

Jameka C. Wiggins

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EDUCATION

The Ohio State University, Columbus, Ohio 2021-Present
Ph.D. in Engineering Education
Honors: College of Engineering Fellowship

University of Maryland, Baltimore County, Baltimore, Maryland 2016-2021
B.S. in Chemical Engineering, GPA: 3.3
Honors: Center for Women in Technology (CWIT) Scholar
Ronald E. McNair Scholar (REM 29)

RESEARCH EXPERIENCE

The Ohio State University, Columbus, Ohio 05/2022 – Present
Graduate Researcher Assistant

Project Title: *Doing Academia Differently: The Creation of a Cohort-Based Postdoctoral Scholars Program for Emerging Engineering Faculty*

- Served as administrative support to the Leading Engineers as Agents Change and Equity (LEGACY) Postdoctoral Scholars Program founded by the OSU College of Engineering Dean Ayanna Howard established to prepare and diversify the next generation of engineering leaders in academia
- Developed an annual evaluation document for the assessment of faculty mentors and postdoctoral scholars
- Submitted and will be presenting an American Society for Engineering Education conference paper

The Ohio State University, Columbus, Ohio 08/2021 – 02/2022
Graduate Researcher Assistant

Project Title: *Social Capital During COVID-19: Case Studies from U.S. and U.K. Contexts*

- Cleaned and analyzed data from two different surveys to categorize survey participants into groups based off their identified form of support they received
- Developed a literature review regarding the forms of support college students received during the COVID-19 pandemic and how it impacted their stance at an institution
- Submitted an ASEE paper on data findings and themes identified between each case study

University of Maryland, Baltimore County, Baltimore, Maryland 08/2020 – 06/2021
Undergraduate Researcher

Project Title: *Assessing Engineering State of Mind of First Year Undergraduate African American/Black Students in Scholar Programs*

- Aided in designing an Engineering State of Mind Instrument, specifically working to add additional questions regarding motivation, belonging, and demographic information
- Utilized a mix-methods approach to compare the engineering mindset of undergraduate students affiliated or a part of programs versus those non-affiliated over the first year
- Examined the impacts of virtual learning on the first-year experience of undergraduate students

Gardner Industries, LLC, Baltimore, Maryland 06/2019 – 04/2021
Manufacturing Specialist

- Developed marketing emails and solicited future customers

- Operated a Formlabs 2 3D printer and PreForm software
- Manufactured two different types of 3D printed Substrate Cages
- Designed and printed custom 3D models for customers using the Openscad and Meshmixer software

Athena Environmental Systems, Baltimore, Maryland 03/2019 - 06/2019
Manufacturing Intern

- Manufactured various powders, broths, and liquid medias to be sold to customers and used for research within Athena Enzyme Systems
- Performed quality control test and cleaned each product made for consumer
- Created and labeled each product to be sold

University of Maryland, Baltimore County, Baltimore, Maryland 03/2018 - 08/2019
Undergraduate Researcher

Project Title: *Optimizing Oleaginous Yeast Cell Factories for Flavonoids and Hydroxylated Flavonoids Biosynthesis*

- Conducted experiments focusing on synthetic biology and cellular engineering

Marymount University, Arlington, Virginia 02/2016 - 05/2016
3D Lab Intern

- Learned how to use the Printbot 3D printer and Solidworks Software and applied those skills in the fabrication of a prosthetic 3D hand

NASA Goddard Space Flight Center, Greenbelt, Maryland 01/2015 - 05/2015
Student Research Intern

- Conducted research on the Link Budget, which discussed the problems signals face when trying to connect with satellites in space with mentor Mr. Carl Wales Associate Head of the Software Systems Engineering Branch, through the STEM ARE Program

PUBLICATIONS

American Society for Engineering Education Conference 2021 06/2021

Proceeding Title: WIP: Assessing Engineering State of Mind of First-Year Undergraduate African American/Black Students in Scholar Programs

American Society for Engineering Education Conference 2022 06/2022

Proceeding Title: Social Capital During COVID 19: Research Case Studies from U.S. and U.K. Context

American Society for Engineering Education Conference 2023 06/2023

Proceeding Title: Doing Academia Differently: The Creation of a Cohort-Based Postdoctoral Scholars Program for Emerging Engineering Faculty

WORK EXPERIENCE

Littera Education, Inc. 01/2023-05/2023

Middle School Mathematics Tutor

- Tutored sixth through eighth-grade students in mathematics using pre-developed content
- Exploring culturally relevant pedagogy to relate mathematical content to students based on their learning needs

Amplify Education, Inc., Brooklyn, New York
Baltimore City Reading Tutor

06/2021-05/2022

- Served as a tutor for elementary students, specifically working on phonemic awareness, reading comprehension, and vocabulary

TeraSense Corporation, Baltimore, Maryland
Business Development Analyst

10/2020 – 04/2021

- Served as a member of the Business Development Team, and lead on the Capability Brief project
- Worked closely with company president and program manager to assess marketing information needed to gain potential clients
- Collaborated with other Business Development and Information Technology team members to design and create marketing materials

Refugee Youth Project, College JUMP, Baltimore, Maryland
Mentor Specialist

08/2018 - 09/2019

- Created lesson plans and assignments for 11th and 12th grade high school students
- Helped mentors with various issues regarding their mentee and the college process
- Plan events and coordinate with other leadership team members to check progression of each mentor-student pair

LEADERSHIP

- OSU Graduate Engineering Education Organization
 - Service/Philanthropy Chairperson (2022-Present)
 - OSU Engineering Education Department
 - Graduate Student Ambassador (2022-Present)
 - OSU Diversity Advisory Council
 - Graduate NSBE Representative (2021-Present)
 - Alpha Kappa Alpha Sorority, Incorporated
 - President (2020-2021)
 - Treasure (2019-2020)
 - Parliamentarian (2018-2019)
 - UMBC LIFT Mentor Program
 - Lead (2020-2021)
 - UMBC Office of Equity and Inclusion: Inclusion Council
 - Co-Chair of Sexual Misconduct Work Group and Student Retention & Belonging Work Groups (2020-2021)
 - Member of Student Recruitment & Enrollment Work Group (2020-2021)
 - Center for Women in Technology
 - K-12 Ambassador (2020-2021)
 - UMBC Ronald E. McNair Scholar Program
 - Induction and Family Weekend Bootcamp Lead (2020-2021)
 - UMBC National Society for Black Engineers
 - UMBC NSBE Senator (2020-2021)
 - UMBC NSBE Pre-Collegiate Initiative Committee Member (2020-2021)
- Truth, Racial Healing, and Transformation
- Student Lead (2017-2019)

OTHER CLUBS AND ORGANIZATIONS

- OSU National Society for Black Engineers Graduate Chapter (2021-Present)

- Society for Women in Engineering (2016-Present)
- American Institute for Chemical Engineers (2017-Present)
- American Society for Engineering Education (2020-Present)
- UMBC Black Student Union (BSU) Member (2016-2021)

LICENSES AND CERTIFICATIONS

- Cornell University Certificate in Women's Entrepreneurship (2021)
- American Institute for Chemical Engineers Academy: Dust Explosion Control, Runaway Reactions, Process Safety Lessons Taught from Experience, Chemical Process Safety in the Chemical Process Industries
- The Collaborative Institutional Training Initiative (CITI) Program Human Research Social/Behavioral Certificate

SERVICE

- The Ohio State University Department of Engineering Education Ambassador: Supported department recruitment events, serving as a panelist for incoming students, attending conferences such as the National Society of Black Engineers conference to advertise the Ph.D. program, and recruit students for Ohio State University
- American Society for Engineering Education (ASEE): Served as a conference paper reviewer for the Minority in Engineering Division ASEE Conference 2023
- See Brilliance Culturally Relevant STEM: Served as a volunteer and facilitator for monthly workshops focused on STEM activities tailored for Black and Latinx communities
- STEM X: Served as a Student Ambassador conducting engineering and robotics workshops for primary school students in Prince George's County, Maryland
- Salvation Army Angel Tree Distribution Volunteer: Distributed holiday gifts to local residents of Prince George's County and the District of Columbia
- Refugee Youth Works College Journey Upward Mentoring Program Mentor: Mentored a high school senior and guided them through the college application process; and administered English language learning skills activities
- NSBE Jr. Next Generation Leadership Academy: Worked bi-weekly with students of the Howard County NSBE Junior Chapter creating professional development seminars, serving as a mentor, and providing information on collegiate level engineering experiences
- Alpha Kappa Alpha Sorority, Incorporated Voting Squad Member: Led voting awareness campaigns, targeting undergraduate voters, and collaborated with graduate chapter and Howard County to serve as an election judge

SKILLS

- 3D Printing Equipment and Software, AutoCAD, Revit, Solidworks, Microsoft Office Software, Qualtrics Survey Software, IBM SPSS Statistics Package, Matlab, RobotC, Aspen Plus, ChemSep, Polymath