The 2nd ASABE Global Evapotranspiration Symposium: Advances, Challenges and Future Needs in Measurements, Modeling and Applications at Various Scales

October 25-29, 2020

Nanjing, China

Call for Technical Abstract Proposals

Who Should Attend: Scientists, researchers, engineers, land and water managers, planners, statisticians/data mining experts, and public officials are expected and strongly encouraged to attend this symposium.
Background
The world is facing unprecedented water resource challenges and associated food security issues in the 21st century. Increasing population growth, demand in energy consumption, agricultural expansion, groundwater extraction, and global climate change are placing enormous pressure on limited water resources resulting in environmental and social crises in many parts of the world. Evapotranspiration (ET) is a major component of the hydrologic cycle that directly or indirectly links to water resources availability and use, water quality, ecosystem productivity, food and fiber production, and Earth’s energy balance and climate system. Evapotranspiration science is central to understanding the consequences of environmental, ecosystems and agricultural systems change and human adaptation to global change. Detailed physically based modeling combined with state-of-the-art measurements (in-situ and remote sensing) and process-based oriented analyses of adaptive measures in the context of the increasing population demands will be critically needed to predict the outcome of and modify the management, policy, and related decisions to achieve the most sustainable state of the Earth water resources. Measuring and modeling ET for long term is not only resource intensive, but also technically and practically challenging. Under broad climatic controls, ET is influenced by parameters that vary across multiple scales – from site-specific variables such as soil, topography, vegetation type, water status, snow, agronomic and soil management practices and microclimatic conditions, to the spatial heterogeneity of land use and management at landscape scales, and ultimately to regional and/or global climate/weather patterns. ET processes at the smaller and medium scales (e.g., leaf to landscape) have important controls/feedbacks to the regional and global climate systems through complex interactions among Earth’s atmospheric, hydrological, and biogeochemical cycles. Emerging innovative methods, models, tools, and technologies offer promises in advancing both our ability to accurately quantify ET and our understanding of plant water use at different scales; such knowledge will be critical for adapting more effective management strategies to cope with the increasing demands on, and increasing variability in water resources.

Proposed Symposium Objectives
This 2nd international specialty symposium on evapotranspiration (ET) will be built upon the success of the first conference held in Raleigh, NC US in April 2014. The 2014 symposium was attended by over 200 participated from over 15 countries and resulted in a special journal issue publication as well as a proceedings. The 2020 symposium will bring together educators, managers, scientists, engineers and other professionals in the same platform to exchange ideas, establish/foster collaborations, and work together to address grand challenges related to water resources, food production, ecosystem management, and environmental services. We will continue the tradition and focus on measurement and modeling application of ET at multiple scales. It will include participants from many different spheres and continents to explore, share, and discuss the latest research findings and issues, state-of-the-art knowledge and technology to monitor and model ET and its various components at multiple temporal and spatial scales helping address grand challenges related to water resources, food production, ecosystem management, and environmental services.

Key Themes of the Symposium
- ET dynamics, processes, and feedback mechanisms across terrestrial ecosystems (agriculture, forest, wetlands, urban areas);
- Scaling up and down and integrating ET processes at multiple spatial and temporal scales;
- Impacts of global change (global warming, deforestation/reforestation, urbanization, etc.) on ET and ecohydrological processes;
- Innovative ET measurement/quantification methods and technologies, including remote sensing and surface energy balance-based methods linked to hydrology, climate and ecosystem models;
Applications of ET science in irrigation engineering, agricultural water management, watershed management, ecosystem planning and management, urban planning and management, and climate change adaptation.

We have invited world’s renowned scholars/experts who conducted ET research in various settings, ranging from temperate, arid to tropical, arctic and mountain environments. We plan to bring in 10 presentations from the keynote, plenary sessions, about 150 oral presentations from general technical sessions, and approximately 50 poster presentations. A full-day field trip is planned to allow participants to visit ET research sites managed by the local universities and research institutions and learn about integrated watershed management as well as issues (flooding control, drinking water supply, irrigation etc.) for the Qinhua River Basin in Nanjing.

Special Sessions/Workshops: TBD

Abstract Proposal Submission: TBD

SPECIAL ISSUE PUBLICATION:

All accepted/presented abstract proceedings will be published and distributed at the Symposium. Authors interested to publish their presentations will later be invited to submit their full technical/scientific manuscripts for a potential publication in special issues of relevant peer-reviewed journals (e.g., Transactions of the ASABE).

Abstracts Acceptance/Rejection Decisions: TBD

Preliminary Program Agenda Available: TBD

Final Program Agenda Available: TBD

EARLY BIRD REGISTRATION DEADLINE: TBD

Details of the Symposium can be found at:
American Society of Agricultural and Biological Engineers (ASABE) Web site: www.asabe.org
Nanjing University of Information Science and Technology Web Site: http://nuist.admissions.cn/
Forest Service Southern research Station (SRS) Web site: http://www.srs.fs.usda.gov/

Symposium Planning Committee Members

Symposium Co-Chair: Suat Irmak (USA), Ph.D., Distinguished Professor, University of Nebraska-Lincoln (sirmak2@unl.edu)
Symposium Co-Chair: Guoyi Zhou (China), Ph.D., Dean and Professor, Nanjing University of Information Science and Technology (gyzhou@nuist.edu.cn)

Devendra Amatya, Ph.D., P.E., Research Hydrologist, USDA Forest Service
Jessica Bell, ASABE, Meetings and Conferences Coordinator
Carmen de Jong, Ph.D., Professor, University of Strasbourg, France
Milan Fischer, Ph.D., Global Change Research Institute CAS, Czech Republic
Lu Hao, Ph.D., Professor, Nanjing University of Information Science and Technology
Hongkai Gao, Ph.D., Research Professor, Eastern China Normal University
Amir Haghverdi, Ph.D., Assistant CE Specialist, University of California-Riverside
Jason Kelley, Ph.D., Assistant Professor, University of Idaho
Meetpal S. Kukal, Ph.D., Post-Doctoral Research Associate, University of Nebraska-Lincoln
Yuanbo Liu, Ph.D., Professor, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences
Haishen Lv, Ph.D., Professor, Hohai University
Jami Nettles, Ph.D., Weyerhaeuser Company
Sudhanshu Panda, Ph.D., Professor, University of North Georgia.
Jose Payero, Ph.D., Irrigation Research/Extension Specialist, Clemson University Edisto Research and Education Center
Guoyu Qiu, Ph.D., Professor, Peking University
Chadi Sayde, Ph.D., Assistant Professor, North Carolina State University
Ge Sun, Ph.D., Research Hydrologist, USDA Forest Service
Zhenghui Xie, Ph.D., Professor, Institute of Atmospheric Physics, Chinese Academy of Sciences