

Registration opens in early January. Submission deadlines vary by state during the first week of March.

A wide variety of learning resources, including tutorials and complete units of study, are available for both classroom and independent learning at expression.microsoft.com/education. A series of online webcasts and virtual labs are being offered to help teachers learn Expression and answer their questions.

Competition support is available on Facebook (bit.ly/facebookTech), and [Twitter@MSTechStudent](https://twitter.com/MSTechStudent). Technical support with Express Web is available at Expression forums at bit.ly/ExWebSupport. Visit www.blinkcontest.com for a complete list of resources.

To ask questions or to request Expression Studio software e-mail innovativeteachers@microsoft.com.

College Connection

University of Alabama

Editor’s note: *This dialog with Jeff Gray, Associate Professor in the Department of Computer Science at the University of Alabama (UA), is a continuation of our series of interviews with CSTA institutional members. The UA Department of CS offers many professional development and outreach opportunities to high school teachers or students. Please share these details about the CS programs at UA (www.cs.ua.edu).*

The University of Alabama, located in Tuscaloosa, is the oldest in the state and has the largest enrollment (30,232) among Alabama universities. UA was recently ranked tenth in the nation for enrollment of National Merit Scholars and led the nation with 10 students named to *USA Today’s* “All-USA College Academic Team.” The CS Department, located in the College of Engineering, offers bachelors, masters, and doctoral degrees.

CSTA: What draws students to UA CS and what keeps them there?

Gray: UA is small enough to offer memorable mentoring experiences with faculty, yet large enough to offer quality cutting-edge research. UA offers a unique Computer-Based Honors option and the department is housed in a new state-of-the-art research complex. Over the next few years, \$250 million worth of additional construction will be added to the science and engineering complex.

CSTA: Tell us about innovative CS programs at UA.

Gray:

- The 100P program is an innovative, NSF-sponsored curriculum in which students complete 100 concept and research-related problems throughout their undergraduate experience.
- The Text-to-Art project combines problem-based learning with service-learning and emphasizes the creation of artistic works, collaboration, and reflection.
- Students in PREOP use incoming sensor data to create intelligent robot controllers with an Alice-like interface.
- A new course will focus on smartphone applications for the Android and service-learning experiences.
- A new course on Competitive Programming is being planned to prepare students for the ACM Programming Competition.

CSTA: What cool careers are your graduates prepared for?

Gray: Students interested in computing can find careers in government, private industry, research labs, and with their own start-up ventures. Our students are employed at traditional software companies but also in diverse companies across multiple domains. Alabama is becoming a leader in automobile

manufacturing (Mercedes-Benz, Honda, and Hyundai); several of our graduates write software for the automation in those factories. Huntsville, AL, has the second largest technical research park in the U.S. (fourth largest in the world) and ranked by *US News & World Report* as one of the top-ten locations for tech jobs.

CSTA: Tell us a bit about the social environment of the CS program.

Gray: The CS classrooms are close-knit learning environments where the faculty members know students personally. The ACM student chapter is very active in arranging events such as movie and game socials, contests and education events, and career seminars.

CSTA: How is the diversity of the CS student population developed and encouraged?

Gray: The College of Engineering has several programs to support students from traditionally underrepresented groups. Our outreach efforts are showing positive results; among the 50 state flagship institutions, UA was recently ranked fourth for percent of undergraduate degrees conferred to minority students.

CSTA: What professional development and outreach programs are offered by the UA CS Department?

Gray:

- The AP CS Summer Institute and Alice workshops for teachers.
- Dorm-based summer camps for students and teachers in Java, robots with Java, and Android apps with Java.
- A robotics programming contest for K–12 students.
- “Roadshow” visits and on-campus field trips.
- XO laptop training with CS Unplugged activities for fifth grade students.

A new area of outreach that I am personally excited about intersects both research and education. Several UA students created an interface to Scratch with a “Programming by Voice” feature. We plan to work with United Cerebral Palsy to teach children with disabilities how to program in Scratch. For more information about professional development and outreach at UA visit www.cs.ua.edu/~gray/outreach/outreach.html.

SHOW ME THE NUMBERS	
CSTA MEMBERS’ PREFERENCES IN PROFESSIONAL DEVELOPMENT	
PD Format	% of members who ranked it highly effective
Workshops/seminars	68.4
Networking with others	50.2
Online resources	46.9
Professional conferences	43.2
Computer-based tutorials	40.7
College courses	31.2

SOURCE: CSTA National Secondary Computer Science Survey (2009)
csta.acm.org/Research/sub/CSTARResearch.html