SAMUEL AGENORWOTH

Sex : Male

Nationality : Ugandan

Lahti, Finland

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PROFILE

I am currently doing a Ph.D. in Computational Engineering (Applied Mathematics) at LUT University, Lahti on a topic Uncertainity Quantification in Pipe Imaging. I am working with Prof. Emilia Blåsten.

I recently graduated with a double Master's degree in Mathematics and Mathematical Engineering on 30 May 2024 from respectively Karlstad University, Sweden and University of L'Aquila, Italy. My research focused on "Tracer Transport in Fractured Porous Media: Homogenization, Dimension Reduction, and Simulation of a Coupled System of Adsorption-Diffusion-Convection Equations."

Beyond my academic pursuits, I am dedicated to extending charitable activities, and I am interested in football as a sport.

LIST OF PUBLICATION

1. S. Agenorwoth and E. Blåsten. *Statistical comparison of reconstruction methods for the inverse boundary problem of the one-dimensional wave equation*. Inverse Problems, 2026. doi:10.1088/1361-6420/aeb156. Preprint: arXiv:2605.28415.
2.
3.

EDUCATION AND TRAINING

12/2024 - 12/2028 **PhD. Computational Engineering (Applied Mathematics)** **LUT University, Lahti (www.lut.fi)**

- Inverse Days Conference 2026, Jyväskylä-Finland.
- International Aerosol Conference, 2026, Xi'an-China.
- Living the Dream Seminar Series, 2026, Lappeenranta-Finland.
- Helsinki Inverse Problems Seminar 2026, Heksinki-Finland.
- Inverse Days Conference 2025, Heksinki-Finland.
- Jyväskylä summer school 2025, Jyväskylä-Finland.
- Applied Inverse Days, 2025 Rio De Janeiro-Brazil.
- LUT Doctoral Student Science Conference 2025, Lappeenranta-Finland.
- Inverse Days Conference 2024, Oulu-Finland.
- Project in Computational Fluid Dynamics.
- Project in Applied Optimization in Engineering.
- Project in Chemical Transport Modelling.
- How to make science videos (https://www.youtube.com/watch?v=o56rXe9BGF4
- AMC-Lahti Project (https://www.linkedin.com/posts/amc-lahti_predictivemaintenance-engineering-ai-activity-7441531133458)

8/2023 - 6/2024 **MSc Mathematics** **Karlstad University (www.kau.se)**

- Thesis titled "Tracer transport in fractured porous media: Homogenization, dimension reduction, and simulation of a coupled system of absorption-diffusion-convection equations"
- Project in partial differential equations and the Finite Element Method titled "Absorbing Boundary Conditions for the Numerical Simulation of Waves"

9/2022 - 7/2023 **MSc Mathematical Engineering** **University of L'Aquila (www.univaq.it)**

- Project in Monte Carlo Simulation of the 2D Ising Model.
- Project in Introduction to Parallel Computing under the topic "Parallel Product Matrix-vector".

8/2017 - 12/2020 **Bsc Education. Mathematics (major), Chemistry (minor)** **Makerere University (www.mak.ac.ug)**

- Modules involved included cores of Pure and Applied Mathematics.

WORK EXPERIENCE

12/2024 – 12/2028 **Junior Reseacher** **LUT University, Lahti**

- Reviewing existing studies on education theories, pedagogy, and policy.
- Summarizing findings for reports, proposals, or academic papers.
- Drafting research papers, reports, and policy briefs.
- Co-authoring publications with senior researchers.

1/2022 – 9/2022 **Mathematics teacher secondary school** **Uganda Martry's S.S, Namugongo**

- Delivering the advanced mathematics curriculum effectively, ensuring students understand complex mathematical concepts.
- Designing and grading assessments to gauge students' understanding and progress in mathematics.
- Planning lessons, creating syllabi, and selecting appropriate teaching materials to cover curriculum.
- Maintaining discipline and a conducive learning environment in the classroom.
- Inspiring students to have passion for mathematics through engaging teaching methods and highlighting the subjects' relevance.

CONFERENCES AND SEMINARS

30/Aug-6/Sep **International Aerosol Conference, 2026** **Xi'an, China**

I gave a talk on Bayesian Retrieval of Aerosol Microphysical Parameters from Spectral AOD which is the third paper on my Ph.D. project.

3/June-3/June **Living the DREAM seminar series, 2026** **Lappeenranta, Finland**

I summarized the results and findings of our first project paper.

26/2/2026 **Helsinki Inverse Problems Seminar** **University of Helsinki, Finland**

I gave a talk on the modification of progress of the first academic paper on uncertainty computational of acoustics in imaging on pipes. It was on an invite by Prof. Lauri Oksanen.

15/Dec-17/Dec **Inverse Days Conference, 2025** **Helsinki, Finland**

I gave a talk on the progress of my first academic paper on uncertainty computational of acoustics in imaging on pipes.

28/July-1/August **Applied Inverse Problem Conference, 2025** **Rio De Janeiro, Brazil**

Participant. I gave no talk.

10/Dec-13/Dec **Inverse Days Conference, 2024** **Oulu, Finland**

Participant. I gave no talk.

GRANTS & FUNDING

2026 **LUT Research Foundation (LUT-yliopiston ja ammatillisen koulutuksen tukisäätiö)**

I was awarded a travel grant worth 3 238 euro for the International Aerosol Conference (IAC) 2026, Xi'an, China, 28th August – 7th September 2026.

2024-2028 **Doctoral research under Doctoral Education Pilot for Mathematics of Sensing, Imaging and Modelling (DREAM) and the Flagship of Advanced Mathematics for Sensing, Imaging and Modelling funding**

I am currently pursuing a Ph.D research degree at LUT University in Finland under this program.

2022-2024 **InterMaths Erasmus Mundus Joint Master Degree (RealMaths Consortium)**

Erasmus Mundus Scholarship Under RealMath Consortium 2022 – 2024 I won the InterMaths Erasmus Mundus scholarship under the RealMaths consortium to pursue an International Double MSc Degree program at L'Aquila University (Italy) and Karlstad University (Sweden).

2017-2021 **Uganda Government National Merit Sponsorship**

I won the Uganda Government National Merit Sponsorship at Makerere University to pursue my Undergraduate Studies.

SKILLS

Languages: Matlab, Python, Gfortran, Pyomo, COMSOL **Technologies:** LaTeX

LANGUAGES

Jonam - Native, **English** - C2, **Italian** - A2.