

## Personal Information

Name: **Endalkachew Bogale Gelaw**  
 Date of birth: 17 May 1983  
 Sex: Male  
 Nationality: Ethiopian  
 Current employer: University of Genoa (CIMA Research Foundation), Italy  
 Present position: PhD Student

## Contact Information

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## Research Interests

I have very strong research interest in Hydroinformatics—the development and application of modelling techniques for hydrology, meteorology, climate change and water resources applications. Particularly I have a keen interest in the impact of climate variability and change on hydrologic response, flood, drought and frost modelling and forecasting, river and groundwater systems modelling, integrated water resources management, water governance, and the buffer and riparian areas of natural water systems.

## Education

**November 2019–Now:** PhD Student in Computer Science and Systems Engineering (University of Genoa under CIMA Research Foundation, Savona, Italy)  
**Thesis:** Coupling of Atmospheric and Hydrological Modelling  
**October 2012–April 2014:** Master of Science Degree (MSc) in Water Science and Engineering specialization in Hydroinformatics–Modelling and Information Systems for Water Management (UNESCO-IHE Institute for Water Education, Delft, the Netherlands)  
**Thesis:** Simulation and Optimization in Water Resources Allocation–Comparative Study for the Zletovica Hydro System, Republic of Macedonia.  
**October 2004–July 2008:** Bachelor of Science Degree (BSc) in Water Resources and Irrigation Engineering (Arba Minch University, Arba Minch, Ethiopia)  
**Project:** Surface Irrigation Water Distribution System Design for Yerer Medium Scale Irrigation Project, Harar, Ethiopia.

## Work Experience

**Oct. 2016–Oct. 2019:** Lecturer in Irrigation and Water Resources Engineering, Debre Markos University, Debre Markos, Ethiopia.  
**July 2014–October 2016:** Senior Water Resources Specialist, Abbay (Blue Nile) River Basin Authority, Bahir Dar, Ethiopia.  
**July 2008–October 2012:** Assistant Lecturer in Water Resources and Irrigation Engineering, Arba Minch University, Arba Minch, Ethiopia.

## Leadership Positions

**Feb. 2019–Oct. 2019:** Chair Holder of Irrigation and Water Resources Engineering chair, Debre Markos University, Debre Markos, Ethiopia.  
**Nov. 2016–April 2016:** Head of the Hydraulic and Water Resources Engineering Department, Debre Markos University, Debre Markos, Ethiopia.

**Sept. 2015–Oct 2016:** Resident Water Governance Project Leader, Abbay (Blue Nile) River Basin Authority, Bahir Dar, Ethiopia.  
(A water governance project initiated by World Waternet of the Netherlands)

## Awards

- 1) Winner of the admission to the PhD programs at the University of Genoa–35<sup>th</sup> cycle (2019-2022) for PhD in Computer Science and Systems Engineering under CIMA Research Foundation, Savona, Italy.
- 2) The Netherlands Fellowships Programs (NFP) for MSc program (2012-2014) in Water Science and Engineering, specialization Hydroinformatics: Modelling and Information Systems for Water Management at UNESCO-IHE Institute for Water Education, Delft, the Netherlands.

## Research Projects

- 1) Sintayehu A. Abebe, **Endalkachew B. Gelaw**, Fentahun A. Werku, Tamrat G. Gutema, Arega M. Adal, Melaku T. Wondim and Yibeltal A. Telak (January 2019–September 2021): *Assessment of Groundwater Potential, Recharge and Quality using Geospatial and Statistical Techniques (the case of Choke Mountain Watersheds)*. (1,023m birr)
- 2) Natnael Y. Assefa, Walegn D. Cherie & **Endalkachew B. Gelaw** (September 2018–September 2019), *Assessment of Surface Water Irrigation Potential (the case of Muga Watershed, Upper Blue Nile Basin, Ethiopia)*. (90,000.00 birr)
- 3) Walegn D. Cherie, **Endalkachew B. Gelaw** & Natnael Y. Assefa (September 2018–September 2019), *Investigation of Drought in Muga and Suha Watersheds Upper Blue Nile Basin, Ethiopia*. (133,000.00 birr)
- 4) Sintayehu A. Abebe, **Endalkachew B. Gelaw** (January 2018–January 2019), *Seasonal Stochastic Modelling and Prediction of Monthly Rainfall in Debre Markos, Upper Blue Nile Basin, Ethiopia*.
- 5) **Endalkachew B. Gelaw**, Fentahun A. Werku & Sintayehu A. Abebe (September 2017–December 2018), *Hydrologic Regionalization for Design Flood Estimation at Ungauged Watersheds (the case of Choke Mountain Watersheds, Upper Blue Nile Basin, Ethiopia)*. (76,000.00 birr)
- 6) Sintayehu A. Abebe, Arega M. Adal & **Endalkachew B. Gelaw** (September 2017–September 2018), *Simulation of Watershed Response to Projected Climate Change at Yeda Watershed, Upper Blue Nile Basin, Ethiopia*. (35,000.00 birr)

## Consultancy Services

Worked as a hydrologist and GIS expert in the Basso River Integrated Development study project (2009–2011), which was funded by the South Nations, Nationalities and Peoples Regional State of Ethiopia and Arba Minch University was the consultant.

## Language

**Amharic:** Mother Tongue

**English:** Proficient Professional User

## Computer Skills

- Common Skills: MS Office (Word, Excel, PowerPoint); Libre Office
- Optimization models: LINGO, GLOBE, GAMS;
- Simulation models: Mudflow, MIKESHE, MIKE BASIN, RIBASIM, WEAP, MIKE11, SOBEK, Hec-RAS, Hec-HMS, HEC-ResSim, MOUSE, MIKE21, SWMM, SWAT;
- GIS Skills: Google Earth, Global Mapper, ArcGIS, QGIS, MapSource (GPS);
- Remote Sensing: MultiSpec, ERDAS Imagine;
- Programming: Matlab, Pascal (Delphi), Fortran, JavaScript, VBA, PHP, HTML, Java, R, Python;
- Machine Learning (Artificial Neural Network) models: Weka, NeuralMachine.

**Note:** Some of the skills are gained from classroom lectures and exercise while others are through more advanced works on academic projects, assignments, group works and MSc thesis.

## Workshops and Trainings

- 1) Participant in the first Amhara Design and Supervision Works Enterprise (ADSWE) Symposium on Integrated Solutions for better Consultancy Services in the Water Sector (20–22 July, 2017) Bahir Dar, Ethiopia.
- 2) Computer Aided Project Management using Microsoft Project Professional and Primavera P6 Professional (28 June–03 July, 2017), Debre Markos University, Debre Markos, Ethiopia.
- 3) Global Positioning System (GPS), Google Earth & EPANET Water Distribution Network Simulation Software (19–22 March, 2017) organized by WaterAid Ethiopia, Bahir Dar, Ethiopia.
- 4) Weather Radar On-site Capacity Training (6–17 June, 2016) organized by the National Meteorological Agency of Ethiopia and VAISALA of Finland, Addis Ababa, Ethiopia.
- 5) GIS and Remote Sensing Training for the Design, Development and Support in Implementation and Operation of Basin Information System (09–19 February, 2015) under the Tana-Beles Integrated Water Resources Development Program, Bahir Dar, Ethiopia.
- 6) Training on Building Adaptive Water Resources Management in Ethiopia (22–26 September, 2014) organised by the Overseas Development Institute (ODI) of UK and Ethiopian Institute of Water Resources (EIWR) of the Addis Ababa University, Addis Ababa, Ethiopia.
- 7) International Training on Ecosystems and Ecological Modelling (28–31 May, 2013) organized by the South Florida Water Management District, West Palm Beach, Florida, USA.
- 8) The First Regional Climate and Impact Modelling Workshop for Eastern Africa (26–31 October, 2009) organized by International Centre for Theoretical Physics (ICTP) of Italy and Addis Ababa University, Addis Ababa, Ethiopia.

## References

- 1) Antonio Parodi (PhD, MSc), Program Director for Meteorology and Climate at CIMA Research Foundation, University of Genoa, Savona, Italy. Email: [antonio.parodi@cimafoundation.org](mailto:antonio.parodi@cimafoundation.org).
- 2) Fabio Delogu (PhD, MSc), Environmental Engineer and Modeller at CIMA Research Foundation, University of Genoa, Savona, Italy. Email: [fabio.delogu@cimafoundation.org](mailto:fabio.delogu@cimafoundation.org).
- 3) Simone Gabellani (PhD, MSc), Program Director for Hydrology and Hydraulics at CIMA Research Foundation, University of Genoa, Savona, Italy. Email: [simone.gabellani@cimafoundation.org](mailto:simone.gabellani@cimafoundation.org).
- 4) Andreja Jonoski (PhD, MSc) (Associate Professor of Hydroinformatics), IHE-Delft Institute for Water Education, Delft, the Netherlands. Email: [a.jonoski@un-ihe.org](mailto:a.jonoski@un-ihe.org), Web page: <https://www.un-ihe.org/andreja-jonoski>
- 5) Blagoj Delipetrev (PhD, MSc) (Assistant Professor), University Goce Delcev, Krste Misirkov bb, 2000 Stip, Republic of Macedonia. Email: [blagoj.delipetrev@ugd.edu.mk](mailto:blagoj.delipetrev@ugd.edu.mk), Web page: <http://scholar.ugd.edu.mk/blagojdelipetrev/>
- 6) Arega Mulu Adal (PhD, MSc) (Assistant Professor), Debre Markos University, Debre Markos, Ethiopia. Email: [muluarega21@gmail.com](mailto:muluarega21@gmail.com).
- 7) Mulu Sewunet Kerebih (PhD, MSc) (Assistant Professor), Debre Markos University, Debre Markos, Ethiopia. Email: [mulusewt@gmail.com](mailto:mulusewt@gmail.com).