

EDWARD P. KOLODZIEJ

Curriculum Vitae

Interdisciplinary Arts and Sciences (UW Tacoma)

Department of Civil and Environmental Engineering (UW Seattle)

Center for Urban Waters (Tacoma, WA)

University of Washington

Box Number 358436, 1900 Commerce St

Tacoma, WA 98402

Phone: (253) 692-5659

Email: koloj@uw.edu

EDUCATIONAL HISTORY

University of California, Berkeley. Berkeley, CA

Ph.D., Environmental Engineering

December 2004

Dissertation topic: *The Occurrence and Environmental Fate of Steroid Hormones with Endocrine and Pheromonal Activity in Fish.* Minor emphases in Chemical Ecology and Endocrinology

University of California, Berkeley. Berkeley, CA

M.S., with honors in Environmental Engineering

May 1999

Johns Hopkins University. Baltimore, MD

B.S., with general honors in Chemical Engineering

May 1998

EMPLOYMENT HISTORY

University of Washington. Tacoma/Seattle, WA

Joint Appointment across Tacoma (67%) and Seattle (33%) campuses *September 2014 – Present*

Professor/Associate Professor, Interdisciplinary Arts and Sciences (UW Tacoma)

Professor/Associate Professor, Department of Civil and Environmental Engineering (UW Seattle)

Principal Investigator, Center for Urban Waters

Research expertise includes the occurrence, fate and transport of organic contaminants in natural and engineered systems, characterization of storm water and non-point source pollution, toxicity identification and evaluation, source apportionment, water reuse, optimization of engineered treatment systems, mitigation of contaminants in urban and agricultural runoff, transformations and retained bioactivity of emerging contaminants, high resolution mass spectrometry, environmental analytical chemistry, innovative and transformative technologies for water quality improvement and ecosystem health.

University of Nevada, Reno, Reno, NV

Associate Professor, Department of Civil and Environmental Engineering

July 2013 – Aug, 2014

Assistant Professor,

January 2007 – June 2013

Research expertise includes the occurrence, fate and transport of contaminants in natural and engineered systems, optimization of engineered water reuse and groundwater recharge systems, mitigation of contaminants in agricultural runoff, transformations of endocrine disruptors and other emerging contaminants, analytical method development, innovative and transformative technologies for water quality improvement, applications of high resolution mass spectrometry.

University of California, Berkeley, Berkeley, CA
Post-Doctoral Scholar; CALFED Project Manager

January 2005 – December 2006

Research focused on the fate and occurrence of endocrine disrupting compounds at regional scales and in agricultural watersheds. Additional duties included experimental design, writing, budgeting, and coordinating the multi-investigator CALFED research project “Identifying the Causes of Feminization of Chinook Salmon in the Sacramento and San Joaquin River System”. Responsibilities included project management, field sampling, analytical method development, data analysis, communication.

AWARDS AND HONORS

Excellence in Review Award, 2021, *Environmental Science and Technology Letters*
2022 Seattle Aquarium Conservation research Award (awarded to Dr. Zhenyu Tian and Co-authors of Tian et al 2021, *Science*)
California Stormwater Quality Association-2021 Outstanding Research Award (EPK and JKM)
Distinguished Research Award (2020), University of Washington-Tacoma
Keynote Speaker, 6th International Conference on Emerging Contaminants (EmCon 2018), Oslo Norway
Invited Speaker, 2014 Gordon Research Conference, Environmental Sciences: Water
Exceptional Reviewers of 2014 Award, *Environmental Toxicology and Chemistry*
Excellence in Review Award, 2012, *Environmental Science and Technology*
UNR College of Engineering 2011 Senior Scholar Faculty Mentor, Stephanie Kover

PUBLICATIONS

ORCID ID# 0000-0002-7968-4198, *H-index 23, i-10 38, ~2522 citations (07/2022) from Google Scholar*
Kolodziej Group: ¹Undergraduate students; ²Graduate students; ³Post-doctoral scholars

- 1) ²Hu, X., ³Zhao, H., ³Tian, Z., Peter K.T., Dodd, M.D., Kolodziej, E.P. 2022. “Transformation Product Formation Upon Heterogeneous Ozonation of the Tire Rubber Antioxidant 6PPD (*N*-(1,3-dimethylbutyl)-*N'*-phenyl-*p*-phenylenediamine).” *Environ. Sci. Technol. Letters*. **9**(5) 413-419. DOI: 10.1021/acs.estlett.2c00187.
- 2) Peter, K.T., Lundeen, J.I., Wu, C., Feist, B., ³Tian, Z., Cameron, J., Scholz, N.L., Kolodziej, E.P. 2022. “Measuring The Chemical Profile of Biological Decline in Stormwater-Impacted Watersheds.” *Environ. Sci. Technol.* **56**(5) 3159-3169. DOI: 10.1021/acs.est.1c08274.
Citations: 0 Contributions: Project leadership team, funding, study design, editing
- 3) Peter, K.T., Kolodziej E.P., Kucklik, J. 2021. “Assessing Reliability of Non-Target High Resolution Mass Spectrometry Fingerprints for Quantitative Source Apportionment in Complex Matrices.” *Anal. Chem.* **94** (6) 2723-2731. DOI: 10.1021/acs.analchem.1c03202.
Citations: 0 Contributions: Study design, ideas, editing
- 4) ³Tian, Z., Gonzalez, M., Rideout, C., ²Zhao, H., ²Hu, X., Wetzal, J., Mudrock, E., James, C.A., McIntyre, J.K., Kolodziej, E.P. “6PPD-Quinone: Revised Toxicity Assessment and Quantification Method Development with a Commercial Standard.” *Environ. Sci. Technol. Letters*. **9** (2) 140-146. DOI: 10.1021/acs.estlett.1c00910.
Citations: 3 Contributions: Corresponding author, project lead, funding, study design, writing
- 5) ²Zhou, H., ³Tian, Z., Kim, K.E., ²Wang, R., ¹Lam, K., Kolodziej, E.P. 2021. “Biotransformation of Current-Use Progestins Dienogest and Drospirenone in Laboratory Scale Activated Sludge Systems Forms High-Yield Products with Altered Endocrine Activity.” *Environ. Sci. Technol.* **55**(20) 13869-13880. DOI: 10.1021/acs.est.1c03805.
Citations: 0 Contributions: Corresponding author, project lead, funding, study design, writing

6) McIntyre, J.K., Prat, J., Cameron, J., Wetzel, J., Mudrock, E., ³Peter, K.T., ³Tian, Z., MacKenzie, C., Lundin, J., Stark, J.D., King, K., Davis, J.W., Kolodziej, E.P., Scholz, N.L. 2021. "Treading Water: Tire Wear Particle Leachate Recreates and Urban Runoff Mortality Syndrome in Coho But Not Chum Salmon." *Environ. Sci. Technol.* **55**(17) 11767-11774 DOI: 10.1021/acs.est.1c03569

Citations: 5 Contributions: Study design, editing

7) Kumar, N., ²Zhao, H., Awoyemi, A., Kolodziej, E.P., Crago, J. 2021. "Toxicity Testing of Effluent Dominated Stream using Predictive Molecular Level Toxicity Signatures Based on High Resolution Mass Spectrometry: A Case Study of the Lubbock Canyon Lake System". *Environ. Sci. Technol.* **55**(5) 3070-3080. DOI: 10.1021/acs.est.0c05546

Citations: 1 Contributions: Study design, data analysis, writing

8) ³Tian, Z., ²Zhao, H.Q., ³Peter, K.T., ¹Gonzalez, M., Wetzel, J., ¹Wu, C., ²Hu, X., Prat, J., Mudrock, E., ¹Hettinger, R., ¹Cortina, A.E., Biswas, R.G., Kock, F.V.C., Soong, R., Jenne, A., ³Du, B., ²Hou, F., He, H., ³Lundeen, R., Gilbreath, A., Sutton, R., Scholz, N.L. Davis, J.W., Dodd, M.C., Simpson, A., McIntyre, J.K., Kolodziej, E.P. 2021. "Ubiquitous Tire Rubber-Derived Chemical Induces Acute Mortality in Coho Salmon." *Science*. Published online 12/3/20, in print 1/8/21. **371** (6525) 185-189. DOI 10.1126/science.abd6951

-“First Release” online 12/3/2020, global media coverage, Altmetric attention score 1244

Citations: 149 Contributions: Corresponding author, project lead, funding, study design, data analysis, writing

9) Du, B., ³Tian, Z., ³Peter, K.T., Kolodziej, E.P., Wong, C. 2020. "Developing Unique Non-Target High Resolution Mass Spectrometry Signatures to Track Contaminant Sources in Urban Waters." *Environ. Sci. Technol. Letters* **7**(12) 923-930. DOI: 10.1021/acs.estlett.0c00749

Citations: 12 Contributions: Study design, ideas, writing

10) Pflug, N.C., Kral, A.K., Hankard, M.K., Breuckman, K.C., Kolodziej, E.P., Gloer, J.B., Wammer, K.H., Cwiertny, D.M. 2020. "Overlooked Environmental Fate Pathways for Trienone Steroids: Reversible Photo-Nucleophilic Addition and Thermal Binding of Photohydrates to Dissolved Organic Matter." *Environ. Sci. Technol.* **54**(19) 12181-12190. DOI: 10.1021/acs.est.0c03821

Citations: 1 Contributions: Study design, funding, ideas, editing

11) ³Peter, K.T., ²Hou, F., ³Tian Z., ¹Wu C., Goehring, M., Liu, F., Kolodziej E.P. 2020. "More Than a First Flush: Urban Creek Storm Hydrographs Reveal Broad Contaminant Pollutographs" *Environ. Sci. Technol.* **54**(10) 6152-6165. DOI: 10.1021/acs.est.0c00872

Citations: 31 Contributions: Study design, project PI, ideas, funding, data analysis, writing

12) ³Tian, Z., ³Peter, K.T., Gipe, A.D., ²Zhou, H., ²Hou, F., ¹Wark, D.A., Kolodziej, E.P., James, C.A. 2020. "Suspect and Non-target Screening for Contaminants of Emerging Concern in an Urban Estuary." *Environ. Sci. Technol.* **54**(2) 889-901. DOI: 10.1021/acs.est.9b06126

Citations: 62 Contributions: Study design, funding, writing

13) ³Peter, K.T., ³Tian, Z., ¹Wu, C., Kolodziej, E.P. 2019. "Application of Non-Target High Resolution Mass Spectrometry Data to Quantitative Source Apportionment." *Environ. Sci. Technol.* **53**(21) 12257-12268. DOI: 10.1021/acs.est.9b04481

Citations: 14 Contributions: Study design, project PI, ideas, data analysis, writing

14) ²Hou, F., ³Tian, Z., ³Peter, K.T., ¹Wu, C., ¹Alegria, E., Gipe, A.D., ²Zhao, H., Liu, F., Kolodziej E.P. 2019. "Quantification of Organic Contaminants in Urban Stormwater by Isotope Dilution and Liquid Chromatography-Tandem Mass Spectrometry." *Anal. Bioanal. Chem.* **411**(29) 7791-7806. DOI: 10.1007/s00216-019-02177-3

Citations: 17 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing

15) ²Yang, X., ²Zhao, H., Cwiertny D.M., Kolodziej E.P. 2019. "Sorption and Transport of Trenbolone and Altrenogest Photoproducts in Soil-Water Systems." *Environ. Sci. Processes Impacts.* **21**(10) 1650-1663. DOI: 10.1039/C9EM00305C

-Front cover article, October 2019, *Environ. Sci. Processes Impacts.*

Citations: 6 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing

16) Pflug, N., Patterson, E., Martinovic-Weigelt, D., Kolodziej, E.P., Gloer, J., McNeill, K., Cwiertny, D.M., Wammer, K. 2019. "Intramolecular [2+2] Photocycloaddition of Altrenogest: Confirmation of Product Structure, Theoretical Mechanistic Insight, and Bioactivity Assessment." *J. Org. Chem.* **84**(17) 11366-11371. DOI: 10.1021/acs.joc.9b02070

Citations: 6 Contributions: Funding, study design, ideas, data analysis, editing

17) Bains, A., Perez-Garcia, O., Lear, G., Greenwood, D., Swift, S., Middleditch, M., Kolodziej E.P., Singhal, N. 2019. "Induction of Microbial Oxidative Stress as a New Strategy to Enhance the Enzymatic Degradation of Organic Micropollutants in Synthetic Wastewater." *Environ. Sci. Technol.* **53**(16), 9553-9563. DOI: 10.1021/acs.est.9b02219

Citations: 11 Contributions: Ideas, study design, data analysis, editing

18) ²Kenyon, P., ²Zhao, H., ²Yang, X., ¹Wu, C., Cwiertny, D.M., Kolodziej, E.P. 2019. "Detection and Quantification of Metastable Photoproducts of Trenbolone and Altrenogest Using Liquid Chromatography-Tandem Mass Spectrometry." *J. Chrom. A.* 1603, 150-159. DOI: 10.1016/j.chroma.2019.06.030

Citations: 7 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing

19) ³Peter, K.T., Herzog, S., ³Tian, Z., ¹Wu, C., McCray, J.E., Lynch, K., Kolodziej, E.P. 2019. "Evaluating Emerging Organic Contaminant Removal in an Engineered Hyporheic Zone using High Resolution Mass Spectrometry." *Water Research.* **150** (3), 140-152. DOI: 10.1016/j.watres.2018.11.050

Citations: 27 Contributions: Project PI, funding, ideas, study design, data analysis, writing

20) ³Peter, K.T., ³Tian, Z., ¹Wu, C., ¹Lin, P., ¹White, S., ³Du, B., McIntyre, J.K., Scholz, N.L., Kolodziej E.P. 2018. "Using High-Resolution Mass Spectrometry to Identify Organic Contaminants Linked to Urban Stormwater Mortality Syndrome in Coho Salmon." *Environ. Sci. Technol.*, **52**(18) 10317-10327. DOI: 10.1021/acs.est.8b03287

Citations: 101 Contributions: Project PI, funding, ideas, study design, data analysis, writing

21) Salls, K.A., ²Won, D., Kolodziej, E.P., Childress, A.E., Hiibel, S.R. 2018. "Transport of Metals and Semi-Volatile Contaminants In Direct Contact Membrane Distillation." *Desalination.* **427**, 35-41, DOI: 10.1016/j.desal.2017.11.001

Citations: 17 Contributions: Funding, study design, data analysis, editing

22) Pflug, N.C., Hankard, M.K., Berg, S.M., O'Connor, M., Gloer, J.C., Kolodziej, E.P., Cwiertny, D.M., Wammer, K.H. 2017. "Environmental Photochemistry of Dienogest: Phototransformation to Estrogenic Products and Increased Environmental Persistence via Reversible Photohydration." *Environ. Sci. Processes Impacts.* **19**, 1414-1426, DOI: 10.1039/c7em00346c

Citations: 14 Contributions: Ideas, funding, study design, writing

23) ³Du, B., ¹Lofton, J.M., ³Peter, K.T., Gipe, A.D., James, C.A., McIntyre, J.K., Scholz, N.L., Baker, J.E., Kolodziej, E.P. 2017. "Development of Suspect and Non-Target Screening Methods for Detection of Organic Contaminants in Highway Runoff and Fish Tissue with High-Resolution Time-of-Flight Mass Spectrometry." *Environ. Sci. Processes Impacts.* **19**, 1185-1196. DOI 10.1039/C7EM00243B

Citations: 84 Contributions: Co-corresponding author, project PI, ideas, funding, study design, data analysis, writing

24) Kolodziej E.P., Choi, K., Marfil-Vega, R., Brooks, B.W. 2017. "The Necessity of Bioanalytical Tools for Advancing Water and Sediment Quality Assessment." *Environ. Sci. Processes Impacts.* **19**, 1113-1116. DOI: 10.1039/C7EM90032E

-Editorial content, not peer-reviewed

Citations: 0 Contributions: Writing

25) Pflug, N.C., Kupsco, A., Kolodziej, E.P., Schlenk, D., Teesch, L.M., Gloer, J.B., Cwiertny, D.M. 2017. "Formation of Bioactive Transformation Products During Glucocorticoid Chlorination." *Environmental Science: Water Research and Technology.* **3**, 450-461. DOI 10.1039/C7EW00033B

Citations: 13 Contributions: Funding, ideas, study design, writing

- 26) Wammer, K.H., Anderson, K.C., Erickson, P.R., Kliegman, S., Moffat, M.E., Heitzman, J.A., McNeill, K., Martinovic-Weigelt, D., Cwiertny, D.M., Kolodziej, E.P. 2016. “Environmental Photochemistry of Altrenogest: Photoisomerization Followed by Reversible Photohydration.” *Environ. Sci. Technol.* **50**(14). 7480-7488. DOI 10.1021/acs.est.6b02608
Citations: 23 Contributions: Project PI, funding, ideas, study design, writing
- 27) Baltrusaitis, J., Patterson, E., O’Connor, M., Shen, Q., Kolodziej E.P., Cwiertny, D.M. 2016. “Reversible Photohydration of Trenbolone Acetate Metabolites: Mechanistic Understanding of Product-To-Parent Reversion through Complementary Experimental and Theoretical Approaches.” *Environ. Sci. Technol.* **50**(13). 6753-6761. DOI 10.1021/acs.est.5b03905
Citations: 12 Contributions: Funding, ideas, study design, data analysis, writing
- 28) Ward, A.S., Cwiertny, D.M., Kolodziej, E.P., Brehm, C.C. 2015. “Stream-Hyporheic Spiraling Increases Environmental Persistence of Trenbolone Metabolites.” *Nature Communications*, **6**, Article #7067, DOI 10.1038/ncomms8067
Citations: 12 Contributions: Funding, ideas, study design, writing
- 29) ²Cole, E.A. ¹McBride, S., ¹Kimbrough K.C., Marchand, E.A., Cwiertny, D.M., Kolodziej, E.P. 2015. “Rates and Product Identification for Trenbolone Acetate Metabolite Biotransformation in Aerobic Conditions.” *Environ. Toxicol. Chem.* **34**(7), 1472-1484, DOI: 10.1002/etc.2962
Citations: 10 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing
- 30) Qu, S., Kolodziej, E.P., Cwiertny, D.M. 2014. “Sorption and Mineral Promoted Transformation of Synthetic Hormone Growth Promoters in Soil Systems” *J. Agricul. Food Chem.* **62**(51), 12277-12286. DOI 10.1021/jf5035527
Citations: 15 Contributions: Project PI, funding, ideas, study design, writing
- 31) ²Jones, G.D., ¹Benchetler, P.V., Tate, K.W., Kolodziej E.P. 2014. “Trenbolone Acetate Metabolite Transport in Rangelands and Irrigated Pastures: Observations and Conceptual Approaches for Agro-Ecosystems.” *Environ. Sci. Technol.* **48**(21) 12569-12576. DOI: 10.1021/es503406h
Citations: 12 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing
- 32) Cwiertny, D.M. Schlenk, D., Snyder, S.A., Kolodziej E.P. 2014. “Environmental Designer Drugs: When Transformation Does Not Eliminate Risk.” *Environ. Sci. Technol.* **48**(20) 11737-11745. DOI: 10.1021/es503425w
 -Invited (EPK) feature article (cover article) for *Environ. Sci. Technol.*
 -Ranked #6, Most Read Articles of 2014; First runner up, Best Feature Article of 2014
Citations: 81 Contributions: Co-corresponding author, project lead, writing
- 33) ²Jones, G.D., ¹Benchetler, P.V., Tate, K.W., Kolodziej E.P. 2014. “Surface and Subsurface Attenuation of Trenbolone Acetate Metabolites and Manure-derived Constituents in Irrigation Runoff on Agro-Ecosystems” *Environ. Sci. Processes Impacts.* **16**, 2507-2516. DOI: 10.1039/c4em00385c
Citations: 12 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing
- 34) ²Jones, G.D., ¹Benchetler, P.V., Tate, K.W., Kolodziej E.P. 2014. “Mass Balance Approaches to Characterizing the Leaching Potential of Trenbolone Acetate Metabolites in Agro-Ecosystems.” *Environ. Sci. Technol.* **48**(7) 3715-3723. DOI 10.1021/es405701f
Citations: 19 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing
- 35) Cavallin, J.E., Durhan, E., Evans, N., Foreman, W.T., Jensen, K.M., Kahl, M.D., Kolodziej, E.P., Kolpin, D., LaLone, C.A., Makynen, E.A., Seidl, S.M., Thomas, L.M., Villeneuve, D.L., Weberg, M.A., Wilson, V., Ankley, G.A. 2014. “Integrated Assessment of Runoff from Animal Feeding Operations: Analytical Chemistry, In Vitro Bioassays, and In Vivo Fish Exposures.” *Environ. Toxicol. Chem.* **33**(8) 1849-1857. DOI 10.1002/etc.2627
Citations: 47 Contributions: Data analysis, writing

- 36) Qu, S., Kolodziej, E.P., Long, S.A., Gloer, J.B., Patterson, E.V., Baltrusaitis, J., ²Jones, G.D., ¹Benchetler, P.V., ²Cole, E.A., ¹Kimbrough, K.C., Tarnoff, M.D., Cwiertny, D.M. 2013. "Product-to-Parent Reversion of Trenbolone: Unrecognized Risks for Endocrine Disruption." *Science*. Published online 9/26/2013 in *Science Express*, in print 10/18/2013. **342**(6156), 347-351. DOI 10.1126/science.1243192
Citations: 80 Contributions: Co-corresponding author, project PI, funding, ideas, study design, data analysis, writing
- 37) Kolodziej, E.P., Qu, S., Forsgren, K., Long, S.A., Gloer, J.B., ²Jones, G.D., Schlenk, D., Baltrusaitis, J., Cwiertny, D.M. 2013. "Identification and Environmental Implications of Photo-transformation Products of Trenbolone Acetate Metabolites." *Environ. Sci. Technol.* **47**(10), 5031-5041.
Citations: 45 Contributions: Corresponding author, project PI, funding, study design, data collection, data analysis, writing
- 38) Qu, S., Kolodziej, E.P., Cwiertny, D.M. 2012. "Phototransformation Rates and Mechanisms for Synthetic Hormone Growth Promoters Used in Animal Agriculture." *Environ. Sci. Technol.* **46**(24), 13202-13211.
Citations: 55 Contributions: Project PI, funding, study design, data analysis, writing
- 39) ²Parker, J.A., ²Webster, J.P., ¹Kover, S.C., Kolodziej, E.P. 2012. "Analysis of Trenbolone Acetate Metabolites and Melengestrol Using Gas Chromatography-Tandem Mass Spectrometry." *Talanta*, **99**, 238-246.
Citations: 33 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing
- 40) ²Webster, J.P., ¹Kover, S.C., Bryson, R.J., Harter, T, Mansell D.S., Sedlak D.L., Kolodziej, E.P. 2012. "Occurrence of Trenbolone Acetate Metabolites in Simulated Confined Animal Feeding Operation (CAFO) Runoff." *Environ. Sci. Technol.* **46**(7), 3803-3810.
Citations: 43 Contributions: Corresponding author, project PI, funding, study design, data analysis, writing
- 41) Mansell, D.S., Bryson, R.J., Harter, T., ¹Webster, J.P., Kolodziej, E.P., Sedlak, D.L. 2011. "Fate of Endogenous Steroid Hormones in Steer Feedlots Under Simulated Rainfall-Induced Runoff." *Environ. Sci. Technol.* **45**(20), 8811-8818.
Citations: 84 Contributions: Funding, study design, writing
- 42) Lavado, R., Loyo-Rosales, J.E., Floyd, E., Kolodziej, E.P., Snyder, S.A., Sedlak, D.L., Schlenk, D. 2009. "Site-Specific Profiles of Estrogenic Activity in California's Inland Waters." *Environ. Sci. Technol.* **43**(24), 9110-9116.
Citations: 48 Contributions: Study Design, data collection, data analysis, writing
- 43) Kolodziej, E.P., Sedlak D.L. 2007. "Rangeland Grazing as a Source of Steroid Hormones to Surface Waters." *Environ. Sci. Technol.* **41**(10), 3514-3520.
Citations: 142 Contributions: Study design, data collection, data analysis, writing
- 44) Fono, L.J., Kolodziej, E.P., Sedlak, D.L. 2006. "Attenuation of Wastewater-Derived Contaminants in a Wastewater-Dominated River." *Environ. Sci. Technol.* **40**(23), 7257-7263.
Citations: 223 Contributions: Data collection, data analysis, writing
- 45) Schlenk, D., Sapozhnikova, Y., Irwin, M.A., Xie, L., Hwang, W., Reddy, S., Brownawell, B.J., Armstrong, J., Kelly, M., Montagne, D.E., Kolodziej, E.P., Sedlak, D.L., Snyder, S.A. 2005. "In Vivo Bioassay-guided Fractionation of Marine Sediment Extracts from the Southern California Bight, USA, for Estrogenic Activity." *Environ. Toxicol. Chem.*, **24**(11), 2820-2826.
Citations: 111 Contributions: Data collection, data analysis, writing
- 46) Kolodziej E.P., Harter T.H., Sedlak D.L. 2004. "Dairy Wastewater, Aquaculture, and Spawning Fish as Sources of Steroid Hormones in the Aquatic Environment." *Environ. Sci. Technol.* **38**(23), 6377-6384.
Citations: 356 Contributions: Study design, data collection, data analysis, writing
- 47) Sedlak D.L., Pinkston K.L., Gray J.L. Kolodziej E.P. 2003. "Approaches for Quantifying the Attenuation of Wastewater-Derived Contaminants in the Aquatic Environment." *Chimia.* **57**(9), 567-569.

Citations: 13 Contributions: Data analysis

- 48) Kolodziej E.P., Gray J.L., Sedlak D.L. 2003. "Quantification of Steroid Hormones with Pheromonal Properties in Municipal Wastewater Effluent." *Environ. Toxicol. Chem.*, **22**(11), 2622-2629.
Citations: 217 Contributions: Ideas, study design, data collection, data analysis, writing

In Review or Preparation

- 49) Zhao, H., Hu, X., Tian, Z., Peter K.T., Dodd, M.D., Kolodziej, E.P. "Identification and Environmental Occurrence of the Ozonation Transformation Products of Tire Rubber Antioxidant 6PPD (N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine)." In Preparation.
- 50) Wang, R., Dodd, M.C., Kolodziej, E.P. "Kinetics and Mechanisms of Chlorination of 1,3-Diphenylguanidine from Density Functional Theory and Experimental Data." In preparation.
- 51) Tang, T., Kolodziej, E.P. "Sorption and Desorption of Urban Stormwater-Derived Organic Contaminants in Soils." In preparation.
- 52) Tian, Z., Peter, K.T., Wu, C., Du, B., Leonard, B., McIntyre, J.K., Kolodziej, E.P. "Performance Evaluation Of Compost-Amended Biofiltration Swales For Roadway Runoff Treatment: Part II". In preparation.
- 53) Zhou, H., Tian, Z., Matiasek, S., Webster, J.P., Kolodziej, E.P. "Occurrence of Contaminants of Emerging Concern in Stormwater Runoff from the Paradise, California Catastrophic Wildfire." In preparation.

Technical Reports

- 1) Kolodziej E.P., Jack, R., Klug, J., Collins, D., Hatch, J. "Use of Recycled Municipal Wastewater for Agricultural Irrigation in the Sammamish River Valley." King County and Washington Water Trust. In preparation.
- 2) Tian, Z., Peter, K.T., Wu, C., Du, B., Leonard, B., McIntyre, J.K., Kolodziej, E.P. "Performance Evaluation Of Compost-Amended Biofiltration Swales For Highway Runoff Treatment In Field And Laboratory." 08/09/2019. Washington Department of Transportation, Federal Highway Administration.
- 3) Peter, K.T., Herzog, S., Tian, Z., McCray, J., Kolodziej, E.P. "Flow Path Delineation and Water Quality Assessment in the Thornton Creek Engineered Hyporheic Zone." 03/09/2018. Seattle Public Utilities.
- 4) Du, W., Kolodziej E.P. "Literature Review and Comment on Groundwater Aquifer Recharge and Recovery Systems. 06/21/2011. City of Reno, NV.
- 5) Callahan, S., Kolodziej E.P. "Assessment and Optimization of Aquifer Recharge and Recovery Systems for the Removal of Trace Organic Contaminants." 04/16/2010. City of Reno, NV.

OTHER SCHOLARLY ACTIVITY

Select Invited Lectures and Seminars

(many presentations below also include students, group, and collaborators as co-authors)

1. **Kolodziej, E.P.**, et al. "Impacts of Roadway Runoff and Tire Rubber on Coho Salmon." Invited presentation, (Virtual format), Oregon State University. April 20, 2022.
2. **Kolodziej, E.P.**, et al. "Car Tires, Coho Salmon, and Water." Invited presentation, Hawaii Pacific University. April 13, 2022.
3. **Kolodziej, E.P.**, et al. "Impacts of Roadway Runoff and Tire Rubber on Coho Salmon." Invited presentation, Northwest Indian Fisheries Council. (Virtual format), August 19, 2021

4. **Kolodziej, E.P.**, et al. "Evaluation of Water Quality Impacts on Coho Salmon." Invited presentation, California Department of Toxic Substances Control-Tire Rubber Workshop. (Virtual format), July 29, 2021
5. **Kolodziej, E.P.**, et al. "Identification and Implications of 6PPD-Quinone in Roadway Runoff." Invited presentation, Department of Fisheries and Oceans-British Columbia. (Virtual format), June 22, 2021
6. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, Northwestern U., Department of Civil and Environmental Engineering. (Virtual format), May 21, 2021
7. **Kolodziej, E.P.**, et al. "Identification and Implications of 6PPD-Quinone in Roadway Runoff." Invited presentation, Environmental Protection Agency, National Audience. (Virtual format), May 20, 2021
8. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, British Columbia Ministry of the Environment "BioCall" Seminar. (Virtual format), April 22, 2021
9. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, U. of Wisconsin-Madison, Department of Civil and Environmental Engineering. (Virtual format), April 9, 2021
10. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, Environment Canada-Complex Mixtures Workgroup. (Virtual format), March 18, 2021
11. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, Washington State University, Department of Civil and Environmental Engineering Graduate Seminar. (Virtual format), March 8, 2021
12. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, Pacific Northwest Fish Health Protection Committee. (Virtual format), February 24, 2021
13. **McIntyre, JK and Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, Pacific Salmon Foundation. (Virtual format), February 17, 2021
14. **McIntyre, JK and Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, Toxics In Puget Sound Conference. (Virtual format), February 5, 2021
15. **McIntyre, JK and Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, California Division of Toxic Substances Control. (Virtual format), January 27, 2021
16. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, U. of Washington-Tacoma, Distinguished Research Award Celebration, January 22, 2021
17. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, U. of Washington, Department of Civil and Environmental Engineering Graduate Seminar. (Virtual format), January 7, 2021
18. **McIntyre J.K. and Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, Nisqually River Council. (Virtual format), December 18, 2020
19. **Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, EAWAG Water Seminar series, Dubendorf, Switzerland. (Virtual format), December 10, 2020
20. **McIntyre, J.K. and Kolodziej, E.P.**, et al. "Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters." Invited presentation, U.S. Tire Manufacturers Association and related regulatory agencies. (Virtual format), December 3, 2020

21. **Kolodziej, E.P.**, et al. “Characterizing the Environmental Chemistry of Roads, Salmon, and Water With High Resolution Mass Spectrometry.” Invited Presentation-EPA Region 10 Tribal Non-point Training. (Virtual format), October 26, 2020
22. **Kolodziej, E.P.**, et al. “Organic Contaminants in Roadway Runoff and Receiving Waters.” Invited presentation, American Association of State Highway Transportation Officials (AASHTO) Natural Resources Subcommittee. (Virtual format). May 13, 2020.
23. **Kolodziej, E.P.**, Katherine Peter, Zhenyu Tian, Nina Zhao, Christopher Wu, Melissa Gonzalez, Allan Cortina, Jen McIntyre. “Characterizing the Environmental Chemistry of Roads, Salmon, and Water with High Resolution Mass Spectrometry.” Invited presentation, Duke University Integrated Toxicology and Environmental Health Seminar series. Durham, NC, February 20, 2020
24. **Kolodziej, E.P.**, Katherine Peter, Zhenyu Tian, Nina Zhao, Christopher Wu, Melissa Gonzalez, Allan Cortina, Jen McIntyre. “Environmental Chemistry of Roads, Salmon, and Water” Invited presentation, *Superheros of Science*, RAIN incubator. Tacoma, WA, February 10, 2020.
25. **Kolodziej, E.P.**, et al. “Stormwater and Salmonid Health.” Invited presentation, Northwest Indian Fisheries Commission Water Quality Board. Olympia, WA, November 19, 2019.
26. **Kolodziej, E.P and Jen McIntyre.** “Characterizing Urban Stormwater Impacts on Water Quality and Coho Salmon.” Invited presentation and industry outreach, stormwater research forum sponsored by WA Department of Ecology, Tacoma, WA, October 16, 2019.
27. **Kolodziej, E.P.**, Katherine Peter, Zhenyu Tian, Christopher Wu, Allan Cortina, Melissa Gonzalez, Jen McIntyre, Nat Scholz. “Impacts of Vehicles and Roads on Urban Water Quality.” Invited presentation, ESPI Editors Symposium, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology. Cambridge, MA, June 24, 2019.
28. **Kolodziej, E.P.** “Chemistry in Stormwater.” Invited presentation, *2nd Annual Green-Duwamish Sustainability Talks* to Auburn High School Students. Auburn Performing Arts Center, Auburn WA, May 24, 2019.
29. **Kolodziej, E.P.**, et al. “Characterizing Urban Stormwater Impacts on Water Quality to Understand Ecosystem Health.” Invited presentation, WA Department of Ecology, Lacey WA, April 17, 2019.
30. **McIntyre J.K., and Kolodziej, E.P.** “Urban Stormwater Aquatic Toxicology and Chemistry” Invited presentation, Clean Cars Task Force and WA Department of Ecology, Tacoma WA, April 16, 2019.
31. **Kolodziej, E.P.**, et al. “Characterizing Urban Stormwater Impacts on Water Quality to Understand Ecosystem Health.” Invited presentation, Department of Chemical Oceanography, University of Washington. Seattle WA, March 15, 2019.
32. **Kolodziej, E.P.**, et al. “Characterizing Urban Stormwater Impacts on Water Quality to Understand Ecosystem Health.” Invited presentation, NIEHS Superfund Research Program 2018 Annual Meeting. Sacramento CA, November 29, 2018.
33. **Kolodziej, E.P.**, et al. “Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality.” Invited presentation, M. Gordan Wolman Seminar, Johns Hopkins University. November 13, 2018.
34. **Kolodziej, E.P.**, et al. “Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality.” Invited presentation, University of Delaware. November 12, 2018.
35. **Kolodziej, E.P.**, et al. “Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality.” Invited presentation, Dr. Jianying Hu Research group, Peking University. October 24, 2018.
36. **Kolodziej, E.P.**, et al. “Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality.” Invited Departmental seminar with funded travel, College of Urban and Environmental Sciences, Peking University. Beijing, China, October 23, 2018.
37. **Kolodziej, E.P.**, et al. “Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality.” Invited presentation, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences. Beijing, China, October 22, 2018.

38. **Kolodziej, E.P.** et al. "Occurrence and Sources of Organic Contaminants in Urban Stormwater and Receiving Waters." Invited presentation, Northwest Indian Fisheries Commission Salmon Stormwater Summit, The Point Casino, Suquamish Tribe, Kingston WA. September 20, 2018.
39. **Kolodziej, E.P.** et al. "Stormwater Derived Chemicals and Ecosystem Health." Keynote Speaker, 6th International Conference on Emerging Contaminants (EmCon 2018), Oslo Norway. June 25, 2018.
40. **Kolodziej, E.P.** et al. "Underexplored Bioactive Contaminants in Urban Stormwaters." Invited presentation, Department of Civil and Environmental Engineering, University of California, Berkeley. April 13, 2018.
41. **Kolodziej, E.P.** "Chemistry and the Environment: Why Puget Sound Needs Clean Water." Invited Keynote Address, ACS Career Day, PNW Regional Chapter, Center for Urban Waters, Jan. 31, 2018.
42. **Kolodziej, E.P.** et al. "Analysis of Urban Water Quality With High Resolution Mass Spectrometry." Invited presentation, Southern California Coastal Water Research Project, Santa Ana, CA. Nov. 3, 2017.
43. **Kolodziej, E.P.** "Our Chemical Fingerprints: Safer Water for Our Cities". Invited Presentation, Department of Civil and Environmental Engineering, University of Washington. Seattle, WA. June 1, 2017
44. **Kolodziej, E.P.** et al. "Detection and Evaluation of Organic Contaminant Flows in the Puget Sound Region". Invited Presentation. NOAA Montlake Lab Monster Jam. Seattle, WA. May 18, 2017
45. **Kolodziej, E.P.** "Understanding Our Chemical Fingerprints on Water: Occurrence and Concerns for Our Contaminants". Invited presentation, University of California, San Diego, School of Pharmacy, San Diego, CA. February 6, 2017.
46. **Kolodziej, E.P.** "Our Chemical Fingerprints: Safer Water for Our Cities". Invited Presentation. UW College of Engineering 2016 Engineering Lecture Series: "City Smarts: Engineering Resilient Communities." Seattle, WA. November 16, 2016 -*Televised presentation.*
47. **Kolodziej, E.P.** "Emerging Contaminants in Our Waters: The State of the Science". Invited Presentation. Northwest Toxics Community Coalition Annual Conference. Seattle, WA. October 22, 2016
48. **Kolodziej, E.P.** et al. "Linking Contaminant Structure to Bioactivity: Key Issues and Uncertainties for Environmental Health." Invited presentation, Oregon Health & Science University, Institute of Environmental Health. November 20, 2015.
49. **Kolodziej, E.P.** et al. "Linking Contaminant Structure to Bioactivity: Key Issues and Uncertainties for Environmental Health" Invited presentation, Oregon State University, Department of Environmental and Molecular Toxicology. November 18, 2015.
50. **Kolodziej, E.P.** et al. "Characterization and Environmental Implications of Pharmaceutical Transformation Products in Water" Invited presentation with funded travel, "Environmental Analysis" Session, Beijing Conference and Exhibition on Instrumental Analysis, China National Convention Center, Beijing, China, October 29, 2015.
51. **Kolodziej, E.P.** et al. "Addressing the Challenge of Agricultural Pharmaceuticals and Bioactive Contaminants in Aquatic Systems." Invited presentation, Pennsylvania State University, Department of Ecosystem Science and Management; Department of Agricultural and Biological Engineering. April 24, 2015.
52. **Kolodziej, E.P.** et al. "Conserved Structure, Conserved Risk: Environmental Transformations of Steroidal Pharmaceuticals" Invited presentation, Gordon Research Conference, Environmental Sciences: Water. Holderness, NH, June 26, 2014.
53. **Kolodziej, E.P.** et al. "The Implications of Structural Conservation During Environmental Transformations of Steroidal Pharmaceuticals" Invited presentation, Session keynote. Canadian Society of Chemistry National Meeting, Vancouver, BC, June 5, 2014.
54. **Kolodziej, E.P.** et al. "The Implications of Novel Transformations of Steroidal Pharmaceuticals for Endocrine Disruption and Environmental Risk Assessment." Invited presentation, Department of Civil and Environmental Engineering, Stanford University, Nov. 15, 2013.

55. **Kolodziej, E.P.** et al. “In the Twilight of Trenbolone: The Vampire Steroid.” Invited presentation, Hydrologic Sciences/Department of Civil and Environmental Engineering, University of Nevada Reno, Nov. 8, 2013.
56. **Kolodziej, E.P.** et al. “In the Twilight of Trenbolone: The Vampire Steroid.” Invited presentation, Environmental Science Graduate Program, Ohio State University, Sept. 6, 2013.
57. **Kolodziej, E.P.** et al. “Trenbolone Transport And Transformation: What Do We Know and What Do We Need To Know?” Invited presentation, Department of Civil and Environmental Engineering, University of Iowa, March 9, 2013.
58. **Kolodziej E.P.** “Sources, Transport, and Transformations of Endocrine Disrupting Steroid Hormones Derived From Animal Agriculture.” Invited Presentation, Washington State University. April 9, 2012.
59. **Kolodziej E.P.** “Agricultural Sources and Transformation of Steroid Hormones in Receiving Waters.” Invited Presentation, University of Missouri. Oct. 4, 2011.
60. **Kolodziej E.P.** “Analytical Challenges of Trace Organics Quantification.” Invited Presentation, NIST Emerging Contaminants Workshop, Falls Church, VA, Sept. 9, 2010.
61. **Kolodziej E.P.** et al. “Steroid Hormone Occurrence, Fate, and Transport in Northern California’s Watersheds.” Invited presentation, University of California, Riverside, April 4, 2008.
62. **Kolodziej E.P.** “Occurrence and Fate of Steroidal Hormones in Surface Waters Impacted by Cattle Grazing and Animal Agriculture.” Plenary Speaker, Water and The Future of Kansas Conference, Topeka, Kansas, March 25, 2008.
63. **Kolodziej E.P.** “Steroid Hormone Occurrence, Fate, and Transport in Northern California’s Watersheds.” Invited Presentation, University of California, Davis, March 17, 2008.

Professional Society Memberships

-Association of Environmental Engineering Science Professors	2007-present
-American Chemical Society	2001-present
-Society for Environmental Toxicology and Chemistry	2001-present
-Water Environment Federation	2007-2013
-Soil and Water Conservation Society	2005-2013

Other

-NSF Review panels: 2009, 2010, 2012, 2017, 2019, 2020, 2021, 2022
 -External Reviewer: UIUC, MIT, CUNY, AOAC, EPA, USGS, USDA, others
 -Journal Peer Review (usually 6-15 reviews/year): *Environmental Science and Technology*, *Environmental Science and Technology Letters*, *Environmental Sciences: Processes and Impacts*, *Environmental Pollution*, *Environmental Toxicology and Chemistry*, *Critical Reviews in Environmental Science and Technology*, *Journal of Chromatography, A*, *Journal of Environmental Quality*, *Water Resources Research*, *Aquatic Toxicology*, *Science of the Total Environment*, *Journal of Chemical Ecology*, *Nature Sustainability*

GRADUATE STUDENTS AND RESEARCH GROUP

Chaired Doctoral Degrees

1. Haoqi (Nina) Zhao (Chair, U. of Washington CEE) 9/2016 – 09/2021
Dissertation: Identification and Fate of Bioactive Transformation Products of Pharmaceuticals and Industrial Antioxidants. Successfully Defended September 24, 2021
 Post-Doctoral Scholar (Dr. Ed Kolodziej), 09-12/2021

Post-Doctoral Scholar (Dr. Peter Dorrenstein), U. California, San Diego. 01/01/2022+

- Gerrad Jones (Chair, U. of Nevada-Reno) 01/2010 - 01/2014
Dissertation: The Environmental Fate and Transport of Trenbolone Acetate Metabolites in Agro-Ecosystems. Currently: Assistant Professor, Department of Biological and Ecological Engineering, Oregon State University. Post-Doctoral Scholar (Dr. Lenny Winkel), Swiss Federal Institute of Technology, ETH, Zurich.

Current Doctoral Students-Chair

- Ximin Hu (Chair, U. of Washington CEE) 9/2019 – Present
Dissertation: Applications of Non-Target Screening via High Resolution Mass Spectrometry for Environmental Assessment. Currently in progress

Chaired Masters Degrees-Research Based, Funded Thesis Projects

- Danbi Won (Chair, U. of Washington CEE); Thesis 12/2015 - 03/2017
- Philip Kenyon (Chair, U. of Washington CEE); Thesis 1/2014 – 12/2015
- Tianlin Song (Chair, U. of Nevada-Reno CEE); Thesis 1/2013 - 7/2014
- Philip Benedetti (Chair, U. of Nevada-Reno CEE); Thesis 1/2013 - 1/2015
- Emily Cole (Chair, U. of Nevada-Reno CEE); Thesis 10/2011 - 12/2013
- Jaewoong Lee (Chair, U. of Nevada-Reno CEE); Thesis 6/2010 - 12/2011
- Wenjun Du (Chair, U. of Nevada-Reno CEE); Thesis 1/2010 - 8/2011
- Jackson Webster (Chair, U. of Nevada-Reno CEE); Thesis 1/2009 - 12/2010
- Silas Callahan (Chair, U. of Nevada-Reno CEE); Thesis 1/2008 - 8/2010
- Jed Parker (Chair, U. of Nevada-Reno CEE); Thesis 1/2008 - 5/2009

Other Significant Student Supervision or Professional Mentorship

Post-Doctoral Scholars:

- Nina Zhao (CUW/UW) 10/2021 – 12/2021
-Post-Doctoral Scholar, U. of California, San Diego
- Zhenyu Tian (CUW/UW) 02/2018 – 08/2021
-Tenure-track Faculty, Dept. of Chemistry, Northeastern U.
- Rachel Lundeen (CUW/UW) 07/2019 - 02/2020
-Research Scientist, Fred Hutchinson Cancer Institute
- Katherine Peter (CUW/UW) 12/2016 - 04/2019
-Research Scientist, National Institute of Standards and Technology
- Bowen Du (CUW/UW) 12/2014 - 06/2017
-Scientist, Southern California Coastal Water Research Project

Visiting Ph.D. Students (U. of Washington CEE):

- Rui Wang 10/2018 – 10/2020
Two year visiting PhD student, UW VISIT program
- Ting Tang 10/2018 – 10/2020
Two year visiting PhD student, UW VISIT program
- Fan Hou 9/2017 - 1/2019
16 month visiting PhD student, UW VISIT program
- Xingjian Yang 9/2015 - 10/2016
One year visiting PhD student, UW VISIT program

Undergraduate Students Participating in Funded Research Projects (UWT/CUW/UW)

1. Hailey Germeau, UWT SAM
2. Heaven Denham, UWT SAM
3. Craig Rideout, UWT SAM
4. Rachel Hettinger, UWT SAM
5. Melissa Gonzalez, UWT SAM
6. Allan Cortina, UWT SAM
7. Keefe Brockman, UWT SAM
8. David Wark, UWT SAM
9. Kenji Lam, UW CEE
10. Sarah White, UWT SAM
11. Christopher Wu, UWT SAM
12. Peter Lim, UWT SAM
13. Harpreet Kang, UW CEE
14. Samantha Randall, UW CEE
15. Jonathan Lofton, UWT CUW
16. Esther Chang, UW CEE

Mentor: Undergraduate Student Capstone Research Projects (UWT/UW)

1. Rachel Hettinger, UWT SAM
2. David Wark, UWT SAM
3. Ernesto Alegria, UWT SAM
4. Susanne Gov, UW Seattle Program for the Environment
5. Jordan Williams UWT SAM
6. Nicole Smith, UWT SAM
7. Don Rollalazo, UWT SAM

Undergraduate Students Participating in Funded Research (UNR):

1. Jackson Webster
2. Doug Holderman,
3. Collin Emmerson
4. Jonathan Ebert
5. Robert (Alex) Vaughn
6. Stephanie Kover
7. Melissa DeVera
8. Samantha McBride
9. Claire Johnson
10. Peter Benchetler
11. Kaitlin Kimbrough
12. Emily Ruskowitz
13. Jasmine Miller
14. Rachel Weber
15. Tatum Demay (NSF REU)

Graduate Student Committee Member (U. Of Washington CEE)

1. Fanny Okaikue-Woodi (Ph.D.)
2. Sin-Yi Liou (Ph.D.)
3. Tess Young (Ph.D.)
4. Nicole Redden (M.S.)

Graduate Student Committee Member (External)

1. Kristen Croft (Ph.D.) External Committee Member, U. Maryland, CEE. College Park, MD
2. Sabine Anliker (Ph.D.) Invited External Committee Member, EAWAG, Dudendorf, Switzerland

Graduate Student Committee Member (U. of Nevada-Reno, all Thesis Degrees)

1. Jazmin Aravena (Ph.D.)
2. Nalelli Herrera (M.S.)
3. Miranda Hutton (M.S.)
4. Winn Wilson (M.S.)
5. Alissa Backman (Ph.D.)
6. Sanjeev Ryaprolu (M.S.)

Student Directed Research and Mentoring

1. Faculty Mentor: Mary Gates Research Scholarship, Undergraduate Student, Kenji Lam (UW CEE). Transformation Kinetics and Products of Synthetic Progestins and their Environmental Implications. 2019. \$5000.
2. Faculty Mentor: EPSCOR Summer Research Award, Undergraduate Student, Kaitlin Kimbrough. Anaerobic Biodegradation of Water Quality Contaminants. Summer 2013, Total award: \$5500.
3. Faculty Mentor: GURA Undergraduate Research Award, Undergraduate Student, Peter Benchetler. 2013-2014. Total Award: \$1,200.
4. Faculty Mentor: EPSCOR Summer Research Award, Undergraduate Student, Peter Benchetler. Riparian Buffer Strip Efficiency in Removal Of Contaminants From Agricultural Runoff. Summer 2012. Total Award: \$5,500.
5. Faculty Mentor: EPSCOR Summer Research Award, Undergraduate Student, Samantha McBride. Manipulation of Redox States Applied to Wastewater Treatment. Summer 2011. Total Award: \$5,500.
6. Faculty Mentor: GURA Undergraduate Research Award, Undergraduate Student, Stephanie Kover. 2010-2011. Total Award: \$1,200.
7. Faculty Mentor: EPSCOR Summer Research Award, Undergraduate Student, Stephanie Kover. Fate and Transport Studies of Synthetic Growth Hormones with Adverse Effects on Water Quality. Summer 2010. Total Award: \$5,500.
-2011 Undergraduate Student Award In Environmental Chemistry, ACS
8. Faculty Mentor: EPSCOR Summer Research Award, Undergraduate Student, Robert (Alex) Vaughn. Biological Dissolved Organic Carbon and its Effect on the Removal of Pharmaceuticals and Personal Care Products in Wastewater Treatment Plant Effluent. Summer 2009. Total Award: \$5,500.
9. Faculty Mentor: EPSCOR/General Undergraduate Research Award, Undergraduate Student, Jackson Webster. Analysis of Endocrine Disrupting Chemicals in Surface Water. Summer and Fall 2008 Semesters. Total Award: \$5,981

DOCUMENTATION OF TEACHING EFFECTIVENESS

Courses Taught & Student Evaluations (*UWT/UW, quarters system, teaching load 3 courses/yr*)

Course	Title	Quarter	Credit Hours	Enrollment	Evaluation Responses	Item 1	Item 3	Item 4	Overall Adj. Median
CEE 356	Quantitative and Conceptual Tools-Sust.	S2021	4	24	12/22	4.1	4.6	4.3	4.2
TCHEM 333	Environmental Chemistry	W2021	6	25	12/25	4.5	5.0	5.0	4.8
TESC 201	Science of Sustainability	W2021	5	48	15/48	4.1	4.5	4.3	4.4
CEE 356	Quantitative and Conceptual Tools-Sust.	S2020	4	20	5/20	3.0	4.7	3.8	3.8
TCHEM 333	Environmental Chemistry	W2020	6	20	9/20	4.1	4.5	4.3	4.4
TESC 201	Science of Sustainability	W2020	5	39	14/39	4.3	4.5	4.5	4.4

TCHEM 333	Environmental Chemistry	W2019	6	20	14/20	4.3	5.1	4.7	4.6
TESC 201	Science of Sustainability	W2019	5	47	19/47	3.8	4.7	4.5	4.4
CEE 496/596	Fate and Transport of Chemicals	A2018	4	37	23/37	4.8	4.9	4.8	4.7
CEE 356	Quantitative and Conceptual Tools-Sust.	S2018	4	18	9/18	2.9	3.6	3.3	3.1
TCHEM 333	Environmental Chemistry	W2018	6	19	12/19	3.4	3.7	3.8	3.7
TESC 201	Science of Sustainability	W2018	5	46	18/46	5.0	5.0	5.0	5.0
CEE 498/599	Environmental Analysis	S2017	4	2	2/2	4.8	4.8	4.9	4.8
TCHEM 333	Environmental Chemistry	W2017	6	19	9/19	3.7	4.0	4.1	4.0
TESC 201	Science of Sustainability	W2017	5	47	23/47	4.1	4.1	3.8	4.1
CEE 498/599	Environmental Analysis	S2016	4	9	7/9	3.7	4.0	4.5	4.0
TCHEM 333	Environmental Chemistry	W2016	6	17	11/17	3.6	3.7	3.5	3.7
TESC 201	Science of Sustainability	W2016	5	37	15/37	4.5	4.9	4.7	4.6
TCHEM 333	Environmental Chemistry	W2015	6	19	15/19	3.2	2.7	1.8	3.0
TESC 201	Science of Sustainability	W2015	5	35	22/35	2.8	2.7	2.5	2.9

SERVICE

Departmental

- UW-Tacoma: Tenure Committee, Dr. Marc Nahmani, 2022
- UW-Tacoma: Faculty Re-appointment Committee Chair, Dr. Kelly Kim, 2021
- UW-Tacoma: ACCESS Student Mentor: Susan Palmer, 2020-2021
- UW-Tacoma: SAM Scholarships and Equity Committee, 2020-2021
- UW-Tacoma: Faculty Re-appointment Committee, Dr. Anna Groat-Carmona, 2020
- UW-Tacoma: Search Committee Chair - Tenure Track Faculty, Ecotoxicology, UWT SAM, 2019-2020
- UW-Tacoma: Search Committee Chair - Tenure Track Faculty, Organic Chemistry, UWT SAM, 2018-2019
- UW-Tacoma: ACCESS Student Mentor: Johannah Noyes, 2018-2020
- UW-Seattle: CEE Faculty and Department Affairs Committee: 2018-present
- UW-Tacoma: Faculty Mentor: Dan Shugar, Marc Nahmani, Alison Gardell
- UW-Tacoma: Faculty Re-appointment Committee Chair, Dr. Karen Cowgill, 2018
- UW-Tacoma: SAM Scholarship Committee, 2017-2019

- UW-Seattle: Search Committee - Tenure Track Faculty, Environmental Engineering, UW CEE, 2017-2018
- UW-Tacoma: Tenure Committee Chair, Dr. John Finke, 2017
Tenure successfully awarded 02/2018
- UW-Tacoma: Search Committee - Tenure Track Faculty, Mathematics, UWT SAM, 2016-2017
- UW-Seattle: Search Committee Co-Chair - Tenure Track Faculty, Environmental Engineering, UW CEE, 2016-2017
- UW-Tacoma: SAM Leadership Committee, 2016-present
- UW-Tacoma: M.S. Degree in Environmental Science Committee Chair, 2015-present
- UW CEE, Environmental Engineering B.S. Degree Development Committee, 2015
- UNR: CEE Search Committees, Geotechnical, Environmental Engineering Faculty Positions
- UNR: CEE Website Committee
- UNR: CEE Undergraduate Committee
- UNR: CEE Curriculum Assessment and Revision Committee
- UNR: CEE Strategic Planning Committee
- Supervisor, CEE Laboratory Technician

College

- UW-Tacoma: Panelist, NSF Day, 10/06/17
- UW-Tacoma/Seattle: Co-Organizer, "Critical Data Needs in Freshwater Research" Workshop, October 27, 2016. Regional water workshop, 135 attendees.
- UW-Seattle: Freshwater Initiative; Mountain to Sound Steering Committee, 2015-2019
- UNR: COE Search Committee, Instructional Designer

University

- UW-Seattle: Search Committee – Dean of College of Environment, 2020-2021
- UW-Tacoma: Distinguished Research Award Selection Committee, Chair, 2020-2021
- UW-Tacoma: Search Committee – Associate Vice Chancellor for Research, 2019-2020
- UW-Tacoma: "Swipe Right for Success" First generation student outreach event 02/14/18
- UW Tacoma: Faculty Advisor, UWT student chapter of the Environmental Science Association 2017-2018
- UW-Tacoma: Faculty Development Committee, 2017-2019
- UNR: Academy for the Environment Steering Committee 2008-2011
- UNR Internal Reviewer, EPSCOR undergraduate research proposals
- Judge, 2010, 2011, 2012 Student World Water Forum

Professional

- Host and Lead Organizer: EMCON 2021: 7th International Conference on Emerging Contaminants. September 13-14, 2021. Virtual Conference. ~160 attendees.
- Technical Advisor, King County Water Reuse; Occurrence of Contaminants of Emerging Concern in Sammamish Valley Recycled Water and the Hollywood Demonstration Garden. 2020-present
- NWRI (National Water Research Institute) Experts Panel for LOTT Clean Water Alliance, Olympia, WA. Invited. 2017-present
- Puget Sound Clean Cars Stormwater Partnership Working Group. Invited. 2017-present
- Editorial Advisory Board, *Environmental Science: Processes and Impacts*, October 2020-present
- Associate Editor, *Environmental Science: Processes and Impacts*, August 2014-October 2020
- Conference Session Co-Chair: "Elucidating Chemical Transformations in Environmental Fate Research". Society for Environmental Toxicology and Chemistry National Conference, Portland, OR, Nov. 2021
- Conference Session Co-Chair: "Stormwater Characterization and Management Using a Watershed Approach". Salish Sea Ecosystem Conference, Seattle WA, April 4-6, 2018.

- Invited Session Facilitator and Technical Content Contributor: “Contaminants in the Food Web” session, Southern Resident Killer Whale Symposium and Workshop. Sponsored by Environment Canada. Vancouver, BC October 10-12, 2017.
- Conference Session Co-Chair/Organizer: “Integrated Tools For Improving Environmental Fate And Risk Assessment For Unregulated Contaminants And Their Mixtures” Society of Environmental Toxicology and Chemistry National Meeting, Minneapolis, MN, November 12-16, 2017
- Science Committee, The 18th IWA International Conference on Diffuse Pollution and Eutrophication. Los Angeles CA, August 13-17, 2017. Invited. 2016-2017
- Member at Large (Academic), PNW Chapter of Society for Environmental Toxicology and Chemistry (PNW-SETAC), Regionally elected leadership position. 2017-2019.
- Conference Session Co-Chair/Organizer: “Endocrine Disrupting Compounds and Pharmaceuticals in the Environment” Society of Environmental Toxicology and Chemistry National Meeting, Tampa Bay, FL, November 5-10, 2016
- Associate Editor, *Critical Reviews in Environmental Science and Technology*, 2012-2015
- Member at Large, ACS Division of Environmental Chemistry, Nationally elected leadership position. 2013-2015.
- Faculty Mentor and Senior Discussion Leader, 2012 Gordon Research Seminar, Environmental Sciences: Water. “Processes in Ecosystems” Session.
- Adjunct Faculty, UNR Graduate Program in Hydrologic Sciences, 2012-2014
- Member, AWWA Organic Contaminants Research Committee, 2011-2013
- Project Advisory Committee, Water Research Foundation Project #4334
- AAESP Student Award Committee, 2013-2015
- Conference Session Co-Chair/Organizer: “Frontiers in Water Reuse: Detection, Advanced Treatment, and Environmental Fate.” ACS National Conference, Salt Lake City 2009.

MEDIA, OUTREACH AND COMMUNICATION

Selected Media, links current at time of publication (partial list)

News Media:

2021 *Science*, *Tire Rubber Toxicant* (Tian et al.)

Science: <https://www.sciencemag.org/news/2020/12/common-tire-chemical-implicated-mysterious-deaths-risk-salmon>

New York Times: <https://www.nytimes.com/2020/12/03/climate/salmon-kill-washington.html>

Seattle Times: <https://www.seattletimes.com/seattle-news/environment/tire-dust-is-killing-salmon/>

LA Times: <https://www.latimes.com/california/story/2020-12-03/coho-salmon-tire-chemical>

CNN: <https://www.cnn.com/2020/12/03/us/microplastics-tire-rubber-chemicals-killing-coho-salmon-scn/index.html>

The Guardian: <https://www.theguardian.com/environment/2020/dec/03/coho-salmon-pollution-car-tires-die-off>

San Francisco Chronicle: <https://www.sfchronicle.com/environment/article/New-research-explains-why-salmon-are-dying-in-the-15773283.php>

San Francisco Estuary Institute: <https://www.sfei.org/news/toxic-tire-contaminant-found-bay-area-stormwater>

Popular Science: <https://www.popsci.com/story/environment/coho-salmon-toxic-chemical-car-tires/>

KUOW: <https://www.kuow.org/stories/scientists-pinpoint-chemical-that-s-been-killing-coho-salmon-it-comes-from-car-tires>

Chemistry World: <https://www.chemistryworld.com/news/tyre-compound-driving-mystery-salmon-deaths-identified-after-years-of-chemical-detective-work/4012851.article>

Canadian Geographic: <https://www.canadiangeographic.ca/article/killer-tire-chemical-threatening-canadian-salmon>

Chemical and Engineering News (Feb 2022): <https://cen.acs.org/environment/water/Urban-stormwater-presents-pollution-challenge/100/i6>

Estuary News (Feb. 2022): <https://archive.estuarynews.org/west-coast-salmonids-all-tired-out/>

The Guardian (July 2022): <https://www.theguardian.com/environment/2022/jul/25/tyre-dust-the-stealth-pollutant-becoming-a-huge-threat-to-ocean-life>

2020 Contaminants in Urban Estuaries (Tian et al.)

UW News (January 2020): <http://www.washington.edu/news/2020/01/22/puget-sound-technique-casts-net-for-concerning-chemicals>

Forbes.com: <https://www.forbes.com/sites/allenelizabeth/2020/01/27/sixty-four-new-chemicals-discovered-in-washingtons-puget-sound/#10a27ef15d93>

KING5 news: <https://www.king5.com/article/news/local/whats-in-puget-sound/281-c122de89-af35-41a6-a47a-42f7345b6389>

2018 Coho Mortality Signature (Peter et al.)

KOUW radio: <https://www.kuow.org/stories/coho>

2017 Engineered Hyporheic Zone Treatment (Peter et al.)

Scientific American (March 2022 Feature Story): <https://www.scientificamerican.com/article/to-revive-a-river-restore-its-hidden-gut1/>

2013 Science, Trenbolone Reversible Photohydration Mechanism (Qu et al.)

Science: <http://www.sciencemag.org/content/341/6153/1441.full>

Nature: <http://www.nature.com/news/hormone-disruptors-rise-from-the-dead-1.13831>

U.S. News and World Report: <http://health.usnews.com/health-news/news/articles/2013/09/26/evidence-shows-steroid-used-in-livestock-can-impact-waterways>

Scientific American: <http://www.scientificamerican.com/article.cfm?id=hormone-disruptors-rise-from-the-dead-like-zombies>

Science Daily: <http://www.sciencedaily.com/releases/2013/09/130926142829.htm>

Chemistry World (Royal Society of Chemistry): <http://www.rsc.org/chemistryworld/2013/09/night-nearly-dead-steroid-trenbolone-acetate>

Chemical and Engineering News: <http://cen.acs.org/articles/91/i39/Growth-Hormones-Knack-Regenerating.html>

Yahoo Health News: <http://health.yahoo.net/articles/healthcare/vampire-steroid-may-haunt-us-rivers-and-streams>

Phys.org: <http://phys.org/news/2013-09-steroids-persist-longer-environment.html>

Huffington Post: http://www.huffingtonpost.com/andrew-gunther/industry-assurances-over-b_4039594.html

Huffington Post: http://www.huffingtonpost.com/andrew-gunther/big-ags-gifts-for-2013_b_4493687.html

The Scientist: <http://www.the-scientist.com/?articles.view/articleNo/37702/title/Steroids-Stick-Around/>

National Science Foundation, "Science360", 9/30/2013 News: <http://news.science360.gov/files/>

ACS "Molecule of the Week" 12/30/2013: <http://www.acs.org/content/acs/en/molecule-of-the-week/archive/trenbolone.html>

Radio, Audio, and Television Media:

Ocean Protect Podcast (05/30/22): <https://play.acast.com/s/ocean-protect/tyres-coho-salmon-kills-with-dr-ed-kolodziej>

ABC News-Bay Area (05/25/22): <https://abc7news.com/car-tire-pollution-6ppd-chemicals-plastic/11890606/>

KUOW Toxic Tires (05/11/22): <https://www.kuow.org/stories/all-cars-and-trucks-are-polluters-when-it-comes-to-their-tires>

Minnesota Public Radio (02/10/22): <https://www.mprnews.org/story/2022/02/10/scientists-look-for-toxic-tire-chemical-in-minnesota-waters>

Oregon Public Radio “Think Out Loud” (12/7/20): <https://www.opb.org/article/2020/12/07/scientists-have-discovered-a-chemical-from-tires-is-killing-coho-salmon-in-the-puget-sound/>

Zero Waste Countdown Podcast: <https://zerowastecountdown.podbean.com/e/122-urban-salmon/>

BBC “Inside Science” on 10/03/13: <http://www.bbc.co.uk/programmes/b03bs0z6>

Documentary Films:

Engineering With Nature: An Ode to Wood, Water and Stone. Leaping Frog Films.

World Premier June 8, 2019 at the Seattle International Film Festival (SIFF). Seattle, WA.

<http://www.leapingfrogfilms.com/thorton.html>