Paper Session:

1209 Integrating remote sensing and geospatial models in monitoring and assessing surface water quality

is scheduled on Tuesday, 4/21/2015, from 10:00 AM - 11:40 AM in Skyway 283, Hyatt, East Tower, Blue Level

Sponsorship(s):
Remote Sensing Specialty Group
Water Resources Specialty Group
Spatial Analysis and Modeling Specialty Group

Organizer(s):
Cyril Wilson - University of Wisconsin-Eau Claire
Bingqing Liang - University of Northern Iowa

Chair(s):
Cyril Wilson - University of Wisconsin-Eau Claire

Abstract(s):

10:00 AM Author(s): *Suzanne Walther - Utah Valley University

Abstract Title: *Small Dams in Oregon: Mapping Distributions at the Ecoregion Extent*

10:20 AM Author(s): *Bingqing Liang - University of Northern Iowa
John DeGroote - University of Northern Iowa
Maureen Clayton - University of Northern Iowa
Xin Hong - Ohio University

Abstract Title: *Assessing the impacts of land use/land cover on surface water quality in Middle Cedar Watershed, Iowa*

10:40 AM Author(s): *Zhongwei Liu, Ph.D. - Department of Geography & Regional Planning, Indiana University of Pennsylvania

Abstract Title: *An analysis on land use and water quality in Southwestern Pennsylvania, USA*

11:00 AM Author(s): *Cyril Wilson - University of Wisconsin-Eau Claire

Abstract Title: *Evaluating the implications of regional land use comprehensive plans on future water quality within the Lower Chippewa River watershed, Wisconsin*

Session Description: Monitoring and assessing surface water quality is a pivotal task in maintaining the sustainability of aquatic ecosystems and their services. Despite the success of various environmental models to address this phenomenon at diverse spatial and temporal scales, the recent 2014 United Nations World Water Development Report pinpoint the inadequacy of a comprehensive data on water as a serious challenge that currently impede the optimal monitoring and assessment of both water supply and quality. The technologies of satellite remote sensing, GIS, and other geospatially driven models provide great tools to address this pressing issue of inadequate water quality information and to enhance successful planning for water resources both contemporarily and at future time scales. The purpose of this session is to offer insight on how remote sensing, GIS, spatial statistics, and other geospatially driven tools can contribute to an

improved monitoring and assessment of surface water quality. Topics of papers for this special session may include but are not limited to the following:

- Use of hyperspectral remote sensing and spatial modeling in surface water quality monitoring.

- Use of multispectral remote sensing and spatial modeling in surface water quality studies.

- Loose or tight coupling of remote sensing and GIS models in water quality evaluation.

- Assessing human influence on surface water quality with the use of geospatial models.

- Predicting the future impacts of land use/land cover change on surface water quality.

- Assessing the influence of regional comprehensive plans on surface water quality using geospatial models.

- Assessing the role of local comprehensive plans on surface water quality with the use of geospatial models.

- Multi-temporal analysis of surface water quality using geospatial tools.

- Multi-scalar assessment of surface water quality with the aid of remote sensing and GIS tools.

- Web-based/enterprise geospatial tools for water quality monitoring and assessment.

It is hoped that this session will bring together innovative modeling frameworks that can be utilized in mitigating water quality impairments and help inform watershed and other water practitioners in sustainable water management. If you are interested in participating in this session, please send your paper title, PIN, and abstract by the AAG due date (November 5) to Cyril Wilson (wilsonc@uwec.edu)

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