

# ORANGE COMPUTING

Newsletter of the Department of Computer Science, Oklahoma State University

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Issue 4, Spring 2010

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## MESSAGE FROM THE DEPARTMENT HEAD

As the Spring semester is ending, it is the time to look back at the accomplishments of our students and faculty in the past few months.

Our outstanding senior this year was William Kelton. Parth Dalal, Derek Webb, Melanie Prevett, Phillip Chatelain, and Benjamin Popp won the annual ConocoPhillips scholarships. Amongst our graduate students, Han Zhao won a summer internship at the IBM T.J. Watson Research Center in New York.

Professor Andy Li was awarded NSF's CAREER Award. Andy Li has established a large group in the networking and cloud computing areas at OSU.

The CS Department hosted the annual Oklahoma Computing Conference on March 5. The Department is in the process of adding to its laboratories. A new cloud computing laboratory will be established in the coming months.

Meanwhile OSU has launched its billion dollar campaign to raise money for scholarships and other student awards. President Hargis and the OSU Foundation have set this ambitious goal to enhance our ability to support the university's educational efforts.

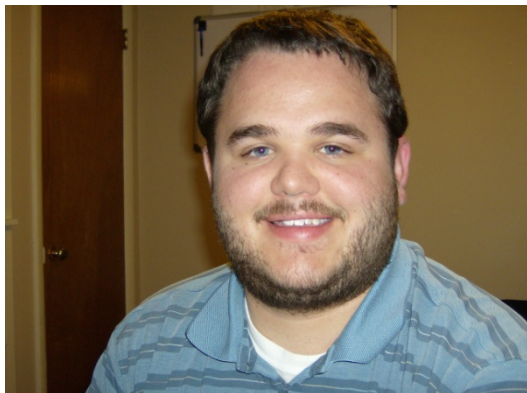
We are sorry that Ed Roberts, a graduate of OSU in 1968, who is called the father of the personal computer, died on April 1, 2010 at the age of 68. Roberts's ALTAIR 8800, c 1975, is generally recognized as the first personal computer. The Altair was a kit for assembling a home computer and it was based on the recently introduced Intel chip, the 8080. Roberts hired Bill Gates and Paul Allen to write software for Altair in BASIC, a language that was in the public domain. The Altair became popular with electronics hobbyists around the country. Roberts and his employees toured the country promoting the Altair. By 1977, Roberts was burnt out and he sold his company for \$6 million.

Roberts now turned to his true passion, entering medical school in 1982 at the age of 39. He bought a farm in rural Georgia and became a country doctor in Cochran, a town with less than 5,000 residents.

*Subhash Kak, Ph.D.*

## OUTSTANDING SENIOR 2009-2010

### William Kelton



Mr. William Kelton was selected the Outstanding Computer Science Senior for the 2009-2010 academic year. He will earn a double degree in Computer Science and Mathematics in May, 2010.

During his tenure at OSU he participated in the local chapter of the Association of Computing Machinery (ACM) by competing in two local programming contests and by representing OSU at the 2008 South Central Regional ACM programming contest by programming on one of two teams. He also participated in the 2009 Mathematics Contest in Modeling.

Fall 2007 through Spring 2008, Will worked as a tutor at the Mathematics Learning and Resource Center (MLRC), helping OSU students with their math course work in courses ranging from College Algebra to Differential Equations. Then from Fall 2008 to the present, he worked as a Coordinator, ensuring that the MLRC runs smoothly to better facilitate the tutoring of OSU students in math courses.

Will plans to continue his education by attending graduate school in Applied Mathematics.

## CONOCOPHILLIPS 2009-2010 SCHOLARSHIP RECIPIENTS IN THEIR OWN WORDS

### Parth Dalal



I'm a 21-year old Computer Science student currently in my third year at OSU. I grew up in Stillwater, passionate about both computers and music. Within the Computer Science field, I am very interested in creating games, and am actually enrolled in Dr. Mayfield's excellent game development class this semester. On the side, I do a lot of work writing, sequencing, mixing, and recording music. I have big dreams for the future. Let's hope they come true.

### Derek Webb



When my parents used to tell me that I should look into computer science, I would roll my eyes and think no way is that ever going to happen. But after taking my first CS course here at OSU, and falling absolutely in love

with it, I cannot think of anything else that I would rather devote myself to! I would have never guessed that I would find myself spending my Friday nights working on my latest personal project or staying up all night because I just couldn't quit coding. I guess my parents were right, as they always seem to be...darn them!

### Melanie Prevett



My name is Melanie Prevett. I am from Owasso, Oklahoma. I am studying towards bachelors in computer science and hope to matriculate to medical school. I would like to be involved with computer based medical research, where I would be able to use both these skills.

### Phillip Chatelain



I am currently a senior at Oklahoma State University. Upon graduation, I plan to pursue a professional career using his degree in Computer Science.

I graduated from Weatherford High School in Weatherford, Oklahoma with honors in May 2007. After high school graduation, I attended Southwestern Oklahoma State University for a year before transferring to Oklahoma State University.

While attending high school and college, I worked for three years as a part-time cook at Pizza Hut.

### Benjamin Popp



I was born October 9, 1988, started computer science in the 5th grade with the Mills Elementary Lego Logo Club. I then went on to learn QuickBasic, Java, and HTML, followed by a host of other languages.

While my majors are Computer Science and Mathematics, I also enjoy playing the piano and writing music. I am now a Senior at OSU and I'm planning to work either as a Game Developer or an User Applications Developer. I will graduate in May of 2011 along with his wife, Raina.



# OKLAHOMA COMPUTING CONFERENCE 2010

## REPORT BY *CHUCK ELLIS*

On March 5, 2010, the OSU Computer Science Department hosted the Fourth Annual Oklahoma Computing Conference. The conference is an annual get together of faculty and students from the various Computer Science departments from around the state. The conference is sponsored by an informal group of Computer Science scholars known as the Oklahoma Computing Consortium and is held once a year, usually in March, on a member institution's campus.

We gather to share our ongoing work and ideas about teaching computer science at the colleges and universities in the state. There were nine formal presentations and one poster presentation made during the course of a very full day. There were attendees from ten different colleges and universities in Oklahoma, both faculty members and students.



Keynote Speaker Bill Walker at OCC

The day was spent in the ConocoPhillips Alumni Center's outstanding facility listening to the presentations over wide range of topics. The day began with a welcome from department head, Dr. Subhash Kak, and the introduction of Dr. Bill Walker, Professor Emeritus, East Central University, our keynote speaker. Dr. Walker shared his experiences and acquaintance with his "Heroes" of Computer Science, some of the best minds in the field since its inception.

Bill's presentation was particularly entertaining because of the personal stories he shared of his friendships with the pioneers of Computer Science, such as Sir Tony Hoare, Edsger Dijkstra, Susan Graham and Richard Stallman. Dr. Walker often entertained these heroes in his home in Ada, OK and was good friends with most, but not all. Apparently, Richard Stallman, of GNU Manifesto/Open Source fame, was a "colorful" character. So colorful in fact that he nearly caused Bill's arrest at the Oklahoma City airport. After sorting out the problem the police asked Bill, what he wanted done with Stallman and Bill said, "Put him on a plane!" "To where?" he was asked. "Anywhere", Bill replied!



## Oklahoma Computing Conference

We continued to hear outstanding presentations the rest of the day, everything from tips on teaching C++ to undergraduates to a survey of the readiness of Oklahoma four year schools to promote and participate in GENI. The best part though, was the opportunity to visit with old friends and share experiences, new and old.

The Alumni Center is a beautiful place with state-of-the-art seminar rooms and a wealth of OSU memorabilia. It is worth a visit even if there isn't a conference going on to attend. It was also conducive to doing the "work" of Computer Science, sharing ideas, techniques and information. The fruits of such a gathering far exceed the mere presentations given but include the valuable collegial interchange among peers with diverse issues and solutions.

Next year's conference will be hosted by Langston University in the Spring of 2011. Stay tuned for details on next year and plan on attending, it is a great experience.



## HAN ZHAO



I was born in Dalian, a seaside city located at Northeast China (that's why seafood is my favorite). I grew up in a teacher's family; my mother taught social science in middle school and my father taught math in military school. Benefiting from this well-balanced educational background I did pretty well in both social and natural sciences at my elementary school. Back at that time I was a shy little boy living in my war hero fantasy. As a young little boy, I read fairly widely and much more compared to my readings today. Sad but true.

My personality mysteriously transforms in my early youth, becoming outgoing and a little rebellious. I used to play electone, and developed into a huge soccer fan. I got my first personal computer at the second year of my junior high school (8th grade in US). Although the visual effects was nowhere close to today's computer, I got enchanted by this charming appliance pretty quickly. I learnt most DOS commands in order to play some hacked games on my desktop. Upon graduating from high school I entered Jilin University, China. No surprisingly I chose to enroll in the major of software engineering. In college I met my wife Xinxin who is also a Ph.D. student of Dr. Li. We were classmates and got married in US on the Valentine's Day of year 2007.

**My Research.** In year 2006 I got admitted to the Ph.D. program in Computer Science Department at OSU, working under Dr. Li's supervision. My research area generally lies in the field of parallel and distributed computing. If there is only one word can be used to describe my research, that would be *scalable*, a property critical to characterize today's global computing platforms. The increasing system scale as well brings design problems such as unbalancing workloads and error-prone applications. My research focuses on designing and evaluating efficient scheduling algorithms for scalable systems, and published several conference papers in that area. Currently I worked as a research assistant for OKGems project, which federates diverse resources of sensors and robots into the NSF funded GENI project. In this summer I am going to join IBM T.J. Watson Center at New York for summer research internship.

**My Life at OSU.** Although the summer temperature drives me crazy, I really enjoy the peaceful life style in Stillwater. I like the crystal clear sky and the refreshing breeze in Oklahoma. As a senior graduate student, I have witnessed our department growing in the last four years. No matter where I am after graduation, the experiences at OSU will always be a priceless gem in my memory. You are welcome to visit my personal home page: <http://www.cs.okstate.edu/~haz/>

## PROFESSOR ANDY LI REFLECTS ON HIS OSU EXPERIENCE



I still remember the first day when I joined the department. That was an interesting feeling, sitting in my new office, almost empty, and thinking how to behave like a professor although I just graduated from Rutgers University one month ago. Then I started to stop by my new colleagues' office, greeting and chatting. When I stopped by Dr. George's office and stretched our my hand to him to shake hands with him, he was quite reluctant but he did shake my hand but with puzzle on his face. He was thinking why this student pretended to be so professional to shake hands with him. After introduction, he realized this guy was one of probably seven faculty candidates who visited the department several months ago. This opens the wonderful journey of my academic life at OSU.

Starting with no student in the first semester, I slowly grew my group from one PhD student and two MS students in the second semester, and finally to nine PhD students and two MS students now. As my group grows, we started with regular weekly seminars, which not only broadens students' knowledge base, but also trained their presentation skills, research senses, and proactive thinking. For many times, new ideas came from these seemingly routined seminars. Our group is called Scalable Software Systems Laboratory, doing research in parallel and distributed systems and cyber

physical systems, all at scale. In the research-intensive environment, our students have been working hard and generated many high-quality research papers and software packages. Our research has been recognized by two Don and Shirley Fisher Graduate Scholarships (PhD) and the National Science Foundation CAREER Award.

During my junior faculty period, I have received much help from my colleagues on how to prepare budgets, proposals, collaborations, mentoring students, to systems, accountings, and many other daily activities. Without the friendship and leadership from our faculty and staff, I couldn't enjoy the typically miserable pre-tenure faculty life. I sincerely appreciate all the help and mentoring from our colleagues.



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Faculty, classmates as well as current students are interested in you and your career after finishing at OSU. Any information that you can send us will be circulated to departmental faculty and staff and will be printed in the next issue of Orange Computing. Please let us hear from you.

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