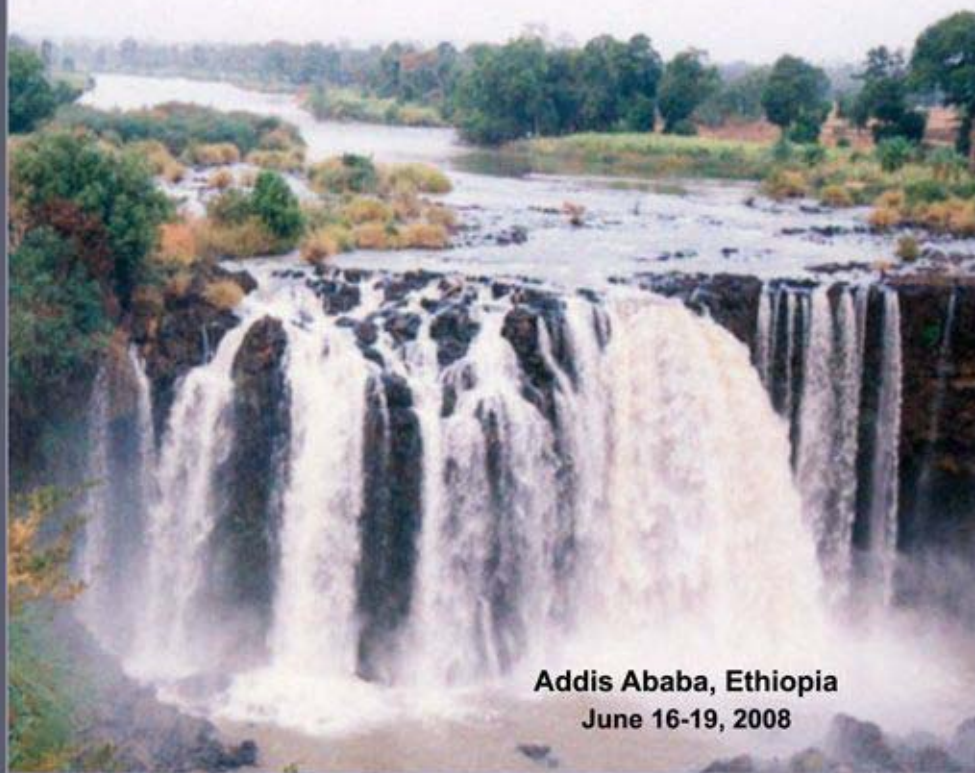


*Proceedings of the Workshop on*  
**Hydrology and Ecology  
of the Nile River Basin  
under Extreme Conditions**

*Edited by:*

Wossenu Abtew and Assefa M. Melesse



**Addis Ababa, Ethiopia  
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*For more information please contact*

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Assefa M. Melesse, Ph. D., P.E., D.WRE  
Assistant Professor  
Department of Environmental Studies, ECS 339  
Florida International University  
11200 SW 8th Street  
Miami, FL 33199, USA  
Tel. (305) 348-6518  
Fax (305) 348-6137  
E-mail: [melessea@fiu.edu](mailto:melessea@fiu.edu)

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## Workshop Scientific Steering Committee Members

### Assefa Mekonnen Melesse, Ph. D., P.E., D.WRE



**Dr. Assefa M. Melesse** is an Assistant Professor of Water Resources Engineering at the Department of Environmental Studies, Florida International University. His research encompasses the application of spatial analysis and remote sensing data from various sensors and electromagnetic spectra for understanding of water and energy fluxes at watershed and regional scales. His research activities are spanning over five countries with the goal of understanding and modeling the land-water interactions and fluxes of water, sediment and

contaminant to coastal waters, river restoration and response to land-use and climate changes and also soil moisture-river flow-climate change linkages.

### Giday WoldeGabriel, Ph. D



**Dr. Giday WoldeGabriel** is a senior research geologist at the Earth Environmental Sciences Division of the Los Alamos National Laboratory in New Mexico, USA. Dr. WoldeGabriel was a Lecturer at Addis Ababa University before he moved to the United States to work on his advanced degree in geology, studying the Main Ethiopian Rift. He has conducted a variety of earth-science research at Los Alamos, including alternative energy sources such as

geothermal and oil shale, sequestration of CO<sub>2</sub> in deep geologic formations to alleviate global warming, and geologic disposal of spent nuclear fuel from commercial reactors. Dr. WoldeGabriel is also actively involved in determining geological context and ancient climatic and environmental conditions of human origins in Ethiopia. He has authored and co-authored several technical papers, including more than 15 Nature and Science publications. Dr. WoldeGabriel has actively worked to raise the awareness of serious hydrological, environmental, ecological, and climatic issues in the Nile River Basin since 1998. He has given a number of public lectures at Los Alamos National Laboratory and at the USAID office for Africa in Washington D. C.

**Gabriel Senay, Ph. D., P.E.**



**Dr. Gabriel Senay** is a principal scientist with SAIC, contractor to the US Geological Survey (USGS) Earth Resources Observation and Science (EROS) Center and an adjunct professor at the Geographic Information Science Center of Excellence (GIScCE), South Dakota State University. He teaches remote sensing of water resources and conducts agro-hydrologic research on water use, crop performance monitoring and production assessment using satellite-derived data and hydrologic simulation models.

**Gerald "Gary" Geernaert, Ph. D**



**Dr. Gerald "Gary" Geernaert** is director of the Institute of Geophysics and Planetary Physics (IGPP), at Los Alamos National Laboratory (LANL). In this position, he is responsible for strategic investments in the astrophysical, space, geophysical, and climate sciences, that involve external collaborations. Between 1994 and 2002, Geernaert was Director of the Department of Atmospheric Environment, at the National Environmental Research Institute, located near Copenhagen, Denmark; in this capacity, he was responsible for the technical component of the air quality monitoring and forecasting network for Denmark and Greenland;

promoting joint ventures together with industry; and managing research in the basic and applied sciences and engineering. He was the founder and subsequent president of the Danish Atmospheric Research Society that began in 1998. Prior to 1994, he was a program manager for marine meteorology and remote sensing, at the US Office of Naval Research, in Arlington, USA.

**J. Phillip King, P.E., Ph.D., M.B.A.**

Associate Professor and Associate Department Head  
Department of Civil Engineering  
New Mexico State University  
Box 30001, MSC 3CE  
Las Cruces, NM 88003-0001  
Tel. 505-646-5377 (office), 505-646-6049 (fax)  
E-mail: [jking@nmsu.edu](mailto:jking@nmsu.edu) (primary)

## *Preface*

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Impacts of the changing climate on fresh water resources coupled with the human-induced activities that accelerate undesirable hydrologic alterations have become a challenge to meeting the freshwater needs of growing global populations. The effort to meet the freshwater demands of the Nile basin countries for various purposes will benefit from the ecohydrology knowledgebase of regions and river basins as well as focused and goal-oriented scientific research. This regional workshop has the goal of developing and strengthening collaborations with key partners from the Nile Basin countries, identifying research and education thrust areas and forming working groups for a follow up formulation of research and educational plans. Outcomes of the workshop discussion will help launch an integrated national and basin scale collaborative research program that will provide the scientific and technological bases for transboundary policy development and management. Scientific papers addressing climate change, land-use dynamics and hydrology of the Nile River Basin are presented in four different general topics: Climate change, land-use dynamics and hydrology of the Nile River basin, Hydrological modeling and simulations of Nile hydrology, Hydrometrological Analysis and River basin management and Water use issues. Special thanks go to the authors who provided high quality papers and abstracts. We believe such a workshop creates a forum for discussion and collaboration between regional and international scientists on the key research questions of the basin. Understanding the ecohydrological issues of the basin is the key for a sustainable environment and advanced water resource management to meet the ever increasing challenges.

With the financial support from the National Science Foundation of USA, this workshop is jointly sponsored and planned by researchers from Florida International University, New Mexico State University, Los Alamos National Laboratory and South Dakota State University. Institutions in the basin countries who have helped in the workshop organization include Addis Ababa University, Amhara Region Agricultural Research Institute, Arbaminch University, Bahir Dar University, Nile Basin Initiative (NBI) Offices, Ministry of Water Resources of Ethiopia, International Water Management Institute (IWMI)-East Africa, Mountain Research Group, Geospace Analytical Services and Avallo-Agro-Tech. We thank Trudy Morris Stein of the South Florida Water Management District for her diligent support in editing the proceedings.

### Editors:

Wossenu Abtey, Ph.D., P.E., D.WRE  
Principal Engineer, South Florida Water Management District

Assefa M. Melesse, Ph.D., P.E., D.WRE  
Assistant Professor, Department of Environmental Studies  
Florida International University

**Wossenu Abteu, Ph.D., P.E., D.WRE**



**Dr. Wossenu Abteu** is a Principal Engineer at the South Florida Water Management District in Florida, USA. Dr. Abteu is a civil engineer, agricultural engineer and a hydrologist. He has worked on various aspects of regional water management systems and environmental restorations for the last 18 years. He has authored technical papers on variety of subjects including wind, evapotranspiration, constructed wetlands design and operation, synthetic data generation and application, droughts, hurricanes, hydrology and hydraulics, sampling methods, monitoring network design, hydro-meteorological

monitoring and data quality control, water quality monitoring, best management practices, the South Florida Water Management System and etc.

**Assefa Mekonnen Melesse, Ph. D., P.E., D.WRE**



**Dr. Assefa M. Melesse** is an Assistant Professor of Water Resources Engineering at the Department of Environmental Studies, Florida International University. His research encompasses the application of spatial analysis and remote sensing data from various sensors and electromagnetic spectra for understanding of water and energy fluxes at watershed and regional scales. His research activities are spanning over five countries with the goal of understanding and modeling the land-water interactions and fluxes of water, sediment and

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