



Building Bridges to Diversity:

The Fisk-Vanderbilt Masters-to-PhD Bridge Program

Keivan Guadalupe Stassun

Physics & Astronomy

Vanderbilt University

Fisk University



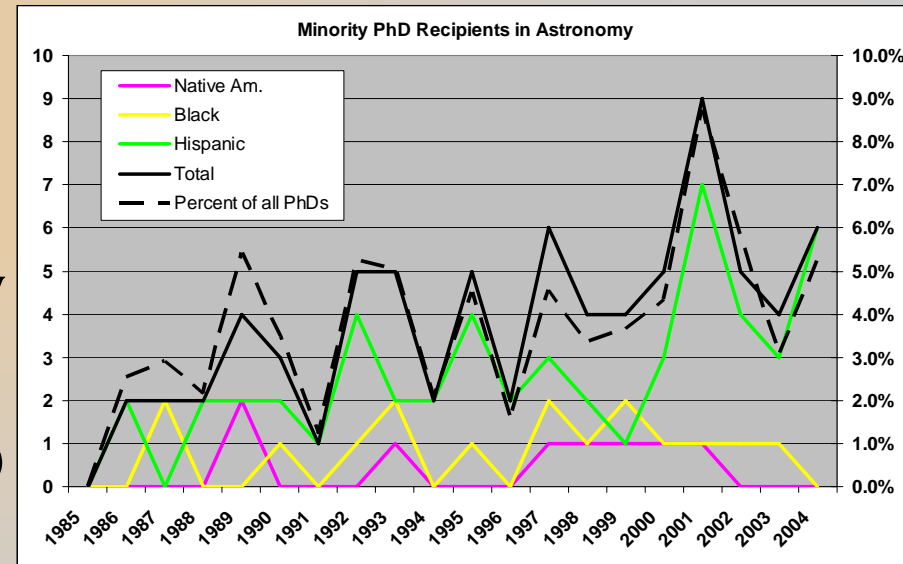
Physics & astronomy context

★ Order-of-magnitude issue:

- 25% of population
- 2-3% of physics and astronomy faculty
- 0.5% of P&A faculty at “top 50” schools

★ Average among PhD granting institutions:

- 1 every 13 years





Where are the minorities in STEM?



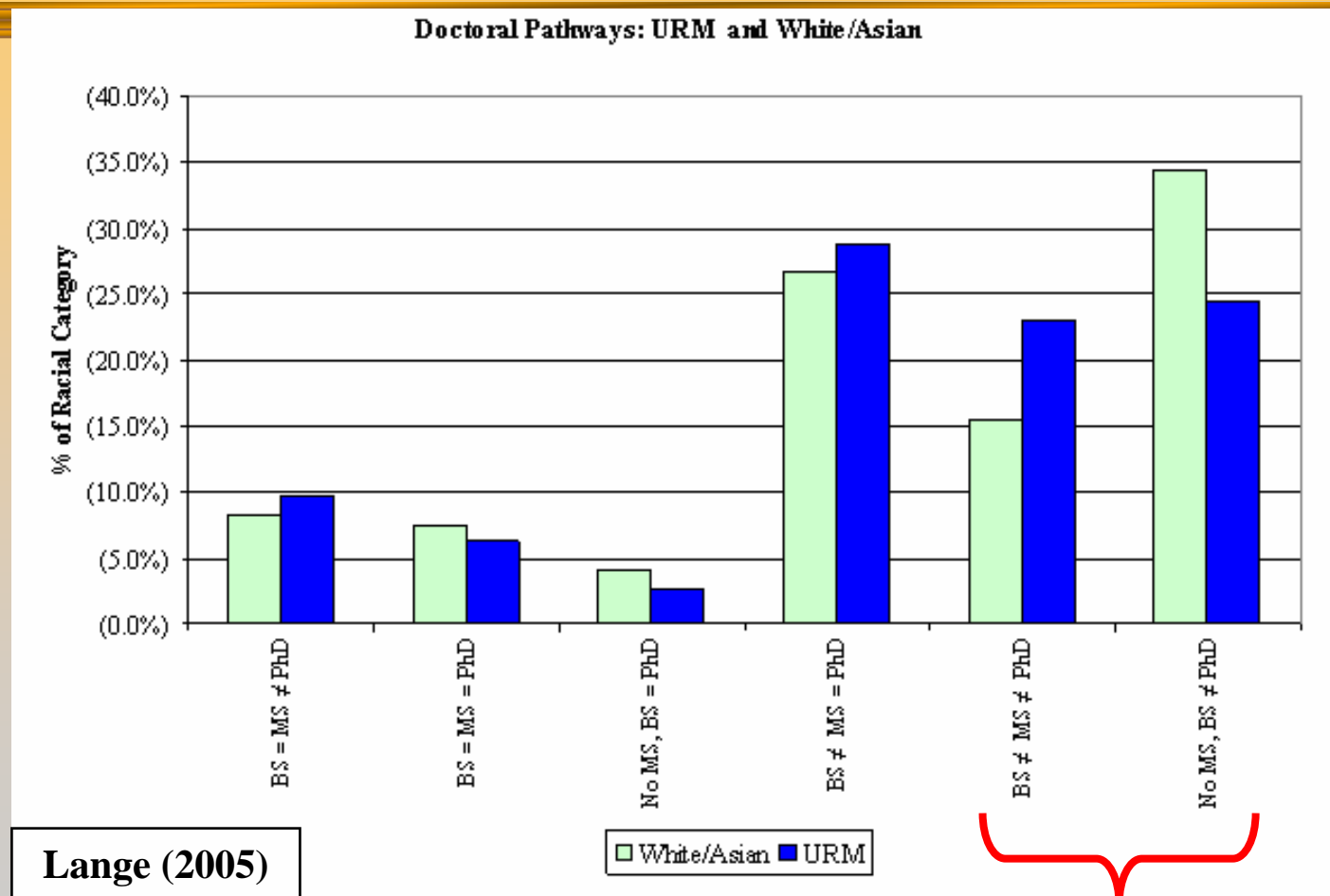
Minority-Serving Institutions

- ★ **Historically Black Colleges & Universities (HBCUs)**
 - 2% of all US college enrollment
 - 25% of all African-American bachelor's degrees
 - 50% of Af-Am bachelor's in science/engineering
- ★ **Hispanic Serving Institutions (HSIs)**
- ★ **Tribal Colleges & Universities (TCUs)**
- ★ **Community colleges**
 - 50% of minorities start here





Importance of Masters-PhD Transitions



Minorities ~50% more likely to earn Masters en route to PhD.
More institutional transitions, with less guidance.



Fisk-Vanderbilt Master's-to-Ph.D. Bridge Program



Jedidah Esler, astrophysics

*Nothing worthwhile is ever easy.
We just help make it possible.*

you can
Reach for the Ph.D.
tú puedes

Who should apply

- Students with undergraduate majors in physics, biology, chemistry, computer science, math, and other science disciplines
- Students motivated to pursue the Ph.D., but who require additional course work, training, and/or research experience

How the program works

- Earn a master's degree at Fisk University, with full funding support.
- Along the way, receive valuable research experience with caring, dedicated mentors.
- Get fast-track admission to one of the participating Vanderbilt Ph.D. programs, with full funding support.

www.physics.vanderbilt.edu/bridge



Helen Jackson, imaging science



John Rigueur, materials science



Vincent Alexander, biophysics

biomedical sciences • materials science • imaging science

physics and astronomy



Nashville, Tennessee

Fisk-Vanderbilt Masters-to-PhD Bridge Program

Get the preparation you need to earn a PhD

1. Earn a Masters degree in physics at Fisk, with full funding support.
2. Get valuable, paid research experience.
3. Receive preparation for the GRE.
4. Get fast-track admission to the Vanderbilt PhD program, with full funding support.
 - Astronomy, astrophysics, cosmology
 - Biophysics
 - Materials science, nanophysics, detector development
 - Imaging science



Masters-to-PhD Bridge Program

Key considerations:

- ★ Not a “back door”: Must satisfy same PhD requirements as all PhD students
- ★ Focus on facilitating successful mentor/mentee relationships





Masters-to-PhD Bridge Program

Facilitating successful transitions:

- ★ Joint advising committees: Involvement of potential PhD advisors from the start, enhanced communication and tracking of progress
- ★ Requirement of coursework at Vanderbilt: Become known to Vanderbilt faculty, complete PhD requirements
- ★ Requirement of research at Vanderbilt: Demonstrate ability in the lab, develop faculty advocates
- ★ Ancillary support: Identify problems early on, provide tutoring where necessary
- ★ “Professionalization”: Seminar on academic culture, participate in professional meetings
- ★ Social networks: Orientation, “Bridge Club”





Current Fisk-Vanderbilt Students

