

PhD Graduate: Dr. Firehiwot Girma

Getting a PhD degree is tough and demanding. It requires a lot of dedication, hard work, and support. Sida has been active in helping talented scholars by supporting their academic growth and development.

Mrs. Firehiwot Girma started her academic career with the help of Sida's scholarship program. She dedicated herself to performing innovative research in the field of Electric Power and Control Engineering, guided by her distinguished advisors Dr. Getachew Bekele of AAiT and Associate Professor Mikael Amelin of KTH.

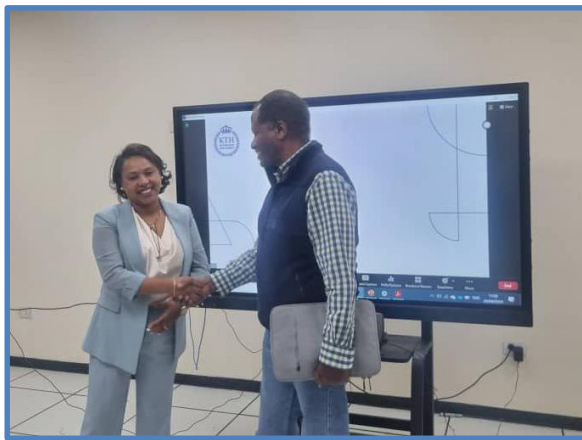


Figure:1 Mrs. Firehiwot Girma and her Ethiopian Advisor Dr. Getachew Bekele

In addition to her remarkable academic achievements, it is important to acknowledge the additional challenges that Mrs. Firehiwot Girma, a dedicated female PhD student and a mother, has overcome on her academic journey. Balancing the demands of conducting rigorous research and the responsibilities of motherhood is no easy task. Yet Mrs. Firehiwot Girma has shown extraordinary resilience and determination. She has had to carefully manage her time and energy, often working late into the night to make progress on her research; while still being present for her family. Her ability to overcome these challenges is a testament to her strength and unwavering commitment to both her academic and family responsibilities. In addition to the integral challenges of academics and motherhood, she faced the unprecedented obstacles posed by the COVID-19 pandemic.



Fig. 2: Mrs. Firehiwot Girma, her husband and daughter after her successful thesis defense.

Sida's support was instrumental in Mrs. Firehiwot Girma's academic journey. The comprehensive collaboration package provided financial assistance, access to resources, and opportunities for networking and professional development. Equally crucial was the mentorship and guidance received from Swedish and Ethiopian Professors, which helped her shape her research and refine her academic skills.

These contributions of her research work have not only added to the body of knowledge she gathered of the years but also hold the potential for adding values to the real-world applications and positive societal impacts.

Mrs. Firehiwot Girma has been recognized for her scholarly work and has authored two journal papers and one conference paper.

By fostering partnerships and participating in academic conferences, she has contributed to the exchange of ideas and the formation of a global network of scholars in their field.

The success achieved by Mrs. Firehiwot Girma can be attributed to a combination of factors. Her unwavering determination, intellectual curiosity, and ability to overcome challenges were pivotal in her accomplishments. Additionally, the support and guidance provided by her advisors, fellow researchers, and the Sida support created an enabling environment for her growth and success. The journey of Mrs. Firehiwot Girma serves as an inspiration to current and future Sida-supported PhD students particularly female candidates. Her story exemplifies the transformative power of

education and the impact that can be achieved through perseverance, hard work, and institutional support.



Fig.3: Left to right: Professor N.P. Singh, Professor Brook Lemma, Ms. Mastewal Moges, Mrs. Firehiwot Girma, Dr. Getachew Bekele, Dr. Mengesha Mamo and Dr. Libsework Yalew.

We extend our heartfelt appreciation to Sida for the untiring commitment to academic development and the role in shaping the quality of the PhD programs at AAU and the careers of PhD students. The Sida support has enabled the realization of remarkable achievements and has contributed to the greater advancement of knowledge and sustainable development.

List of Publications:

Firehiwot Girma Dires, Amelin, M. and Getachew Bekele (2021): "Deterministic Hydropower Simulation Model for Ethiopia," IEEE Madrid Power Tech, Madrid, Spain, pp. 1-6, doi: 10.1109/PowerTech46648.2021.9494862.

Firehiwot Girma Dires, Amelin, M. and Getachew Bekele (2023): "Inflow Scenario Generation for the Ethiopian Hydropower System", Water, 15(3), 500; <https://doi.org/10.3390/w15030500>.

Firehiwot Girma Dires, Amelin, M. and Getachew Bekele (2023): Long-Term Hydropower Planning for Ethiopia: A Rolling Horizon Stochastic Programming Approach with Uncertain Inflow (Conference Paper: in print).

PhD Candidate: Dr. Dawit Habtu Gebremeskel

Mr. Dawit Habtu Gebremeskel, the first PhD candidate from the Electric Power and Control Engineering PhD Program, supported by Sida, successfully graduated with a PhD in Electrical Power Engineering. His doctoral dissertation, entitled: "Long-Term Modeling and Analysis of Optimal Pathways and Scenario Alternatives for the Ethiopian Power Sector," was completed at Addis Ababa University and Chalmers University of Technology. The graduation took place in July 2023.



Figure 4: PhD Student Dawit Habtu during his PhD Defense

Under the guidance of his supervisor, Dr. Getachew Bekele from the School of Electrical and Computer Engineering at Addis Ababa University, and co-supervisor Prof. Erik O. Ahlgren from the Department of Space, Earth, and Environment at Chalmers University of Technology, Dawit conducted extensive research in the field of power sector reform and energy system modeling. Throughout his academic journey, Dawit made significant contributions to the field, as evidenced by his list of publications.

Dawit's academic journey and research achievements highlight his commitment to advancing the field of electrical power engineering. His contributions have the potential to inform policy decisions and drive sustainable development in Ethiopia's power sector.

With his successful completion of the PhD program and the publication of his research findings, Dawit Habtu Gebremeskel has established himself as a promising researcher in the field of electrical power engineering. His work serves as a solid foundation for further advancements in the Ethiopian power sector and contributes to the body of knowledge in the global energy community.

List of Publications:

Dawit H. Gebremeskel, Getachew Bekele, Erik O. Ahlgren, Assessment of resource adequacy in power sector reforms of Ethiopia (2019): IEEE PES/IAS Power Africa, Abuja, Nigeria, pp. 81-86.

Dawit H. Gebremeskel, Getachew Bekele, Erik O. Ahlgren, Energy System modeling tools: Review and comparison in the context of developing countries (2020): IEEE PES/IAS Power Africa, Nairobi, Kenya.

Dawit H. Gebremeskel, Erik O. Ahlgren, Getachew Bekele, Long-term evolution of energy and electricity demand forecasting: The case of Ethiopia (2021): *Energy Strategy Reviews*, 36:100671.

PhD Candidate: Dr. Kena Likassa

Mr. Kena Likassa, a PhD candidate from the Electric Power and Control Engineering PhD Program, supported by Sida, successfully graduated with a PhD. His doctoral dissertation, titled "STUDY INTO GRID INTEGRATION OF VARIABLE RENEWABLE ENERGY IN ETHIOPIAN POWER SYSTEM" was completed at Addis Ababa University and KTH Royal Institute of technology. The graduation took place in May 16, 2024.

Under the guidance of his supervisor, Dr. Mengesha Mamo from the School of Electrical and Computer Engineering at Addis Ababa University, and co-supervisor Professor Lennart Söder from KTH Royal Institute of Technology, Mr. Kena Likassa conducted extensive research in the field of Electric power and energy.



Figure 5: PhD student Mr. Kena Likassa during his PhD defense

Throughout his academic journey, Mr. Kena Likassa made significant contributions to the field, as evidenced by his list of publications.

Mr. Kena Likassa's academic journey and research achievements highlight his commitment to advancing the field of electrical power and control engineering. His contributions have the potential to inform policy decisions and drive sustainable development in Ethiopia's power sector.

With his successful completion of the PhD program and the publication of his research findings, Mr. Kena Likassa has established himself as a promising researcher in the field of electrical power engineering. His work serves as a solid foundation for further advancements in the Ethiopian power sector and contributes to the body of knowledge in the global energy community.

List of Publications:

Nefabas, Kena Likassa, Lennart Söder, Mengesha Mamo, and Jon Olauson. Modeling of Ethiopian wind power production using era5 reanalysis data." *Energies* 14, no. 9 (2021): 2573.

Nefabas, Kena Likassa, Mengesha Mamo, and Lennart Söder. Analysis of System Balancing and Wind Power Curtailment Challenges in the Ethiopian Power System under Different Scenarios." *Sustainability* 15, no. 14 (2023): 11400.

Likassa, Kena, Mengesha Mamo, and Lennart Soder. Assessment of Wind Power Variability in Ethiopian Power System (2021): IEEE PES/IAS Power Africa, pp. 1-5. IEEE.

