



## Computer Science Student Attends Apple Worldwide Developer Conference

Luke Irvin (BS-Computer Science; 2011) was selected by a panel of technical professionals at Apple, Inc. to attend Apple's World Wide Developer Conference (WWDC) in San Francisco June 6 – June 11, 2011. According to Apple, this conference "is the premier event for developers creating innovating applications for Apple platforms. Many students apply, but only a select few are chosen" to attend this meeting. Luke was able to afford the \$1,600 registration fee thanks to a student scholarship from Apple. The WWDC has been an annual event since 1983 with 5,200 people in attendance this year. The focus of this year's conference was (*continued*)



## UCA STEM Institute Hosts the third and final year of the Science Lead Teacher Institute (SLTI)

The UCA STEM Institute has hosted the third and final year of the SLTI program. SLTI is a three-year partnership grant funded through the Arkansas Department of Education, under the auspices of the No Child Left Behind Act of 2001. Total funding for the three years was \$341,262 and Dr. Umadevi Garimella has been the project director. In total, 28 teachers from 13 school districts participated in the program. They attended a 2-week summer session each year that was content-intensive, classroom focused and aligned with state standards and science curricula. The teachers learned new ways of teaching Newton's Laws, Electromagnetism, Plate Tectonics, Gas Laws, Atomic Structure, Plant Systems, Photosynthesis, Respiration, Heredity, Ecology and Biogeochemical Cycles. Ms. Minnietta Ready, STEM Institute science specialist, facilitated the program. Drs. Culwell (retired), Hirrel, Slaton, Mimms, Yarberry and Swanson from College of Natural Sciences and Mathematics (CNSM) presented the lessons. Dr. Kohler-Evans from College of Education (COE), presented the "Concept (*continued*)"





(*SLTI continued*) Mastery Routines” strategies and Dr. Alison Hall (Honors College) talked about agricultural biodiversity and the importance of seeds.

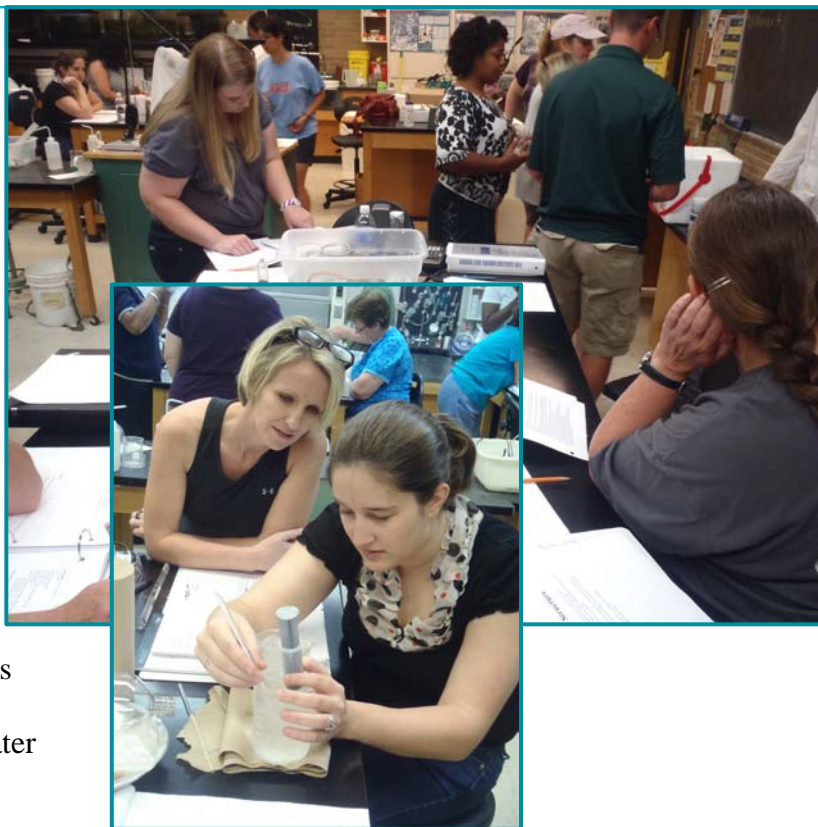
The intent of this program is to encourage institutions of higher education and high-need local education agencies to participate in programs that increase the subject matter knowledge and teaching skills of teachers to improve the academic achievement of students in the areas of mathematics and science. The SLTI program is a model designed to provide secondary science teachers with the knowledge, skills, and resource materials to engage their students in the sciences by integrating concepts of physical science with biology and creating a vertical alignment of the curriculum. Since August 2008, 20 classroom activities have been developed that engage student interest in sciences and integrate current technology. The teachers have gone through 180 hours of professional development training. To help implement the activities, UCA faculty visited their schools and co-taught several lessons.



This long-term, sustained, professional development program had positive impact on both teachers and UCA faculty. Most of the teachers participated in the program for the full three years. The teachers gained content and pedagogy knowledge, had an opportunity to network with their colleagues and to get familiar with UCA programs and resources. The UCA faculty learned a lot about how science and math (*continued*)



(*SLTI continued*) education works at the K-12 level. To assess the impact of the MSP on the K-12 science teachers and their students' content knowledge, the treatment group (SLTI teachers) were compared to the comparison group (non-SLTI teachers) using a quasi-experimental design. The pre- and post-test results revealed a statistically significant difference between the post-test scores of the treatment and the comparison groups. To measure the impact on the students' science content knowledge, a pre/post-test was administered to students of the treatment group and comparison groups. The students in the classrooms of the treatment group teachers gained 17% (items answered correctly) while the students in the classrooms of the comparison-group teachers gained only 3% (items answered correctly). Overall, the students of participating teachers exhibited substantially greater pre-test/post-test gains than students of the comparison teachers.



(*Luke Irvin continued*) software with the unveiling of Lion (the next version of Mac OS X), iOS 5 (the next version of Apple's mobile operating system for iPhones and iPads), and iCloud (Apple's new cloud data storage service).

Luke had five recommendations for others upon return from the conference. First, get a Twitter account. This was used in lieu of business cards at the conference. Second, travel light. Vendors were handing out plenty of swag; Luke had four t-shirts given to him by start-ups the night before the big event. Third, show off your app. Even if it is not quite ready for the app store yet, be ready to show what you can do because people are interested in seeing it. Fourth, come prepared to ask questions. Apple uses this event to help to train the army of developers that will make their devices useful. And finally, take time to sight see. Don't lock yourself in the conference and forget where you are. There are always other things to see and do when you travel to far away places!



## Chemistry Faculty Member Named Resident Master of Hughes Residential College

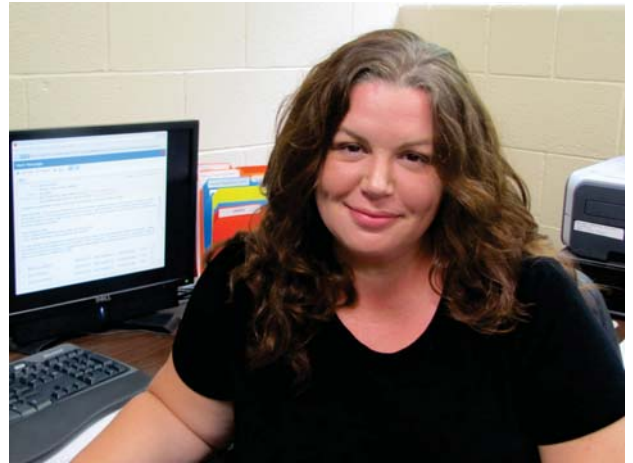


Dr. Faith Yarberry of the Department of Chemistry will serve as Resident Master of the Hughes Residential College beginning with the fall semester of 2011. The appointment is for a two-year period. Dr. Yarberry will continue to serve as Lecturer I in the Chemistry Department with a reduced teaching load. Dr. Yarberry's involvement in this residential college, which has the theme of leadership, will be a significant contribution to the University as well as the College and the Department. Dr. Yarberry and her family are excited about the prospect of living in Hughes Residence Hall! Congratulations Faith!

## New Biology Staff

Kate Saunders has been a chef and restaurant manager/owner for the past fifteen or so years. She is now putting her skills as restaurant office manager to new use as an Administrative Specialist II in the Biology Department at UCA. She has been married for almost 12 years to the most wonderful man on earth, Kevin Saunders, and together they have two beautiful daughters, Lilith, 11 and Eva, 6 months.

Kate is looking forward to settling in to her new career and becoming a part of the UCA family once more after being a student here years ago. Everyone has been very welcoming to her as she becomes adjusted to her new role. She looks forward to meeting all of you in the coming days and weeks. Kate is excited to be a part of the UCA Biology team!



## United States Navy Medical Education



From June 21st through June 23rd Dr. Steven Runge, Dean of the College of Natural Sciences and Mathematics attended a VIP Medical Educators tour of the U.S. Navy medical facilities in San Diego, CA. The trip, arranged by Chief Petty Officer Julie L. Arp and hosted by Lieutenant Commander AJ Donato, included visits to the Naval Medical Center-San Diego and the Mercy, a U.S. Naval Hospital Ship. During the trip

Dr. Runge interviewed with medical personnel ranging from corpsmen, nurses and physical therapists to an orthopedic surgeon and medical technologists. As a side trip, Dr. Runge's group toured the USS Asheville (SSN 758), a Los Angeles-class nuclear submarine. A follow-up event at UCA is planned for early November 2011. All health care-affiliated student groups and their advisors will be invited to a luncheon at which they will learn about opportunities for scholarships, educational programs and careers in Navy medicine.



# COMPUTING IS COOL AND FUN

## Google CS4HS Workshop @ UCA

From July 11-14, fifteen teachers from schools in central Arkansas participated in the CS4HS (Computer Science for High Schools) Workshop in the UCA Computer Science Department. The objective of the workshop was to promote computer science and computational thinking in middle and high schools. Computer science is having a revolutionary impact on and beyond scientific research and discovery. To flourish in today's world, everyone needs to understand computational thinking.



During the first day, workshop participants reviewed data from the Bureau of Labor Statistics that revealed a huge and growing demand in the computing related workforce. Currently, universities can only graduate about half of the students necessary to meet the demand. Significant nationwide efforts are being made by governments,



industries, and of course educators to advocate computing education at all levels from K-16.



The theme of the workshop at UCA was: Computing is Cool and Fun. Computing fundamentals were introduced through hands-on projects such as interactive game development, image manipulation, and computer security. Teachers will be able to use these projects in their classes directly or with minor modifications to meet their needs. Some of the quotes from the post workshop survey show how successful the workshop was:



"I will encourage my students to pursue computer science classes."

"The professors that taught and kept us (*continued*)"

*(Google CS4HS Workshop continued)* learning and the individualized instruction that was available were all absolutely phenomenal."

"I want to use these basic principles to help encourage my students to look into computer science and also to apply these settings to my classroom technology."

"This was an outstanding workshop. Well planned, comfortable, inspiring. Thank You!"

This workshop is funded by a grant from Google.

Dr. Chenyi Hu is the PI of the grant with co-PIs Bernard Chen, Michael Nooner, Vamsi Paruchuri, and Karen Thessing. Teachers from the following schools participated: Benton Junior High School, Cabot High School, Conway Area Career Center, Conway High School – West, Gravette High School, Horace Mann Magnet, J. A. Fair, LISA Academy, Mabelvale Middle School, Mount Vernon-Enola, Parkview High School, Pulaski Heights Middle School, Searcy High School.



Save the Date!

Summer 2 and  
10 Week Finals  
Friday, August 12

Summer  
Commencement  
Friday, August 12

Summer 2 and  
10 Week Course  
Grades Due

Noon  
Tuesday, August 16

Welcome Week  
August 21 - 25

Opening  
Convocation  
Monday, August 22

CNSM College  
Faculty Meeting  
Wednesday, August 24  
9:00 – 10:00, LSC 100

Fall Classes Begin  
Thursday, August 25