



Transition to the Doctorate
by Adaptable Best Practices:
The Impact of PITT STRIVE
on URM PhD Access,
Community and Success

2020 AGEP Conference
Steve Abramowitch, David Gau,
Mary Besterfield-Sacre, Melissa
Bilec, Deanna Sinex, and Sylvanus
Wosu



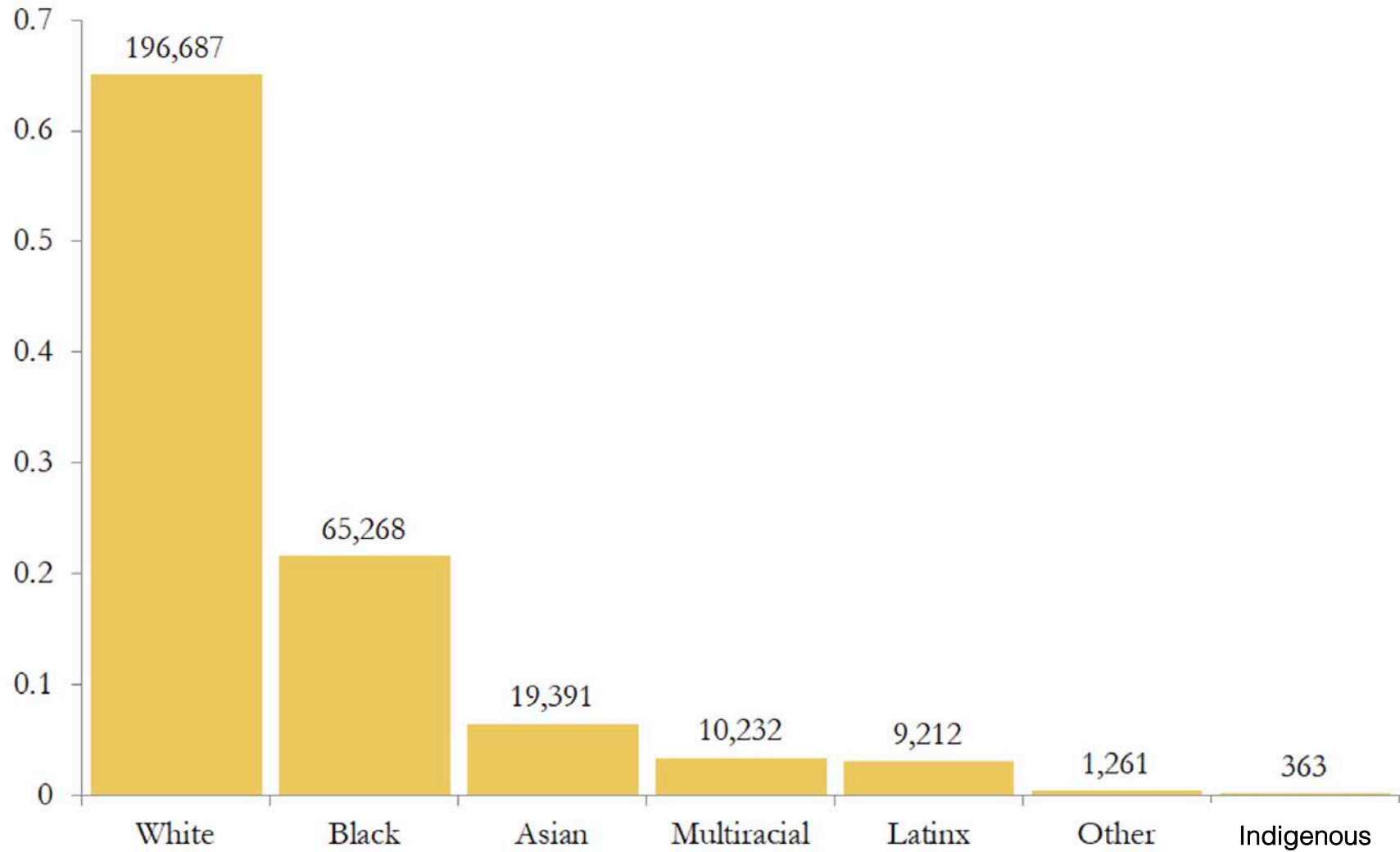
Funded by the National Science Foundation AGEP: KAT Program - #1434012

Pittsburgh: 2nd Most Livable City



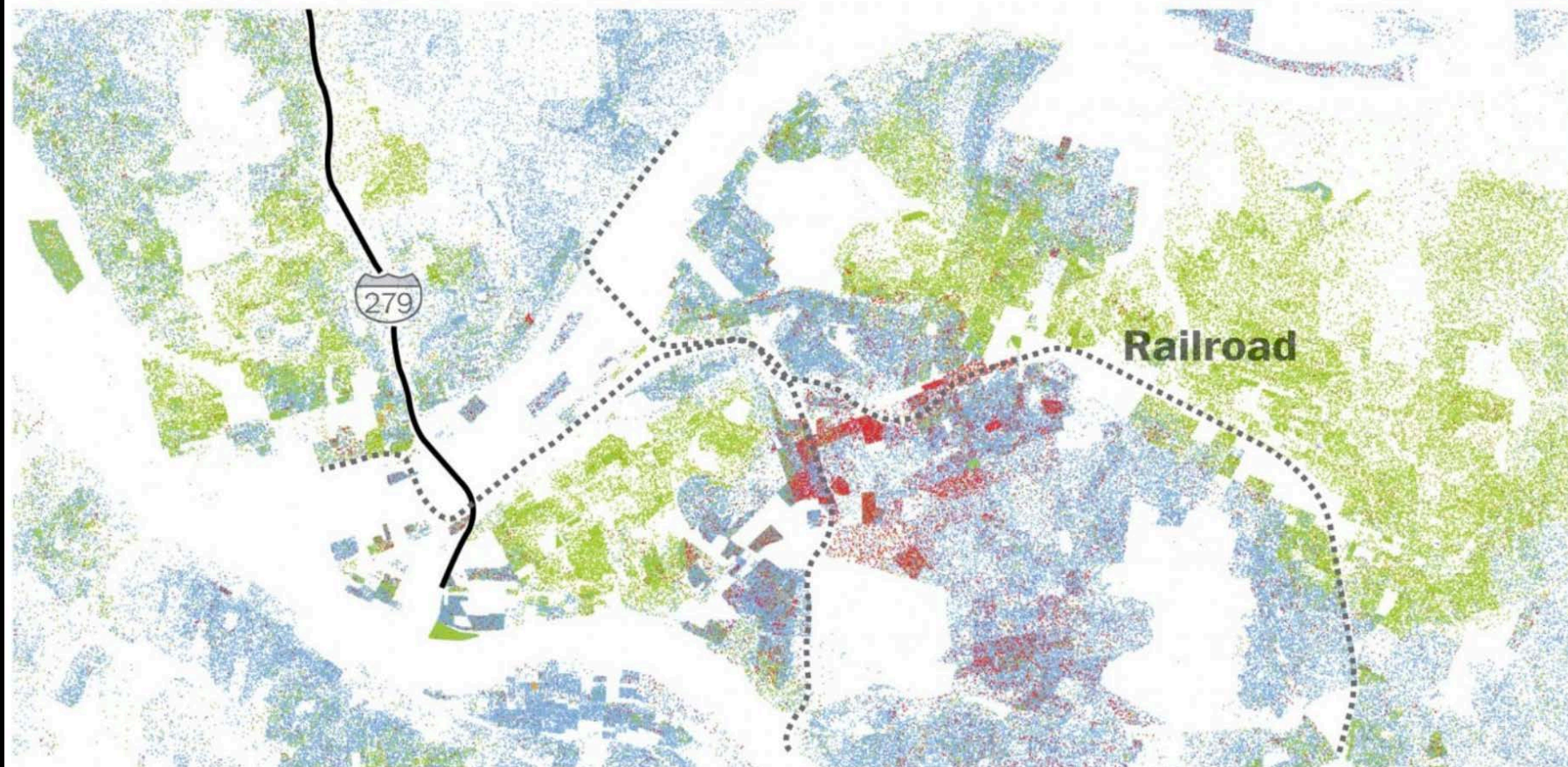
The Economist (2019): (1st Honolulu, Pittsburgh 32nd internationally)

Racial Categories in Pittsburgh



Lines of segregation in Pittsburgh

1 dot = 1 person ● White ● Black ● Asian ● Hispanic ● Other



Source: U-Va. Cooper Center analysis of 2010 Census data

THE WASHINGTON POST

News

<https://www.pghcitypaper.com>

November 15, 2020

FBI declared Pittsburgh a new white supremacy hub, but it has been this way for decades

By Ryan Deto



CP photo: Jared Wickerham

Pittsburghers marching in protest in October 2018 through Squirrel Hill towards the Tree of Life synagogue, where President Trump was making an appearance, three days after a mass shooting took place.




William "Bouie" Haden

1917 - 1974

- A "militant" leader of the United Movement for Progress
- Worked in the Steele Mills, then owned a grocery store
- Also a boxer
- Regarded by white Pittsburgh as "most violent of Pittsburgh's Black leaders" and a "threat"
- Became a spokesman for Black Pittsburgh after the MLK assassination
- Pushed for rioting to stop
- Catholic Diocese gave his organization \$12,000 grant in 1968
 - Hate mail, phone calls
 - Contributions fell
- Died at 57 of terminal cancer





PITTSBURGH'S INEQUALITY ACROSS GENDER AND RACE

2019

CITY OF PITTSBURGH'S
GENDER EQUITY COMMISSION

ABOUT THE AUTHORS

Junia Howell, Ph.D. is an Assistant Professor of Sociology at the University of Pittsburgh. Howell's research focuses on how cities can foster equity for all residents.

Sara Goodkind, Ph.D., M.S.W., is Associate Professor of Social Work, Sociology, and Gender, Sexuality, and Women's Studies at the University of Pittsburgh. Her research focuses on social service programs and systems that work with young people.

Leah A. Jacobs, Ph.D., M.S.W., is an Assistant Professor in the School of Social Work at the University of Pittsburgh. She studies criminal justice involvement and behavioral health, focusing on related socio-structural risk factors and points of intervention.

Dominique Branson, is a graduate student in the Department of Linguistics at the University of Pittsburgh. She studies the correlation between African American Language and the social outcomes of Black Americans, particularly in the U.S. Criminal Justice System.

Liz Miller, M.D., Ph.D. is Professor in Pediatrics, Public Health, and Clinical and Translational Science at the University of Pittsburgh and Director of the Division of Adolescent and Young Adult Medicine, UPMC Children's Hospital of Pittsburgh. Her research addresses interpersonal violence prevention and adolescent health promotion in clinical and community settings.

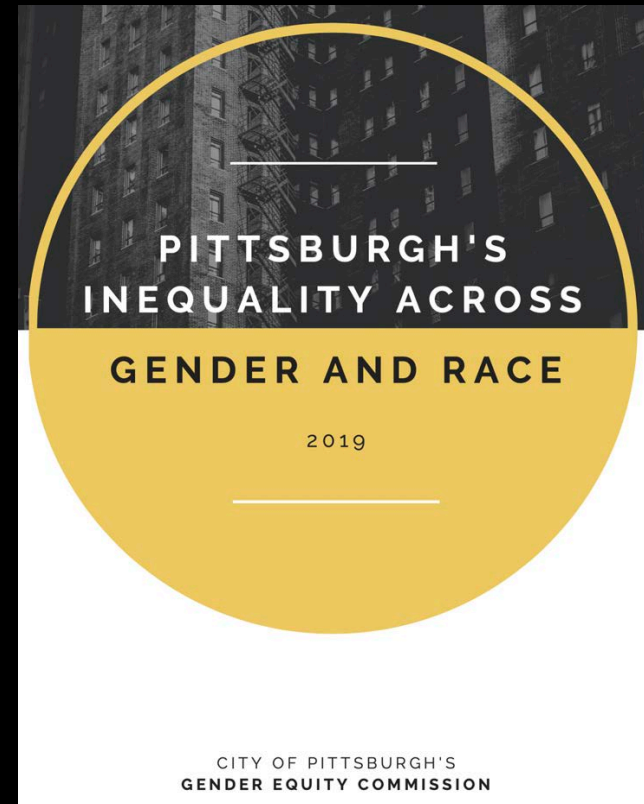
Pittsburgh has more Black women out of the labor force than **97 percent** of cities.

85 percent
of cities have
higher Black
employment than
Pittsburgh.

Racial equality in

Pittsburghers are more
educated than most,
except for Pittsburgh's
Black women who have
less education than
Black women elsewhere.

Pittsburgh: 2nd Most Livable City



For who?



NATIONAL SCIENCE FOUNDATION AGEP PROGRAM
SWANSON SCHOOL OF ENGINEERING



The PITT STRIVE program adopts evidence-based strategies to improve the academic culture and the success of underrepresented minority (URM) doctoral students in engineering.



Promise
Meyerhoff

Sylvanus Wosu, Ph.D.



Associate Dean of Diversity Affairs
Swanson School of Engineering
University of Pittsburgh

PITT STRIVE Goals and Research Questions

- **Impact on Academic/Faculty Culture**
 - Are faculty awareness and cultural competency for URM success increasing ?
- **Impact on URM Transition to PhD**
 - Are shared faculty engagement and strategies increasing URM Success?
- **Ensure model replication:** How can we inform engineering graduate programs across the nation about how to adapt effective strategies to ensure the success of URM doctoral students?

Observations & Challenges

Culture/Climate is different from UMBC

- UMBC 49% URM vs. SSOE ~7%
- UMBC faculty have more experience with URM mentees
- Pittsburgh is not considered a favorable place for Black people
- Pittsburgh has low Hispanic/LatinX community
- SSOE faculty less diverse
- UMBC program is more mature
- UMBC is cohort model, SSOE is a community model

CHALLENGES: Chairs Assessment

- Small pool of candidates to choose from
- Lack of resources needed to identify, attract, and bring in possible candidates.
- There is a lack of role models for URM.

CHALLENGES: Faculty Assessment

- Currently a lack of URM faculty and graduate students in the departments, as well as a lack of URM candidates/applicants
- Some faculty perceive that URM lack preparation and/or confidence (for example, faculty cite examples of URM who have failed qualifier exams)
- Communication and awareness of URM issues seems to be a major issue with URM students and mentors
- Faculty have little ability to appreciate the lens that these students are looking through
- Faculty don't appreciate the difference in the education system (K-12) and undervalue HBCU education

CHALLENGES: Faculty Assessment

- Negative faculty perception and lack of awareness of URM challenges:
 - “Faculty feel that they are obligated to bend over for students who are URM... Apprehension in dealing with the issues and they fail to provide special attention to URM... Worried about breaking the rules.”
 - “...problems arise when there is a discrepancy between what EOD considers to be quality grad student to what [the department] considers to be a quality student... Faculty accepts a student unconvincingly with respect to quality...”
 - “Not enough committed faculty; some are not capable because some are not culturally sensitive to a diverse population... Sense of feeling by some that affirmative action is not good for the country.”

CHALLENGES-Barriers to URM Success in SSoE

- Lack of role models/mentors
- Unsupportive Institutional and Faculty Culture/Climate; low sense of belonging
- Perceptions of lack of academic preparedness
- Socio-economic issues
- Low leadership receptivity to diversity and inclusion

UMBC's 13 Key Components

13 Key components	Principles Adopted by PITT STRIVE
Recruitment	Yes
Financial Aid	Yes
Summer Bridge	Yes
Program Values	Yes
Study Groups	Yes
Program Community	Yes
Personal Advising and Counseling	Yes
Tutoring	No
Summer Research Internships	Yes
Mentors/Mentorship	Yes
Faculty Involvement	Yes
Administrative Involvement and Public Support	Yes
Family Involvement	No



Enrollment

- Program recruitment for scholars and fellows primarily takes place through the departments after students have applied to the program
- Discover Graduate Weekend, which is a trip for URM juniors and seniors to learn about graduate school serves as a recruitment mechanism for scholars and fellows
- Scholars and fellows may also be identified through connections with members from the Office of Diversity

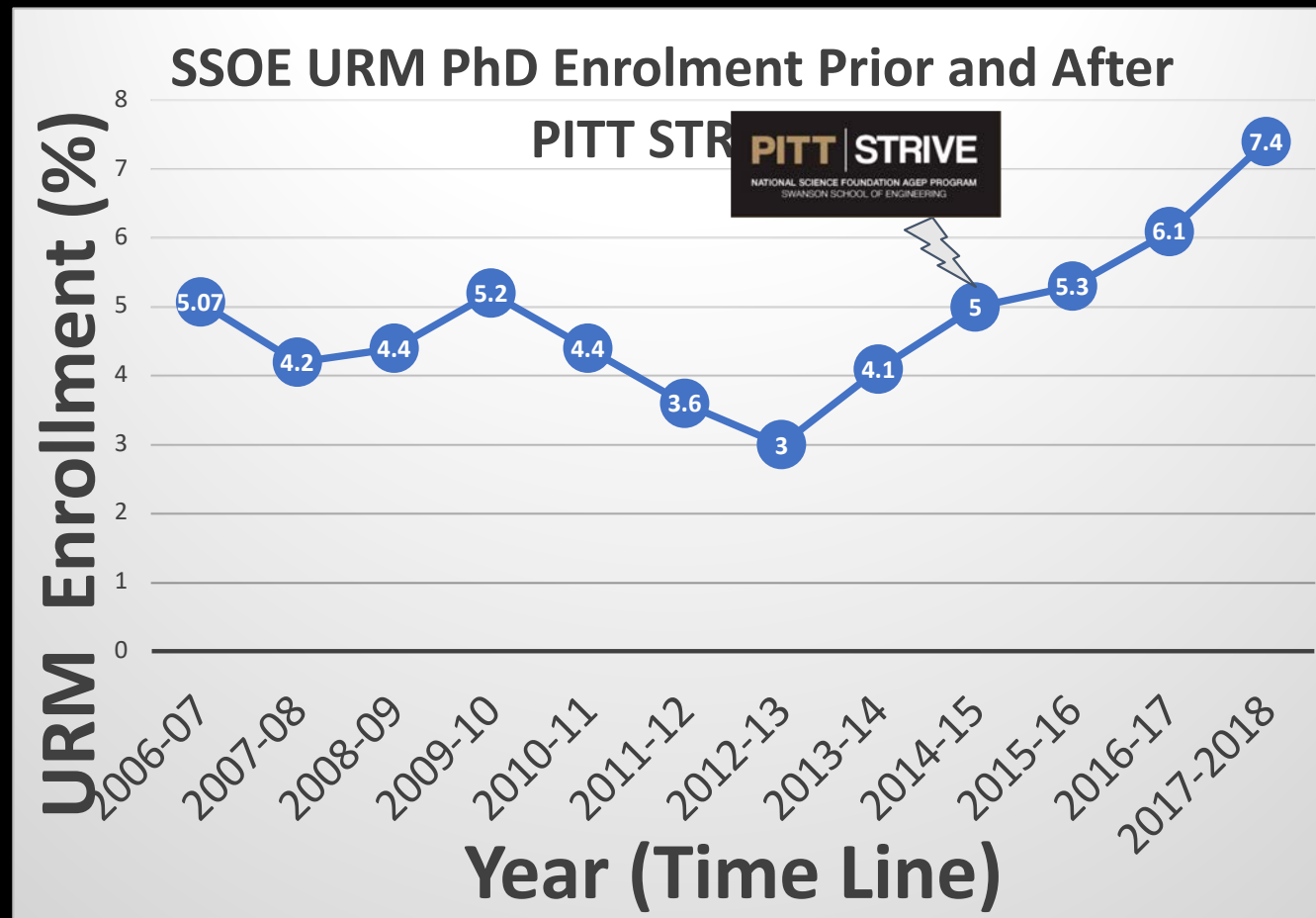
Financial Aid

- Scholars receive funding through matched funds from the Swanson School of Engineering which covers tuition and the stipend
- Fellows receive their tuition and stipend through other mechanisms but are still adopted into the STRIVE community and attend STRIVE program activities.
- Both groups receive support through the STRIVE programs, workshops, retreats, mentorship, and other activities which are funded through the NSF grant

Summer Bridge Program

- Students who will be scholars are required to attend a 9-week long Pre-PhD program
- The program is a “summer research internship” in which students do the following:
Work 30 hours per week on their research area of interest, meet with staff regularly, attend workshops, perform literature reviews, publish and present on findings, participate in an ethics forum, and maintain a daily journal
- Students receive a stipend and housing

Impact on Enrollment of URM PhD Students



Program Community

- Events include an annual retreat
- Future Faculty Discovery Development Program
- Various workshops and seminars, and a monthly social night



Impact on Community



University of
Pittsburgh

Swanson School
of Engineering

Future Faculty Discovery Development Program

Primary objective: To build a pipeline for future faculty by establishing significant relationships with underrepresented populations at the advanced PhD or post-doctoral stages in participants' STEM careers throughout the country and to contribute towards critical mass of allies for underrepresented faculty.

Code	Definition
Motivation	Increased desire to pursue professoriate
Awareness	Increased knowledge of the application process and faculty life
Networking	Developing a rapport with faculty or other attendees at program
Confidence	Increased confidence in self as a prospective applicant to professoriate
Intimidation	Aware of the challenges in starting as faculty or navigating academic ladder in preparation for applying
Exploration	Openness to exploring other types of academic positions

Code	% of Responses (n=26)
Motivation	65%
Awareness	62%
Networking	12%
Confidence	23%
Intimidation	12%
Exploration	4%

Current Position	# of Participants (2018)
Postdoctoral Fellow	3
PhD Student	6
Industry	3
Adjunct Faculty	1
Did not respond	5

Personal Advising and Mentoring

- Students are assigned to an academic advisor in their department
- They also receive guidance from the PITT STRIVE leaders with monthly meetings with scholars during the first two years of the program
- PITT STRIVE scholars are paired up with a mentor during the Annual Retreat who is not their academic advisor

Faculty Involvement

- There is also a faculty learning community which is intended to promote diversity and inclusion in the Swanson School of Engineering
- Communication with program administrators states that “The Learning Community brings faculty and staff members from different departments within the School together for shared learning, discovery, and the generation of knowledge.” In addition, there is an Internal Advisory Board which helps to provide feedback on the program implementation.

Are we making *impact*?

- Faculty
 - We have solid changes in culture
 - The snowball has begun to roll
- Students
 - Making impact on their professional development and acclimation to SSoE
 - But need to tell the story of impact and still be able to properly assess if the impact was achieved



Faculty Accomplishments

- Internal Advisory Board developed anti-harassment statement included in SSoE course syllabi (being considered university-wide)
- Specific faculty spearheading their own initiatives, e.g. diverse faculty recruitment model, Meet the EDAC monthly lunch
- URM focus groups responded that they have positive relationships with their mentors
- 75% (of 67 faculty surveyed) say they are well-equipped to seek out those who are different;
- 86% (of 67 surveyed) say they are “committed to fostering an equitable, diverse, and inclusive culture”

Impact on Community



DR. CHRISTOPHER MAHONEY



DR. KATARINA KNIGHT



DR. HERVENS JEANNIS



DR. NATALIE AUSTIN



DR. MARCUS ALLEN



DR. BRANDON JENNINGS



DR. HAROLD RICKENBACKER



DR. SOSSENA WOOD

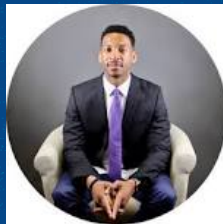


**DR. FLORENCIO
SERRANO CASTILLO**



DR. JONQUIL MAU

DR. ROSS GRIESHABER



DR. BRADLEY CAMPBELL



DR. BEROOK ALEMAYEHU



DR. HENRY AYoola



DR. YUSUF AKINBADE

Quotes from PITT STRIVE students -

“I feel recognized. I feel validated. I feel good here.”

“Knowing that I have people behind me that will root for me and really have my back on stuff too.”

“I think that the mission of the program is to not only assist and encourage students of color and minority students to finish their PhDs, but also creates open pathways between students and faculty within the engineering departments to have open conversations about what it means to be a student of color or minority student within the engineering disciplines and it helps to encourage those conversations.”

Quotes from PITT STRIVE faculty mentors -

“We have an established culture, an established community. If we want to grow that community, I think that resources for bringing in new students shouldn't stay flat. It should improve, so then, the question is how do we do that?”

“I wish that so many more of our colleagues could come to the annual retreat. I wish we would just load them on a bus, blindfold them, not tell them where they're going, and force them to sit through it.”

WHERE PITT STRIVE IS GOING

- Need for greater administrative support
- Need more buy-in from department chairs
- Further increase community
- Provide a voice for students at events
- Include students' family/friends to some PITT STRIVE events
- Increase visibility of program both internally and externally

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Big Thanks: Sussan Olaore!!!



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