

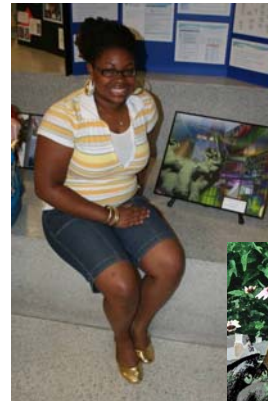
## Mentoring for Connections to Computing (MC<sup>2</sup>) Broadening Participation in Computing: Demonstration Project



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The University of Cincinnati (UC) aims to provide urban high school students with exposure to computing-related problem-solving activities and undergraduate mentors. The undergraduates have had significant co-operative education experience and are trained to mentor youth. As part of the *Computer Science Investigations (CSI:Cincinnati)* project, undergraduate mentors develop innovative lessons and activities about computing topics, conduct and assist in lesson delivery, and make their lessons available in a web-based repository.

Another major activity of the grant is to offer the *UC/CATC Digital Arts Workshop*, where urban high school students use computers to create an original, digital artwork based on the Harlem Renaissance movement. The students tour UC's campus and take their own photos of people and architecture to use in their art work.



Digital Arts Workshop Exhibit of student work

A sample digital collage



### 2008 Highlights:

- 8 undergraduate mentors developed and delivered 9 activities in 3 urban STEM classrooms for 47 students in the *CSI:Cincinnati* project
- 14 high school students participated in the *Digital Arts Workshop (DAW)* and developed original photo collages; 12 were female, 9 African-American, 3 Asian/Pacific Islander, 1 Hispanic
- 4 mentors, the GA, and the PI attended the ACM Computer Science Education Conference in Portland, Oregon; two CSI lessons were inspired by a bioinformatics workshop and the *CS Unplugged* workshop



### Findings:

- *CSI:Cincinnati* post-surveys indicated increased interest in computing topics and careers
- *DAW* student interviews indicated interest learning more about post-secondary studies in computing, engineering, and the arts

### Contributions to Broadening Participation in Computing include:

- encapsulating computing expertise in lessons to share with teachers and mentors,
- increasing access to free educational materials related to computing,
- providing exposure to challenging computing concepts and increasing technological literacy for underrepresented groups, and
- encouraging underrepresented groups to explore computing as a field of study and a career.