

Appendix A: Current Academic Vitae

ACADEMIC VITA

Sean Lyle Gestson

Assistant Professor of Civil Engineering, Donald P. Shiley School of Engineering
University of Portland
gestson@up.edu, 503-943-7361, Shiley Hall Office 235

CURRENT:

Assistant Professor of Civil Engineering, Donald P. Shiley School of Engineering, Since August 2022

ACADEMIC APPOINTMENTS:

Graduate Research and Teaching Assistant, Civil and Construction Engineering
Oregon State University, 2016 – 2020

Instructor, Civil and Construction Engineering, Oregon State University, Winter 2020 – Spring 2022, Non-tenure-track

Courses Taught: Civil and Construction Engineering Capstone Design (CE418/419), Geotechnical Engineering (CE372), Design Engineering and Problem Solving (ENGR102), Highway Location and Design (CE365), Surveying Theory (CE361), Civil and Construction Engineering Graphics and Design (CCE201), Engineering Orientation (ENGR111), Design of Coffee (ENGR101), Statics (ENGR211)

Assistant Professor of Civil Engineering, Donald P. Shiley School of Engineering, University of Portland, August 2022 – Current

COURSES TAUGHT AT UNIVERSITY OF PORTLAND:

Engineering Dynamics (EGR212/214)
Engineering Capstone I & II (EGR483/4)
Traffic Engineering (CE 416)
Geotechnical Engineering (CE 321)
Geotechnical Lab (CE 371)
Surveying (CE223)
Surveying Lab (CE224)
Transportation Engineering (CE 315)
Civil Engineering Capstone Project II (CE484)

EDUCATION:

Lower Columbia College, Longview, WA	2011-2013	A.S.
Engineering, Environmental Focus		
University of Portland, Portland, OR	2013-2016	B.S.
Engineering, Civil Concentration		
Oregon State University, Corvallis, OR	2016-2019	M.S.
Civil Engineering, Engineering Education Concentration		
<i>Thesis:</i> Problem Solving Personas of Civil Engineering Practitioners using Eye Tracking Techniques		
Oregon State University, Corvallis, OR	2019-2022	Ph.D.
Civil Engineering, Engineering Education Concentration		
<i>Dissertation:</i> Understanding the Similarities and Differences Between Academia and the Engineering Workplace through Barriers to Adoption, Epistemic Beliefs, and Problem-Solving Behavior		

Advisor: Shane A. Brown

ADMINISTRATIVE POSITIONS, PROFESSIONAL EXPERIENCE, CONSULTING:

Engineering Technician I, Bureau of Environmental Services, Portland, OR, 2016
Engineer Trainee, Bureau of Environmental Services, Portland, OR, 2015-2016

RESEARCH INTERESTS:

Engineering education, practical learning innovation development, barriers to adoption, experiential learning, pedagogy, situated cognition

SCHOLARLY WORK:

Grants Awarded:

Shiley Grant with Student Researchers. Industry Inspired Project. Funded through Shiley School of Engineering, Summer 2026, \$16,500.00.
Butine Faculty Development Grant, Developing a framework for explaining the value of a liberal arts education to engineering students, Funded by University of Portland, Summer 2026, \$3,253.00.
KEEN Illumination and Elevation Grant. KEEN University of Portland, 2025, \$1500.00
Shiley Grant for Student Researchers. Industry Inspired Project. Funded through Shiley School of Engineering, Summer 2025, \$9000.00.
Shiley Grant for Faculty Research and Development. Collaboratively Develop New Learning Innovations with Faculty, Engineers, and Students, Funded through Shiley School of Engineering, Summer 2024, \$9500.00.
Butine Faculty Development Grant, Conference Attendance: American Society of Engineering Education (ASEE) 2024, \$979.00.
Butine Faculty Development Grant, Integrating the Practical Considerations of Cost and Stakeholder Analysis in Engineering Economics, Funded by University of Portland, Summer 2023, \$765.00.
KEEN Module Development Grant. KEEN University of Portland, 2024, \$1500.00
KEEN Module Development Grant. KEEN University of Portland, 2023, \$1100.00.
KEEN Module Development Grant. KEEN University of Portland, 2023, \$1100.00.
Shiley Grant for Faculty Research and Development. Collaboratively Develop New Learning Innovations with Faculty, Engineers, and Students, Funded through Shiley School of Engineering, Summer 2023, \$9500.00.

Publications (Peer-reviewed):

1. **Gestson, S.L.** & Barner, M.S. (June 2026). *Balancing Flexibility and Accountability: Implementing Late Work Policies in Civil Engineering Courses (Work in Progress)*. ASEE Annual Conference & Exposition, Charlotte, North Carolina.
2. Barner, M.S. & **Gestson, S.L.** (June 2026). *Engineering Tutors' Perspectives on How to Increase Engineering Students' Utilization of Peer Tutoring – A Work-in-Progress*. ASEE Annual Conference & Exposition, Charlotte, North Carolina.
3. **Gestson, S.L.**, Barner, M.S. (2025). *How Engineering Faculty Define and Value the Impact of University Service*. Paper presented at 2025 ASEE Annual Conference & Exposition, Montreal, Canada.
4. Barner, M.S., **Gestson, S.L.** (2025). *Engaging Mechanics of Materials and Dynamics Students in Designing Curriculum for Statics*. Paper presented at 2025 ASEE Annual Conference & Exposition, Montreal, Canada.

5. **Gestson, S.L.**, Barner, M.S., *Fitzgerald, R., Farina, J. (2024). *Developing a Learning Innovation for an Undergraduate Mechanical Engineering Course through Faculty, Engineer, and Student Collaboration*. Paper presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon.
6. Barner, M.S., **Gestson, S.L.**, *Dewey, A. (2024). *Student Led Curriculum Development: Incorporating Mechanics of Materials Students in the Design of Statics Curricula. A Work in Progress*. Paper presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon.
7. *Repp, S., **Gestson, S.L.**, Kimball, J. (2024). *Engineering Ideation Method Efficacy Study*. Paper to be presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon.
8. **Gestson, S.L.**, Brown, S.A., Ahmed, A., Hurwitz, D., Bornasal, F., Desing, R. (2024) Exploring the Differences in Hydraulic Engineering Problem-Solving Behavior of Undergraduate Students and Engineering Practitioners with Multiple Representations Using Eye Tracking Techniques. *Journal of Civil Engineering Education*. 150(1).
9. **Gestson, S.L.**, Barner, M.S., Abadi, M.-G., Hurwitz, D.S., Brown, S.A. (2019). *Problem Solving Personas of Civil Engineering Practitioners using Eye Tracking Techniques. International Journal of Engineering Education*. 35(4), 1074–1093.
10. ¹**Gestson, S. L.**, Brown, S. A., Barner, M. S., Ghodrati Abadi, M., Hurwitz, D. S. (2019). *Factors Contributing to the Problem-Solving Heuristics of Civil Engineering Students*. Paper presented at 2019 ASEE Annual Conference & Exposition, Tampa, Florida.
11. **Gestson, S. L.**, Lutz, B. D., Brown, S. A., Barner, M. S., Hurwitz, D. S., Ghodrati Abadi, M. (2018). *Developing an Understanding of Civil Engineering Practitioner Problem-solving Rationale Using Multiple Contextual Representations*. Paper presented at 2018 ASEE Annual Conference & Exposition, Salt Lake City, Utah.
12. Ahmed, A., Hurwitz, D., **Gestson, S.**, Brown, S. (2021). Differences between Professionals and Students in Their Visual Attention on Multiple Representation Types While Solving an Open-Ended Engineering Design Problem. *Journal of Civil Engineering Education*, 147(3).
13. Ahmed, A., Hurwitz, D., **Gestson, S.L.**, Brown, S. (2023). Closure to “Differences between Professionals and Students in Their Visual Attention on Multiple Representation Types While Solving an Open-Ended Engineering Design Problem” by Ananna Ahmed, David Hurwitz, Sean Gestson, and Shane Brown. *Journal of Civil Engineering Education*, 149(1).
14. Ghodrati Abadi, M., **Gestson, S. L.**, Brown, S., Hurwitz, D. S. (2019). *Traffic Signal Phasing Problem-Solving Rationales of Professional Engineers Developed from Eye-Tracking and Clinical Interviews*. *Transportation Research Record*, 2673(4), 685–696.
15. ²Barner, M. S., Brown, S. A., **Gestson, S. L.** (2019). *Conceptual Representations in the Workplace and Classroom Settings: A Comparative Ethnography*. Paper presented at 2019 ASEE Annual Conference & Exposition, Tampa, Florida.
16. Barlow, A. J., Pitterson, N. P., Brown, S. A., Quardokus Fisher, K., **Gestson, S. L.**, Simmons, D. R., Adesope, O. (2017). *Incorporating Faculty Sense Making in the Implementation and Modification of an Instrument to Measure Social and Cognitive Engagement*. Paper presented at 2017 ASEE Annual Conference & Exposition, Columbus, Ohio.

*UP Undergraduate Student. ¹Ressler Best Paper Award in the ASEE Civil Engineering Division. ²Best Paper in the ASEE Educational Research and Methods Division.

Presentations (external to UP):

- P1. Developing an understanding of civil engineering practitioner problem-solving rationale using multiple contextual representations, American Society of Engineering Education (ASEE), June 2018.
- P2. Uncovering the influence of contextual representation on engineering problem solving in engineering students and practicing engineers. Workshop. PNW Section Conference, American Society of Engineering Education (ASEE), March 2019. Co-presenter: Ananna Ahmed.
- P3. Factors Contributing to the Problem-Solving Heuristics of Civil Engineering Students, American Society of Engineering Education (ASEE), June 2019.
- P4. Developing a Learning Innovation for an Undergraduate Mechanical Engineering Course through Faculty, Engineer, and Student Collaboration. American Society of Engineering Education (ASEE), June 2024.
- P5. How Engineering Faculty Define and Value the Impact of University Service, American Society of Engineering Education (ASEE), June 2025.

Presentations (internal to UP):

- P6. University of Portland Capstone Program Presentation for Daimler Information Day. Daimler Trucks North America. April 11, 2023. Co-presenters: Brian Fabien, Joseph Hoffbeck, C.J. Hainley, Surj Patel, Sal Orara.
- P7. Research Presentation, University of Portland Engineering Advisory Council (UPEAC) Meeting, April 28, 2023.

STUDENT CAPSTONE AND RESEARCH PROJECTS SUPERVISED:

- 1. Courage Ughwari, Audrey Nguyen, Evan Yoshishige, Luke Keliikuli. Civil Capstone Project: VPOC Site Access Improvements. 2025-2026
- 2. Emily Voiculescu and Aiden Brooks. Research Projects: Collaboratively Developing a Learning Innovation and Late Work Policies. Summer 2025
- 3. Lily Hall, Sahas Sok, Theodore West, Ethan Yin, Matthew Kuang. Civil Capstone Project: Ridgefield Washington Interchange Improvements. 2022 – 2023.
- 4. Anna Tinoco, Curtis Jones, Sarah Ebner, Jack Brown. Civil Capstone Project: Outfall 73A DES Stormwater Treatment Design Project. Spring 2023.
- 5. Rhianna Fitzgerald and Audrey Dewey. Research Project: Collaboratively Develop New Learning Innovations with Faculty, Engineers, and Students. Summer 2023
- 6. Rhianna Fitzgerald. Research Project: Integrating the Practical Considerations of Cost and Stakeholder Analysis in Engineering Economics. Summer 2023
- 7. Rhianna Fitzgerald. Research Project: Defining University Service. Spring 2024
- 8. Aiden Brooks. Research Project: Industry-Inspired Class Project. Summer 2025
- 9. Emily Voiculescu. Research Project: Industry-Inspired Class Project. Summer 2025

UNIVERSITY SERVICE:

Shiley School of Engineering:

Current Service:

January 2025 – Current	Chair, Capstone Committee
May 2025 – Current	Core Integration Assessment Group
January 2023 – Current	Member, Capstone Committee
August 2024 – Current	Member, Academic Senate Committee on Diversity, Equity, Inclusion, and Justice (DEIJ)

Past Service:

2023, 2024, 2025, 2026	Engineering Faculty Representative, Weekend on the Bluff
2025	FE Review Session for Civil Engineers
2025	Pilots Pre-College Summer Program, University of Portland
2025	Core Integration Workshop, University of Portland
2024	Engineering Faculty Representative, Wings Conference
2022, 2023, 2024	Engineering Faculty Representative, Junior/Senior Family Weekend (November)
2022, 2023	Engineering Faculty Representative, STEAM Outreach Education Day (November)
2023	Engineering Faculty Representative, Freshman/Sophomore Family Weekend (February)

SERVICE TO PROFESSION:

Current Service:

Reviewer

Conference Proceedings: ASEE, 2020 - Current

Past Service:

Reviewer

Journals: Journal of Civil Engineering Education, 2022-2023

PROFESSIONAL DEVELOPMENT

While at UP:

KEEN Problem Based Learning Conference, Summer 2025

Capstone Design Conference, Summer 2024

Inclusive STEM Teaching Project Workgroup, Spring 2023

Inclusive STEM Teaching Project Course, Spring 2023

Previous Institution:

Writing Intensive Course (WIC) Faculty Seminar, Oregon State University, 2021

Social Justice Education Initiative Tier 1 and 2 Workshop, Oregon State University, 2021

Social Justice Book Club, Oregon State University, 2021

Technical Writing Evaluator Search Committee, Oregon State University, 2021

CCE Representative, Engineering EXPO Committee, Oregon State University, 2020 - 2022

AWARDS, FELLOWSHIPS, AND HONORS:

Ressler Best Paper Award in the ASEE Civil Engineering Division, 2019

Best Paper in the ASEE Educational Research and Methods Division, 2019

Magna Cum Laude, University of Portland, 2016

Outstanding Civil Engineering Student, University of Portland 2016

Jack Kent Cooke Scholarship (2013), University of Portland Transfer Scholarship (2013),

Washington State Opportunity Scholarship (2012), Kiwanis Science Scholarship (2013),

Quidobach Memorial Endowed Scholarship (2012), Donald G. and Delores M. Felthous Memorial Endowed Scholarship (2012)

Tau Beta Pi Honor Society, Delta Epsilon Sigma Honor Society, Phi Theta Kappa Honor Society

PROFESSIONAL MEMBERSHIPS:

American Society for Engineering Education (ASEE); *Divisions: Civil Engineering Division, Educational Research and Methods, Design in Engineering Education Division*
American Society of Civil Engineers (ASCE)
Institute of Transportation Engineers (ITE)

PROFESSIONAL MEETINGS ATTENDED:

While at the University of Portland:

Acronyms:

ASEE American Society for Engineering Education Annual Conference & Exposition
TREC Transportation Research and Education Center

ASEE, Montreal, CA, June 2025
KEEN PBEL, Cincinnati, OH, June 2025
ASEE, Portland, OR, June 2024
Capstone Design Conference, Knoxville, TN, June 2024
ASEE, Baltimore, MD, June 2023
TREC, Portland State University, Portland, OR, July 2023
Faculty Workshop: Integrating Bike-Ped Topics into University Transportation Courses