

WADE GOODRIDGE, Ph.D.

M. ASEE, M. ASCE, National Councillor/Representative - CUR Engineering Division

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EDUCATION & DEGREES

Doctorate of Philosophy (PhD.)

Utah State University Dept. of Civil and Environmental Engineering, Logan, UT., Sum. 2009

Emphasis: Sediment Transport and Hydraulic Engineering

Dissertation: "Sediment Transport Impacts upon Culvert Hydraulics"

Masters of Science (M.S.)

Utah State University Dept. of Civil and Environmental Engineering, Logan, UT., Sum. 2006

Emphasis: Water Resources and Hydraulic Engineering

Thesis: "A Comparative Study between Mitered Crests and Traditional Ogee Crests for Use with Stair Step Spillways"

Bachelors of Science (B.S.)

Utah State University Dept. of Civil and Environmental Engineering, Logan, UT., Sum. 2006 (Conc. M.S.)

Emphasis: Water Resources and Hydraulic Engineering

Bachelors of Science (B.S.)

Utah State University Dept. of Industrial Technology and Education, Logan, UT., Wint. 1998

Industrial/Vocational Technology Education

Graduate Certificate

California Polytechnic State University, San Luis Obispo, CA. December 2016

Fire Protection Engineering Applications

ACADEMIC & PROFESSIONAL EXPERIENCE

- **Associate Professor**, Engineering Education Dept., Utah State University, July 2019 – Present (full time position, tenure track)
- **Assistant Professor**, Engineering Education Dept., Utah State University, Aug 2013 – July 2019 (full time position, tenure track)
- **Principal Lecturer**, Engineering Education Dept., Utah State University, Jan 2009 - Aug 2013 (full time position, non-tenure track)
- **Graduate Research Assistant**, Utah Water Research Laboratory and Civil and Environmental Engineering Dept., Aug. 2005 – Jan 2009
- **Adjunct Instructor**, Engineering & Technology Education Dept., Utah State University, Sept 1998 – Jan 2009
- **Technology/Vocational Educator**, Mountain Crest High School, Cache County School District, UT, Jun 1998 – Jun 2001

LICENSURES / ENDORSEMENTS / CERTIFICATIONS

- **Graduate Certificate**, Fire Protection Engineering: Applications, *California Polytechnic State University*, 2016
- **NIH** "Protecting Human Research Participants" certificate number 2593995, 1/11/2018
- **EIT**, passed Fundamental of Engineering Exam, State of Utah Department of Commerce - Division of Occupational and Professional Licensing, October, 2004

- Basic Secondary Education (6-12) **Teaching License**, State of Utah Board of Education 4/1999 – 6/2003
- Technology Education (ATE-Gen) **Teaching Endorsement**, State of Utah Board of Education 4/1999 – 6/2003
- Trade and Industry Cabinetry **Teaching Endorsement**, State of Utah Board of Education 4/1999 – 6/2003

PUBLICATIONS

REFEREED JOURNAL PUBLICATIONS

1. *Anderson, J. D., Lawanto, O., & Crookston, B. M., **Goodridge, W. H.**, (2023). “Students Recorded Online Learning Task Value during Covid-19 in a Foundational Statics Course and Upper Level Hydraulics Course.” *International Journal of Engineering Education (IJEE)*. (Accepted for Publication).
2. Green, T., **Goodridge, W. H.**, Anderson, J. D., Davishahl, E., Kane, D. (2023). “Comparing Effectiveness of newer Linework on the Mental Cutting Test (MCT) for Assessing Spatial Ability in Engineering Students” *International Education Studies*. Vol 16, No. 4, 1-10. H-index 62, i10-index 604 <https://ccsenet.org/journal/index.php/ies/article/view/0/49002>
3. Green, T., **Goodridge, W.H.**, Kane, D., Shaheen, N. (2023). “Spatial Strategies employed by blind and low vision (BLV) individuals on the Tactile Mental Cutting Test (TMCT)” *International Journal of Engineering Pedagogy (IJEP)*, Vol. 13, No. 5. 42-57. Kirchengasse, Vienna, Austria. H-index 14, <https://doi.org/10.3991/ijep.v13i5.38021>
4. **Goodridge, W. H.**, Shaheen, N., Bartholomew, S. R., and Cunningham, A. (2023). “Proposing Accessible Line Standards for Tactile Drafting Accessibility for Blind and Low-Vision Students” *Technology and Engineering Teacher*. Vol 82, Iss. 7, 13-22. https://www.proquest.com/openview/5c94dc50cccfa83d0453f_689a30ed543/1?pq-origsite=gscholar&cbl=34845
5. Lawanto, O., Iqbal, A., **Goodridge, W. H.**, Minichiello, A., & Asghar, M. (2022). Emergency Remote Learning: Developing an understanding about online learning features and students’ feelings. Special Edition of the *International Journal of Engineering Education (IJEE)*, Vol. 38, No. 5B, 1629-1642. IF 1.7 <https://www.ijee.ie/contents/c380522B.html>
6. Minichiello, A., Lawanto, O., **Goodridge, W. H.**, Iqbal, A., & Asghar, M. (2022). Flipping the digital switch: Affective responses of STEM undergraduates to emergency remote teaching during the COVID-19 pandemic. *Project Leadership and Society*, 3, 100043. IF 2.8 <https://doi.org/10.1016/j.plas.2022.100043>
7. Fang, N., Farooq, A., and **Goodridge W. H.**, (2022). “Enhancing Undergraduate Engineering Students’ Spatial Skills through a 3D Interactive Virtual and Physical Manipulatives (VPM) Technology.” *International Journal of Engineering Education*. Vol 38 No. 1 90-100. <https://www.ijee.ie/contents/c380122.html>
8. Snowden, A. W., Warren, C. M., **Goodridge, W. H.**, and Fang, N. (2021). “Developing an Understanding of Neural Efficiency with Spatial Task Difficulty: A road forward to mapping Students

Neural Engagement in Spatial Cognition” *Engineering Design Graphics Journal*, Vol. 85.
<http://www.edgj.org/index.php/EDGJ/issue/view/264>

9. **Goodridge, W. H.**, Shaheen, N., and Bartholomew, S. R. (2020). “Teaching Technology & Engineering concepts through socially relevant contexts: Adapting Older Engineering Graphics Methods to Facilitate New Opportunities in our School Systems for Blind and Low Vision Youth.” *Technology and Engineering Teacher*. Vol 79, Iss. 6. 33-37.
<https://www.proquest.com/openview/9865c923e967b73a547fe6721982f88d/1?pq-origsite=gscholar&cbl=34845>
10. Bartholomew, S. R., Nadelson, L. S., **Goodridge, W.H.**, Reeve, E. M. (2018). “Adaptive Comparative Judgment as a Tool for Assessing Open-Ended Design Problems and Model Eliciting Activities.” *Educational Assessment*. Vol 23, No. 2. 85-101.
<https://doi.org/10.1080/10627197.2018.1444986> **SciMago 0.498, H-index 20, CiteScore 0.89, SJR 0.498**
11. Santoso, H. B., Batuparan, A. K., Isal, R. K., and **Goodridge, W.H.** (2018). “The Development of Learning Dashboard for Lectures: Case Study Student Centered e-Learning Environment.” *Journal of Educators Online*. Vol 15, No. 1. **SciMago 0.29, H-index 9, CiteScore 0.94, SJR 0.290**
https://www.thejeo.com/archive/2018_15_1/santoso_betuparan_isal_goodridge
12. Bartholomew, S. R., Reeve, E. M., Veon, R., **Goodridge, W.H.**, Lee, V., and Nadelson, L. (2017). Relationships Between Access to Mobile Devices, Student Self-Directed Learning, and Achievement. *Journal of Technology Education*. Vol 29, No. 1, 2-23.
<http://scholar.lib.vt.edu/ejournals/JTE/v29n1/pdf/bartholomew.pdf> **SciMago 0.119, H-Index 15, CiteScore 0.62, SJR 0.119,**
 - Selected for Council for Technology & Engineering Teacher Education (CTETE) Outstanding Research Award
13. Santoso, H. B., Nurrohmah, I., Fadhilah, S., and **Goodridge, W.H.** (2017). “Evaluating and Redesigning the Self-Monitoring Tool.” *International Journal on Advanced Science, Engineering and Information Technology*. Vol 7, No. 1, 228-234. [doi:10.18517/ijaseit.7.1.1526](https://doi.org/10.18517/ijaseit.7.1.1526), **SciMago 0.117, H-index 3, CiteScore 0.09, SJR 0.117**
http://ijaseit.insightsociety.org/index.php?option=com_content&view=article&id=9&Itemid=1&article_id=1526
14. **Goodridge, W. H.**, Lawanto, O., and Santoso, H. B., (2017). A Learning Style Comparison between Synchronous Online and Face-to-Face Engineering Graphics Instruction. *International Education Studies*. Vol 10, No. 2, 1-14. <https://doi.org/10.5539/ies.v10n2p1> **SciMago 0.18, H-index 10, CiteScore none**
15. Fang, N., Lawanto, O., **Goodridge, W. H.**, and Villanueva, I. (2016). “A Research Experiences for Undergraduates (REU) Site Program on Engineering Education Research.” *International Journal of Engineering Education*. Vol. 32, No. 5, pp. 1-11.
http://jolt.merlot.org/vol10no1/lawanto_0314.pdf **SciMago 0.386, H-index 37, CiteScore 0.96**
16. Villanueva, I., **Valladares, M. M.**, and **Goodridge, W.H.** (2016). Use of Galvanic Skin Responses, Salivary Biomarkers, and Self-Reports to Assess Undergraduate Student Performance During a Laboratory Exam Activity. *Journal of Visualized Experiments*. (108), e53255, [doi:10.3791/53255](https://doi.org/10.3791/53255)
<https://pubmed.ncbi.nlm.nih.gov/26891278/> **SciMago 0.555, H-Index 42, CiteScore 0.78, SJR**

0.555

17. *Call, B J., **Goodridge, W. H.**, Villanueva, I., Wan, N. J. A., and Jordan, K. (2016). Utilizing Electroencephalography Measurements for Comparison of Task-Specific Neural Efficiencies: Spatial Intelligence Tasks. *Journal of Visualized Experiments*. (114) e53327, [doi:10.3791/53327](https://pubmed.ncbi.nlm.nih.gov/27584838/) <https://pubmed.ncbi.nlm.nih.gov/27584838/> **SciMago 0.555, H-Index 42, CiteScore 0.78, SJR 0.555**
18. Lawanto, O., **Santoso, H.**, Lawanto, K., and **Goodridge, W. H.** (2014). Self-Regulated Learning Skills and online Learning Activities between Higher and Lower Performers in a Web-Intensive Undergraduate Engineering Course. *Journal of Educators Online*. Vol 11, No. 3, 1-32. [doi.org/10.9743/jeo.2014.3.2](https://www.thejeo.com/archive/2014_11_3/lawanto_santoso_lawanto_goodridge) https://www.thejeo.com/archive/2014_11_3/lawanto_santoso_lawanto_goodridge **SciMago 0.29, H-Index 9, CiteScore 0.94, SJR 0.290**
19. Lawanto, O., **Goodridge, W. H.**, **Santoso, H. B.**, and Lawanto, K. (2014). Task-Value, Self-Regulated Learning, and Performance in a Web-Intensive Undergraduate Engineering Course: How are they Related? *Journal of Online Learning and Teaching*. Vol 10, No. 1, 97-111. http://jolt.merlot.org/vol10no1/lawanto_0314.pdf **SciMago none, H-Index none, CiteScore none**
20. Lawanto, O., Butler, D., Cartier, S., **Santoso, H. B.**, and **Goodridge, W. H.** (2013). Task Interpretation, Cognitive, and Metacognitive Strategies of Higher and Lower Performers in an Engineering Design Project: An Exploratory Study of College Freshmen. *International Journal of Engineering Education*. Vol 29, No. 2, 459-475. https://www.ijee.ie/latestissues/Vol29-2/18_ijee2704ns.pdf **SciMago 0.386, H-index 37, CiteScore 0.96**
21. Lawanto, O., Butler, D., Cartier, S. **Santoso, H.**, **Goodridge, W. H.**, Lawanto, K. and Clark, D. (2013). Pattern of Task Interpretation and Self-Regulated Learning Strategies of High School Students and College Freshmen during an Engineering Design Project. *Journal of STEM Education: Innovations and research*. Vol. 14, No. 4, 15-27. <http://www.jstem.org/index.php?journal=JSTEM&page=article&op=view&path%5B%5D=1803> **SciMago none, H-Index none, CiteScore none**

REFEREED CONFERENCE PUBLICATIONS (Required Accompanying Conference Presentation)

1. Hamilton, C., Stratman, E., Kane, D., Blondquist, J., Shaheen, N. L., and Goodridge, W. H. (2023). "Parallel Form Reliability Analysis of a Tactile Mental Cutting Test for Assessing Spatial Ability in Blind and Low-Vision Populations", *129th Annual Conference Proceedings of the American Society for Engineering Education*, Baltimore, MA. <https://peer.asee.org/parallel-form-reliability-analysis-of-a-tactile-mental-cutting-test-for-assessing-spatial-ability-in-blind-and-low-vision-populations>
2. Kane, D., Shaheen, N. L., and Goodridge, W. H. (2023) "An Analysis of Low-Scoring Blind and Low Vision Individuals; Selected Answers on a Tactile Spatial Ability Instrument", *129th Annual Conference Proceedings of the American Society for Engineering Education*, Baltimore, MA. <https://peer.asee.org/an-analysis-of-low-scoring-blind-and-low-vision-individuals-selected-answers-on-a-tactile-spatial-ability-instrument>
3. Searle, D., Kane, D., Shaheen, N. L., and Goodridge, W. H. (2023). "An Analysis of Pre and Post-COVID-19 Lockdown Spatial Ability Performance in Blind and Low-Vision Individuals", *129th Annual Conference Proceedings of the American Society for Engineering*

Education, Baltimore, MA. <https://peer.asee.org/an-analysis-of-pre-and-post-covid-19-lockdown-spatial-ability-performance-in-blind-and-low-vision-individuals>

4. Asghar, M., Kane, D., Minichiello, A., and Goodridge, W. H. (2023). “A Kickstart to Smart Living in Undergraduate Engineering: Proposing Goals and Objectives for a First-Year Happiness and Well-Being Course,” *129th Annual Conference Proceedings of the American Society for Engineering Education*, Baltimore, MA. <https://peer.asee.org/a-kickstart-to-smart-living-in-undergraduate-engineering-proposing-goals-and-objectives-for-a-first-year-happiness-and-well-being-course>
5. Timko, G., Shaheen, N., Goodridge, W. H., Green, T. and Kane, D. (2022). “Advantages and Disadvantages of a Virtual Engineering Experience During COVID-19 for Blind and Low-Vision High School Students” *128th Annual Conference Proceedings of the American Society for Engineering Education*, Minneapolis, MN. <https://peer.asee.org/41052>
6. Timko, G., Shaheen, N., Goodridge, W. H., Green, T. and Kane, D. (2022). “Spatial Language Used by Blind and Low-Vision High School Students During a Virtual Engineering Program (Research).” *128th Annual Conference Proceedings of the American Society for Engineering Education*, Minneapolis, MN. <https://peer.asee.org/41010>
7. Oyewola, V., *Cowburn, B., Barlow, R., *Reichard, B., Becker, K. and Goodridge, W. H. (2022). “The Effect of Introducing Biological and Environmental Discipline-Themed Problems in Statics on Students’ Self-Efficacy and Perceived-Value of the Course” *128th Annual Conference Proceedings of the American Society for Engineering Education*, Minneapolis, MN. <https://peer.asee.org/40529>
8. Lawanto, O., Goodridge, W. H., Iqbal, A. (2022). “Virtual REU Program: Engineering Education Research.” *128th Annual Conference Proceedings of the American Society for Engineering Education*, Minneapolis, MN. <https://peer.asee.org/42046>
9. McCall, C., Araiinejad, L, Heaps, T., Goodridge, W. H., and Cochran, B. (2022). “Exploring the Influence of Students’ Perceptions of Course Assessments on Retention and Professional Identity Formation” *128th Annual Conference Proceedings of the American Society for Engineering Education*, Minneapolis, MN. <https://peer.asee.org/40844>
10. Kane, D., Green, T., Shaheen, N., Goodridge, W. H., (2022) “A Qualitative Study of Spatial Strategies in Blind and Low Vision Individuals.” *2022 ASEE Zone IV Conference Proceedings*, Vancouver, BC. Canada, May 12-14th. <https://zoneivfiles.azurewebsites.net/papers/35901.pdf> and proceedings here <https://aseezoneiv2022.engineering.ubc.ca/program/>
11. Goodridge, W. H., Shaheen, N. L., Hunt, A. T., & Kane, D. (2021, July). Work in Progress: The Development of a Tactile Spatial Ability Instrument for Assessing Spatial Ability in Blind and Low-vision Populations. In *2021 ASEE Virtual Annual Conference Content Access*. <https://peer.asee.org/work-in-progress-the-development-of-a-tactile-spatial-ability-instrument-for-assessing-spatial-ability-in-blind-and-low-vision-populations>
12. Davishahl, E., Haskell, T., Davishahl, J., Singleton, L., & Goodridge, W. H. (2020, June). Best 2019 PIC III Paper: Do they Understand your Language? Access their Fluency with Vector Representation. In *2020 ASEE Virtual Annual Conference Content Access*.

<https://peer.asee.org/best-2019-pic-iii-paper-do-they-understand-your-language-access-their-fluency-with-vector-representation>

13. Lopez, S. E., Goodridge, W., Gougler, I., Kane, D. & Shaheen, N. (2020, Apr 17 - 21) *Preliminary Validation of a Spatial Ability Instrument for the Blind and Low Vision* [Roundtable Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/qlemtgm> (Conference Canceled)
14. Davishahl, E., Haskell, T. R., Davishahl, J., Singleton, L. and **Goodridge, W. H.**, (2019). “Do They Understand Your Language? Assess their Fluency with Vector Representations.” *126th Annual Conference Proceedings of the American Society for Engineering Education*, Tampa, FL. <https://peer.asee.org/do-they-understand-your-language-assess-their-fluency-with-vector-representations>
 - Awarded Best Paper, Engineering Mechanics Division, ASEE 2019
 - Awarded Best Paper, Professional Interest Council, ASEE 2019
15. Villanueva, I., **Goodridge, W. H.** (2018). “An Initial Exploration of Engineering Students’ Emotive Responses to Spatial and Engineering Statics Problems.” *125th Annual Conference Proceedings of the American Society for Engineering Education*, Salt Lake City, UT. <https://peer.asee.org/an-initial-exploration-of-engineering-students-emotive-responses-to-spatial-and-engineering-statics-problems>
16. *Lopez, S. E., **Goodridge, W. H.**, Becker, K., *Sayedmohammad, T. (2018). “Interest and Needs of Secondary Science Educators Regarding Professional Development on Engineering Standards (Fundamental)” *125th Annual Conference Proceedings of the American Society for Engineering Education*, Salt Lake City, UT. <https://peer.asee.org/interests-and-needs-of-secondary-science-educators-regarding-professional-development-on-engineering-standards-fundamental>
17. **Litton, A. J., **Goodridge, W. H.**, *Call, B. J., and *Lopez, S. (2018). “Increasing Student Self-Efficacy through Undergraduate Research Experiences: A Qualitative Study.” *125th Annual Conference Proceedings of the American Society for Engineering Education*, Salt Lake City, UT. <https://peer.asee.org/increasing-student-self-efficacy-through-undergraduate-research-experiences-a-qualitative-study>
18. *Lopez, S. E., and **Goodridge, W. H.** (2018). “The State of Engineering Integration in K-12 Science Standards – Five Years after NGSS (Fundamental).” *125th Annual Conference Proceedings of the American Society for Engineering Education*, Salt Lake City, UT. <https://peer.asee.org/the-state-of-engineering-integration-in-k-12-science-standards-five-years-after-ngss-fundamental>
19. **Ashby, T., **Goodridge, W. H.**, *Lopez, S. E., Shaheen, N. L., *Call, B. J., (2018). “Adaptation of the Mental Cutting Test for Use among the Blind or Visually-impaired.” *2018 ASEE Zone IV Conference*, Boulder, CO. <https://peer.asee.org/adaptation-of-the-mental-cutting-test-for-the-blind-and-low-vision>
 - Awarded Best Conference Presentation: Tyler Ashby
20. **Hansen, J., **Goodridge, W. H.**, and *Call, B. J. (2017) “Defining Directions for Future Spatial Ability Research: K-12 Math and Physics.” *2017 ASEE Rocky Mountain Section Conference*, Provo, UT. <http://www.et.byu.edu/%7Embc57/ASEE2017/44%20Final%20Draft%20Focusing%20on%20Spatial%20Ability%20Development.pdf>

21. **Ruesch, J. P., Goodridge, W. H., Call, B. J., and Lopez, S. E.** (2017) "Understanding Spatial Ability through a Neural Efficiency EEG Study" *2017 ASEE Rocky Mountain Section Conference*, Provo, UT.
http://www.et.byu.edu/%7Embc57/ASEE2017/37%20RMS_ASEE_Final_Draft_Ruesch_et_al.pdf
22. **Litton, A., Call, B. J., and Goodridge, W. H.** (2017). "Effects of Mentoring on Undergraduate Students Self Efficacy and Professionalism: Initial Qualitative Findings." *2017 ASEE Rocky Mountain Section Conference*, Provo, UT.
<http://www.et.byu.edu/%7Embc57/ASEE2017/47%20EffectofMentoringonUndergraduateStudentsSelf%20-%20Final.pdf>
23. **Call, B. J., and Goodridge, W. H.,** Scheaffer, M. H., Milliken, T. R., (2017, June). "Entrepreneurial Motivations for High-Interest Students." *124th Annual Conference Proceedings of the American Society for Engineering Education*, Columbus, OH. <https://peer.asee.org/28286>
24. **Lopez, S. E., Goodridge, W. H.,** Tajvidi, M., and Becker, K. H. (2017). "Assessing the Need for Professional Development in Engineering among Rural High School Science Teachers." *124th Annual Conference Proceedings of the American Society for Engineering Education*, Columbus, OH. <https://peer.asee.org/27627>
25. Santoso, H. B., Sudaryanto, F. H., and **Goodridge, W.H.** (2016). "The Impact of a Feedback Phase to the Development of an ICT Product: A Case study of a Software Project Course." *6th Regional Conference on Engineering Education*, Kuala Lumpur, Malaysia
<https://drive.google.com/file/d/0B938Qg-UXOT7RHMzbWZBb1BBMHc/view>
26. Santoso, H. B., Cenka, B. A. N., Sadita, L., Junus, K., Fadhilah, S., Prihandoko, P., and **Goodridge, W.H.** (2016). "Learning Experience of IT Lecturers' Enrolled in The Association of Higher Education in Informatics and Computer's Online Degree Program." *Educational Technology World Conference (ETWC)*, Bali, Indonesia. https://www.dropbox.com/sh/m1wq557icylhvov/AAB8vo3a-tQucQThh4RUDp9Za/VOLUME-2/ROUNDTABLE%20SESSION%205/Subtheme-5.1-DD%26PQ%26MO%26DE?dl=0&preview=ETWC-2016_paper_310.pdf
27. Santoso, H. B., Lawanto, O., Cenka B. A. N., Purbarani, S. C., and **Goodridge, W. H.**, (2016). "Information Visualization of Students' Self-Regulated Learning Strategies While Engaged in Interactive Learning Modules: A Two-Dimensional Approach." In *2016 4th International Conference on User Science and Engineering (i-USEr)* (pp. 139-144), Melaka, Malaysia.
<http://ieeexplore.ieee.org/document/7857949/>
28. Santoso, H. B., Fadhilah, S., Nurrochmah, I., and **Goodridge, W. H.** (2016). "The Usability and User Experience Evaluation of Web-based Online Self-Monitoring Tool: Case Study Human-Computer Interaction Course." *The 4th International Conference on User Science and Engineering*, Melaka, Malaysia. <http://ieeexplore.ieee.org/document/7857946/>
29. Fang, N., Lawanto, O., **Goodridge, W.H.**, and Villanueva, I. (2016). "Research Experiences for Undergraduates (REU) on Self-Regulated Learning in Engineering Education." *46th Annual Frontiers in Education Conference*, Eire, PA. doi:10.1109/FIE.2016.7757480 **SciMago 0.218, H-Index 32, CiteScore 0.43, SJR 0.218**
30. **Call, B. J., Goodridge, W. H.,** and Scheaffer, M. (2016). "Entrepreneurial Curriculum in an Engineering Technical Communication Course: Looking for Impact on Creativity and Mindset."

46th Annual Frontiers in Education Conference, Eire, PA. doi:10.1109/FIE.2016.7757370 SciMago 0.218, H-Index 32, CiteScore 0.43, SJR 0.218

31. Mejia, J. A., **Goodridge, W. H.**, *Call, B. J. and **Wood, S. D. (2016). “Manipulatives in Engineering Statics: Supplementary Analytical Techniques with Physical Models.” 123rd Annual Conference Proceedings of the American Society for Engineering Education, New Orleans, LA. doi:10.18260/p.25673
32. **Wood, S.D., **Goodridge, W.H.**, and *Call, B.J.(2016). “Preliminary Analysis of Spatial Ability Improvement within an Engineering Mechanics Course: Statics.” 123rd Annual Conference Proceedings of the American Society for Engineering Education, New Orleans, LA. doi:10.18260/p.25942
33. *Call, B. J., **Goodridge W.H.**, and Sweeten, T. L. (2016). “Spatial Ability Instrument Ceiling Effect and Implications.” 123rd Annual Conference Proceedings of the American Society for Engineering Education, New Orleans, LA. doi:10.18260/p.25849
34. Fang, N., Lawanto, O., Villanueva, I., and **Goodridge, W.H.** (2016). “Self-Regulated Learning in Engineering Education: A Research Experience for Undergraduates (REU) Site Program.” 123rd Annual Conference Proceedings of the American Society for Engineering Education, New Orleans, LA. doi:10.18260/p.26161
35. **Nahar, N., **Goodridge, W.H.**, *Call, B.J., and DeVitry, J. (2016). “Creativity Enhancement via Engineering Graphics: Conceptual Design Blending Approach.” 123rd Annual Conference Proceedings of the American Society for Engineering Education, New Orleans, LA. doi:10.18260/p.26594
36. Fadhilah, S., Santoso, H. B., Junus, K., and **Goodridge, W. H.** (2016). “Interaction Design Evaluation and Improvement of Beling.co –An Online Basic Programming Learning Website.” *The 2nd International Conference on Human-Computer Interaction and User Experience*, Jakarta, Indonesia. <http://dl.acm.org/citation.cfm?id=2898475>
37. **Bell, S., **Goodridge, W.H.**, *Call, B.J., and DeVitry, J. (2016, April). “A New Instructional Technique within Engineering Graphics Education, and Its Effect on Spatial Ability.” In *2016 Annual Meeting of American Educational Research Association (AERA)*, Washington D.C. http://digitalcommons.usu.edu/ete_facpub/201/
38. *Call, B. J., **Goodridge, W. H.**, and **Green, C. (2015). “Strategy, Task Performance, and Behavioral Themes from Students Solving 2-D and 3-D Force Equilibrium Problems.” 122nd Annual Conference Proceedings of the American Society for Engineering Education, Seattle, WA. doi:10.18260/p.24742
39. *Mejia, J.A., **Goodridge, W. H.**, and **Green, C. (2014). “Using Web-Based Learning Logs to Analyze Students' Conceptual Understanding of Truss Analysis in an Engineering Statics Course.” 44th Annual Frontiers in Education Conference, Madrid, Spain. doi:10.1109/FIE.2014.7044450 SciMago 0.218, H-Index 32, CiteScore 0.43, SJR 0.218
40. **Goodridge, W. H.**, Villanueva, I., *Valladares, M. M., Wan, N. J., and **Green, C. (2014). “Cognitive Strategies and Misconceptions in Introductory Statics Problems.” 44th Annual Frontiers in Education Conference, Madrid, Spain. doi:10.1109/fie.2014.7044346 SciMago 0.218, H-Index 32, CiteScore 0.43, SJR 0.218

41. *Mejia, J.A., **Goodridge, W. H.**, and **Green, C. (2013). Enhancing Engineering Mechanics - Statics Instruction Using Manipulative Truss Models. *43rd Annual Frontiers in Education Conference*, Oklahoma City, OK. [doi:10.1109/fie2013.6684849](https://doi.org/10.1109/fie2013.6684849) **SciMago 0.218, H-Index 32, CiteScore 0.43, SJR 0.218**
42. Lawanto, O., **Goodridge, W.H.**, and Santoso, H. (2012). Self-Regulated Learning Strategies of Grades 9-12 Students in Design Project: Performance and Gender Perspectives. *119th Annual Conference Proceedings of the American Society for Engineering Education*, San Antonio, TX. <https://peer.asee.org/21908>
43. **Goodridge, W.H.**, Greenhaulgh, S., Lawanto, O., and Stewardson, G. (2012). Measured Differences in Spatial Ability between a Face-To-Face and a Synchronous Distance Education Undergraduate Engineering Graphics Course. *119th Annual Conference Proceedings of the American Society for Engineering Education*, San Antonio, TX. <https://peer.asee.org/21679>
44. **Goodridge, W.H.**, and Rahmeyer, W.J. (2011). Culvert Design for Flood Routing Considering Sediment Transport. *34th International Association of Hydro-Environment Engineering and Research World Congress*, Brisbane Australia. <http://search.informit.com.au/documentSummary;dn=291936689097364;res=IELENG>
45. Lawanto, O., **Goodridge, W.H.**, and Santoso, H. (2011). Task Interpretation and Self-Regulating Strategies in Engineering Design Project: An Exploratory Study. *118th Annual Conference Proceedings of the American Society for Engineering Education*, Vancouver, B.C. <https://peer.asee.org/18458>
46. Lawanto, O., **Goodridge, W.H.**, Santoso, H., and Boyles, R. (2011). A Preliminary Study of Conducting Semi-Structured Interview as Metacognitive Assessment in Engineering Design: Issues and Challenges. *118th Annual Conference Proceedings of the American Society for Engineering Education*, Vancouver, B.C. <https://peer.asee.org/17369>
47. Minichiello, A., **Goodridge, W.H.**, Sam, D., and Blake, T. (2011). Team Teaching That Goes the Distance: Team Instruction for the Broadcast Introductory Engineering Course. *118th Annual Conference Proceedings of the American Society for Engineering Education*, Vancouver, B.C. <https://peer.asee.org/18948>
48. **Goodridge, W.H.** and Rahmeyer, W.J. (2008). Application of a Mitered Ogee Crest to Steep Stair-Stepped Spillways. *2008 World Environmental and Water Resource Congress*, Honolulu, Hawaii. [doi:10.1061/40976\(316\)243](https://doi.org/10.1061/40976(316)243)

PEER REVIEWED CONFERENCE PRESENTATIONS

1. **Hamilton, C, **Goodridge, W. H.**, *Kane, D., Blonquist, J. (2022). “Assessing TMCT Reliability with BLV Populations.” *Stephen F. Austin State University Math Department Colloquium Presentation*, University of Texas at Austin, Austin, TX., 26 Sept.
2. **Kane, D., **Green, M., **Snow, C., **Goodridge, W. H.** (2021) “A Qualitative Study of Spatial Strategies in Blind and Low Vision Populations” *Oral Presentation at Utah State University’s 2017 Student Research Symposium (SRS)*, Logan, UT., 14-15 April 2021
3. **Goodridge, W. H.**, Shaheen, N., Cunningham, A. (2020). Tactile Drawing Methods to Teach

Engineering Graphics to Blind and Low Vision Students.” *Workshop at the 82nd Annual International Technology and Engineering Educators Associations Conference*, Baltimore, MD. March 11-14, 2020.

https://www.iteea.org/Activities/Conference/ITEEA_Conference_2020/BaltoProgramming/161575.aspx

4. Erickson, D., Grewe, J., Goodridge, W.H., Savoie, R., Lucas, L., Dejonge-Kannan, C. E. (2019) “Learning from the best: Our teaching philosophies in action.” *Oral Presentation at the Utah State University Empowering Teaching Excellence Conference*, Logan UT., August 14, 2019.
https://mpvideo.usu.edu/media/Learning+From+the+BestA+Our+Teaching+Philosophies+in+Action/0_b9ay6r23/22829762
5. Shaheen, N. and **Goodridge, W.H.** (2019) “Education, Research, and Raising Expectations: Exploring Spatial Abilities and Training Blind Engineers” *Plenary session presented at the 2019 Annual Convention for the National Federation of the Blind*, Las Vegas, NV. July 7 – 12, 2019.
<https://nfb.org/sites/www.nfb.org/files/files-pdf/2019-final-agenda-for-web-accessible.pdf>
6. **Hansen, J., Goodridge, W. H., and Call, B. J.** (2017) “Defining Directions for Future Spatial Ability Research: K-12 Math and Physics.” *Oral Presentation at Utah State University’s 2017 Student Research Symposium (SRS)*, Logan, UT., 13 April 2017.
<http://digitalcommons.usu.edu/researchweek/ResearchWeek2017/Session2OralPresentations/6/>
7. **Ruesch, J. P., Goodridge, W. H., Call, B. J., and Lopez, S. B.** (2017) “Understanding Spatial Ability through a Neural Efficiency EEG Study” *Oral Presentation at Utah State University’s 2017 Student Research Symposium (SRS)*, Logan, UT., 13 April 2017.
<http://digitalcommons.usu.edu/researchweek/ResearchWeek2017/Session2OralPresentations/2/>
8. Rahmeyer, W. J. and **Goodridge, W. H.** (2016). *Open Channel Flow and Design*. HalfMoon Education Inc., Altoona, WI. http://digitalcommons.usu.edu/ete_facpub/188/
9. Rahmeyer, W.J. and **Goodridge, W. H.** (2016) *The Design of Culverts for Flood Routing with Sediment Transport or Notes and Observations for the Transport of Sediment in Culverts/Road Crossings. UCOWR/NIWR 2016 Annual Water Resources Conference*, Pensacola, FL.
http://digitalcommons.usu.edu/ete_facpub/189/
10. **Espinoza, J., Villanueva, I., Goodridge, W. H., and Call, B. J.** (2016). “Cognitive/Emotional Engagement and Spatial Performance during Engineering Examination Activities.” *Oral Presentation at Utah State University’s 2016 Student Research Symposium (SRS)*, Logan, UT., Logan, UT., 14 April 2016.
11. **Wood, S. D., Call, B. J., and Goodridge, W. H.** (2016) “A Deeper Look into Statics and its Relation to Spatial Ability.” *Oral Presentation at Utah State University’s 2016 Student Research Symposium (SRS)*, Logan, UT., 14 April 2016.
12. **Wood, S. D., Goodridge, W. H., and Call, B.J.** (2016) “A Deeper Look into Past Experiences Linked to Spatial Ability.” *National Conference on Undergraduate Research (NCUR)*, Asheville, NC. U of North Carolina.
13. **Wood, S. D., Goodridge, W. H., and Call, B.J.** (Feb 19th, 2016) "Student Hobby Participation and Spatial Ability Scores." *Ninth Annual Utah Conference on Undergraduate Research (UCUR)*, Salt Lake City, UT., U of U.

14. Sweeten, T.L., **Goodridge, W. H.**, and *Call, B.J. (April 2nd, 2016) “Spatial-Ability and STEM Courses: Why Mental Manipulation Matters.” *National Science Teachers Association/Society for College Science Teachers*, Nashville, TN.
15. *Call, B. J., **Goodridge, W. H.**, and **Green, C. (2015) “Strategy, Task Performance, and Behavioral Themes from Students Solving 2-D and 3-D Equilibrium Problems.” *2015 Utah State University Student Research Symposium (SRS)*, Logan, UT.
16. **Green, C. and **Goodridge, W. H.** (2014) "Learning Log Indicators of Student Understandings to Common Truss Analysis Methods within a Statics Course." *National Conference on Undergraduate Research*, Lexington, KY. University of Kentucky.
17. **Green, C. and **Goodridge, W. H.** (2014) "Discourse Analysis Identification of Common Codes Related to Truss Design in a Statics Course." *Seventh Annual Utah Conference on Undergraduate Research*, Provo, UT., BYU.
18. **Norris, A. and **Goodridge, W. H.** (2011) “Applying Kolb's Method to Broadcast Education in an Engineering Graphics Course” *Fifth Annual Utah Conference on Undergraduate Research*, Ogden, UT., Weber State University.

REFEREED POSTER PRESENTATIONS

1. Fang, N., Farooq, A., and Goodridge, W. (2022): An innovative virtual and physical manipulatives technology for spatial training of engineering undergraduates: Quantitative assessments. The 5th Annual STEM Education Conference, UTRGV STEM Education Consortium, South Padre Island, Texas, February 10-12, 2022.
2. Kane, D., Snow, C., Green, M. & **Goodridge, W. H.** (2021). A Qualitative Study of Spatial Strategies in Blind and Low Vision Individuals *Poster Presentation at Utah State University's 2021 Student Research Symposium (SRS)* Enhancing, Logan, UT., 14 April 2021.
3. **Bell, S., **Goodridge, W.H.**, *Call, B. and DeVitry, J. (2016, April). “A New Approach to Engineering Graphics Education, and Its Effect on Spatial Ability.” In *American Educational Research Association (AERA) Conference*, Washington D.C.
4. **Goodridge, W. H.**, Villanueva, I., Wan, N. J. A., *Call, B. J., Valladares, M. M., Robinson, B.S., and Jordan, K. (2014). “Neural Efficiency Similarities between Engineering Students Solving Statics and Spatial Ability Problems” 44th Annual meeting of the Society of Neuroscience (SfN). Washington D.C.
5. Villanueva, I., **Goodridge, W. H.**, Wan, N. J. A., Valladares, M. M., Robinson, B. S., and Jordan, K. (2014). “Hormonal and Cognitive Assessment of Spatial Ability and Performance in Engineering Examination Activities” 44th Annual meeting of the Society of Neuroscience (SfN). Washington D.C.
6. **Goodridge, W. H.** and Davis, S. (2011) “Learning Styles and Student Success” *International Technology and Engineering Educators Association (ITEEA) 73rd Annual Conference*. Minneapolis, MN.

PEER REVIEWED POSTER PRESENTATIONS

1. **Hamilton, C, **Goodridge, W. H.**, *Kane, D., Blonquist, J. (2022). "TMCT Reliability Calculations with BLV Populations." *Stephen F Austin State University Undergraduate STEM Research Showcase Poster Presentation*, University of Texas at Austin, Austin, TX., 10 Nov.
2. *Gougler, I., **Goodridge, W. H.**, *Lopez, S. E., and **Kane, D. (2019) *Spatial Ability and Blind Engineering Research (SABER): A Research Collaboration Between the NFB and Utah State University*. National Federation of the Blind of Utah Annual Convention, Salt Lake City, UT.
<http://www.nfbutah.org/info/2019-national-federation-of-the-blind-of-utah-convention/>
3. **Goodridge, W. H.** (2019) Addressing the College of Engineering Advisory Board: An Emphasis on Engineering Education and Teaching, Utah State University College of Engineering, College Advisory Board Meeting, Logan, UT.
4. Shaheen, N. and **Goodridge, W. H.** (2019) "Creating Opportunities for Blind Students to Develop their Spatial Ability." NSF Advancing Informal STEM Learning Program – Principal Investigator Meeting, CAISE Center for Advancement of Informal Science Education, Alexandria, VA., February 11-13, 2019.
5. **Green, C. and **Goodridge, W. H.** (2014) "Common Misconceptions Found in a Statics Course Through Discourse Analysis of Student Learning Logs." *Research on Capitol Hill: Research on the Hill (Salt Lake City)*. Paper 15 http://digitalcommons.usu.edu/poth_slc/15

ENGINEERING/TECHNICAL REPORTS

1. Stoudt, A., McLean, J. E., Hortin, J. M., DuPont, R. R., and **Goodridge, W. H.** (2019). UDOT Pollution Prevention and Water Reuse at Utah Department of Transportation Facilities, Prepared for UDOT, a joint venture, Salt Lake City, UT. Utah State University, Utah Water Research Laboratory USU Report.
2. *Bellon, W., McLean, J. E., **Goodridge, W. H.**, *Gelles, L., and DuPont, R. (2018). UDOT Maintenance Site Detention and Retention Pond Water Report, Prepared for UDOT, a joint venture, Salt Lake City, UT. Utah State University, Utah Water Research Laboratory USU Report.
3. *Gelles, L., **Goodridge, W. H.** and McLean, J. E. (2017). Preliminary Water Quality Report on UDOT Maintenance Sites Detention/Retention Ponds, Prepared for UDOT, a joint venture, Salt Lake City, UT., Utah State University, Utah Water Research Laboratory USU Report.
4. **Goodridge, W.H.**, and Rahmeyer, W.J. (2007). Models of the Gilboa Spillway and Dam Crest. Prepared for Gannett Fleming / Hazen Sawyer, a joint venture, New York, New York, Utah State University, Utah Water Research Laboratory USU Report 675.

CURRICULUM (Accessible Engineering Based Curriculum for Blind and Low Vision: An effort with USU and the National Federation of the Blind)

1. Shaheen, N. L., **Goodridge, W. H.**, Lopez, S, Anderson, P., Cunningham, A., Nietfeld, D., (2023, April). *NFB Engineering Quotient Curriculum*. National Federation of the Blind. :
<https://nfb.org/programs-services/education/national-center-blind-youth-science/nfb-eq/nfb-eq-teachers>

TEXTBOOK-MANUSCRIPTS-LAB MANUAL PUBLICATIONS-BOOK CHAPTERS-INDUSTRY GUIDES

1. Timko, G. M., Green, T., Kane, D., Goodridge, W. H., Wiess, L., (2021). Spatial Ability Blind Engineering Research (SABER): 2021 NFB EQonline (Engineering Quotient) Program Research and Evaluation Report, National Federation of the Blind
2. Strimel, G. J., Huffman, T., Grubbs, M., Gurganus, J., Sabarre, A., Bartholomew, S., ... **Goodridge, W. H.**,et al. (2020). Framework for P-12 Engineering Learning: A Defined and Cohesive Educational Foundation for P-12 Engineering, AEEE (Advancing Excellence in P-12 Engineering Education) <https://p12framework.asee.org/>
3. Akers, R., Anderson, A., Bartholomew, S. R., Bayles, T., Bowen, B. Browne, E. Buelin, J., Deck, A. S., Evans, S., Fahrner, N. E., **Goodridge, W. H.**, Greenhalgh, S., Garganus, J., Jackson, A., Kim, E., Krause, L., Krause, G., Morrell, C., Newman, C., Oehrli, R., Parker, C., Parry, E., Reid, K., Sabarre, A.E., Shanta, S., Sparks, A., Sutton, K., Waldrop, A. M., Ruesch, E. Y. (2018). Dimensions of Engineering Literacy and Taxonomy of Core & Sub Concepts for Secondary Engineering Education, AEEE (Advancing Excellence in P-12 Engineering Education), https://www.dropbox.com/s/6vosnqybu7vism9/AEEE_TaxonomyofCoreConcepts%26SubConceptsforSecondaryEngineering%20.pdf?dl=0
4. Akers, R., Anderson, A., Bartholomew, S. R., Bayles, T., Bowen, B. Browne, E. Buelin, J., Deck, A. S., Evans, S., Fahrner, N. E., **Goodridge, W. H.**, Greenhalgh, S., Garganus, J., Jackson, A., Kim, E., Krause, L., Krause, G., Morrell, C., Newman, C., Oehrli, R., Parker, C., Parry, E., Reid, K., Sabarre, A.E., Shanta, S., Sparks, A., Sutton, K., Waldrop, A. M., Ruesch, E. Y. (2018). Progressions of Learning in Engineering for Secondary Schools, AEEE (Advancing Excellence in P-12 Engineering Education), https://www.dropbox.com/s/qfsb72ld2c7uyws/PLiE_Final%20Template%20%26%20Example.pdf?dl=0
5. **Goodridge, W. H.** and Lawanto, O. (2016). Online Curriculum Style Guide, Siemens Product Lifecycle Management (PLM) Software, INC.
6. Rahmeyer, W. J. and **Goodridge, W. H.** (2016). Open Channel Flow and Design. HalfMoon Education Inc., Altoona, WI.
7. Minichiello, A. L., Blake, T., **Goodridge, W.H.**, and Sam, D. (2015). Interdisciplinary team instruction in a distance-delivered first-year engineering course.” In Blackstock, A. and Straight, N. (Eds.) *Interdisciplinary approaches to distance teaching; Connecting classrooms in theory and practice*. New York, NY. Routledge/Taylor & Francis. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315694412-8/interdisciplinary-team-instruction-distance-delivered-first-year-engineering-course-angela-minichiello-tracy-blake-wade-goodridge-david-sam>
8. **Goodridge, W. H.**, and Devitry, J. (2011). Introduction to Mechanical Engineering: Emphasizing solid modeling of machines and mechanisms. Dubuque, IA: Kendall-Hunt Publishing Company. ISBN # 978-0-7575-9167-9 <https://www.amazon.com/Introduction-Mechanical-Engineering-Emphasizing-Mechanisms/dp/0757591671>
9. Schreuders, P., **Goodridge, W. H.**, and Robinson, T. (2011) “Computer Aided Drafting Laboratory Handbook.” Version 2.7.

Italicized name represents a graduate or undergraduate student author
** represents a graduate student author under my direct mentorship*
*** represents a undergraduate author under my direct mentorship*

Google Scholar: <https://scholar.google.com/citations?hl=en&user=5Jagi5QAAAAJ>

ResearchGate: https://www.researchgate.net/profile/Wade_Goodridge

LinkedIn: <https://www.linkedin.com/in/wade-goodridge-phd-9b631650>

Scopus Author ID: 36863370000

ResearcherID: M-2341-2016

ORCID: 0000-0002-5811-7629

PATENTS and INTELLECTUAL PROPERTY

- **Goodridge, W., Green, C., Mejia, J.A., and Lambert, M.** (2013). Provisional Patent, Docket # P14017.01 Instructional truss component.
- **Goodridge, W.** (2018). Registered Copyright, Tactile Mental Cutting Test (T-MCT)

TEXTBOOK REVIEWS FOR PUBLISHERS

- McCormac, J. (2013). Surveying. John Wiley and Sons Inc., Hoboken, NJ. 6th Ed., ISBN # 978-0-471-23758-7

MEDIA CONTRIBUTIONS

1. Lord, M. (2018, October) The Mind's Eye. Prism, 28(2), pp. 32-35.
2. Lord, M. (2018, October) The Mind's Eye. Retrieved from <http://www.asee-prism.org/the-minds-eye/>
3. Opsahl, K. (2018, March 15) USU professor hopes to open doors by studying blindness, spatial ability. *The Herald Journal*, Retrieved from https://news.hjnews.com/allaccess/usu-professor-hopes-to-open-doors-by-studying-blindness-spatial/article_49beaeb7-cab1-5367-ad61-ea2f6ed31319.html
4. Russell, B. (2018, March 25) USU engineering creates tactile Mental Cutting Test for blind and low-vision individuals. *The Utah Statesman*, Retrieved from <http://usustatesman.com/usu-engineering-creates-tactile-mental-cutting-test-for-blind-and-low-vision-individuals/>
5. Walter, B. (KVNU News Speaker). (2018, March 14) *Hour 2: Pi day and physicists as pop culture icons — Students are getting the best of the NRA with social media — Gen Y defenders speak up*, Retrieved from <https://www.kvnutalk.com/3-14-2018/> @ 34:44 -35:42 minutes
6. Hislop, C. (2018, March 14) USU researcher seeks to teach engineering fundamentals to blind students. *Cache Valley Daily.com*, Retrieved from http://www.cachevalleydaily.com/news/local/article_90034294-2743-11e8-85c4-ef4949fbcc09.html
7. Jensen, M. (2018, March 8) USU Engineering Faculty Develops Non-Visual Teaching Methods. *Utah State Today*, Retrieved from <https://www.usu.edu/today/index.cfm?id=57465>

8. Danielson, C. (2018, February 13) National Federation of the Blind Receives Grant from National Science Foundation. *The National Federation of the Blind*, Retrieved from <https://nfb.org/national-federation-blind-receives-grant-national-science-foundation-0>

INVITED SPEAKER

- Goodridge, W. H., (2017, June). *NSF IDEAS LAB “Creating capacity and funding for studying how students learn engineering.* 124th Annual American Society for Engineering Education Annual Conference (M414D), Columbus, OH
https://www.asee.org/public/conferences/78/registration/view_session?session_id=7995
 - I was a Session Speaker/Facilitator to discuss, organize, and coordinate the topics and this event
- Goodridge, W.H. (2015, September). *Undergraduate Engineering and its Connections to Spatial Ability.* Conference on Integrating Cognitive Science with Innovative Teaching in STEM Disciplines: Modeling and Spatial Learning in STEM., sponsored by Northwestern Center for Engineering Education Research, Northwestern’s Weinberg College of Arts and Sciences, Northwestern’s Associate Provost for Undergraduate Education and the Spatial Intelligence and Learning Center (SILC), Northwestern University, Evanston, IL.
<http://spatiallearning.org/index.php/showcase/215-showcase-november-2015-integrating-cognitive-science-with-innovative-teaching-in-stem-disciplines-spatial-learning-in-stem>
 - I was an invited speaker to this conference based on previous publications and spatial expertise.
- Goodridge, W. H. (2016, March). *Enhancing Spatial Thinking through grounded technical experiences.* STEM Education Tour - Phranakhon Rajabhat University (PNRU), Utah State University, Department of Technology and Engineering Education, Logan, UT.
 - I was an invited speaker to this conference based on previous publications and spatial expertise.

EXHIBITS

- Invited Exhibit for National ASEE conference of the Tactile Mental Cutting Test (T-MCT). Ashby, T. J., **Goodridge, W. H.**, Lopez, S. E., Call, B. J. Shaheen, N., “Adaptation of the Mental Cutting Test for the Blind and Low Vision, 125th Annual Conference Proceedings of the American Society for Engineering Education, Salt Lake City, UT.

FUNDING

External to USU

1. **2023 EAGER: Leveraging Disruptive Technologies to promote Learner Agency in Engineering Education**, The National Science Foundation, (NSF ??-??), NSF Award #??????? Division of Research on Learning, **\$299,998.58**, Submitted Sept. 5th, 2023 (Pending) (Co-PI)
2. **2023 PDG B-5 Activity 5 23-25 Contract to Dr. Lisa Boyce**, Utah Department of Health and Human Services (DHHE) **123,500.00**, (Funded), (Curriculum Developer)
 - Improve the overall quality of early childhood programs and services in the state, including professional development and enhance educational opportunities for children. Develop and implement equitable and culturally responsive practices for all children, families, and providers, including children who are dual or multi-language learners and their families and individuals from historically marginalized communities and ensure continuity from early childhood settings into the early grades. My role in this project is a curriculum developer. Specific tasks include ...Work with Native American leaders and families in the Ute White Mesa community to

Identify skills (e.g., gardening, irrigation, archery, repairing simple machines) that they would like their children to develop that builds on problem-solving/critical thinking/engineering knowledge and strategies. Identify meaningful, hands-on activities that could help children develop problem-solving and engineering background knowledge as they are learning the specific skills. Develop modules/activities or a curriculum that would help teach/mentor the skill development and background knowledge. Work with high school students to provide student mentoring for the younger children as they engage in the activities/curriculum. Develop an assessment that would document student progress in developing problem-solving/critical thinking skills.

3. **2023 Survey Development and Implementation to Assess Practitioners Attitudes on EV Charging Stations (USU ASPIRE Sub Award), \$50,683.51, Submitted March 6th, 2022 (Funded) Janette Goodridge PI, (Co-PI)**
 - Create, validate, assess reliability, and disseminate and analyze results for a EV survey to EV users and power station operators on opinions and issues they have discovered in EV progression.
4. **2023 Developing and Validating a Tactile Rotations Multiview Spatial Ability Test (TRMSA), ORACLE Inc., \$100,000.00, Submitted Feb 28th, 2023 (Not-Funded) (PI)**
5. **2022 Enhancing Professional Engineering Knowledge, Self-Efficacy, and Professional Learning Skills: An Incremental Online Teacher Professional Development (IoTPD) Model, The National Science Foundation, (NSF 20-572), NSF Award #2300536 Division of Research on Learning, \$450,000.00, Submitted Oct 5th, 2022 (Not-Funded) (PI)**
6. **2022 Enhancing Engineering Retention and Diversity through Inclusive Assessment Design, The National Science Foundation, (NSF 21-588), NSF Award #2300277 Division of Undergraduate Education, \$500,000.00, Submitted Oct 6th, 2022 (Not-Funded)(Co-PI)**
7. **2022 Blind Youth-Informed Accessibility in Technology-Mediated STEM Learning (YI-A11Y in STEM), The National Science Foundation, (NSF 21-599), NSF Award #2214688 Division of Research on Learning, \$2,999,605.00 as co-PI and principal researcher (\$463,000.00 sub-awarded to USU from National Federation of the Blind as PI, Submitted Jan. 14th, 2022 (Not-Funded)(Co-PI)**
8. **2021 Enhancing Engineering Retention and Diversity through Inclusive Assessment Design, *The National Science Foundation*, (NSF 21-588), NSF Award #2201959 Division of Undergraduate Education, \$500,000.00, Submitted Oct, 11th, 2021 (Not-Funded) (co-PI)**
9. **2020 Collaborative Research: How does Teaching of Engineering Design Affect Student Engagement and Outcomes, *The National Science Foundation*, (NSF 19-601), NSF Award #2110945 Division of Undergraduate Education, \$332,170.00, Submitted Nov, 29th, 2020 (Not-Funded) (co-PI)**
10. **2019 REU Site: Engineering Education Research on Undergraduate Engineering Students' Problem Solving Capacity, The National Science Foundation, (NSF 13-542), NSF Award #1950330 Division of Undergraduate Education, \$360,516.00, Submitted Aug, 8th, 2019 (**Funded** 10/01/2020—9/30/2023) (co-PI).**
 - Teach basic engineering education research methods to 30 REU applicants as they engage in a variety of engineering education projects with local faculty. Develop publications on the results the participants have discovered.
11. **2018 REU Site: Understanding Students' Problem Solving in Engineering Education, The National Science Foundation, (NSF 13-542), NSF Proposal #1852098 Division of Undergraduate Education, \$431,916.00, Aug, 28th, 2018 (Not-Funded) (co-PI)**
12. **2018 Improving undergraduate engineering students' spatial skills through 3D interactive virtual and physical manipulatives, *The National Science Foundation*, (NSF IUSE 17-590), NSF**

- Proposal # 1831740 Division of Undergraduate Education, **\$300,000.00**, Aug. 22nd, 2018 (**Funded**) (co-PI).
- Create physical manipulatives that enhance spatial ability and thinking and assess intervention impacts upon spatial ability of participants.
13. **2018** Extension to: Filter Systems to Produce Industrial Use Water for UDOT Maintenance Stations: A Graduate/Undergraduate Educational Investigation, *Utah Department of Transportation*, (UDOT UTRAC), **\$131,948.71**, Sept. 27th, 2016 (**Funded**) Wade Goodridge (**PI**), Ryan DuPont, (Co-PI), Joan McClean (Co-PI).
 - Continue water quality research on selected Utah water detention basins found at DOT truck washing stations and assess capability for that waters reuse to be mixed and used as road de-icing solution.
 14. **2017** Spatial Thinking and Spatial Strategy Evolution within Engineering Mechanics, *The National Science Foundation*, (NSF ECR 15-509), NSF Proposal # 1761138 Division of Research on Learning, \$423,963.52, Sept. 14th, 2017 (Not-Funded) (PI)
 15. **2017** Spatial Ability and Neuroscientific Engineering Education Research (SANE²R), *The National Science Foundation*, (NSF ECR 15-509), NSF Proposal #1761255 Division of Undergraduate Education, \$440,690.38, Sept. 14th, 2017 (Not-Funded) (PI)
 16. **2017** REU Site: Understanding Students' Problem Solving in Engineering Education, The National Science Foundation, (NSF 13-542), NSF Proposal #1757988 Division of Undergraduate Education, 459,865.00, Aug, 23rd, 2017 (Not-Funded) (co-PI)
 17. **2017** Spatial Ability and Blind Engineering Research (SABER), *The National Science Foundation*, (NSF AISL 15-593), NSF Proposal #1712887 Division of Research on Learning, **\$2,093,624.00** as co-PI and principal researcher (\$399,045.04 sub-awarded to USU from National Federation of the Blind as PI, Submitted Aug. 1st, 2017 (**Funded 08/01/2017-07/31/2022**)).
 - Create and investigate engineering curriculum-based interventions and their impact on Blind and Low Vision participants spatial ability. Develop a tactile spatial ability instrument for this assessment and publish accessible engineering-based curriculum to the education community.
 18. 2016 REU Site: Understanding Students Problem Solving in Engineering Education, The National Science Foundation, (NSF 13-542), NSF Proposal #1659270 Division of Undergraduate Education, 457,643.33, Aug, 28th, 2016 (Not-Funded) (co-PI)
 19. 2016 CAREER: Understanding Student Spatial Ability and Its Impacts upon Success: A Focus on Secondary Education Physics and Post-Secondary Calculus Courses, *The National Science Foundation*, (NSF CAREER 15-555), NSF Proposal #1653127 Division of Engineering Education and Centers, \$507,173.00, July 21st, 2016 (Not-Funded) (PI)
 20. **2016** Filter Systems to Produce Industrial Use Water for UDOT Maintenance Stations: A Graduate/Undergraduate Educational Investigation, *Utah Department of Transportation*, (UDOT UTRAC), **\$150,000.00**, Sept. 27th, 2016 (**Funded**) (PI).
 - Investigate water quality on selected Utah water detention basins found at DOT truck washing stations and assess capability for that waters reuse to be mixed and used as road de-icing solution. Investigate topography of truck washing stations and detention basins using surveying methods and assess probability of overflow.
 21. **2015** EAGER: MAKER: Blind and Visually Impaired Spatial Ability and Self-Efficacy in Maker Spaces, *The National Science Foundation*, (NSF 15-1 GPG), NSF Proposal #1623341 Division of Research on Learning, \$199,543.00, Dec. 17th, 2015 (Not-Funded) (co-PI)
 22. **2015** Piloting Canvas™ and Developing Online Tutorials for SIEMENS NX and Catchbook

Software, *SIEMENS*, #662, \$546,008.00, Dec. 30th, 2015 (Not-Funded) (PI)

23. **2015** An Investigation of Spatial Thinking and Its Impacts on Academic Success: A Focus on Engineering Statics Problem Solving, *The National Science Foundation*, (NSF ECR 15-509), NSF Proposal # 1561736 Division of Undergraduate Education, \$494,693.00, Sept. 10th, 2015 (Not-Funded) (PI)
24. **2015** Faculty Fellowship-Capstone Course Development for *Metal Building Manufacturers Association*, \$10,000, April 30th, 2015 (Not-Funded) (co-PI)
25. **2015** Relationships between Spatial Thinking and Student Academic Success in Statics, *The National Science Foundation*, (NSF ECR 15-509), NSF Proposal # 1535452, \$495,050.00, Feb 3rd, 2015 (Not-Funded) (PI)
26. **2014** (Team) Non-Traditional Students in Distance Education (NSF ENG Ideas Lab 14-7513), *The National Science Foundation*, NSF Proposal # 1431764, \$0.00, Feb. 4th, 2014 (Not-Invited)

Internal to USU

1. **2019** Office of Research Capital Equipment Grant, CGX EEG Headset – Quick-8 System Utah State University, **\$3,262.00**, with Department matching commitment of \$3,260.00, May 22nd, 2019 (**Funded**) (**PI**).
 - Procure equipment for investigating brainwave activation and intensity during engineering activities.
2. 2016 A proposal for curriculum innovation: Implementing a Spatial Orientated Support Course for students in STEM Majors at Utah State University (USU Curricular Innovation Grant), *Utah State University*, \$49,149.51, July 19th, 2016 (Not-Funded) (PI)
3. **2015** An Investigation of the Desire & Need for Professional Development of Science Educators: A Response to the Next Generation Science Standards Push to Adopt Engineering (RC Seed Grant). *Utah State University Vice Presidents' Office for Research*. **\$19,646.00**, October 15th, 2015 (**Funded**) (**PI**).
 - Develop, disseminate, and analyze a national survey investigating secondary science educators knowledge levels of core engineering mechanics curriculum and their views of implementing that knowledge to help address NGSS science standards situated towards teaching engineering.
4. **2015** Providing Engineering Design Depth for Secondary Science Educators: An Investigation into a Desire by Secondary Educators for Training in Engineering Design in Response to the newly released Next Generation Science Standards (RC Seed Grant). *Utah State University*. \$19,985.56, April 15th, 2015 (Not-Funded) (PI)
5. **2014** The Relationship between Spatial Ability and Achievement in Statics (RC Seed Grant). *Utah State University*. \$19,918.50, April 15th, 2014 (Not-Funded) (PI)

Graduate Research Fellowships (in supporting academic advisor/mentor role)

1. Sarah Bell Lopez, EED Ph.D. Candidate, with assistance from myself, *Application for NSF Graduate Research Fellowship Program* – Nov 2nd 2017 (Unfunded)

POST DOCTORAL RESEARCHERS

- Theresa Green, **Post-Doctoral Fellow**, (2021-2022), Utah State University, Department of

Engineering Education. Dr. Green's responsibilities included literature review searches and reviews, conducting qualitative data analysis, conducting qualitative data collection on BLV students engaged in summer learning experiences, and writing manuscripts for publication upon this data that was funded by the NSF Proposal #1712887 Division of Research on Learning SABER Grant

GRADUATE RESEARCH ASSISTANTS

- Benjamin Call, **Doctoral Candidate**, Summer 2014 – May 2019, Engineering Education, *Spatial Thinking Degradation during Intermissions in Engineering Education at the University Level*, Successfully Defended Sept. 7th, 2018, Graduated Dec. 2018
 - USU RGS Graduate Student Travel Award – Spring 2016
 - USU Presidential Doctoral Research Fellowship – Cohort:2014
- Jonathan Anderson, **Doctoral Candidate**, Summer 2018 – Summer 2023, *Student Reliance on Simulations: The Extent that Engineering Students Rely on the Outcomes of Their Simulations*
- Jennifer Blondquist, **Doctoral Candidate**, Fall 2021 – Present, Engineering Education, *Spatial Thinking*
- Sujata Basnet, **Doctoral Candidate**, Fall 2023 – Present, Engineering Education,
- Rachel Phelps, **Masters in Electrical Engineering**, Summer 2019 – Present, Engineering Education, *Assessing Spatial Thinking in Blind and Low Vision Youth with Interest in STEM*
- Sarah Bell Lopez, **Masters in Electrical Engineering**, Summer 2016 – 2020, Engineering Education, *Assessing Spatial Thinking in Blind and Low Vision Youth with Interest in STEM*
 - Graduate Student Teacher of the Year for Department of Engineering Education, April 2018
 - Graduate Student Teacher of the Year for the College of Engineering, March 2018
 - USU Presidential Doctoral Research Fellowship – Cohort:2016
 - Submitted Application for NSF Graduate Research Fellowship Program – Nov 2nd 2017

UNDERGRADUATE RESEARCH ASSISTANTS & STUDENTS MENTORED

1. Rosemarry Yahne, MAE, Spring 2023 – Present, *Data Collection TMCT*
2. Jace Harris, MAE, Fall 2022 – Summer 2023, *Data Collection TMCT*
3. Jocelyn Black, MAE, MAE, Spring 2023 – Summer 2023, *Data Collection TMCT*
4. Wyatt Chadwick, MAE, Spring 2023 – Summer 2023, *Data Collection TMCT*
5. Summer Whooton, MAE, Fall 2022 – Present, *Reliability Studies on the Tactile Mental Cutting Test*
6. Candice Hamilton, Mathematics. Steven F. Austin State University – Summer 2022 EED REU, *Reliability of the T-MCT*
7. Emily Stratman, Biological Systems Eng. University of Nebraska. – Summer 2022 EED REU, *Reliability of the T-MCT*
8. David Searle, Psychology, Spring 2022 – Spring 2023, *Transcription of Qualitative Spatial Data*
9. Sariah Jardine, MAE, Spring 2021 – Spring 2022, *HERC Curriculum for Statics & Grader*
10. Christopher Rosenlund, MAE, Spring 2021 – Spring 2022, *HERC Curriculum for Statics & Grader*
11. Katie Marbury, ECE, Fall 2021, *USU Connections Peer Mentor for Connections Students*

12. Brian Cowburn, RUE participant, Summer 2021, *Investigating impacts from adapted Bio-Enviro Homework's on Student perceived Value and Self Efficacy in Statics.*
13. Benjamin Reichard, RUE participant, Summer 2021, *Investigating impacts from adapted Bio-Enviro Homework on Student perceived Value and Self Efficacy in Statics.*
14. Matthew Green, CEE, Fall 2020 – Summer 2021, *Qualitative Analysis of Spatial Strategies on the T-MCT*
15. Connor Snow, CEE, Fall 2020 – Summer 2021, *Qualitative Analysis of Spatial Strategies on the T-MCT and Connections Peer Mentor for Connections Students (Fall 2020)*
16. Jarrett Anderson, MAE, Spring 2020 – Summer 2020, *Engineering Curriculum Development for Blind and Low Vision Youth**
17. Mathew Harris, MAE, Spring 2019 – Summer 2020, *Spatial Thinking**
18. Daniel Kane, MAE, Spring 2018 – Present, *Developing the T-MCT for use with Blind and low Vision Youth*
 - *Undergraduate Research and Creative Opportunities (URCO), Utah State University Office of Research and Graduate Studies \$1,000.00 + 902.23 Budget **Grant Recipient** Aug 2021*
 - *“A Qualitative Study of Spatial Strategies in Blind and Low Vision Individuals”*
19. Tara Pendleton, MAE, Spring 2018 – Summer 2020, *HERC Curriculum for Statics*
20. Brooklyn Morgan, CEE, Fall 2018 – Spring 2019, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
21. Hunter Payne, CEE, Fall 2018 – Fall 2019, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
22. Seth Tremayne, CEE, Spring 2019 – Fall 2019, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
23. Grant Mauk, CEE, Fall 2018- Fall 2019, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
24. David Gibbbs, MAE, Spring 2018 – Fall 2018, *Creating a tactile and accessible Mental Cutting Test*
25. Jacob Barney, BIE, Fall 2017 – Spring 2018, *Creating a tactile and accessible Mental Cutting Test**
26. Tyler Ashby, CEE, Fall 2017 – Fall 2018, *Creating a tactile and accessible Mental Cutting Test*
 - *American Society for Engineering Education Section IV Rocky Mountain Region - **Best Conference Presentation***
27. Jorge Espinoza, CEE, Fall 2016 – Fall 2017, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
28. Tanner Sweat, CEE, Fall 2016 – Spring 2017, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
29. Steven Wood, CEE, Fall 2016 – Fall 2017, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*, Spring 2014 – Spring 2017, *Spatial ability and its improvement in Statics*, Spring 2015 – Spring 2016
 - ***Undergraduate Researcher of the Year** - Department of Engineering Education –USU*
 - *Engineering Undergraduate Research Program (EURP) Utah State College of Engineering \$4,500.00 Dec. Cohort #7 **Grant Recipient** 2016-2017*
30. Jeremy Johnson, MAE, Fall 2016-Spring 2017, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
31. Erika Mueller, CEE, Fall 2016 – Summer 2017, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
32. Awilma Ventura, MAE, Spring 2017 – Summer 2017, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*
33. Taylor Torgersen, CEE, Fall 2016 – Spring 2017, *Retention Pond Water Quality at UDOT Maintenance Shed Sites*

34. Addison Litton, MAE, Fall 2016 - Present, *Undergraduate Student Mentoring and Engagement in Authentic Engineering Projects*.
 - *Engineering Undergraduate Research Program (EURP) Utah State College of Engineering \$4,500.00 May Cohort #10 **Grant Recipient** May 2018-2019*
35. Mikayla Renee, ECE (REU summer 2016) *Conceptual Design Blending and Spatial Ability*
36. Bilskie Tyler Milliken, ECE (REU summer 2016) *Conceptual Design Blending and Spatial Ability*
37. Jonathan Ruesch, MAE, Fall 2016 – Present, *EEG measurements of individuals engaged in Spatial Engineering Tasks*
 - *Engineering Undergraduate Research Program (EURP) Utah State College of Engineering \$4,500.00 Dec. Cohort #9 **Grant Recipient** 2018-2019*
38. Johnny Hansen, Physics, Spring 2016 – Spring 2018, *Spatial ability and its importance to STEM*
 - *Undergraduate Research and Creative Opportunities (URCO), Utah State University Office of Research and Graduate Studies \$1,000.00 **Grant Recipient** Mar 2018*
39. Travis Hotchkiss, MAE & Pre-Med, Fall 2015 – Spring 2016, *Spatial ability and spatial instruments*
40. Julianne Wood, Biology, Fall 2015 – Fall 2016, *Transcription of Qualitative Data*
41. Jorge Espinoza, CEE, Fall 2015, student under direction of Dr. Villanueva, *Analysis of EEG data with MatLab*
42. Sarah Bell, ECE and Math Education, Summer 2015 – USU REU Student, *Conceptual Design Blending and its impacts on Spatial Ability*
43. Nazmum Nahar, Science Education, Summer 2015 -- USU REU Student, *Conceptual Design Blending and its impacts on Creativity*
44. Orin Pope, Fall 2013 – Spring 2016, ME student working in EED, *Developing Multivariable Calculus curriculum to introduce CG in Statics*
45. Jason Dance, Fall 2013 – Spring 2016, ME student working in EED, *Developing Multivariable Calculus curriculum to introduce CG in Statics*
46. Christopher Green, Fall 2013 – Fall 2015, *Discourse Analysis of Learning Logs to reveal misconceptions in a gateway statics engineering course, Spatial Ability and its links to Statics Performance*
 - ***Undergraduate Researcher of the Year** - Department of Engineering Education-USU, 2016*
 - *Engineering Undergraduate Research Program (EURP) Utah State College of Engineering \$4,500.00 May Cohort #5 **Grant Recipient** 2013-2014*
47. David Sphar, ECE – NASA Lunabot Competition (2012-2013)
48. Corry Burnett, MAE – NASA Lunabot Competition (2012-2013)
49. William Miller (Jesse), MAE - NASA Lunabot Competition (2012-2013)
50. Adam Norris, Fall 2010-Spring 2011, ME Student working in EED, *Applying Kolb's Method to Broadcast Education in an Engineering Graphics Course*

CONSULTING and WORK EXPERIENCE

Engineering

Utah Department of Transportation, Utah (Kevin Griffin P.E., Jason Richins, Rhonda Thiele)

- Primary Investigator (PI) on “Filter System to Produce Industrial Use Water for UDOT Maintenance Stations” July 2016 – February 2018
 - Managed (USU and UWRL) research team looking at water quality analysis for TSS, Metals, SVOC, and VOC’s
 - Field sampling of Water form 10 separate maintenance shed sites.
 - Investigated pump and filter applications for removal of detention/retention pond solids as well as best practices in pumping to limit solid entrainment.

- Presented research to Utah DEQ/DWQ and UDOT
- Developed BMP's for maintenance site regarding impacts to water quality in retention/detention ponds
- Primary Investigator (PI) on "Extension: Filter System to Produce Industrial Use Water for UDOT Maintenance Stations" March 2018 – June 2019
 - Managed (USU and UWRL) research team looking at sludge analysis for metals, TCLP metals, VOC, inorganics.
 - Field sampling of sludge from 18 separate maintenance shed sites.
 - Presented research to Utah DEQ/DWQ and UDOT

Jacobs Engineering Group, Inc., Utah (Mark Barratt P.E.)

- Rainfall intensity, Rational Method of Estimating 100-yr flood discharge, FHWA Culvert Capacity Design

Mellor Engineering Lehi, Utah (Mark Barratt P.E.)

- Open channel flow energy dissipation structure design, sediment entrapment structure design, and conveyance calculations, Jan 2012
- Design of pneumatic distribution system (compressible flow), Apr 2013

Barghausen Engineering, Kent, Washington (Pete Bailey P.E.)

- Backstep method spreadsheet analysis for application in stormwater system, March 2017
- Conveyance calculations for detention pond systems, Mar 2013
- Conveyance calculations for parking lot drainage system, Sept 2014

NRCS Logan, Utah (Ray Howard P.E.)

- Supply pipeline design for stock-water applications using Civil 3D, EPACAD, and EPANET, May 2013
- Route survey for pipeline using TRIMBLE TSC3 data collector and R8 rover and base. June 2013
- Wheel line and pivot irrigation system certification' Jun - July 2013
- Initial design of linear move sprinkler system encompassing pressurized pipe & sprinkler nozzle design, soil evaluation, and civil 3D modeling. Jun - July 2015

Utah State University Facilities

- Topographical survey using TRIMBLE TSC3 data collector and R8 rover and base. June – Aug 2013

Educational

SIEMENS

- Developing Online Course Style Guide, point of contact is Patricia Jebeles & Jerry Sarfati,. March – Sept. 2016

National Federation of the Blind-Jernigan Institute

- Developing and implementing informal **Structural Engineering Education Curriculum** for Engineering Related Activities, The National Federation of the Blind STEM-X, point of contact is Natalie Shaheen (Director of Education) or Mr. Anil Lewis (Executive Director), June-August, 2016 and onsite June 19-25, 2017. <https://blindscience.org/nfbeq>
- Developing and instructing hydrostatics informal education **Curriculum for Engineering Activities** at the National Federation of the Blind Youth Slam and NFB EQ, point of contact is Natalie Shaheen (Director of Education) or Mr. Anil Lewis (Executive Director), June 19-25th. 2016; July 23rd – 29th, 2017.

https://www.facebook.com/pg/NationalFederationoftheBlind/photos/?tab=album&album_id=10155722587759248 and
https://www.facebook.com/pg/NationalFederationoftheBlind/photos/?tab=album&album_id=10154528395584248

HalfMoon Education Inc.

- Developing informal education curriculum and teaching seminar/short course in **Open Channel Flow and Design**, point of contact is Tim Case, Salt Lake City, UT– November, 10th, 2016
<https://www.halfmoonseminars.org/>

TEACHING EXPERIENCE AND COURSE DEVELOPMENT

<u>Associate Professor</u>	<u>July 2019-Present</u>	<u>USU-Logan</u>	
• ENGR 2010	<i>Engineering Mechanics: Statics</i> (4.5/5.0 for 8 classes)		(3 credits)
• ENGR 2010 Recitation	<i>Engineering Mechanics: Statics</i> – 26 Recitations		(0 credits)
• EED 6150	<i>Teaching, Learning, & Asmt. in Eng. Ed</i> (4.5/5.0 for 2 class)		(3 credits)
• *CEE 2240	<i>Surveying</i> (4.5/5.0 for 1 classes)		(3 credits)

<u>Assistant Professor</u>	<u>Aug 2013-July 2019</u>	<u>USU-Logan</u>	
• ENGR 2010	<i>Engineering Mechanics: Statics</i> (4.5/5.0 for 12 classes)		(3 credits)
• ENGR 2010 Recitation	<i>Engineering Mechanics: Statics</i> – 40 Recitations		(0 credits)
• EED 6910	<i>Achievement Testing and Evaluation</i> (4.8/5.0 for 1 class)		(3 credits)
• EED 7040	<i>Qualitative Mthds. in Eng. Ed.</i> (50% development)		(3 credits)
• EED 6150	<i>Teaching, Learning, & Asmt. in Eng. Ed</i> (4.5/5.0 for 2 class)		(3 credits)

<u>Principal Lecturer</u>	<u>Aug 2009-Aug 2013</u>	<u>USU-Brigham City</u>	
• *ENGR 2210	<i>Fundamental Electronics for Engineers</i> (4.5/5.0 for 2 classes)		(3 credits)
• *ETE 2210	<i>Engineering Electronics for Non-Majors</i> (4.5/5.0 for 3 classes)		(4 credits)
• *ENGR 1000	<i>Introduction to Engineering Design</i> (4.6/5.0 for 2 classes)		(2 credits)
• MAE 1200	<i>Engineering Graphics</i> (4.4/5.0 for 14 classes)		(2 credits)
• *CEE 2240	<i>Surveying</i> (4.8/5.0 for 3 classes)		(3 credits)
• *ETE 2270	<i>Computer Engineering Drafting</i> (4.3/5.0 for 5 classes)		(2 credits)

<u>Adjunct Professor</u>	<u>Aug 2000-Aug 2013</u>	<u>USU-Logan</u>	
• ENGR 2010	<i>Engineering Mechanics: Statics</i> (4.5/5.0 for 2 class)		(3 credits)
• ENGR 2010 Recitation	<i>Engineering Mechanics: Statics</i> – 5 Recitations		(0 credits)
• *ETE 1010	<i>Communications Technology</i> (no data)		(3 credits)
• *ETE 1040	<i>Construction and Estimating</i> (no data)		(3 credits)
• *ETE 1200	<i>Computer Aided Drafting and Design</i> (4.3/5.0 for 3 classes)		(3 credits)
• *ETE 2030	<i>Wood-Based Manufacturing Systems</i> (4.7/5.0 for 3 classes)		(3 credits)
• *ETE 2270	<i>Computer Engineering Drafting</i> (4.3/5.0 for 1 class)		(2 credits)
• ITE 3020	<i>Power, Energy and Transportation</i> (no data)		(3 credits)
• *ETE 3220	<i>Architecture and Construction Systems</i> (4.6/5.0 for 2 classes)		(3 credits)
• *ETE 3270	<i>Advanced Computer Aided Drafting</i> (3.5/5.0 for 1 class)		(3 credits)

<u>Recitation/Substitute Lecturer</u>	<u>2009</u>	<u>USU Logan</u>	
• CEE 2030	<i>Dynamics</i> (recitation instructor)		(3 credits)
• CEE 3500	<i>CEE Fluid Mechanics</i> (substitute lecturer)		(3 credits)

(?.?/5.0 for ? classes) Indicates an averaged class evaluation rating across all instances the course was taught)

*Indicates courses taught with full laboratory component

°Indicates courses taught synchronously through Interactive Video Conferencing

ªIndicates courses taught with full recitation component

PROFESSIONAL SERVICE

Presenter

- Goodridge, W. H. (2021, February 22). Innovative Teaching Strategies Workshop: Training the Trainer (TT) – Scaffolding and Routine Problem Solving in Engineering Education. USAID, Utah State University, The American university in Cairo, Alexandria University, Logan, Ut.
- Goodridge, W. H. (2021, February 22). Innovative Teaching Strategies Workshop: Training the Trainer (TT) – Learning Assessments and Measuring the Transmission of Knowledge. USAID, Utah State University, The American university in Cairo, Alexandria University, Logan, Ut

Invited Speaker/Lecturer

- Goodridge, W. H., (2017, June). *NSF IDEAS LAB “Creating capacity and funding for studying how students learn engineering.* 124th Annual American Society for Engineering Education Annual Conference (M414D), Columbus, OH
https://www.asee.org/public/conferences/78/registration/view_session?session_id=7995
- Goodridge, W.H. (2015, September). *Undergraduate Engineering and its Connections to Spatial Ability.* Conference on Integrating Cognitive Science with Innovative Teaching in STEM Disciplines: Modeling and Spatial Learning in STEM., sponsored by Northwestern Center for Engineering Education Research, Northwestern’s Weinberg College of Arts and Sciences, Northwestern’s Associate Provost for Undergraduate Education and the Spatial Intelligence and Learning Center (SILC), Northwestern University, Evanston, IL.
<http://spatiallearning.org/index.php/showcase/215-showcase-november-2015-integrating-cognitive-science-with-innovative-teaching-in-stem-disciplines-spatial-learning-in-stem>
- Goodridge, W. H. (2016, March). *Enhancing Spatial Thinking through grounded technical experiences.* STEM Education Tour - Phranakhon Rajabhat University (PNRU), Utah State University, Department of Technology and Engineering Education, Logan, UT.

Invited Committee Member

- **Organizing Committee Member** - Best Practices for Broadening the participation for people with Disabilities in STEM: Center for Advancing Research Impact in Society (ARIS).
 - Committee will organize a 2020 conference in Baltimore to address the best practices of for broadening the participation of people with Disabilities in STEM.
- **Advancing Excellence in P-12 Engineering Project:** conducted in conjunction with the *High School Engineering Education Symposium and the International Technology and Engineering Education Association*, Baltimore School District, ASEE, & Purdue University
https://www.iteea.org/Activities/2142/AEEE_P12.aspx

National Science Foundation

- **NSF IUSE reviewer**, 2019 Division of Undergraduate Education, Education and Human Resource Directorate
- **NSF EHR Core Research reviewer (ECR)**, 2015, Directorate for Education and Human Resources
- **NSF IUSE reviewer**, 2015, Division of Undergraduate Education, Education and Human Resource Directorate

- **NSF REU reviewer**, 2013, Division of Chemistry, Mathematical and Physical Sciences Directorate

Assistant Editor for Professional Journals

- **Associate Editor**, Nov. 2022-Present, STEM Education (specialty section of Frontiers in Education) (Front. Educ.), Axel Cleeremans Field Chief Editor, Luasanne, Switzerland, Avenue du Tribunal-Federal 34. <https://www.frontiersin.org/journals/education/sections/stem-education>
- **Assistant Editor**, 2017-2022, Journal of Information Systems (JSI), Harry Santoso editor in chief, (Jurnal Sistem Informasi), Kampus Baru UI Depok, 16424 Indonesia <http://jsi.cs.ui.ac.id/index.php/jsi/index>

Reviewer for Professional Journals (Publons – publons.com/a/1287366/)

- **Manuscript Reviewer, Journal of Engineering Education (JEE)**, IF 1.976, H-index 86 in 2019, Lisa Brown ed. in chief, Alejandra J. Magana, assc. ed., Jeffrey E. Froyd, assc. ed., ASEE, (2 articles) <https://onlinelibrary.wiley.com/journal/21689830>
- **Manuscript Reviewer, Visual Cognition**, IF 2.5, H-index 85 in 2021, Taylor & Francis Online, Jonathan Flombaum Co-Editor, London, UK (1 article 2023) <https://www.tandfonline.com/toc/pvis20/current>
- **Manuscript Reviewer, Heliyon Education**, IF 0.55, H-index 46 in 2021, Elsevier BV, David González-Gómez and Tova Michalsky, (1 articles) <https://www.cell.com/heliyon/home>
- **Manuscript Reviewer, International Journal of Engineering Pedagogy (iJEP)**, IF 0.44, H-index 10 in 2021, International Association of Online Engineering, Matthias Christoph Utesch, Vienna, (2 articles) <https://online-journals.org/index.php/i-jep/index>
- **Manuscript Reviewer, Journal of Hydraulic Research (JHE)**, IF 3.830, H-index 64 in 2019, Mohamad Ghidaoui ed. in chief, Taylor and Francis, (1 article) <https://www.tandfonline.com/toc/tjhr20/current>
- **Manuscript Reviewer, International Journal of Engineering Education (IJEE)**, IF 0.77, H-index 37, in 2015, Ahmad Ibrahim ed., Toronto, Ontario, Canada (2 articles) <http://www.ijee.ie/>
- **Manuscript Reviewer, Journal of STEM Outreach**, Virginia L. Shepard and Ann Chester, Nashville TN. (4 articles) <https://www.jstemoutreach.org/>
- **Manuscript Reviewer, IEEE Transactions on Education (ToE)**, IF 1.855, Lawanto, O. assc. ed. (5 articles) <https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=13>
- **Manuscript Reviewer, Computer Applications in Engineering Education (CAEE)**, IF 2.109, H-index 37, Magdy Iskander ed. In chief, John Wiley and Sons, Hoboken, New Jersey, U.S.
- **Manuscript Reviewer, PLOS one**, IF 2.806 in 2016, H-index 241, Joerg Heber ed. in chief, David Uttal academic ed., Cambridge, UK and San Francisco, CA. (1 article) <http://journals.plos.org/plosone/>
- **Peer Review Board Member, Journal of Educators Online (JEO)**, IF 0.82 in 2015, H-index 9, B. Jean Mandernach ed., Phoenix, AZ (4 articles) <https://www.thejeo.com/peer>
- **Manuscript Reviewer, The Journal of Educational Research (J. Educ. Res.)**, IF 1.218 in 2015, Mary F. Heller ed. in chief, Taylor and Francis Group, Milton Park, Abingdon, Oxfordshire, England, United Kingdom (1 article) <http://www.tandfonline.com/toc/vjer20/current>
- **Manuscript Reviewer, Cognitive Research: Principles and Implications (CR:PI)**, IF 3.701, Assc. Ed. Nora Newcombe ed., Springer Open, (1 article) <https://cognitiveresearchjournal.springeropen.com/about>
- **Manuscript Reviewer, Journal of Visualized Experiments (JoVE)**, IF 1.325 in 2014, H-index 42, Moshe Pritsker ed., Cambridge MA. United States, (1 article) <http://www.jove.com>

- **Manuscript Reviewer, *Journal of Information Systems* (JSI)** Harry Santoso ed., (Jurnal Sistem Informasi), Kampus Baru UI Depok, 16424 Indonesia (3 articles)
<http://jsi.cs.ui.ac.id/index.php/jsi/index>
- **Manuscript Reviewer, *International Journal on Innovations in Online Education* (IJIOE)** John Long Guest Editor. Begell House Publishers, Danbury, CT. (1 article)
<https://onlineinnovationsjournal.com/>
- **Manuscript Reviewer, *Journal of Pre-College Engineering Education Research* (J-PEER),** IF 2.091, Monica E. Cardella, ed. Senay Purzer, ed., Purdue University Press, (1 article),
<http://www.thepress.purdue.edu/journals/jpeer>

Professional Societies

- **Engineering Division CUR National Councilor**, 3 year elected term to The Council on Undergraduate Research (CUR), July 2016 – June 2022,
- **Engineering Division CUR National Representative**, 3 year elected term to the Council on Undergraduate Research (CUR), June 2023- June 2026 (As of June 2023 the designation of “Councilor” designation was changed to “Representative”)
 - **CUR Finance Committee Member**, June 23rd 2016 – June 2017, June 2018 - Present
 - **CUR Task Force Member**, Integrating research into the Curriculum, June 2017 – June 2018
 - **CUR Engineering Division – Mentor Award Judge** 2021, 2022
 - **CUR Constitution and Bylaws Committee** – 2022, 2023
 - **CUR Engineering Division Awards Committee** – 2021, 2022, 2023
- **Member**, ASEE Project Board, External Relations for ASEE, June 2017 – June 2019
<https://www.asee.org/about-us/the-organization/advisory-committees/projects-board>
 - **Member**, ASEE Project Board IRB Panel, November 2017 – June 2019
- **Session Speaker – NSF IDEAS LAB** “Creating capacity and funding for studying how students learn engineering”, at 124th Annual American Society for Engineering Education Annual Conference (M414D), Columbus, OH
https://www.asee.org/public/conferences/78/registration/view_session?session_id=7995
- **Member**, Hydraulic Structures Committee for EWRI, Summer 2008 – 2010
- **ICEDU Conference Paper Reviewer**
 - 3rd International Conference on Education (ICEDU) The International Institute of Knowledge Management, Kuala Lumpur, Malaysia, 2017
- **CUR Posters on the Hill Reviewer**,
 - Council on Undergraduate Research, 2016
- **InCULT Conference Paper Reviewer and Technical Program Committee Member**
 - The International Conference on University Learning and Teaching (InCULT), Krabi, Thailand, 2016
- **NCUR Conference Paper Reviewer**,
 - 30th Annual Conference on Undergraduate Research, Asheville, NC, UNC
- **ASEE (American Society for Engineering Education) Conference Paper Reviewer**,
 - 130th, Baltimore, MA (2023), Educational Research and Methods Division, Civil Engineering Division, Entrepreneurship & Engineering Innovation Division, Engineering Design Graphics, Ocean and Marine Divisions, 129th, Minneapolis, MN (2022), Ocean and Marine Divisions, Engineering Design Graphics, Educational Research and Methods Division, Civil Engineering Division, & Engineering Leadership Development Division, 128th, Long Beach, CA (2021), Engineering Design Graphics, & Entrepreneurship, Engineering Innovation, and Civil

Engineering Divisions, Educational Research and Methods Division, Virtual Conference due to CoVid19, 127th, Originally Montreal, Quebec, Canada, but then Virtual due to CoVid19, Civil Engineering Division, Ocean and Marine Divisions, & Engineering Leadership Development Division 126th, Tampa Florida (2019), LEAD & Ocean and Marine & Civil Engineering Divisions, 125th, Salt Lake City, UT (2018), Engineering Design Graphics & Civil Engineering Divisions, 124th Columbus, OH (2017), Civil Engineering Division, 123rd New Orleans, LA (2016), Entrepreneurship & Engineering Innovation, ASEE Global Programs, & Engineering Design Graphics Divisions, 122nd Seattle, WA (2015), Entrepreneurship & Engineering Innovation, Engineering Design Graphics, Civil Engineering, & K-12 & Pre-College Engineering Divisions

- **FIE (Frontiers in Education) Conference Paper Reviewer,**
 - 53rd, Uppsala Konser och Kongress (UKK) Upsala Sweden (2022), 48th, San Jose, CA, 2017, 47th, Indianapolis, IN, 2017, 46th, Erie, PA, 2016, 45th, El Paso, TX, 2015, 44th, Madrid, Spain, 2014, 43rd, Oklahoma City, OK, 2013, 42nd, Seattle, WA, 2012

Textbook Publishers

- **Textbook Reviewer**
McCormac, J. (2013). Surveying. John Wiley and Sons Inc., Hoboken, NJ. 6th Ed., ISBN # 978-0-471-23758-7

Communities, Schools, and Universities

- **Instructor/Developer**
 - USU Brigham City Summer Science and Engineering Academy, Summer 2011 & 2012
- **Head Judge**, VEX Robotics Competition, Fall/Spring 2010-2011, Spring 2013, 2014, 2015
- **USU Student Research Symposium Judge**, April 2015
- **URCO project reviewer**, October 2017

National Institutions

- **Engineering Instructor/Curriculum Developer**, National Federation of the Blind
 - Developed and delivered instructional curriculum based on fluid mechanics for Blind and low vision youth including hands on lab activities and embedded analytical engineering techniques.
 - Developed and delivered instructional curriculum based on structural mechanics for Blind and low vision youth including hands on lab activities and embedded analytical engineering techniques.
- **Site Administrator**, National Occupational Competency Testing Institute (NOCTI) Utah State University, 2009-2012
 - Find and direct Proctors for other NOCTI exams.
- **Proctor**, National Occupational Competency Testing Institute (NOCTI) Utah State University, 2007 – 2012
 - Proctor Cabinetry and Millwork Exam
 - Proctor Drafting Exam

INSTITUTIONAL SERVICE

Utah State University (External to Department)

- Member USU Committee for Staff Learning Management System, Jan 2023 – Present
 - Identification of requirements for new training LMS system, request for proposals and demonstrations of systems, selection of the system to be adopted by USU
- USU 1010 Connections Instructor, AY 2020-2021, 2021-2022, 2022 - 2023
- **Chair and Engineering College Representative/Member, USU IRB Advisory Council**, Utah State University, August 2018 – August 2020

- Ensure Council objectives are met and discussed with administration.
- Establish meeting times.
- Liaison between IRB Board, VP and Dean for Research and Graduate Studies, and IRB Director
- Direct Advisory Council meetings
- Advise IRB Board, VP and Dean for Research and Graduate Studies, and IRB Director
- **Member** USU Faculty Senate, July 2019 – 2022
 - Faculty Senate **Representative** for University Assessment Coordinating Council (UACC)
- **Engineering College Representative/Member, Undergraduate Research Advisory Board (URAB)**, Utah State University, August 2018 – Present
 - Advise USU Associate VP and Dean for Research and Graduate Studies on Undergraduate Research
 - Advising the UR Program, including review of the current undergraduate research program and suggestions for future directions;
 - Advocating for UR, including supporting the increased the visibility of undergraduate research at USU and providing recommendations on marketing of undergraduate research to enhance the reputation of the institution and the program regionally and nationally;
 - Supporting UR Programs, such as reviewing proposals for URCO grants, judging UR Symposia, and interviewing finalists for the Peak Prize;
 - Supporting UR Events, such as the Utah Conference on Undergraduate Research and the Student Showcase.
 - Selection of Undergraduate Researcher of the Year and Undergraduate Research Mentor of the Year
- **Engineering College Representative/Member, USU Testing Center Faculty Feedback Committee**, Utah State University, July 2016 – July 2019
 - Advise USU Testing Center director and Executive Vice Provost and Dean of Academic and Instructional Services on testing center evolution
- **New Faculty Orientation Panel – Fall 2020**
 - Develop and present a presentation to new USU faculty on the tenure process and helpful hints to navigate it, teaching and how to be effective with economy, and service.
 - Goodridge, W. H. (2019). *Positioning Yourself for Success at Utah State: Faculty Perspectives*, Logan Utah Main Campus. Aug 13th, 2019.
- **New Faculty Orientation Panel – Fall 2019**
 - Develop and present a presentation to new USU faculty on the tenure process and helpful hints to navigate it, teaching and how to be effective with economy, and service, as well as develop and present a presentation on USU history.
 - Goodridge, W. H. (2019). *A Brief History of Utah State University. Orientation for Utah State University New Tenured/Tenure-Track Faculty*, Logan Utah Main Campus. Aug 13th, 2019.
 - Goodridge, W. H. (2019). *Positioning Yourself for Success at Utah State: Faculty Perspectives*, Logan Utah Main Campus. Aug 13th, 2019.
- **2019 Empowering Teaching Excellence Conference Presenter**
 - “Learning from the Best: Our teaching Philosophies in Action” - Quick presentation to conference attendees on specific area of teaching excellence

College of Engineering USU

- **Member**, College of Engineering, Curriculum Committee, 2022 – Present
- **Member**, College of Engineering Faculty Appeals Committee, 2019-Present
- **Presenter**, College of Engineering Professional Advisory Board, Engineering Education Department Overview – Research, Teaching, and Service, April 5th, 2019
 - Discuss and showcase a class’s emphasis towards connecting teaching and industry needs in

graduating students.

- **Presenter**, College of Engineering Tutors, Strategies for Tutoring, Jan 8th, 2019
- **Invited Speaker**, to CEE 1880 “Strategies for success: Navigating your degree” Feb 23rd, 2016
- **Advisor**, Steven Wood, 2015 – present, College of Engineering Undergraduate Research Program (EURP 2016-2017)
- **Advisor**, Chris Green, 2013-2015, College of Engineering Undergraduate Research Program (EURP 2014-2015)
- **Honors Student mentor**, Orin Pope, MAE working in EED
- **Lecturer/Reviewer**, prepared notes for and instructed students in a statics review session for the Fundamentals of Engineering Exam (FE), 3/2012, 10/2012, 4/2013
- **Assistant**, PDCA sponsored “Professor’s Driven Pile Institute (PDPI), Summer (June 20th – 24th) 2011
- **Instructor**, Engineering State, Summer 2006, 2002, 2000, 1998
- **Recruitment**, Hosted Weber School Districts “Three Rivers High School” field trip to USU, Spring & Fall 2011/12/13/14/15/16, Fall 2013/14

Engineering Education Department USU

- **Promotion Committee Chair**, Cassandra McCall, Assistant to Associate Professor, USU EED Dept. 9/28/2020 - Present
- **Promotion Committee Member**, Marissa Tsuguwa, Assistant to Associate Professor, USU EED Dept. 9/29/2021 - Present
- **Promotion Committee Member**, Angela Minichiello, Assistant to Associate Professor, USU EED Dept, 10/24/2019-5/1/22
- **Promotion Committee Chair**, Shelly Halling, Lecturer to Senior Lecturer, USU EED Dept. 10/8/2019 – 5/1/22
- Bohne Scholarship **Selection Committee** February 2021, 2022
- **NSF funded REU/Project Advisor** (NSF 1262806), Self-regulated learning in engineering education, “Entrepreneurial Interventions in a Technical Writing Course and their impacts on Entrepreneurial Mindsets,” Summer 2016
- **NSF funded REU/Project Advisor** (NSF 1262806), Self-regulated learning in engineering education, “Mindsets and Spatial Thinking in Engineering Mechanics,” Summer 2015
- **Recruiter** for EED Ph.D. Program, Boise State, Feb 18th, 2016 and Feb 12th, 2015
- **Faculty Committee Member**
 - Development of EED Website, Spring 2016
 - Development of EED Strategic Plan, Fall 2014 – Spring 2015
 - Development of EED Graduate Student Handbook, Fall 2014 – Spring 2015
- **Engineering Curriculum Committee Member**
 - Statics course and Curriculum Review Committee, EED Dept. Fall 2013
 - Engineering Graphics Review Committee, EED Dept. Fall 2013
- **Collaborator**, w/ Oenardi Lawanto for CAREER proposal “Cognitive and Metacognitive Activities in Eng. Design Ed.
- **Member**, APE Electrical Engineering Faculty Hiring Committee, USU-Tooele Campus, July 2008
- **Invited Lecture**, GPS and its applications in Surveying, Dept. Engineering and Technology Education, Spring 2011

Technology and Engineering Education Department, College of Agriculture

- **Promotion Committee Member**, Joseph Furse, Assistant to Associate Professor, USU, College of Agriculture, Dept. of Technology and Engineering Education. 9/28/2023- Present

College of Education School of Teacher Education and Leadership

- **Promotion Committee Member**, Max Longhurst Assistant Professor of Professional Practice to Associate Professor of Professional practice, USU, College of Education, School of Teacher Education and leadership. 10/8/2020 - Present

Civil and Environmental Engineering Department USU

- **Promotion Committee Member**, Austin Ball, Assistant to Associate Professor of Practice, USU CEE Dept, 2/26/2021-Present
- **Thesis Advisor and Funding PI**, CEE Dept. Graduate Student Masters Committee (MS)
 1. Amanda Stoudt (MS), Summer 2018 – Present (Summer 2019)
 2. Weston Bellon (MS), Summer 2017 – Spring 2018
- **Member**, Civil Engineering Faculty Hiring Committee, Transportation Assistant Professor Position USU-Logan Campus, Sept. 2017 – Mar. 2018
- **Member**, CEE Dept. Engineering Week Committee to choose Outstanding Pre-professional, Junior and senior Undergraduates for 2018
- **Independent Study Advisor**, Nathan Wallantine, Hydraulic Pipeline Design on Water Supply using GPS, Civil 3D, and EPANet

Brigham City Campus USU

- **Promotion Committee Member**, Camille Fairbourn's, Lecturer to Senior Lecturer, Brigham City RCDE, 11/2012
- **Presenter**, Presented current APE Engineering program success to Brigham City USU Advisory Board, 10/2012
- **Advisor**, Lunabotics Brigham City Team, NASA Mining Robot Competition 2013, 2014
- **Member**, RCDE Committee for review of IDEA Evaluation Forms, Summer 2011
- **Co-Advisor**, BLAST Brigham City Engineering Club Advisor, Fall 2011 - 2012
- **Co-Advisor**, FATE Brigham City Engineering Club Advisor, Fall 2009- 2011
- **Member**, Peer review committee USU RCDE, Fall/Spring/Summer 2010

Graduate Student Committees

- EED Dept. Graduate student doctoral committee, for
 1. Talha Naqash, Fall 2023 – Present, Ph.D. (Committee Member)
 2. Zain Abideen, Fall 2023 – Present, Ph.D. (Committee Member)
 3. Abby Lehto, Fall 2023 – Present, Ph.D. (Committee Member)
 4. Hannah Wilkinson, Fall 2023 – Present, Ph.D. (Committee Member)
 5. **Sujata Basnet**, Fall 2023 – Present, Ph.D. (**Major Advisor** & Committee Chair)
 6. Sakshi Solanki, Fall 2022 – Present, Ph.D. (Committee Member)
 7. Autumn Cueller, Spring 2023 – Present, Ph.D. (Committee member)
 8. **Jenny Blondquist**, Fall 2021 – Present, Ph.D. (**Major Advisor** & Committee Chair)
 9. **Daniel Kane**, Spring 2021 – Present, Ph.D. (**Major Advisor** & Committee Chair)
 10. Mohammad Al Mestiraihi, Fall 2020 – Fall 2022, Ph.D. (Committee Member)
 11. Assad Iqbal, Fall 2020 – Fall 2022, Ph.D. (Committee Member)
 12. Ibukun Osunbunmi, Spring 2020 – Spring 2022, Ph.D. (Committee Member)
 13. Darcie Christensen, Fall 2019 – Summer 2021, Ph.D. (Committee Member)
 14. Lori Caldwell Openshaw, Fall 2019 – Present, Ph.D. (Committee Member)
 15. **Jonathan Andersen**, Summer 2018 – Summer 2023, Ph. D. (**Major Advisor** & Committee Chair)
 16. Kate Youmans, Spring 2019 – Fall 2020, Ph.D. (Committee Member)
 17. **Benjamin Call**, Summer 2014 – Summer 2019, Ph.D. (**Major Advisor** & Committee Chair)
 18. Ahmad Farooq, Spring 2018 – Spring 2021, Ph.D. (Committee Member)

19. Ryan Barlow, Fall 2018 – Fall 2020, Ph.D. (Committee Member)
20. Laura Gelles, Fall 2017 – Fall 2020, Ph.D. (Committee Member)
21. Kirstin Strong, Spring 2013 – Spring 2018, Ph.D. (Committee Member)
22. Murad Mahmoud, Fall 2015 – Spring 2018, Ph.D. (Committee Member)
23. Gang Liu, Fall 2015 – Summer 2018, Ph.D. (Committee Member)
24. Andreas Fabrian, Fall 2015 – Summer 2018, Ph.D. (Committee Member)
25. Presentacion Rivera-Reyes, Fall 2013 – Fall 2015, Ph.D. (Committee Member)
26. Seyedmohammad Tajvidi, Fall 2013 – Fall 2015, Ph.D. (Committee Member)
27. Oai Ha, Fall 2012 – Spring 2015, Ph.D. (Committee Member)
28. Joel Mejia, Fall 2012 – Fall 2014, Ph.D. (Committee Member)
- EED Dept. Graduate student MS committee, for
 1. **Rachel Phelps**, Fall 2021 – Present, M.S. (**Major Advisor** & Committee Chair)
 2. Gabe VanDyke, Spring 2023 – Present, M.S. (Committee member)
- CEE Dept. Graduate student Masters committee (ME & MS), for
 1. Zach Benson, Spring 2023 – Present, M.S. (Committee member) Structures
 2. Daniel Kane, Spring 2021 – Present, M.E. (Committee Member) Transportation
 3. Isra Abu Shanab, Spring 2021 – Fall 2022, Ph.D. (Committee Member) materials
 4. Andrew LeCheminant, Fall 2019 – Spring 2020, M.E. (Committee Member)
 5. Amanda Stoudt, Summer 2018 – Summer 2019, M.S. (Committee Member) Hydraulics
 6. **Weston Bellon**, Summer 2017 – Spring 2018, M.S. (Committee Member and Funding Source) Hydraulics
 7. Megan Gordon Fall 2017 – Spring 2018, M.S. (Committee Member) Hydraulics
 8. Ryan Weller, Fall 2017 – Spring 2018, M.S. (Committee Member)
 9. Dane Hurst, Fall 2014 – Spring 2015, M.E. (Committee Member)
 10. Justin Dietrich, Fall 2014 – Spring 2015, M.E. (Committee Member)
 11. London Saxton, Fall 2014 – Spring 2015, M.E. (Committee Member)
- TEE Dept. Graduate student Ph.D. and M.S. committees for
 1. Emily Ruesch, Fall 2021 – Spring 2023, Ph.D. (Committee Member)
 2. Cory Ortiz, Fall 2018 – Spring 2021 Ph.D. (Committee Member)
 3. Joseph Furse, Fall 2017 – Fall 2020, Ph.D. (Committee Member)
 4. Russell Mayo, Fall 2017 – Fall 2018, M.S. (Committee Member)
 5. Cory Ortiz, Fall 2017 – Fall 2018, M.S. (Committee Member)
 6. Jordan L. Bartholomew, Fall 2017 – Fall 2018, M.S. (Committee Member)
 7. Scott Bartholomew, Fall 2014 – Spring 2016, Ph.D. (Committee Member)
 8. Robert Warcup, Fall 2012 – Spring 2015, Ph.D. (Committee Member)
 9. Steven Williams, Spring 2011 – Spring 2019, Ph.D. (Committee Member)
 10. Keith McMullin, Fall 2012 – Spring 2013, Ph.D. (Committee Member)
- ETE Dept. Graduate student Doctoral Committees (Ph.D.) for
 1. Scott Greenhalgh, Fall 2010 - Fall 2011, Ph.D. (Committee Member)
 2. Katrina Cox, Fall 2010 – (ABD), Ph.D. (Committee Member)
- College of Education School of Teacher Education and Leadership
 1. John Louviere, Fall 2019 – Spring 2020, Ph.D. (Committee Member)
- ECE Dept. Graduate student Masters Committee (MS) for
 1. Sarah Lopez, Summer 2016 – Summer 2019, Concurrent MS (ECE) (Committee Member)

RESEARCH INTERESTS

Engineering Education

- Spatial cognition, creativity, and mindsets in Engineering
- Student spatial ability enhancement with Solid Modeling Software- Solid Edge

- Distance, on-line, and web intensive education for post-secondary students.
- Physical manipulative implementation into traditional engineering mechanics curriculum.
- Self-regulated learning

Hydraulic/Sedimentation Engineering

- Physical modeling of hydraulic structures.
- Incipient motion and transportation of sediments under a variety of culvert flow regimes.
- Culvert sediment yield rates for variable flow conditions.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

• ASCE	(American Society of Civil Engineers: EWRI & COPRI)	since Feb. 2008
• ASEE	(American Society for Engineering Education)	since Apr. 2008
• ASDSO	(Association of State Dam Safety Officials)	since Apr. 2008
• SILC	(Spatial Intelligence and Learning Center)	since May 2014
• IGIP	(International Society of Engineering Pedagogy)	since May 2015
• SFPE	(Society of Fire Protection Engineers)	Sep 2016-2018
• USSD	(United States Society on Dams)	Feb 2008-2010
• ITEEA	(International Technology and Engineering Education Association)	Apr 2010-2012
• AWWA	(American Water Works Association)	Apr. 2008-2012
• SfN	(Society for Neuroscience)	Apr 2014–2015
• AERA	(American Educational Research Association)	Mar 2014-2016

PROFESSIONAL TRAINING ATTENDED

Leadership

- **Leading at USU Part A: Mindset of a Leader**, August 8/11/2020 (Associate Professor)
- **Leading at USU Part B: Performance Management**, August 8/11/2020 (Associate Professor)
- **Leading at USU Part C: Effective Communication**, May 5/26/2021 (Associate Professor)

Teaching

- New Faculty Teaching Academy, Fall 2013 and Spring 2014 (Assistant Professor at Logan Campus)
- New Faculty Teaching Academy, Fall 2009 and Spring 2010 (Principal Lecturer at Brigham City USU)

Research

- New Faculty Research Training, Fall 2013 and Spring 2014 (Assistant Professor)

Grant Writing

- Write Winning Grant Proposals Workshop, Oct 27, 2015 (Assistant Professor)
- Proposal Writing Institute Fellow, Utah State University, 2014 (Assistant Professor)
- Write Winning Grant Proposals Workshop, Sept 18, 2013 (Assistant Professor)
- Write Winning Grant Proposals Workshop, June 18, 2012

Civil Engineering

- ASCE PDH Training 2014 (HEC RAS/Stormwater BMP, Wetland Construction, Stormwater Management)
- NRCS State of Utah Autodesk Civil 3d Training, Summer 2013

Finance

- RFAST (USU Research Financial and Administrative Series Training)

Peer Review

- Certificate for Reviewing in the Humanities – Web of Science – Spring 2023 (Associate Professor)
- Certificate for An Introduction to Peer Review – Web of Science – Spring 2023 (Associate Professor)
- CIRT Peer Review Design Course – Center for Innovation in Research and Teaching, Grand Canyon University

OTHER RELATED EXPERIENCE

- **EIT Fundamentals of Engineering Exam**, Logan, Utah Fall 2004
- **Adjunct Professor** for Department of Engineering and Technology Education 2000-2009
- **Graduate Research Assistant** at Utah Water Research Laboratory 2005-2008
- **Industrial Technology/Vocational Education Teacher**, Cache County School District, UT., MCHS, 1999-2000, Video Production, Cabinetry and Millwork, Basic Woods
- **Secondary Education (6-12) Teaching License**, Utah State Board of Education 4/1999 – 6/2003 (expired)
- **Lab Technician/Welder/Shop Worker**, 20 hr/week, Utah Water Research Laboratory, 2005-2008
- **Engineering Intern**, Utah Water Research Laboratory, 20 hr/week, 2003-2005
- Part Time **Machinist**, 10-15 hr/week, Utah State University ITE Dept., 1999-2003
- **Engineering State Instructor**, USU, 2001, 2002, 2006, and 2007

OTHER LEADERSHIP EXPERIENCE

- **Residential Construction Foreman**, Part time and full time in summer, Lund Construction, Logan Utah 1995-1997
- **Residential Construction**, Laborer, Taylor Homes, Logan Utah, 1996
- **Residential Construction**, Laborer, Goodridge Enterprises, Cordova Alaska 1990 – 1993
- **Commercial Construction**, Laborer, Cordova School District, Cordova Alaska, Summer, 1994
- **Deck Boss**, F/V Pacific Pacer, Seasonal, Cordova Alaska, 1994-1995, Capt. Neil Schultz
- **Deck Hand/Deck Boss**, F/V Carrol Ann, Seasonal, Cordova Alaska, 1991-1993, Capt. Robert Maxwell

EDUCATIONAL RESEARCH TRAINING

- Finance and Grant Writing (**EED 7460**) Audited as Assistant Professor at USU
- Developing an Online Educational Curriculum (**EED 6090**) Audited as Principal Lecturer at USU
- Qualitative Research Methods I (**EDUC 6770**) Audited as Assistant Professor at USU
- Qualitative Research Methods II (**EDUC 7780**) Audited as Assistant Professor at USU
- Introduction to Educational & Psychological Research (**EDUC 6570**) Audited as Assistant Professor at USU

SOFTWARE/COMPUTER EXPERIENCE

Extensively Used:

- CAD Packages: AutoCAD 2000 – 2019, Solid Edge ST10
- Office: Microsoft: Excel, WordPerfect, Microsoft Word, Power-Point
- Course Mngt: Blackboard, CANVAS, Wimba

Outdated Familiarity:

- Hydraulics: EPANET, EPACAD, HEC-RAS, HEC-1/HMS 1, HEC-ResSim, DAMBRK,

SWMM

- Geotechnical: PLAXIS, GRLWEAP, DRIVEN, LPILE, COM624P, FB-PIER, SHAFTUF, SPT97
- Statistics: SPSS, SAS, R
- CAD packages: Architectural Desktop 2006, LDD 2006, Chief, Civil 3d, Revit
- Solid Modeling: Solid Edge v20, ST1 – ST-7, Autodesk Inventor R10-R11
- Program/Math: Visual Basic for Applications, Maple 10, Sci-Lab, MathCAD 6, MATLAB
- GIS Software: Arc GIS, Arc Map
- Educational (Research.): Nvivo
- Educational (Teaching): MD Solids
- Fire Protection: Pathfinder

AWARDS

- **2022 Undergraduate Faculty Mentor of the Year Award**, Department of Engineering Education, USU, 2020
- **2020 Undergraduate Faculty Mentor of the Year**, Department of Engineering Education, USU, 2020
- **2019 Best Paper Award**, Professional Interest Council, American Society for Engineering Education, 126th Annual Conference and Exposition, Tampa Florida.
Davishahl, E., Haskell, T. R., Davishahl, J., Singleton, L. and **Goodridge, W. H.**, (2019). “Do They Understand Your Language? Assess their Fluency with Vector Representations.” 126th Annual Conference Proceedings of the American Society for Engineering Education, Tampa, FL. <https://www.asee.org/public/conferences/140/papers/26903/view>
- **2019 Best Paper Award**, Mechanics Division, American Society for Engineering Education, 126th Annual Conference and Exposition, Tampa Florida.
Davishahl, E., Haskell, T. R., Davishahl, J., Singleton, L. and **Goodridge, W. H.**, (2019). “Do They Understand Your Language? Assess their Fluency with Vector Representations.” 126th Annual Conference Proceedings of the American Society for Engineering Education, Tampa, FL. <https://www.asee.org/public/conferences/140/papers/26903/view>
- **2019 College of Engineering Teacher of the Year**, College of Engineering, USU, Spring 2019
Nominated for 2019 Eldon J. Gardner Teacher of the Year
- **2019 Outstanding Teacher of the Year**, Department of Engineering Education, USU, Spring 2019
- **2019 Undergraduate Faculty Advisor of the Year**, Department of Engineering Education, USU, Spring 2019
- **2018 Best Conference Presentation**, American Society for Engineering Education: Zone IV Conference – Rocky Mountain Region 2018: Tyler Ashby, "Adaptation of the Mental Cutting Test for the Blind and Low Vision", USU
- **2018 Outstanding Research Award**, Council for Technology & Engineering Teacher Education (CTETE) for
Bartholomew, S., Reeve, E., Veon, R., **Goodridge, W.H.**, Lee, V., and Nadelson, L. (2017). Mobile Devices, Self-Directed Learning, and Achievement in Technology and Engineering Education Classrooms during a STEM Activity. *Journal of Technology Education*. Vol 29, No. 1, 2-24. <http://scholar.lib.vt.edu/ejournals/JTE/v29n1/pdf/bartholomew.pdf>
- **2018 Undergraduate Research Mentor of the Year**, College of Engineering, USU, 2018
- **2018 Undergraduate Research Mentor of the Year**, Department of Engineering Education, USU, 2018
- **2017 ASEE Outstanding Teaching Award**, American Society of Engineering Education, Rocky Mountain Section which includes Colorado, Utah, South Dakota (zip codes 57575-57577), and Wyoming, Sept. 2017

- **2016 Outstanding Teacher of the Year**, Department of Engineering Education, USU, Spring 2016
- **2016 Undergraduate Research Mentor of the Year**, Department of Engineering Education, USU, 2016
- **2013 Regional Campus Distance Education Researcher of the Year**, USU
- **2013 Researcher of the Year**, Brigham City Regional Campus, USU
- **2013 Undergraduate Research Mentor of the Year**, Brigham City Regional Campus, USU
- **2012 Undergraduate Research Mentor of the Year**, Brigham City Regional Campus, USU
- **2009 Distinguished Service Award**, Engineering and Technology Education Department, USU
- **2000 Award of Appreciation for Dedicated Service**, Mountain Crest High School
- **1999-2000 Distinguished Service Award**, FFA Agricultural Education, Mountain Crest High School

ACCOMPLISHMENTS

- **Engineering Division CUR Councilor**, The Council on Undergraduate Research (CUR), National Elected Position, June 23rd 2016 – 2019 and June 23rd 2019 - 2022
- **Member**, Order of the Engineer, 2017
- **Invited Speaker/Facilitator**, *NSF IDEAS LAB “Creating capacity and funding for studying how students learn engineering.* 124th Annual American Society for Engineering Education Annual Conference (M414D), Columbus, OH
- **Invited Speaker**
 - “Undergraduate engineering and its connections to spatial ability. “Conference on Integrating Cognitive Science with Innovative Teaching in STEM Disciplines: Modeling and Spatial Learning in STEM, Northwestern University, September 17-19th, 2015
 - “Enhancing Spatial Thinking through grounded technical experiences.” STEM Education Tour - Phranakhon Rajabhat University (PNRU) at Utah State University, Department of Technology and Engineering Education, Logan, UT., March 2016
- **21st Century Fellow**, FTEE/ITEEA/CTETE 2015 Class of the 21st Century Leadership Academy, 2014
- **Proposal Writing Institute Fellow**, Utah State University, 2014
- **Graduate Assistantship**, Utah Water Research Laboratory (UWRL) & Dept. CEE, USU 2005-2008
- **Research Technician**, Utah Water Research laboratory (UWRL), USU 2003 - 2005
- **Golden Key** National Honor Society, Oct. 2007-Present
- Biltmore’s Who’s Who among American Professionals 2010
- **Eagle Scout**, 1992- member of NESA
- **Order of the Arrow**, 1992

SUPERVISED TEACHING ASSISTANTS

James Blake, MAE, Engr 2010
 Karmen Teuscher, MAE, Engr 2010
 Summer Whooton, MAE, Engr 2010
 Gabriel Van Dyke, CEE, Engr 2010
 Andrew LeCheminant*, CEE, CEE 2240
 Devan Peterson, CEE, CEE 2240
 Matt Rigby, CEE, CEE 2240
 Maren Chadwick, CEE, CEE 2240
 Caitlin Roundy, CEE, CEE 2240
 Carly Jo Bateman, MAE, Engr 2010
 Doug Lundell, MAE, Engr 2010

Jeadon White, MAE, Engr 2010
 Connor Gray, MAE, Engr 2010
 David Olsen, CEE, Engr 2010
 Evan Capron, CEE, CEE 2240
 Skyler Allred, CEE, CEE 2240
 Nichole Rogers, CEE, CEE 2240
 Andrew Walker, CEE, CEE 2240
 Benjamin Ashley, CEE, CEE 2240
 Austin Andrus, MAE, Engr 2010
 Tyler Peterson, MAE, Engr 2010

Tyler Ashby*, CEE, Engr 2010
 Jorge Espinoza, CEE, Engr 2010
 Carly Litton, MAE, Engr 2010
 Eduardo Hueramo, CEE, Engr 2010
 Rylee Allen, MAE, Engr 2010
 Carly Jo Bateman, MAE, Engr 2010
 Michael Bradford, MAE, Engr 2010
 Jeffrey Fannesbeck, CEE, Engr 2010
 Jacob Rosqvist, MAE, Engr 2010
 Sydney Taylor, CEE, Engr 2010
 Taylor Torgersen, CEE, Engr 2010
 Christopher Green, MAE, Engr 2010
 Ishmaal Erikson, MAE, Engr 2010
 London Saxton, MAE, Engr
 Kevin Johnson, ECE, Engr 2010
 Paul Montoya, MAE, Engr 2010
 Ken Broadhead, MAE, Engr 2010
 Matt Dean, MAE, Engr 2010
 Jarret Bone, MAE, Engr 2010
 Erik Fjeldsted, CEE, Engr 2270
 Edward Bennion, MAE 1200
 Adam Norris, MAE 1200
 Hannah McDermott, CEE, Engr 2010
 Paul Montoya, BIE, Engr 2010
 Matt Dean, MAE, Engr 2010
 Nick Faust, MAE, Engr 2010
 Tim Hammond, MAE, Engr 2010

*Indicates a graduate student

Liz Housley, MAE, Engr 2010
 Addison Litton, MAE, Engr 2010
 Nathan Raine, CEE, Engr 2010
 Parker Carter, MAE, Engr 2010
 Jarrett Anderson, MAE, Engr 2010
 Nathan Harward, MAE, Engr 2010
 Tim Clark, MAE, Engr 2010
 Taylor Harman MAE, Engr 2010
 Steven Wood, CEE, Engr 2010
 Hannah Dudley, CEE, Engr 2010
 Troy Greener, CEE, Engr 2010
 Alexis Houghton, BIE, Engr 2010
 Joel Mejia, EED, Engr 2010
 Julia Klinger, MAE, Engr 2010
 Steven Batty, MAE, Engr 2010
 Jordan Clark, CEE, Engr 2010
 Tori Turner, CEE, Engr 2010
 Jacob Crump, BIE, Engr 2010
 Jake Cable, MAE, Engr 2010
 Ting Song, EED, Engr 2270
 Justin Hoffman, MAE 1200
 Scott Greenhaulgh, ETE 3220
 Jacob Jewkes, CEE, Engr 2010
 Erik Fjeldsted, CEE, Engr 2010
 Jordan Clark, MAE, Engr 2010
 Alex Mejia, EED, Engr 2010
 Steven Daniels, MAE, Engr 2010

SUPERVISED UNDERGRADUATE COMPETITORS

NASA Lunabot Competition (2012-2013)

- David Sphar, ECE – NASA Lunabot Competition
 - Corry Burnett, MAE – NASA Lunabot Competition
 - William Miller (Jesse), MAE - NASA Lunabot Competition
-

TRADE SKILLS

Manufacturing (Machinist, Welder)

- 3D printing
- CNC Lathe and End-milling Millwork in aluminum, plastics, steel, and brass
- Jig and Fixture Design
- MIG, SMAW, GAS Welding (uncertified currently)
- Fabrication for Hydraulic Structure Models (welding, machining, framing)
- Working Drawing Development with CAD
- Machine and Tool Maintenance
- PLC programing
- G-Code and Conversational Programming for CNC Milling Operations
- Operation and Safety
- GD&T

Residential Construction (Foreman, Lead Framer, and Laborer)

- Concrete finish-work, formwork, and foundation
- Tilework
- Framing including stairs and roofs systems.
- Finish Millwork
- Siding
- Roofing
- Insulating
- Door and Window installation
- Plumbing
- Cabinet Construction and Installation
- Drywall and Mudding
- Machine and Tool Maintenance
- Bidding
- Operation and safety

Drafting/Solid Modeling

- Architectural Residential House Plans
- Well Proof Plans
- Solid Edge and Basic FEA Analysis with add-in Software
- Autodesk Inventor

Private Pilot

- Cessna 172, Piper PA-180