

Joash Geteregechi, Ph.D.

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Education

- 2015 – 2020 **Ph.D. (Mathematics Education), Syracuse University, New York, USA**
Thesis title: *Investigating middle school students' mathematical reasoning in a connected in-school and out-of-school context*
Advisor (main): Prof. Joanna Masingila
- 2010 – 2013 **M.Sc. (Mathematics Education), Kenyatta University, Kenya**
Thesis title: *Determinants of students' mathematics performance in Nyamira North District, Kenya*
Advisor (main): Prof. Miheso-O'Connor Marguerite
- 2005 – 2008 **B.Ed. (Mathematics & Chemistry), Egerton University, Kenya.**

Employment History

- 2020 – **Assistant Professor of Mathematics, Ithaca College, NY, USA.**
I have taught the following courses at IC:
- Statistics for life, health, and social sciences
- Calculus I
- Math for Decision making
- Intermediate Statistics
- Graph Theory and Combinatorics
- Basic Statistical Reasoning
- Statistics for Business, Economics and Management
- Finite Mathematics with Calculus
- 2015 – 2020 **Teaching Assistant (Mathematics), Syracuse University, NY, USA.**
I have taught the following courses at IC:
- Statistics for life, health, and social sciences, Spring 2021; Spring 2023
- Calculus I
- Calculus for Life Sciences I
- Regular Pre-calculus
- Algebra-infused pre-calculus
- Probability and Statistics for Liberal Arts
- Foundational Mathematics via problem-solving I - For preservice teachers
- Foundational Mathematics via problem solving II - For preservice teachers

Employment History (continued)

- 2017 **Teaching Assistant (Secondary Mathematics Methods Course)**. Syracuse University, NY, USA.
Assisted in a mathematics methods course (SED 413/614) meant for preservice teachers. More specific roles included:
- Reviewed the pre-service teachers' edTPA materials and provided feedback.
 - Collaborative lesson planning (with the professor)
 - Chose readings in line with weekly themes
 - Engaged in collaborative lesson planning (with the professor)
 - Led classroom discussions on a few occasions
- 2013–2015 **Part time Lecturer (Statistics & Research Methods)**, University of Eldoret, Kenya.
- Teaching and assessment of assigned courses
 - Advised students on the choice of research topics for practical community purposes
- 2010–2015 **High School Teacher(Mathematics & Chemistry)**, Nyamauro Secondary, Kenya.
- Taught Mathematics and Chemistry across all grades
 - Served as acting deputy principal for two years and then as senior teacher for two years
 - Served as head of the mathematics department
- 2009–2010 **High School Teacher(Mathematics & Chemistry)**, Kebabe Girls High School, Kenya.
- Taught Mathematics and Chemistry across all grades
 - Served as academic parent to a group of six girls.
 - organized events to promote favorable attitude toward mathematics.
 - Organized and conducted remedial classes during after-school hours and weekends.

Research Publications

Journal Articles

- 2023 **Geteregechi, J.M.** (2023) Investigating undergraduate students' mathematical reasoning via problem posing. *International Journal of Mathematical Education in Science and Technology*, 1-20. <https://doi.org/10.1080/0020739X.2023.2169646>
- 2018 **Ogembo, J.O., & Geteregechi, J.M.** (2018). Influence of language skills on students' learning and achievement in mathematics in basic education in Kenya. *Research Journal of Educational Studies and Review* 4 (1), pp. 6-11.

Conference Proceedings

- 2023 **Geteregechi, J.M.** (2023). Analyzing the Reasoning Types Potentially Required by Tasks in an Open-Source Introductory Statistics Textbook. In Cook, S., Katz, B. & Moore-Russo D. (Eds.). *Proceedings of the 25th Annual Conference on Research in Undergraduate Mathematics Education*. Omaha, Nebraska, USA. http://sigmaa.maa.org/rume/RUME25_Proceedings.pdf
- 2022 **Geteregechi, J.M.** (2022). Investigating undergraduate students' mathematical creativity via problem posing. In Scott, A.C (Eds) *Proceedings of the 12th Annual Conference on International Group on Mathematical Giftedness and Creativity*. Las Vegas, NV, USA. <https://doi.org/10.37626/GA9783959872263.0>
- Geteregechi, J.M.** (2022). Characterizing undergraduate students' problem-posing products and processes in an Introductory Business mathematics course. In Karunakaran, S. S., & Higgins, A. (Eds.). (2022). *Proceedings of the 24th Annual Conference on Research in Undergraduate Mathematics Education*. Boston, MA, USA. <http://sigmaa.maa.org/rume/RUME24.pdf>


Research Publications (continued)

- Altindis, N. **Geteregechi, J.M.**, & Waswa A. (2022). Networking multiple reasoning perspectives to characterize students' thinking about quantities and quantitative relationships. In Karunakaran, S. S., & Higgins, A. (Eds.). *Proceedings of the 24th Annual Conference on Research in Undergraduate Mathematics Education*. Boston, MA, USA. <http://sigmaa.maa.org/rume/RUME24.pdf>
- 2020 **Geteregechi, J.M.**, & Waswa A. (2020). Opportunities for reasoning-and-proving in a University precalculus textbook. In Karunakaran, S. S., Reed, Z., & Higgins, A. (Eds.). *Proceedings of the 23rd Annual Conference on Research in Undergraduate Mathematics Education*. Boston, MA, USA. <http://sigmaa.maa.org/rume/RUME23.pdf>
- 2019 Wambua, W.M., Fonger, N.L., & **Geteregechi J.M.** (2019). Exploring cogenerative dialogues with undergraduates to improve teacher feedback practices in probability and statistics. In Weinberg, A., Moore-Russo, D., Soto, H., & Wawro, M. (Eds.). *Proceedings of the 22nd Annual Conference on Research in Undergraduate Mathematics Education*. Oklahoma City, Oklahoma, USA. *Proceedings of the 22nd Annual Conference on Research in Undergraduate Mathematics Education*. pp. 1195-1196 Oklahoma City, Oklahoma, USA. http://sigmaa.maa.org/rume/RUME22_Proceedings.pdf
- 2015 **Geteregechi, J.M.**, Miheso-O'Connor, M. K., & Ondigi, S.R. (2015). How does notational competence affect student understanding and performance in mathematics? *Proceedings of the 4th International Conference on Education*, pp. 221-226. Nairobi, Kenya.


Talks

- May 2024 **Alumni Talk: Syracuse University Future Professoriate Program (FPP)**. Gave a talk to an audience of PhD students about "Experiences working at a liberal arts college in the United States". White Eagle Hotel and Conference Center, Hamilton, New York.
- Mar 2021 **Exploring undergraduate students' mathematical reasoning via problem posing**. Research Talk (Preliminary Report) at the 2021 Mathematical Association of America (MAA) Mathfest Meeting. Virtual (Hopin and Zoom), USA. **(Peer reviewed Abstract)**
- Nov 2021 **Opportunities for mathematical reasoning in Open-source Statistics textbook**. Research talk at the 5th North Eastern Chapter of Research in Undergraduate Mathematics Education. Virtual (Zoom), New York, USA. **(Peer reviewed Abstract)**
- May 2021 **The Role of Problem Posing in teaching and learning college-level mathematics courses**. Talk to MATH 191 (World of Mathematics) class at Ithaca College. Ithaca Collges, Ithaca, New York, USA.
- Sep 2020 **Opportunities for reasoning-and-proving in a precalculus course textbook**. Research Brief at the 47th annual conference on Research Council on Mathematics Learning (RCML). Las Vegas, Nevada, USA. **(Peer reviewed Abstract)**
- Sep 2019 **Investigating the nature of student learning in a precalculus course from a mathematical reasoning perspective**. Talk at the 3rd North Eastern Chapter of Research in Undergraduate Mathematics Education. York College, New York, USA. **(Peer reviewed Abstract)**
- Mar 2019 **Creative mathematical reasoning among undergraduate students of mathematics**. Talk at the 44th Annual New York State Regional Graduate Mathematics Conference. Syracuse University, New York, USA. **(Peer reviewed Abstract)**
- Sep 2018 **Opportunities for reasoning and proof in Form 2 (Grade 10) Mathematics textbooks in Kenya**. Talk at the 10th Annual conference of Kenya Scholars and Studies Association (KESSA). Atlanta, Georgia, USA. **(Peer reviewed Abstract)**







Talks (continued)

- Sep 2017  Investigating the role of mathematical problem posing on pre-service teachers' problem solving processes. Proceedings of the 45th Annual Conference on Research Council on Mathematics Learning. Baton Rouge, Louisiana, USA. **(Peer reviewed Abstract)**

Awards and Certificates

- 2024  **Pi Mu Epsilon National Honor Mathematics Society - Ithaca College Chapter**
- Elected to Pi Mu Epsilon in recognition of superior achievement in the field of mathematics.
- 2021  **Syracuse University- All University Doctoral Prize**
- Earned the all-university doctoral prize that come with a \$500 honorarium.
- Key criteria was the rigor and depth of the research methods.
- 2018  **Syracuse University- Certificate in University Teaching**
- Participated in the Future Professorial Program (FPP) that tracks and awards successful teaching of undergraduate courses.
-  **Syracuse University- Outstanding Teaching Award**
- Awarded by Syracuse University's Graduate School for outstanding performance in undergraduate teaching of mathematics courses.
-  **Phi Beta Delta International Honor Society- Syracuse University Chapter**
- Certificate awarded in recognition of academic excellence in graduate studies. Awarded only to those with GPA of greater than 3.7.
- 2014  **DePaul University - Certificate in Values-Centered Leadership (online)**
- Gained intensive knowledge and skills in organizational management and enhancing collaboration among team members.
- Learned the value and importance of institutional mission/vision and how to design daily activity towards these broad goals.
Learned about various polarity management strategies and how to apply them in conflict resolution.

Skills

- Languages  Strong reading, writing, and speaking competencies in English, Swahili, and Kisii (Kenya).
- Coding  Python, R, \LaTeX , ...
- Data Analysis  **Quantitative:** R (Tidyverse), Python, Minitab, and SPSS.
Qualitative: MAXQDA, NVIVO.
- Databases  MySQL, SQLite.
- Web Dev  HTML, CSS, JavaScript.
- Misc.  Academic research (mathematics education), teaching, training, consultation, \LaTeX typesetting and publishing.

Miscellaneous Experience

References

Available on Request