

George Leshkevich

Physical Scientist, NOAA/Great Lakes Environmental Research Laboratory

B.A., Wayne State University, Physical Geography/Geology, 1966

M.A., Wayne State University, Physical Geography, 1970

M.S., University of Michigan, Remote Sensing, 1982

George Leshkevich, Research Physical Scientist and Manager of the NOAA CoastWatch Great Lakes Program has been involved with algorithm development for interpretation, classification, and mapping of Great Lakes water quality parameters and features, including ice cover, color producing agents, and HAB applications from aircraft and satellite imagery for over 30 years. Research and field work in both optical properties (ice, snow, chlorophyll, CDOM, suspended mineral) and digital image processing of satellite visible and radar imagery for development of Great Lakes water quality products has resulted in over 70 scientific publications. As manager of the CoastWatch Great Lakes Program, he assembles, develops, and distributes to the user community a variety of satellite and in situ data and products via the CoastWatch Great Lakes Web Site (<http://coastwatch.glerl.noaa.gov>).

Select Professional Activities

Manager, NOAA CoastWatch Great Lakes Program

Associate Editor, *Journal of Great Lakes Research (JGLR)*

Transfer satellite SAR ice type classification algorithm to NOAA/NESDIS for evaluation for operational use

Transfer satellite color producing agent (CPA) algorithm to NOAA/NESDIS for evaluation for operational use

Co-Guest Editor, *JGLR* Special Issue on Remote Sensing of the Great Lakes and Other Inland Waters

Member, Advisory Board for the NASA funded project "National Drought Monitoring System for Drought Early Warning Using Hydrologic and Ecologic Observations from NASA Satellite Data"

Member, NOAA/NESDIS Sea Surface Roughness Team

Member, Steering Committee, NASA Great Lakes Workshop Series on Remote Sensing of Water Quality

Invited Participant, NOAA Satellite Re-Capitalization Workshop

Co-Chair, Sentinel-1 SAR Breakout Group, NOAA Sentinel Interests Workshop

Reviewer, Fifth Assessment Report (AR5) Chapter 4 (Ch4) on Cryosphere Observations for the Intergovernmental Panel on Climate Change (IPCC)

Secretary/Treasurer, Eastern Great Lakes Region/American Society of Photogrammetry and Remote Sensing

Select Honors and Awards

NOAA Bronze Medal Award

2014 OAR Employee of the Year Award

Michigan Sea Grant Award for CoastWatch Support

ASPRS-EGLR Service Recognition Award

Select Scientific Publications

Leshkevich, G. and S.V. Nghiem. Great Lakes ice classification using satellite C-band SAR multi-polarization data. *Journal of Great Lakes Research*, Supplement 1 on Remote Sensing, Volume 39 (2013)55-64.

Shuchman, R.A., Leshkevich, G., Sayers, M.J., Johengen, T.H., Brooks, C.N., and Pozdnyakov, D. An algorithm to retrieve chlorophyll, dissolved organic carbon, and suspended minerals from Great Lakes satellite data, *Journal of Great Lakes Research*, Supplement 1 on Remote Sensing, Volume 39 (2013)14-33.

Shuchman, R.A., Sayers, M., Fahnenstiel, G.L., Leshkevich, G. A model for determining satellite-derived primary productivity estimates for Lake Michigan, *Journal of Great Lakes Research*, Supplement 1 on Remote Sensing, Volume 39 (2013) 46-54.

Fujisaki, A., Wang, J., Bai, X., Leshkevich, G., Lofgren, B.M. Model-simulated interannual variability of Lake Erie ice cover, circulation, and thermal structure in response to atmospheric forcing, 2003-2012. *Journal of Geophysical Research – Oceans* Volume 118, Issue 9, (2013)4286-4304.

Lekki, J., G. Leshkevich, R. Anderson, Q-V. Nguyen, J. Demers, J. Flatico, and J. Kojima. 2009. Development of Hyperspectral Remote Sensing Capability for the Early Detection and Monitoring of Harmful Algal Blooms (HABs) in the Great Lakes. Proceedings: AIAA Infotech@Aerospace Conference, 6-9 April 2009, Seattle, Washington, pp. 1-14.

Leshkevich, G.A., Schwab, D.J., and Muhr, G.C. 1997. Satellite environmental monitoring of the Great Lakes: Great Lakes CoastWatch Program update. *Marine Technology Society Journal* 30(4):28-35.

Leshkevich, G.A., Deering, D.W., Eck, T.F., and Ahmad, S.P. 1990. Diurnal patterns of the bidirectional reflectance of freshwater ice. *Annals of Glaciology*, 14:153-157.

