# Michael D. Marsolek, PhD, PE

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### **Education**

B.S.	Chemical Engineering, University of Minnesota	1999
B.S.	Chemistry, University of Minnesota	1999
Ph.D.	Chemical Engineering, Northwestern University	2005
Postdoc	Biodesign Institute, Arizona State University	2006

## **Appointments**

Seattle University, Department of Civil and Environmental	Engineering, Seattle, WA		
Associate Professor	2008-present		
Adjunct Professor	2006-2008		
Blue Tree Strategies, Portland, OR			
Consultant	2008-2011		

## **Recent Journal Publications**

- Michael D. Marsolek, Bruce E. Rittmann, "Effect of Substrate Characteristics on Microbial Community Structure, Function, Resistance, and Resilience; Application to Coupled Photocatalytic-Biological Treatment", Water Research, Vol. 90 (1), March 2016
- Nirmala Gnanapragasm, J. W. Lauer, J. P. Smith-Pardo, M. Marsolek, and N. Canney
  "International Civil Engineering Capstone Projects Benefits, Challenges, and
  Lessons Learned", International Journal of Engineering Education, 31(6b), pp. 1-12, 2015
- Teodora Rutar Shuman, Mason, G., Marsolek, M., Lin, Y., Reeve, D., Schacht, A.,
  "Rapid and Ultra Low-Energy Use Microalgae Pre-Concentration Method",
  Bioresource Technology, Vol. 158, April 2014
- Michael D. Marsolek, Mary Jo Kirisits, Kimberly A. Gray, and Bruce E. Rittmann, "Coupled photocatalytic-biodegradation of 2,4,5-trichlorophenol: effects of photolytic and photocatalytic effluent composition on bioreactor process performance, community diversity, and resistance and resilience to perturbation", Water Research, Vol. 50 (1), March 2014
- Michael D. Marsolek, Elizabeth Kendall, Phillip L. Thompson, and Teodora Rutar-Shuman, "Thermal Pretreatment of Algae for Anaerobic Digestion", Bioresource Technology, Vol. 151, January 2014
- Michael D. Marsolek, Patrick Cummings, Joshua Alcantara, Michael Wynne, Luis Quintero, Carlos Vallejos, Charles Jackels, and Susan Jackels, "Wastewater Treatment for a Coffee Processing Mill in Nicaragua: A Service-Learning Design Project", International Journal for Service Learning in Engineering, June 2012.
- Michael D. Marsolek, Cesar E. Torres, Martina Hausner, and Bruce E. Rittmann,
  "Intimate Coupling of Photocatalysis and Biodegradation in a Photocatalytic Circulating-Bed Biofilm Reactor.", Biotechnology and Bioengineering, Vol. 101 (1), March, 2008.
- Michael D. Marsolek, Bruce E. Rittmann, "Biodegradation of 2,4,5-Trichlorophenol

by Mixed Microbial Communities: Biorecalcitrance, Inhibition, and Adaptation.", journal publication, *Biodegradation*, Vol. 18 (3), June, 2007.

# **Invited Book Chapters**

- Susan Jackels, Charles Jackels, Carlos Vallejos, and Michael Marsolek, "Coffee for Justice: Chemistry and Engineering in Service to the Jesuit Mission with Small-holder Coffee Farmers of Nicaragua," a book chapter for "Justice in Jesuit Higher Education; Transforming the World and Being Transformed," Fordham University Press, New York, NY, 2013.

#### **Recent Conference Publications and Presentations**

- Michael D. Marsolek and Nathan E. Canney, Frontiers in Education, "Facilitating Habitual Reflection in Students - Application to an Engineering Capstone Project", Conference Paper, October 2016
- Jeff Rudolph, Glen Boyd, and **Michael D. Marsolek,** *Pacific Northwest Clean Water Association Annual Conference*, "Decant Water Reuse", October 2016
- Gnanapragasam N. Lauer J.W, Smith-Pardo J. P. **Marsolek M**. "International Civil Engineering Capstone Projects Benefits, Challenges and Lessons Learned", Capstone Design Conference, Conference Paper, Columbus, Ohio, 2014.
- Michael D. Marsolek, 3<sup>rd</sup> International Conference on Algal Biomass, Biofuels, and Bioproducts, "Enhanced Digestion of Algae and Lipid Extracted Algal Byproduct", June 2013.
- Susan Jackels, Charles Jackels, Carlos Vallejos, and Michael Marsolek, "Coffee for Justice: Chemistry and Engineering in Service to the Jesuit Mission with Small-holder Coffee Farmers of Nicaragua," a book chapter for "Justice in Jesuit Higher Education; Transforming the World and Being Transformed," Fordham University Press, New York, NY, 2013.

#### **Patents**

**Michael D. Marsolek** and Bruce E. Rittmann, "Intimate Coupling of Photobiocatalysis and Biodegradation in a Photocatalytic Circulating-Bed Biofilm Reactor." [PCT/US2008/072657][60/955,310] 2012