Stephanie Rich

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EDUCATION:

M.Sc. Water Science and Engineering **October 2018**
Karlsruhe Institute for Technology, Karlsruhe Germany
Swiss Federal Institute of Aquatic Science and Technology, Dübendorf Switzerland
Thesis: *Kinetic Analysis of Pesticide Biodegradation in Activated Sludge*

Honors B.Sc. Environmental Engineering, *cum laude* **June 2015**
Oregon State University, Corvallis Oregon
Honors Thesis: *Kinetic Analysis of the Aerobic Degradation of Chlorinated Ethenes by the Mycobacterium ELW-1 and Rhodococcus rhodochrous ATCC 21198*

EMPLOYMENT HISTORY:

Scientific Assistant **Nov 2018 – Dec 2018**
Graduate Research Assistant **May 2018 – Oct 2018**
Swiss Federal Institute of Aquatic Science and Technology, Dübendorf Switzerland
Department of Environmental Chemistry
Prof. Dr. Kathrin Fenner

- Quantifying pesticide transformation time series in batch reactors with high performance liquid chromatography/mass spectrometry (HPLC/MS)
- Correlating biodegradation half-lives in active sludge with those found in soil for improved pesticide persistence screening in coordination with industry partner Syngenta
- Preparing publication for submission in February 2019

Graduate Research Assistant **April 2017 – Sept 2017**
Karlsruhe Institute for Technology, Karlsruhe Germany
Institute for Water and River Basin Management
Dr. Stephan Hilgert

- Modeled erosion trends in Brazil using Geographic Information Systems

Graduate Research Assistant **Sept 2016 – March 2017**
U.S. Fulbright Scholar **Sept 2015 – July 2016**
Water Technology Center, Karlsruhe Germany
Department of Environmental Biotechnology and Contaminated Sites
Prof. Dr. Andreas Tiehm

- Monitored the aerobic biodegradation of trichloroethylene in continuous flow and batch systems using gas and ion chromatography

Undergraduate Research Assistant **June 2012 – Aug 2015**
Oregon State University, Corvallis Oregon
Department of Chemical, Biological and Environmental Engineering
Dr. Lewis Semprini

- Characterized ability of pure microorganism cultures to remediate groundwater contaminants
- Modeled chlorinated ethene biodegradation using Monod kinetics modified for cometabolism
- Presented research at the 2013 American Institute of Chemical Engineers (AIChE) National Undergraduate Poster Competition
- Won 2nd Place at 2014 AIChE Regional Research Paper Competition

Resident Assistant **Sept 2012 – June 2013**
Oregon State University, Corvallis Oregon
University Housing and Dining Services

- Managed a floor of 25 undergraduate residents, assisting with orientation, policy enforcement and incident documentation

PUBLICATIONS:

Fenner, K., Screpanti, C., Renold, P., Rouchdi, M., Vogler, B., & Rich, S. (Manuscript in preparation February 2019). *Contaminant biotransformation half-lives: Opportunities to read across environmental compartments?* Department of Environmental Chemistry, Swiss Federal Institute of Aquatic Science and Technology. Syngenta, Stein am Rhein, Switzerland.

Suvadee, T., Rich, S., Azizian, M., Hyman, M., & Semprini, L. (August 2016). *Cometabolism of 1,4-dioxane and chlorinated solvent mixtures by Rhodococcus rhodochrous grown on isobutane*. ACS National Meeting & Exposition, Philadelphia.

PROJECTS:

Flow Analysis of Inlet Conditions in a Hydraulic Flume. Institute for Hydromechanics, Karlsruhe Institute for Technology. (Student Project 2018)

Aerobic Productive Degradation of TCE via in-situ Application at a Field Site. Water Technology Center, Karlsruhe Germany. (Institutional Presentation 2016)

Optimization of Return Activated Sludge Flow Rate and Draft Tube Configuration. Corvallis Wastewater Reclamation Facility, Corvallis Oregon. (Senior Project 2015)

Modeling of the Aerobic Cometabolic Transformation of chlorinated ethenes by the Mycobacterium ELW-1. (Publication in Student Journal "The Catalyst," presentation at American Institute of Chemical Engineers National Conference 2014 in Atlanta, Georgia and 2nd place prize at AIChE regional paper competition at Washington State University in 2014)

The Aerobic Cometabolic Transformation of Chlorinated Ethenes by the Mycobacterium ELW1 Grown on Isobutene. (Undergraduate Research Innovation Scholarship & Creativity (URISC) project and poster at American Institute of Chemical Engineers National Conference 2013)

Determination of Kinetic Parameters of Dehalogenation of Tetrachloroethene (PCE) using Anaerobic Microorganisms. (Poster at American Institute of Chemical Engineers National Conference 2012)

HONORS AND AWARDS:

Germany National Scholarship	Oct 2017 – Sept 2018
Fulbright U.S. Student Research Fellowship	Sept 2015 – July 2016
OSU Class of 2015 Environmental Leadership Award	June 2015
OSU Class of 2015 Eager Beaver in Environmental Engineering Award	June 2015
Undergraduate Research Innovation Scholarship & Creativity Grant	Summer 2014

VOLUNTEER/LEADERSHIP EXPERIENCE:

Unitanzorchestra Trombonist	March 2017– Sept 2018
Arbeitskreis Erasmus International Student Orientation Leader	Jan 2016 – May 2018
Civil Engineering Master Exam Committee Member	Sept 2016 – May 2018
Chemical Biological Environmental Engineering (CBEE) Club President	June 2014 – June 2015
Mortar Board Senior Honor Society	June 2014 – June 2015
Mentor for Summer Experience in Science and Engineering for Youth	Summer 2013 and 2014

ADDITIONAL QUALIFICATIONS:

Languages

- German: GER Level C1 (fluent)

Laboratory and Technical Experience

- MATLAB, RStudio, Thermo TraceFinder, GIS, Excel
- Gas/Ion Chromatography
- High Performance Liquid Chromatography/Mass Spectrometry (HPLC/MS)
- Pure microorganism sterility and maintenance techniques