First Iteration of SGCI Internships and Coding Institute

2017 :: Joel Gonzales-Santiago, Hagen Hodgkins, Edsel Norwood II, Reginald Kelley, Derek Morris Jr
Dr. Linda B. Hayden, SGCI Workforce Development :: Center of Excellence in Remote Sensing Education and Research
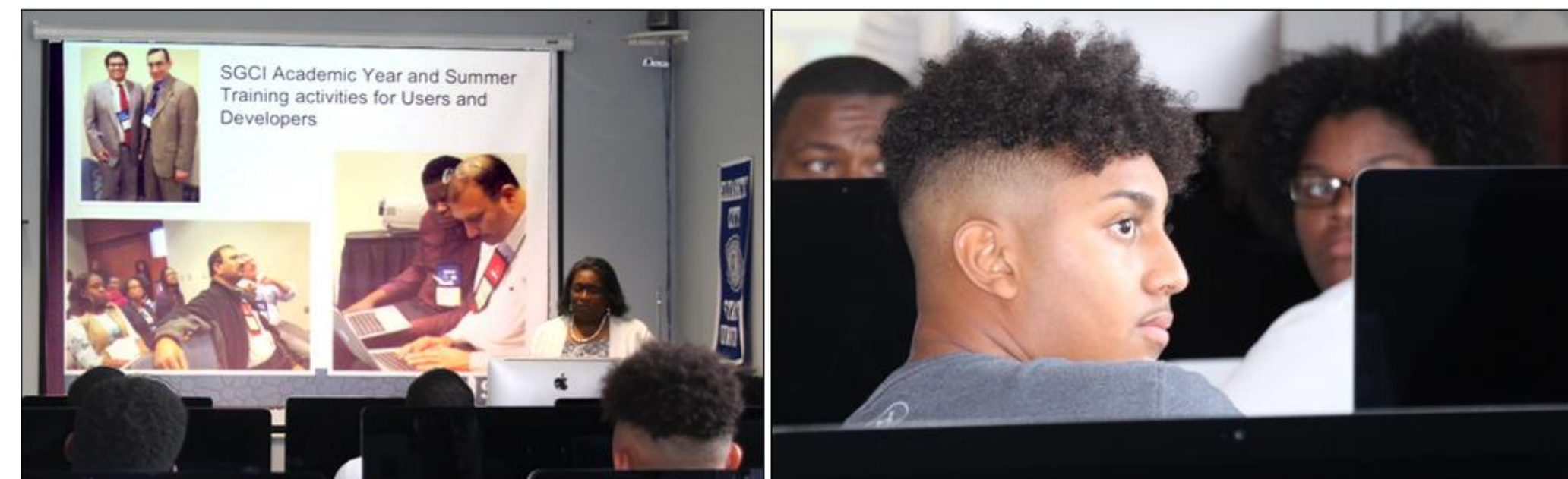
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SGCI · Science Gateways Community Institute

SGCI Coding Institute

Summer 2017 saw the first iteration of internship placements and implementation of a 4–week coding institute. While the internships placed students with mentors at Science Gateways Community Institute (SGCI) and client sites, the coding institute covered the core skills needed to be productive in design and maintenance of science gateways. This poster details both the SGCI internships during 2017 and the experiences during the 4-week coding institute.

Attendees

Edsel Norwood II	College of the Albemarle	CS
Reginald Kelley	Elizabeth City State University	CS
Derek Morris Jr	Elizabeth City State University	MATH/RS
Percy Adams	Mississippi Valley State University	CS
La'Andrea Gates	Mississippi Valley State University	MATH
Kartavis Phillips	Mississippi Valley State University	MATH
Kyanie Waters	Mississippi Valley State University	MATH
Jeffrey Guzman	Saint Augustine's University	CS
Mahamat Oumar	Winston-Salem State University	CS
Ke'Darius Whitley	Winston-Salem State University	CS

Trainers

The SGCI Workforce Development 4-week Coding Institute hosted eight undergraduates and two graduate student trainers. Indiana University and Software Carpentry provided trainers Jerome Mitchell, Bill McClung, and Kunal Marwaha. Topics included in the coding institute: Python/R, Unix Shell, and MatLab programming.
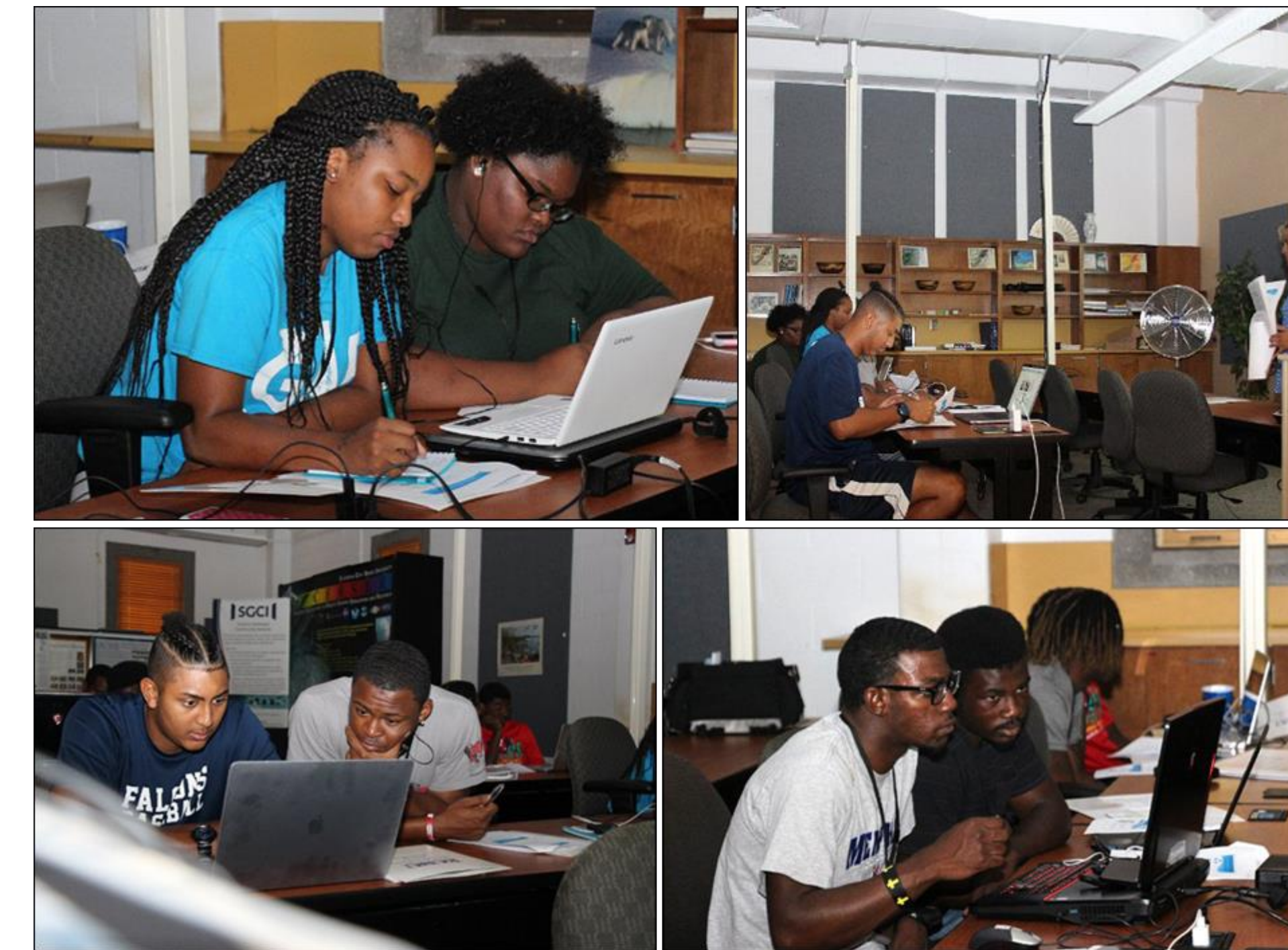

Jerome Mitchell   Bill McClung   Kunal Marwaha

PEARC17 · Virginia Tech · SDSC · STEM TREK · XSEDE

PEARC17

As part of the Coding Institute participants were registered for the PEARC17 conference. Five students presented posters during PEARC17 and students participated in the Student Modeling Day, the Student-Mentor Program, and Speed Networking. While there, students completed hands-on projects and gave presentations as listed here:

- Mathematical Modeling for Malaria Transmission Dynamics I and II
- Prediction Model for Human and Mosquito Populations in Malaria Afflicted Regions
- Modeling the Zombie Apocalypse
- Using RK4 to Model Felix Baumgartner's 38969 m Skydive

Among other tasks, interns investigated the use of web-enabling Interactive Parallelization Tools to run very large simulations; and created a proof-of-concept science gateway for the acquisition, storage, sharing, analysis, and visualization of social media data, named the Social Media Macroscope.