

Margaret W. Gatongi

| gatongimw@vcu.edu |

EDUCATION

Ph.D., Student – Research, Assessment and Evaluation

Anticipated Graduation: May 2026

Virginia Commonwealth University, Richmond, VA

M.S., Biological Sciences

December 2008

Marshall University, Huntington, WV

Thesis: Characterization of Unusual Gymnamoebae from the Marine Environment. Chair: Dr. Andrew Rogerson

B.S., Biological Sciences

May 2004

Nairobi University, Nairobi, Kenya

AREA OF RESEARCH INTEREST

- Program Evaluation
- Research Methodology
- Curriculum development
- STEM in higher education

ACADEMIC EXPERIENCE

Statistics Coordinator

2023 – Present

Duke University, Durham, NC

- Managing lab and statistics content on the Learning Management System (Canvas)
- Updating statistics and lab materials as needed
- Writing and grading statistics exam questions

Research Assistant

2008 – 2012

Department of Microbiology and Biochemistry
Marshall University, Huntington, WV

Research Assistant

2006 – 2008

Biology Department, Chemistry Department
Marshall University, Huntington, WV

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- Led a study on the prevalence of *Acanthamoeba* in the domestic tap water system of Huntington, WV

AREA OF RESEARCH INTEREST

PROFESSIONAL EXPERIENCE

Senior Teaching Laboratory Administrator

2021 – Present

Duke University, Durham, NC

- Supporting core and elective courses including BME 244L (Quantitative Physiology Biostatistics Application), BME 221DL (Biomaterials), BME 301L (Bioelectricity), BME 302L (Fundamentals of Biomaterials and Biomechanics), BME 490L (Biotech Design), BME 590L (Gene Engineering Lab), BME 260 (Modeling Cellular and Molecular Systems), BME 570L (Intro to Molecular Engineering), BME 306 (Cellular Engineering), BME 305 (Molecular Engineering)
- Developing laboratory course material in conjunction with faculty
- Mentoring Teaching Assistants and work-study students
- Mentoring students as they complete their design projects
- Maintaining laboratory equipment in BME courses

Teaching Laboratory Administrator

2012 – 2021

Duke University, Durham, NC

RESEARCH AND SCHOLARSHIP

My line of research is multidisciplinary, spanning research methodology, program evaluation, and curriculum development, within the context of education, with a particular emphasis on STEM.

PUBLICATIONS

Refereed

Kim, C. M., & Wallace, C., & **Gatongi, M. W.** (2023), *Transforming the Molecular and Cellular Engineering Educational Experience in Biomedical Engineering*. ASEE Annual Conference & Exposition, Baltimore, Maryland. <https://strategy.asee.org/42754>

Trzyna, W. C., **Mbugua, M. W.**, & Rogerson, A. (2010). *Acanthamoeba* in the Domestic Water Supply of Huntington, West Virginia, U.S.A. *Acta Protozoologica*, 49(1), 9–15.

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Mbugua, M. W. (2008). *Characterization of unusual Gymnamoebae isolated from the marine environment*. ProQuest Dissertations Publishing. [Characterization of Unusual Gymnamoebae Isolated from the Marine Environment \(marshall.edu\)](#)

Non-refereed

Gatongi, M. W., AERA 2024 Session Submission, Presentation Three: Transforming the Engineering Classroom with bell hooks: Fostering Diversity, Equity, and Inclusion. bell hooks lives on: Oppressive Structures and Liberatory Agency.

PROFESSIONAL PRESENTATIONS

Refereed

Kim, C, Wallace, C, **Gatongi, M.** (2023, June). Transforming the Molecular and Cellular Engineering Educational Experience in Biomedical Engineering. 2023 ASEE Annual Conference & Exposition. <https://strategy.asee.org/42754>

Mbugua, M. W. (2012, August - 2019, August). TA Training Presentation for PRATT School of Engineering

Non-refereed

Short, A., L. Bevins, **M. W. Mbugua**, W. Trzyna and A. Rogerson (2008). Prevalence of Acanthamoeba in Huntington Tap Water. Annual Undergraduate Research day at the Capitol, Charleston, WV.

Mbugua, M. and A. Rogerson (2007). Characterization of Unusual Gymnamoebae from the Marine Environment. Marshall University, Sigma-Xi Research Symposium, Huntington, WV.

Khristian, S., Dodson, M., Gillespie, J., Versteeg, C., Odom, D., Taylor, C., **Mbugua, M.**, Beaudoin, D., Chang, H., Keuren, D., Stephenson, S., Adams, L., Newman, M., Donovan, E., Sheffield, A., Santos, S., Gast, R., Rogerson, A., Sullivan, B., Liles, M., Moss, A., (2007). Microbial assemblages and associated unique behaviors in *Mnemiopsis leidyi*. Third Triannual Meeting of the NSF/Microbial Observatories/Microbial Interactions and Processes Principal Investigator's Workshop, Washington, DC.

TEACHING

Marshall University
Huntington, WV

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- Lab Instructor, Human Biology BSC 105, Human Biology BSC 104

AWARDS AND RECOGNITIONS

Lois and John L. Imhoff Distinguished Teaching Award, Duke University, 2022

Marshall University Graduate Advisory Board Thesis Grant, Marshall University, 2007

Louis Stokes Alliance Minority Participation (LSAMP) Research Grant, Marshall University, 2007

European Union research scholarship, Tropical Biology Association, Kenya, 2005

SERVICE

Peer Reviewer, GEM Workshop, International Conference on Learning Representations (ICLR) 2024

Member, Virginia Commonwealth University Holmes Scholar

Member, American Educational Research Association

Member, American Society for Engineering Education

Community Liaison, The Expedition School Community Association, Hillsborough, NC

President, PRATTically Speaking Toastmasters Club, Duke University, 2020

References available upon request

Updated January 19, 2024