

Phillip L. Thompson
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Seattle, Washington 98122
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206.296.5521

EDUCATION

Ph.D. Environmental Engineering, University of Iowa 1997
M.S. Environmental Engineering, University of Iowa 1992
B.A. Biology, University of Iowa 1990

Dissertation: The Phytoremediation of Munitions (RDX, TNT) Waste at the Iowa Army Ammunition Plant with Hybrid Poplar Trees (Advisor: Jerald Schnoor)

PROFESSIONAL REGISTRATION

Registered Professional Engineer in the State of Washington, License #: 36577
U.S. Green Building Council–LEED Accredited Professional

EXPERIENCE

Center for Environmental Justice and Sustainability, Seattle University

Director January 2013 to Present

Department of Civil and Environmental Engineering, Seattle University

Professor September 2012 to Present

Department Chair September 2006–June 2013

Associate Professor September 2003–March 2012

Assistant Professor September 1997–February 2003

Courses: Engineering Economics, Principles of Environmental Engineering, Water and Wastewater Engineering, Hazardous Waste Management, , Engineering Design, Biological Principles for Environmental Engineers, Introduction to Civil & Environmental Engineering, Fluid Mechanics Laboratory

Department of Civil and Environmental Engineering, University of Iowa

Teaching Assistant August 1991–May 1995

Courses: Biological Treatment Processes, Engineering I, Hydrogeology and Groundwater Quality, Environmental Chemistry Laboratory.

Research Assistant

May 1995 –1997. Studied phytoremediation of TNT and RDX wastes by a hybrid poplar tree.

May 1994 –May 1995. Designed pilot–scale fluidized bed for drinking water denitrification.

January 1993 –May 1994. Studied the decomposition of chloramines in model waters.

January 1990 –December 1993. Performed nitrate analysis for a statewide water quality survey.

September 1988 –December 1990. Monitored water quality of local reservoir and river system.

OTHER RELATED EXPERIENCE

Visiting Professor, University of Washington, Civil and Environmental Engineering, Fall 2019

Consultant, Bullitt Foundation, November 2011–Present

Consultant, Bill and Melinda Gates Foundation, January 2012 to August 2012

Affiliate Faculty, University of Washington, September 1998 to Present
 Principal, Northwest Engineers, Seattle, Washington. January 2007 to Present
 Principal, KDD & Associates, Seattle, Washington. May 2001–December 2006
 Consultant, Appia Engineering, Seattle, Washington. June 2000–December 2001
 Consultant, CH2M Hill. Portland, Oregon. July 1998–June 2000.
 Consultant, US Environmental Protection Agency. Athens, GA October 1998–March 1999.
 Consultant, Howard R. Green & Associates, Des Moines, Iowa. January–October 1992.
 Lab Technician, Iowa City Wastewater Treatment Plant, December 1990–December 1991.
 Technical Reviewer: *Environmental Science and Technology*; National Science Foundation; *Environmental Toxicology and Chemistry*; *Journal of the American Water Works Association*; *International Journal of Phytoremediation*; *Water Environment Research*; *Journal of Environmental Engineering, Interdisciplinary Environmental Review*

GRANTS & AWARDS

Seattle University Summer Faculty Fellowship, 1998, 2001, 2004, 2020
 Seattle University Endowed Mission Fund: 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2017, 2018, 2019
 Seattle University College of Science and Engineering Summer Research Grant, 2019
 Seattle University Alumni Association, Distinguished Faculty Award, 2015
 Environmental Works – Building Energy Study, 2015
 Herrera Environmental Consultants – Stormwater Media Study, 2014
 Leona Helmsley Foundation, Reflection in Engineering Education, 2014
 Bullitt Foundation, Evaluation of Gray Water Treatment System Performance, 2013
 Seattle University McGoldrick Fellowship (Seattle University’s highest faculty honor), 2011–2012
 American Society of Engineering Education – Design in Engineering Education, Best Paper, 2012.
 Seattle University Global Grants Fund: 2011, 2012, 2013
 Seattle University Thomas J. Bannan Endowed Chair for Engineering, 2009–2011
 National Science Foundation–Course, Curriculum & Laboratory Improvement Phase I, 2009.
 National Science Foundation–Course, Curriculum & Laboratory Improvement Phase II, 2007.
 National Science Foundation–Course, Curriculum & Laboratory Improvement Phase I, 2004.
 National Science Foundation–Research Experience for Undergraduates, 2003.
 National Science Foundation–Major Research Instrumentation, June 2002.
 National Science Foundation–New Century Scholar, August, 1999.
 National Research Council Postdoctoral Fellowship, June 1997–1998 (award declined).
 Iowa Department of Natural Resources Seed Grant, May 1996.
 United States Environmental Protection Agency Fellowship, June 1995–May 1996.
 Neil B. Fisher Environmental Engineering Fellowship, University of Iowa, 1992.

PUBLICATIONS

Thompson, P. L., Porter, R. (2020). “Potable Rainwater for an Building from Rainwater Collection”, *Journal of the American Water Works Association*. Vol. 112, No. 12, 46 –54.

Thompson, P. L., Polka, J. D. (2017). “Graywater Treatment for a Commercial Building”, *Water Environment Technology*, Vol. 29, No. 12, 52-56.

Thompson, P. L. (Ed.). (2017). “Environmental Justice and Sustainability” [Special Issue]. *Interdisciplinary Environmental Review*, Vol. 18, Nos. 3 and 4.

- Abraham, S., Shahbazian, A., Dao, K., Tran, H., Thompson, P. (2017). “An Internet of Things (IoT)-based aquaponics facility”, IEEE Global Humanitarian Technology Conference, San Jose, CA, October 18.
- Thompson, P. L. (2015). “Graywater Management for an Integrated High Performance Building”, National Institute of Building Sciences Best4 Conference, Kansas City, MO, April 13.
- Thompson, P. L. (Ed.). (2015). “Environmental Justice and Sustainability” [Special Issue]. *Interdisciplinary Environmental Review*, Vol. 16, Nos. 2, 3 and 4.
- Marsolek, M. D., Kendall, E., Thompson, P. L., Rutar-Shuman, T. (2014). “Thermal Pretreatment of Algae for Anaerobic Digestion” *Bioresource Technology*, Vol. 151, 373-377.
- Lebeau, J., McCormack, J., Beyerlein, S., Davis, D., Trevisan, M., Leiffer, P., Thompson, P., Davis, H., Howe, S., Brackin, P., Gerlick, R., Khan, J. (2014). “A New Perspective on Impact of the Integrated Design Engineering Assessment and Learning System for Professional Skills.” *International Journal of Engineering Education*. Vol. 30, No. 1, 1-12.
- Thompson, P. L., Jiencke, F. W., Reinhart, S. W., Reha, M. E., Byrne, S. S. (2013). “Avoiding Digester Upset.” *Water Environment Research*. Vol. 85, No. 4, pp. 327-330.
- Thompson, P., Connell, A., Jacobs, D., Kemly, C., Nolan, K. and G. Ongoco. (2012). “Evaluation of Water Treatment Systems for Medical Clinics.” *International Journal for Service Learning in Engineering: Humanitarian Engineering and Social Entrepreneurship*. Vol. 7, No.1, 13-25.
- McCormack, J., Beyerlein, S., Davis, D., Trevisan, M., Lebeau, J., Davis, H., Howe, S., Brackin, P., Thompson, P., Gerlick, R., Khan, J., and Leiffer, P. (2012). “Contextualizing Professionalism in Capstone Projects Using the IDEALS Professional Responsibility Assessment.” *International Journal of Engineering Education*. Vol. 28, No. 2, 416-424.
- Trevisan, M., Davis, D., Beyerlein, S., McCormack, J., Thompson, P., Leiffer, P., Davis, H., Howe, S., LeBeau, J, Gerlick, R., Brackin, P., and J. Khan. (2012). Integrated Design Engineering Assessment and Learning System (IDEALS): Piloting Teamwork and Professional Skills Development Instructional Materials. American Society of Engineering Education, San Antonio, TX.
- McCormack, J., Beyerlein, S., Brackin, P. Davis, D., Trevisan, M., Davis, H., Gerlick, R., Thompson, P., Howe, S., Leiffer, P. and J. Khan. (2011). “Assessing Professional Skill Development in Capstone Design Courses.” *International Journal of Engineering Education*. Vol. 27, No. 6, 1308-1323.
- Thompson, P., Milonova, S., Reha, M., Mased, F. and Tromble, I. (2011). “Coil Pump Design for a Community Fountain in Zambia.” *International Journal for Service Learning in Engineering: Humanitarian Engineering and Social Entrepreneurship*. Vol. 6, No.1, 33-45.

- Thompson, P. (2011). “Eradicating the Safe Water and Sanitation Crises via Unification” in: Engaging with Environmental Justice: Governance, Education and Citizenship, Cotton, M. and Motta, B. H. eds., *Inter-Disciplinary Press*, Oxford, UK. 163-173.
- Davis, D., Trevisan, M., Davis, Beyerlein, S , Howe, S., Thompson, P., McCormack, J, Brackin, P., Khan, M. (2011). “IDEALS: A Model for Integrating Engineering Design Professional Skills Assessment and Learning.” American Society for Engineering Education, Vancouver, BC.
- Thompson, P. and A. Polebitski (2010). “The Effect of Mycorrhizal Fungi on the Phytoremediation of RDX.” *Environmental Science and Technology*. Vol. 44, No. 3, 1112-1115.
- Thompson, P. (2010). “Economically Sustainable Safe Drinking Water Systems for the Developing World”. *Business and Society Review*. Vol. 115, No. 4, 477-493.
- Davis, D., Trevisan, M., Davis, H., Gerlick, R., McCormack, J., Beyerlein, S., Thompson, P., Howe, S., Leiffer, P. and P. Brackin (2010). “Assessing Team Member Citizenship in Capstone Engineering Design Courses.” *International Journal of Engineering Education*. Vol. 26, No. 4, 771-783.
- Davis, D., Beyerlein, S., Thompson, P., McCormack, J., Harrison, O., Trevisan M., Gerlick, R., and S. Howe (2009). “Assessing Design and Reflective Practice in Capstone Engineering Design Courses.” American Society for Engineering Education, Austin, TX.
- Gerlick, R., Davis, D., Beyerlein, S., McCormack, J., Thompson, P., Harrison, O, and M. Trevisan (2008). “Assessment Structure and Methodology for Design Processes and Products in Engineering Capstone Courses.” American Society for Engineering Education, Pittsburgh, PA.
- Davis, D., Beyerlein, S., Trevisan, M., Harrison, O., Thompson, P., and M. Trevisan (2007). “Assessments for Three Performance Areas in Capstone Engineering Design.” American Society for Engineering Education, Pittsburgh, PA
- Davis, D., Beyerlein, S., Thompson, P., Harrison K., Trevisan, M., and B. Mount (2006). “A Conceptual Model for Capstone Engineering Design Performance and Assessment”, Proceedings of Annual Conference of the American Society for Engineering Education” Chicago, IL.
- Beyerlein, S., Davis, D., Trevisan, M., Thompson, P., and K. Harrison (2006) “Assessment Framework for Capstone Design Courses”, Proceedings of Annual Conference of the American Society for Engineering Education, Chicago, IL.
- Trevisan, M., Davis, D., Beyerlein, S., Thompson, P., and K. Harrison (2006) “A Review of Literature on Assessment Practices in Capstone Engineering Design Courses: Implications for Formative Assessment.” Proceedings of Annual Conference of the American Society for Engineering Education, Chicago, IL.

- Davis, D., Beyerlein, S., Thompson, P., Gentili, K. and L. McKenzie (2003) “How Universal are Capstone Design Course Outcomes?” Proceedings of Annual Conference of the American Society for Engineering Education, Chicago, IL
- Thompson, P. L., D. Moses, K. M. Howe (2003). “Phytoremediation at the Iowa Army Ammunition Plant” in: Phytoremediation: Transformation and Control of Contaminants S. C. McCutcheon and J. L. Schnoor, eds. John Wiley and Sons, Inc., New York.
- Thompson, P. L. (2002). “Designing a Discipline –Specific Introductory Course for Freshmen”. American Society of Engineering Education Annual Conference Proceedings, Montreal, Quebec.
- Davis, D., Trevisan, M., McKenzie, L., Beyerlein, S., Daniels, P., Rutar, T., Thompson, P., and Gentili, K. (2002). “Practices for Quality Implementation of the TIDEE Design Team Readiness Assessment”, American Society of Engineering Education Annual Conference Proceedings, Montreal, Quebec.
- Thompson, P. L. (2001). “Phytoremediation Laboratory” in Environmental Engineering Laboratory Manual, S. Powers, ed. American Society of Environmental Engineering and Science Professors, Potsdam, NY.
- Thompson, P. L., and S. Safferman (2001). “Hardness Removal Laboratory” in Environmental Engineering Laboratory Manual, S. Powers, ed. American Society of Environmental Engineering and Science Professors, Potsdam, NY.
- Burken, J. G., Shanks, J. and P. L. Thompson (2000). “Phytoremediation and Plant Metabolism Explosives and Nitroaromatic Compounds” in: Biodegradation of Nitroaromatic Compounds and Explosives, Spain, J. C., Hughes, J. B. and H. Knackmuss. eds., Plenum, New York. 239 –275.
- Thompson, P. L., Ramer, L. A., Yong, P. and J. L. Schnoor (2000). “Pilot–scale Treatment of TNT –spiked Groundwater by Hybrid Poplars” in: Emerging Technologies in Hazardous Waste Management VIII, Tedder, D. W. and F. G. Pohland eds., Kluwer Academic/Plenum, New York. 109 –118.
- Thompson, P. L., Murphy, D. J., Harmsen, J. and P. Chang. (1999). “Effect of Leachate on Native Grass Species of Eastern Washington,” *Journal of Solid Waste Technology and Management*. Vol. 26, Nos. 3 & 4. 114 –118.
- Thompson, P. L. (1999). “Phytoremediation of Explosives” in Guidelines for Successful Phytoremediation, Jordahl, J. ed., American Institute of Chemical Engineers, New York.
- Thompson, P. L., Ramer, L. A. and J. L. Schnoor (1999). “1,3,5–trinitro –1,3,5 –triazaine (RDX) Translocation in Hybrid Poplar Trees”, *Environmental Toxicology and Chemistry*, Vol. 18, No. 2, 279 –284.

Thompson, P. L., Ramer, L. A. and J. L. Schnoor (1998). “Uptake and Transformation of TNT by a Poplar Hybrid,” *Environmental Science and Technology*, Vol. 32, No. 7, 975 –980.

Thompson, P. L. and W. L. Paulson (1998). “Dewaterability of Alum and Ferric Coagulation Sludges,” *Journal of the American Water Works Association*, Vol. 90, No. 4, 164 –170.

Thompson, P. L., Ramer, L. A., Guffey, A. P., and J. L. Schnoor (1998). “Decreased Transpiration in Poplar Trees Exposed to 2,4,6 –Trinitrotoluene,” *Environmental Toxicology and Chemistry*, Vol. 17, No. 5, 902 –906.

SELECTED PRESENTATIONS

Thompson, P. L. (2017). “Aquaponics Systems for Sustainable Agriculture and Technology Education”, 29th Annual Meeting of the Thai Society for Biotechnology and International Conference, Bangkok, Thailand, November 23.

Thompson, P. L. (2017). “Wetland Treatment of Graywater from a Commercial Building”, 29th Annual Meeting of the Thai Society for Biotechnology and International Conference Bangkok, Thailand, November 24.

Thompson, P. L. (2017). “Aquaponics for Science and Technology Education”, Aquaponics Association Conference, Portland, OR, November 3.

Thompson, P. L. (2017). “Engineering Education at a Jesuit University”, Congress of Technology and Innovation in Higer Education, EMGE School of Engineering, Belo Horizonte, Brazil, September 15. (Invited).

Thompson, P.L. (2017). “Sustainability's Big Ideas: A Model Strategy for Integrating Sustainability Across the Curriculum.” Washington Higher Education Sustainability Conference, Spokae, WA, February 16. (Panel).

Thompson, P. L. (2015). “Impacts of Sea Level Rise on Wastewater Infrastructure”, 7th Annual Conference on Climate Change: Impacts and Responses., Vancouver, BC, April 11.

Thompson, P. L. (2015). “Graywater Management for an Integrated High Performance Building”, National Institute of Building Sciences Best4 Conference, Kansas City, MO, April 13.

Thompson, P. L. (2013). “Ending the Safe Water and Sanitation Crises in the 21st Century”, Invited presentation to Fremont Rotary Club. Seattle, WA, January 29.

Thompson, P. L. (2010). “Safe Water for Medical Clinics in Haiti: A Community-based Solution”, Invited presentation for State Senator Jeanne Kohl-Welles’ Haiti Benefit. Seattle, WA, December 29.

Thompson, P. L. (2010). “Eradicating the Safe Water and Sanitation Crises in the 21st Century”, Invited presentation to University of Iowa Department of Civil Engineering Seminar. Iowa City, IA, November 19.

- Thompson, P. L. (2010). “Sustainable Water and Sanitation for the Developing World”, Invited presentation to Global Washington Annual Conference. Redmond, WA, November 15.
- Thompson, P. L. (2010). “Eradicating the Safe Water and Sanitation Crises in the 21st Century”, Invited presentation to Massachusetts Institute of Technology Engineers Without Borders. Boston, MA, October 19.
- Thompson, P. L. (2010). “Eradicating the Safe Water and Sanitation Crises in the 21st Century”, Invited presentation to Harvard University Engineers Without Borders. Boston, MA, October 18.
- Thompson, P. L. (2010). “Building Water Partnerships with Rotary and EWB”, Invited presentation to Rotary International Western District Governors Meeting. Bellevue, WA, October 2.
- Thompson, P. (2010). “Assessing Professional Development and Teamwork Skills in Using IDEALS”, Seattle University Engineering Faculty Workshop, Seattle, WA, September 15.
- Thompson, P. (2010). “Capturing Carbon and Hearts in Seattle”, Invited presentation to Heriot-Watt University School of the Built Environment. Edinburgh, Scotland. July 15.
- Thompson, P. (2010). “Eradicating the Safe Water and Sanitation Crises via Unification” 9th Global Conference on Environmental Justice and Global Citizenship. Mansfield College, Oxford, UK, July 12.
- Thompson, P., Brackin, P. and J. McCormack (2010). “Workshop: Assessing Professional Development and Teamwork Skills in Senior Capstone Engineering Courses”, Capstone Design Conference, Boulder, CO, June 7.
- Thompson, P. (2010). “Assessing Professional Development and Teamwork Skills in Senior Capstone Engineering Courses”, ABET Workshop, Las Vegas, NV, April 15.
- Thompson, P. (2010). “Safe Water Access for the Developing World”, Invited lecture for Seattle University Course NPLR 492: Voices in Motion: Social Media for Global Justice. Seattle, WA, January 11.
- Thompson, P. L. (2009). “Seattle University’s Engineers Without Borders Program”, Invited presentation to Emerald City Rotary Club. Seattle, WA, July 27.
- Thompson, P. L. (2009). “Economically Sustainable Safe Drinking Water Systems for the Developing World”, Working Collaboratively for Sustainability. Seattle, WA, April 2.
- Thompson, P. L. (2008). “Seattle University’s Engineers Without Borders Program”, Invited plenary address EWB –USA National Conference. Seattle, WA, March 27.

- Thompson, P. L. (2006). “Enhancing Phytoremediation of RDX with Mycorrhizal Fungi”, 23rd Annual Conference on Soil, Sediments and Water. Amherst, MA, October 19.
- Thompson, P. L. (2005). “A New Tool for Testing Anaerobic Digester Stability”, Annual Conference of the Pacific Northwest Clean Water Association. Tacoma, WA, September 29.
- Thompson, P. L. (2004). “Enhancing the Phytoremediation of RDX with Fungi”, Battelle’s Fourth International Conference on the Remediation of Chlorinated and Recalcitrant Compounds. Monterey, California, May 24.
- Thompson, P. L. (2002). “Hybrid Poplar Uptake Kinetics”, Battelle’s Third International Conference on the Remediation of Chlorinated and Recalcitrant Compounds. Monterey, California, May 21.
- Thompson, P. L. (2000). “Phytoremediation of Explosives”, First EPA Conference on Phytoremediation, Invited Speaker, Boston, Massachusetts, May 1.
- Thompson, P. L. (2000). “Phytoremediation of TNT and RDX”, Battelle’s Second International Conference on the Remediation of Chlorinated and Recalcitrant Compounds. Monterey, California, May 23.
- Thompson, P. L. (1999). “Phytoremediation of Explosives Waste”, Northwest Scientific Association Annual Meeting, Tacoma, Washington, March 25.
- Thompson, P. L. (1999). “Phytoremediation of Munitions Waste”, Invited Speaker, Department of Forestry. University of Washington, Seattle, Washington, February 27.
- Thompson, P. L. (1998). “Phytoremediation of Hazardous Wastes”, Chemical and Hazardous Materials Managers Association, Northwest Chapter, Invited Speaker. Seattle, Washington, December 1.
- Thompson, P. L. (1998). “Using Plants to Clean-up Hazardous Wastes”, Special Presentation at Seattle University, Earth Day Celebration, April 22.
- Thompson, P. L. and J. L. Schnoor (1997). “Phytoremediation of Munitions (RDX, TNT) Waste by a Hybrid Poplar”, American Chemical Society National Meeting, Division of Environmental Chemistry, San Francisco, California, April 13 –17.

AFFILIATIONS

Member: American Water Works Association, Water Environment Federation, American Chemical Society, American Society of Civil Engineers, American Society of Engineering Education, Association of Environmental Engineering and Science Professors, Emerald City Rotary Club

ACADEMIC SERVICE

College of Science & Engineering *ad hoc* Personnel Committees, Fall 2015, Fall 2016
Seattle University Parent’s Weekend Keynote Speaker, October 2014

Seattle University Mission Day 2014 – Planning Committee and Speaker
Seattle University Academic Strategic Action Plan Two – 2013-2014, Committee Member
Middle College High School Advisory Board, Fall 2013 to Present
American Society of Engineering Education Pacific–NW Section, Awards Chair, 2009–2011
College of Science & Engineering Facilities Planning Committee, Spring 2008–2010
American Society of Engineering Education Pacific–NW Section, Chair, 2007–2009
SU Teagle Steering Committee, Spring 2008–Fall 2009
SU Strategic Planning Committee for Global Engagement, Fall 2008
College of Science & Engineering Personnel Committee, Chair, Fall 2008–Spring 2009
College of Science & Engineering Personnel Committee, Fall 2006–Spring 2008
Lake Washington Technical College Advisory Board, Fall 2004–Spring 2008
Engineers Without Borders, Faculty Advisor, Fall 2005–Winter 2014
Engineers for a Sustainable World, Faculty Advisor, Spring 2014–Present
World Water Partners, Faculty Advisor, Fall 2010–Present
Sustainable University Revolving Fund, Faculty Advisor, Fall 2009–Spring 2011
SU Society of Environmental Engineers and Scientists, Faculty Advisor, Fall 1997–Spring 2009
Seattle University Academic Assembly, Fall 1999 –Spring 2004
College of Science & Engineering Newsletter, Editor, Fall 1997–Spring 2008.
College of Science & Engineering Faculty Development Committee, Chair, 1998–2003.
University of Iowa Graduate Student Senate, President, 1993–1995.