

Yaw Owusu-Agyemang

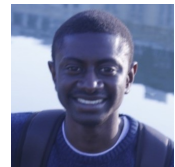
Ph.D. Mathematics Student, George Mason University

✉ yowusuag@gmu.edu

🌐 <https://orcid.org/0009-0003-3196-5606/>

🌐 [yawwusugh](https://www.github.com/yawwusugh)

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Education

- Aug 2023 - To Date 📖 **Ph.D Mathematics, George Mason University**
Interests in: *Finite Elements, PDE-Constrained Optimization and Machine Learning*
Advisor: Prof Harbir Antil
- Sep 2018 – Sep 2020 📖 **M.Sc. Mathematical Engineering, University of L'Aquila and TU Vienna**
in joint program.
Thesis title: *Multivariable Haar Wavelets: Construction and Applications.*
Advisor: Prof Vladimir Protasov
- Aug 2013 – June 2017 📖 **B.Sc. Mathematics, Kwame Nkrumah University of Science and Technology** .
Thesis title: *Optimal Terminal Locations for a Bus-Shuttle system.*
Advisor: Dr Peter Amoako-Yirenkyi

Summary of Graduate Coursework Completed

- Ph.D 📖 **Mathematics, Research in Numerical PDEs, Optimal Control of PDEs**
Courses in: *Linear Analysis, Numerical Analysis, Topology, Ordinary and Partial Differential Equations, Finite Elements, PDE-Constrained Optimization and High Performance Computing*
- Masters 📖 **Mathematical Modelling in Engineering, Specialization in Optimization**
Courses in: *Functional Analysis, Advanced Analysis (Distributions, Sobolev Spaces etc), Scientific Programming (C/C++), Numerical Methods for PDEs (Finite Elements etc), Numerical Methods of ODEs, Optimization in Signal Processing and Wavelets, Optimization Models and Algorithms, Master Thesis (Title: Multivariable Haar Wavelets: Construction and Applications)*

Employment History








- Aug 2023 - To Date 📖 **Research Assistant**, Mathematics Department, College of Science, George Mason University.
- June 2024 - Aug 2024 📖 **Visiting Student**, Optimization and Uncertainty Quantification Department, CCR, Sandia National Laboratories.
Mentor: Dr. Denis Ridzal
- Oct 2021 – Aug 2023 📖 **FullStack Software Developer** Cargoful Srl.
- Dec 2021 – Feb 2022 📖 **Junior Programmer (Part Time)** Columbus IT Srl.
- Oct 2020 – Aug 2021 📖 **FullStack Software Developer (Tech Lead)** Testami Srl.
- Sep 2017 – Aug 2018 📖 **Teaching and Research Assistant** National Institute of Mathematical Sciences (NIMS) Ghana, KNUST.

Research Publications



- 1 H. Antil, J. Adiazola, R. Khandelwal, Y. Owusu-Agyemang, and D. Ridzal, “An optimal control problem to mask space-time dependent sources,” In preparation.
- 2 H. Antil, R. Khandelwal, J. Nicols, and Y. Owusu-Agyemang, “A finite element method for conservation laws arising in light bending problem,” In preparation.

Conferences and Seminars





Conferences

- 2025  **Computational Learning for Model Reduction**, at ICERM, Brown University, Providence, RI, USA.
- 2024  **SIAM Washington D.C.-Baltimore Sectional Meeting**, at George Mason University, VA, USA.
-  **Finite Element Circus**, at University of Maryland, Baltimore County, MD, USA.
-  **American Mathematical Society Eastern Sectional Meeting**, at Howard University, DC, USA.
-  **Finite Element Circus**, at Brown University, Providence, RI, USA.
- 2023  **Mathematical Opportunities in Digital Twins**, at George Mason University, VA, USA.
- 2018  **Scientific Computing and Industrial Modelling**, by National Institute of Mathematical Sciences at Kumasi, Ghana.

Seminars

- 2023-2024  **Joint PDE/Control Seminar**, George Mason University.
-  **CMAI Colloquium**, Center for Mathematics and Artificial Intelligence, GMU.

Skills

- Languages  Strong reading, writing and speaking competencies for English. Basic understanding of Italian, German and French
- Academic  Academic research, teaching, training, consultation, \LaTeX typesetting and publishing.
- Programming  Python, Matlab, R, C, C++, \LaTeX .
- Web Dev  HTML, CSS, JavaScript, SQL, Django, Amazon Web Server, Docker, Kubernetes.




Miscellaneous Experience

Awards and Achievements

- 2017  **College of Science Prize for Best Mathematics Student**, Kwame Nkrumah University of Science and Technology.

Miscellaneous Experience (continued)

Certification

- 2018  **Deep Learning.** Awarded by deeplearning.ai via Coursera.
- 2017  **Machine Learning.** Awarded by Stanford University via Coursera.
- 2016  **Statistics with R.** Awarded by Duke University via Coursera.

References

Available on Request