iAAMCS: Diversifying the Computing Pipeline

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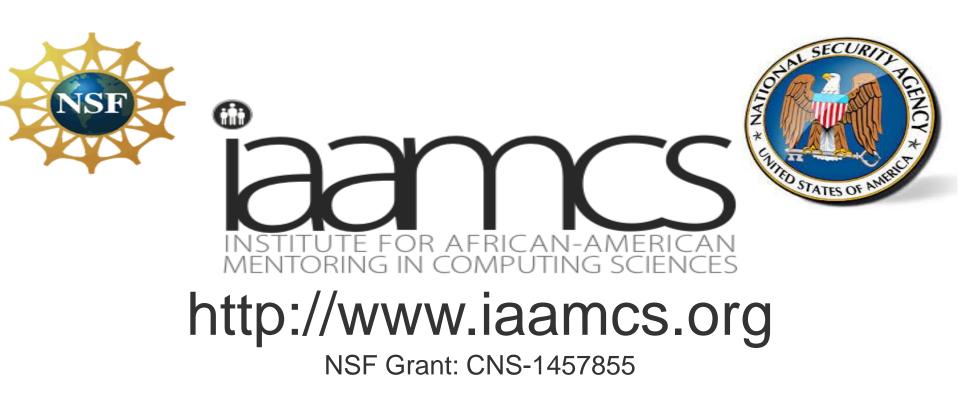Andrew Banks Family Preeminence Endowed Professor & Chair

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NSF Grant: CNS-1457855

iAAMCS Objectives

1. Increase the number of African-Americans receiving Ph.D. degrees in computing sciences

1. Promote and engage students in teaching and training opportunities

1. Add more diverse researchers into the advanced technology workforce

Tapia 2015, Boston, MA

Barriers to STEM Discipline Ph.D.

1. Stereotypes

2. Role Models

3. Helping Professions

4. Financial Concerns

5. Inadequate Advisement

6. Lack of Knowledge of Ph.D.

7. Employment Opportunities

Lewis, N. & Frierson, H., (2005). How Pervasive Are the Barriers To Science PhD Programs? Comparing Perceptions of Underrepresented Minorities. Presented at AERA 2005, Montreal, Canada.

Mentoring

- If we breakdown the barriers, will this:
    a) Increase participation
    b) Increase persistence
    c) Change the view of a scientist

Diversifying Computing PhDs

Early Interventions

- In data collections from Black/African-American CS PhDs

- It emerged both in quantitative and qualitative data.

- Individuals both mentioned during interviews that early exposure was very important and in the quantitative work, early exposure was a predictive measure for those individuals currently in CS.

Thank You

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