



## **AARCS Program Evaluation Data: 2006 Co-Hort**

Jerlando F. L. Jackson, Ph.D., University of Wisconsin-Madison

Phillis L. George, University of Wisconsin-Madison

### **African American Researchers in Computing Sciences (AARCS) program**

The African American Researchers in Computing Sciences (AARCS) program, funded by the National Science Foundation<sup>1</sup>, aims to broaden the participation of African Americans at the levels of tenure track faculty and research scientist in the computing sciences. All activities are specifically designed to address the barriers and disbeliefs, concerns, and misunderstandings about computing sciences faculty and research. The activities include a series of targeted presentations by African American computing sciences faculty and graduate students at HBCUs, a Future Faculty Mentoring Program, and an annual AARCS mini-conference hosted at Auburn University. The targeted presentations take place at HBCUs and provide undergraduates with mentoring and information on research careers. The Future Faculty Mentoring Program provides advanced graduate students with e-mentoring on academic careers, and the AARCS mini-conference is a research and skill building conference for faculty, undergraduates and graduate students. Although African Americans are the target group for this program, the AARCS program serves as a model that can be used to target other underrepresented groups.

### **Targeted Presentations (TP)**

- 151 students attended Targeted Presentations (51% male, 49% female) (95.4% African American/Black, 0.7 Hispanics, 2% White, 1.3% Asian/Pacific Islander, and 0.7 American Indian/Alaskan Native).
- Largest percentage was from middle income households and low income, single head of household.
- TP participants were not involved in extracurricular activities emphasizing computing sciences or undergraduate research programs.
- TP participants had a very high level of contact with faculty by all measures.
- After attending the presentation, approximately 69.8% (compared to 45.6% prior) were likely or very likely to attend graduate study in computing sciences.
- After attending the presentation 84.9% were likely or very likely to submit an application for graduate school in 1-5 years in any field.
- Afterwards, 71.4% (compared to 14.1% prior) of the participants changed their views for the better regarding scientists and computing sciences as a career option.
- After the presentation, approximately 88.4% felt that graduate school was an option for them.
- Approximately 48% of the TP participants could see themselves as faculty or researchers in computing sciences after attending the presentation.

---

<sup>1</sup> African American Researchers in Computing Sciences is funded by the National Science Foundation grant BPC #0540492

## **AARCS Annual Conference**

### *Quantitative Data*

- 34 participants attended the 2006 AARCS annual conference (29.4% male, 70.6% female) (97.1% African American/Black, 2.9% White).
- Largest percentage from middle income households.
- The AC participants had significant experiences that traditionally lead to research related positions in computing sciences.
- These AC participants had a very high level of contact with faculty by all measures.
- 100% of the AC participants felt the conference informative or very informative.
- 100% of the AC participants felt the conference was successful with connecting them with role models in computing sciences.

### *Qualitative Data*

- 14 attendees were interviewed (85.7% male, 4.3% female) (100% African American)
- All of the interviewees had either majored or were majoring in an area within or related to computing sciences as undergraduates.
- Each of the interviewees indicated that their first experiences within computing sciences occurred in middle or high school while taking computing classes.
- Each of the interviewees indicated that they were expressly attracted to the computing sciences because of the following salient features: the universal application of computers, the sense of autonomy/control and creativity, and feelings of immediate gratification when creating and writing programs.
- No one interviewee was able to completely separate their interests in the computing sciences from other non-computer sciences related interests.

## **Future Faculty Mentoring Program (FFMP)**

- Of the eight participants in the FFMP, seven returned surveys (42.9% male, 57.1% female) (100% African American).
- Of the eight participants in the FFMP, five obtained tenure-track faculty positions in computer science, two accepted postdocs and one took a research scientist position.
- Largest percentage from middle income households and low income, dual parent households.
- These FFMP participants had a very high level of contact with faculty by all measures.
- 71.4% of the FFMP participants had been involved in an undergraduate research program.
- 71.4% of the FFMP participants felt their faculty advisor was a mentor to them.
- The majority of these FFMP participants had faculty advisors that were of the same gender, but different race.
- 83.3% of the FFMP participants felt that participation in FFMP made them feel optimistic or very optimistic about the job search.
- 100% of the FFMP participants felt the program provided them with concrete information with regards to pursuing faculty positions.