

AMINAT A. AMBELORUN

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EDUCATION

Georgia Institute of Technology, USA
PhD Candidate in Earth and Atmospheric Science

August 2021-Present

The Abdus Salam International Centre for Theoretical Physics, Italy
Postgraduate Diploma in Earth System Physics

September 2020-August 2021

University of Ibadan, Nigeria
Bachelor of Science in Physics

March 2015-February 2018

PUBLICATIONS

Peer-reviewed

- **Ambelorun, A.A.** & Robel, A.A., (2025). The integrated ice sheet response to stochastic iceberg calving. *Journal of Glaciology*, 71, e79. doi:10.1017/jog.2025.10056.
- Nicola, L., Frøystad, R., Juarez-Martinez, A., Menthon, M., Moraes Luzardi, A. C., Turner, K. A., Wilson, S. F., Karlsson, N. B., van den Akker, T., **Ambelorun, A. A.**, ... Keisling, B. (2025). Where do we want the glaciological community to be in 2073? Equality, diversity and inclusion challenges and visions from the 2023 Karthaus Summer School. *Journal of Glaciology*, 71, e68. doi:10.1017/jog.2025.18
- Robel, A.A., Verjans, V., & **Ambelorun, A.A.**, (2024). Biases in ice sheet models from missing noise-induced drift. *The Cryosphere*, 18, 2613–2623. doi:10.5194/tc-18-2613-2024.

In Prep

- **Ambelorun, A.A.**, Robel, A.A., & Seroussi, H. A Positive Feedback between Iceberg Calving and Local Sea Level through Hydrostatic Pressure. *Geophysical Research Letters*
- Duffy, A., Greenlee, E., Cha, M., & **Ambelorun, A.A.** Optimal behind-the-meter storage options: Balancing cost, carbon, and grid benefits in Georgia. *Geophysical Research Letters*

FELLOWSHIPS AND ACADEMIC HONORS

Brook Byers Institute for Sustainable Systems (BBISS) Graduate Fellowship 2023-2025
A competitive fellowship awarded to students whose research advances sustainability; total value of award: \$127,500

Evans Family Graduate Fellowship 2024
Awarded \$10,000 for a 3-month research visit to Dartmouth College.

Center for Programs to Increase Engagement in the Sciences Award 2023
Fellowship of \$1,500 to support research experience-related activities.

UNESCO/IAEA Study Grant 2020-2021
A fully funded scholarship awarded to outstanding students from developing countries to attend ICTP.

University of Ibadan Scholars' Award for Academic Excellence 2019
Awarded to students who graduated with First Class Honors.

Dean's Roll of Honor for Academic Excellence 2016,2017
Awarded to students with a First Class CGPA in the Faculty of Science, University of Ibadan, Nigeria.

RESEARCH EXPERIENCES

PhD Candidate August 2021-Present
Georgia Institute of Technology, Atlanta, USA
Stochastic modeling of iceberg calving in a one-dimensional depth-integrated glacier model and ISSM.
Quantifying the feedback between calving and local sea level changes due to gravitational effects.
Working with satellite data sets.

BBISS Graduate Fellow August 2023-July 2025
Georgia Institute of Technology, Atlanta, USA
Modeled residential electric and thermal storage adoption to minimize carbon emission, costs, and peak demand using residential energy and utility data.

Student Researcher July 2024
School on Polar Climates: Theoretical, Observational and Modelling Advances, Italy
Collaborative project on biophysical and biogeochemical sampling of polar regions using multi-scale datasets (SUIT, ice cores, ROV, satellite and models) to assess Arctic and Antarctic differences and evaluate limitations and benefits of each methodology.

Student Researcher October 2023
GeoSMART Hackweek, eScience Institute, University of Washington, Seattle, USA
Collaborative project on application of machine learning in hydrology and cryosphere science.

Student Researcher May 2023
Karthus Summer School, Italy
Collaborative project mapping the glacial geomorphology of the Haizishan Plateau using Google Earth.

Postgraduate Diploma Research May 2021-August 2021
International Centre for Theoretical Physics, Trieste, Italy
Studied interactions between Barents-Kara December sea-ice loss and atmospheric circulation anomalies using a large-scale Atmospheric General Circulation Model (SPEEDY model).

TEACHING AND MENTORING

Mentor for Undergraduate Student August 2023-Present
Georgia Institute of Technology, Atlanta, USA
Mentoring a student investigating whether variability in Greenland's ice loss signals a nearing tipping point or results from increased variability of surface mass balance.

Graduate Teaching Assistant July 2019-August 2020
Department of Physics, University of Ibadan, Oyo, Nigeria
Led tutorials and laboratory sessions for first-year students, and graded laboratory reports.

Physics Tutor Jan 2020- Mar 2020
JSAY Prevarsity Academy, Ibadan, Oyo, Nigeria
Tutored Cambridge Advanced level physics and mathematics.

Teaching/Graduate Assistant April 2018-April 2019
JUPEB Center, Federal University Oye-Ekiti, Ekiti, Nigeria
Tutored advanced level physics, graded entrance examinations, and assisted with other organizational duties.

Physics Tutor Jan 2018- Mar 2018
Elects Academy, Ibadan, Oyo, Nigeria
Tutored Cambridge Advanced level physics.

Physics Tutor September 2014-March 2015
Educational Advancement Centre, Ibadan, Oyo, Nigeria
Tutored Cambridge Advanced level physics.

LEADERSHIP EXPERIENCE

Graduate Symposium Chair 2024
Georgia Institute of Technology, Atlanta, USA
Organized and hosted the annual research symposium for Earth and Atmospheric Sciences (EAS) graduate students.

Co-organizer, Climate sustainability challenges & opportunities Workshop

2023

Spellman College, Atlanta, USA

Coordinated a climate sustainability workshop for undergraduate students covering climate science, modeling, solutions, and justice. Hosted climate modeling day, and led interactive round table discussions.

Public Relation Officer

2018-2019

Federal Road Safety Club, Community Development Service Group, NYSC, Oye-Ekiti, Nigeria

Responsible for all communications, public affairs and relations in the group. Gave presentations during the group outreach activities.

PRESENTATIONS

Invited Talks and Seminars

- **Ambelorun, A.,** Robel, A., "The Integrated Ice Sheet Response to Stochastic Iceberg Calving" AGU Fall Meeting, Washington DC (December 2024)
- Dartmouth College, Ice+Climate Seminar (November 2024)

Contributed Talks

- **Ambelorun, A.,** Robel, A., "The Integrated Ice Sheet Response to Stochastic Iceberg Calving" EGU General Assembly, Vienna, Austria (April 2024)
- **Ambelorun, A.,** Robel, A., "Quantifying Uncertainty in Sea Level Projections for Improved Sustainability Strategies" GT/Spelman Workshop, Spelman College, GA (September 2023)

Contributed Posters

- **Ambelorun, A.,** Robel, A., & Helene S., "Coupling Iceberg Calving to Local Sea Level ", Summer School on "Sea-level change: evidence, challenges and policy", Delft University of Technology, Delft, The Netherlands (August 2025)
- **Ambelorun, A.,** Robel, A., "Modeling the impact of stochastic iceberg calving on ice sheet dynamics", Verification and Validation of Cryospheric Models, Northumbria University, Newcastle, UK (August 2024)
- **Ambelorun, A.,** Robel, A., "The Integrated Ice Sheet Response to Stochastic Iceberg Calving" WAIS Workshop, Estes Park, CO (September 2022)

TECHNICAL SKILLS

Programming Languages: MATLAB, Python, FORTRAN**Software Tools:** Git, L^AT_EX, Cloud Computing, ISSM, Flowline Modeling, Machine Learning