julie Thornton, an instructor in the department of computer science.

"Golden Key sponsors this recognition ceremony because we feel that it is important to acknowledge the graduate teaching and research assistants at K-State and all that they do," said Kori Zarzutzki, social events chair for Golden Key. "It gives department heads and professors an opportunity to show their GTA or GRA that their work is not only great, but truly appreciated by nominating them for the Outstanding GTA of the Year or Outstanding GRA of the Year awards."
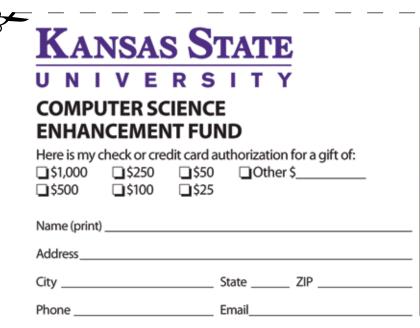
NEW ORGANIZATION TO SPARK STUDENT INTEREST IN ARTIFICIAL INTELLIGENCE

Today there is a pressing need to embrace artificial intelligence as we move further into a world of smart and connected devices. The Association for Computing Machinery's Special Interest Group on Artificial Intelligence, or ACM-SIGAI, is a student organization of the department of computer science, which aims to provide a common platform for students to learn and work on problems involving artificial intelligence.

Many researchers at K-State are embracing AI and its related fields — machine learning and computer vision — in their research. But the major challenge they face is finding researchers and students with these skills and interests. ACM-SIGAI bridges this gap by connecting undergrads, graduate students and faculty in a wide variety of fields in and outside of engineering.

ACM-SIGAI will officially begin in the fall 2016 semester. It will host bi-weekly meetings with educational events, guest speakers, programming contests pertaining to artificial intelligence and movie nights, as well as lively discussion of this exciting field. Anyone with interest in artificial intelligence and its opportunities is encouraged to attend the meetings. Further information and an interest form to fill out are online at bit.ly/kstate-acm-sigai-form.

KANSAS STATE UNIVERSITY

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CS UNDERGRADUATE STUDENTS PARTICIPATE IN THE 2016 COLLEGE OF ENGINEERING OPEN HOUSE SKIT, APRIL 15, 2016.