

Shohei Watanabe

Tahoe Environmental Research Center
Watershed Science Building, One Shields Avenue
University of California, Davis, CA 95616

Phone: 1-530-752-6932
Cell Phone:
E-mail: swatanabe@ucdavis.edu

Education

Université Laval, Québec, Québec, Canada, Ph.D. in Biology, 2011

Dissertation title: Water colour and the transmission of underwater light in lake ecosystems

University of Missouri-Columbia, Columbia, Missouri, MS in Fisheries and Wildlife (Limnology), 2004

Thesis title: Subsurface light conditions and light attenuation mechanisms in Missouri reservoirs.

Kyoto University, Kyoto, Japan, BS in Agriculture, 2000

Thesis title: The Sweeping Reform of National Forest Management in Japan

Peer reviewed publications

Watanabe, S., W. F. Vincent, J. Reuter, S. Hook, and S. G. Schladow. 2015. A quantitative blueness index for oligotrophic waters: Application to Lake Tahoe, California-Nevada. *Limnol. Oceanogr.: Methods*. doi: 10.1002/lom3.10074.

Watanabe, S., I. Laurion, S. Markager, and W. F. Vincent. 2015. Abiotic control of underwater light in a drinking water reservoir: Photon budget analysis and implications for water quality. *Water Resour. Res.* 51: 6290-6310. doi: 10.1002/2014WR015617.

Watanabe, S., I. Laurion, K. Chokmani, R. Pienitz, and W. F. Vincent. 2011. Optical diversity of thaw ponds in discontinuous permafrost: A model system for water color analysis, *J. Geophys. Res.*, 116, G02003, doi:10.1029/2010JG001380.

Watanabe, S., M. F. Knowlton, W. F. Vincent, and J. R. Jones. 2009. Variability in the optical properties of colored dissolved organic matter in Missouri reservoirs. *Verh. Internat. Verein. Limnol.* 30(7): 1117-1120.

Jones, J. R., B. D. Perkins, D. V. Obrecht, M. F. Knowlton, A. P. Thorpe, S. Watanabe, and R. R. Bacon. 2008. Nutrients, seston and transparency of Missouri reservoirs and oxbow lakes: an analysis of regional limnology. *Lake Reserv. Manage.* 24: 155-180.

Non-peer reviewed publication

Watanabe, S., I. Laurion, M. Kumagai, and W. F. Vincent. 2007. Hydrologic Optics: AOP and IOP Approaches towards Lake Observation Systems. Proceedings of the international workshop for lake observation systems. Otsu, Shiga, Japan.

Oral presentation

Watanabe, S., W. F. Vincent, J. E. Reuter, and G. Schladow. Quantifying the blueness of Lake Tahoe: Spatial and long term variations in lake color. Aquatic Science Meeting, Association for the Science of Limnology and Oceanography. July 8-13, 2012. Shiga, Otsu, Japan.

Watanabe, S., W. F. Vincent, J. E. Reuter, and G. Schladow. The blueness of Lake Tahoe: Quantitative estimates of water color and evidence of change. Tahoe Science Conference. May 22-24, 2012. Incline Village, NV.

Watanabe, S., E. L. Hestir, S. D. Hogan, G. Schladow, G. Scheer, and S. L. Ustin. Remote sensing of Lake Tahoe's near shore environment. Tahoe Science Conference. May 22-24, 2012. Incline Village, NV.

Watanabe, S., I. Laurion, and W. F. Vincent. Color analysis of permafrost thaw ponds: Toward regional estimates of greenhouse gas emissions from northern landscapes. Fall Meeting, American Geophysical Union. Dec 5-9, 2011. San Francisco, CA

Watanabe, S., I. Laurion, M. Kumagai, and W. F. Vincent. Hydrologic Optics: AOP and IOP Approaches towards Lake Observation Systems. The international workshop for lake observation systems. October 29-30, 2006. Otsu, Shiga, Japan.

Poster presentation

- Watanabe, S., I. Laurion, and W.F. Vincent. Abiotic control of underwater light in a drinking water reservoir. Aquatic science meeting, American Society of Limnology and Oceanography. February 13-18, 2011. San Juan, PR.
- Watanabe, S., I. Laurion, and W.F. Vincent. High latitude water colours: Optical diversity of permafrost thaw lakes in the forest-tundra. Aquatic science meeting, American Society of limnology and Oceanography. January 25-30, 2009. Nice, France.
- Watanabe, S., M. F. Knowlton, W. F. Vincent, and J. R. Jones. Variability in the optical properties of colored dissolved organic matter in Missouri reservoirs. 30th Congress of the International Association of theoretical and applied limnology. August 12-18 2007. Montreal, QC. Canada.

Teaching Experience

ESP151 Limnology: Department of Environmental Science and Policy, University of California, Davis. Spring 2015 (as IOR).

Invited Lecture

Watanabe, S., Quantifying blueness of an ultraoligotrophic lake. Department of Civil Engineering, Tohoku University. February 28, 2014. Sendai, Miyagi, Japan.

Research Experiences

- January 2014 to Present Postdoctoral Scholar - Tahoe Environmental Research Center. University of California, Davis, CA Project: Evaluation of Rim Fire impacts on alpine lakes, Continuous radiometry of an ultraoligotrophic lake, and Water color and clarity of Lake Tahoe.
- August 2012 to Present Certified scientific boat operator - Completed the Motor Boat Operator Certification Course, equivalent to the Department of Interior Motor Boat Operator Certification Course, and served as a field support crew for the remote sensing instrument calibration flights.
- January 2012 to December 2013 Postdoctoral Scholar - Center for Spatial Technologies and Remote Sensing and Tahoe Environmental Research Center. University of California, Davis, CA Project title: Remote sensing of Lake Tahoe's near shore environment.
- June to July 2010 Field research assistant - Marine physical laboratory (Dr. D. Stramski), Scripps Institution of Oceanography, University of California San Diego, CA, USA. Field and laboratory assistant for analyses on optical properties of suspended particles in a scientific research cruise in the Arctic Ocean funded by NASA (ICESCAPE 2010).
- September and October 2007 Scientific advising, translation, and interpretation - Japan Broadcasting Cooperation (NHK Japan), Otsu, Shiga, Japan. Biological and limnological advising for developing a documentary program dealing with climate change and environmental change of Lake Biwa, Japan (Including translation and summarizing of scientific literatures)
- January to March 2005 Part-time Research Assistant - Public policy and management department, UFJ institute Ltd., Osaka, Japan. Data input and management, and conducting statistical analyses on the sociological evaluation of public awareness on Japanese food safety regarding Bovine Spongiform Encephalopathy. Assistant on the development of a public health policy regarding Echinococcosis in Hokkaido, Japan. English-Japanese/Japanese-English translation.
- August 2001 to December 2004 Graduate Research Assistant - Missouri Statewide Lake Assessment Program, University of Missouri – Columbia, Columbia, MO. Conducted field sampling and laboratory experiments.
- April to December 2000 Internship - International Environment Technology Center, United Nations Environmental Programme, Kusatsu, Shiga, Japan. Projected and conducted the seminar regarding lake and watershed environmental issue for college students under the auspice of the UNEP-DITE-IETC on December 10, 2000. Arranged Lectures delivered by UNEP officers and representatives of NGOs. As a chairperson, conducted discussion with students about the issue

raised in the lecture.

Awards and Honors

The American Society of Limnology and Oceanography - Early career travel award for ASLO aquatic science meeting. August 2012.

The Prince Albert II of Monaco Foundation - Student travel award for ASLO aquatic science meeting. January 2009

The American Society of Limnology and Oceanography - Student travel award for the Congress of the International Association of Theoretical and Applied Limnology. August 2007

Université Laval - La bourse d'exemption des droits de scolarité supplémentaires pour les étudiants étrangers (Scholarship for international student tuition). January 2007 to December 2008

The Oceanography Society - Student travel award for the Ocean Optics Conference. October 2006

Université Laval - La bourse de la chaire de recherche du Canada. May 2006 to Present

The Japan Scholarship Foundation - Graduate student scholarship program. April 2000 to March 2001

The Japan Scholarship Foundation - Undergraduate student scholarship program. April 1997 to March 2000