

ANGELA MINICHELLO, Ph.D., P.E.

Utah State University
ENGR 217
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Logan, Utah 84322-4160
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EDUCATION and PROFESSIONAL PREPARATION

Ph.D., Engineering Education

Utah State University, 2016, Logan, Utah

Dissertation: *“Toward Alternative Pathways in Engineering Education: Nontraditional Student Success in a Distance-Delivered Engineering Transfer Program”*

Co-Advisors:

Dr. Oenardi Lawanto, Department of Engineering Education, College of Engineering
Dr. Sherry Marx, School of Teacher Education and Leadership, Emma Eccles Jones
College of Education and Human Services

Registered Professional Engineer (mechanical)

Colorado (#36281) 2001 - P
Utah (#5105852-2202) 2002 - P

MS, Mechanical Engineering

Georgia Institute of Technology, 1997, Atlanta, Georgia
National Science Foundation Graduate Fellowship (NSFGRP) 1994-1997

Thesis: *“Development of a Heat Transfer Module for the Thermal Management of Sealed Electronic Enclosures”*

Advisor: Dr. Ari Glezer, George W. Woodruff School of Mechanical Engineering

BS, Mechanical Engineering (Aerospace emphasis)

United States Military Academy (USMA), 1987, West Point, New York
Dean’s List (4 years)
Graduated *with distinction* (Top 5% of graduating class, 14th of 1032)

RESEARCH INTERESTS

Engineering professional formation and identity development
Engineering problem solving
e-learning and educational technology
Inclusive engineering education
Qualitative, mixed methods, and mixed methodologies research
Design-based research

FACULTY APPOINTMENTS

2016 – P Assistant Professor (tenure track)

Department of Engineering Education, Utah State University, Logan, Utah

2009 – 2016 Principal Lecturer, Engineering (non-tenure track)

Department of Engineering Education, Utah State University

Brigham City Regional Campus, Brigham City, Utah

Developed and instructed core undergraduate engineering courses via distance delivery (synchronous broadcast and asynchronous online) for pre-professional engineering students.

2005 – P Adjunct Faculty

Department of Mechanical and Aerospace Engineering, Utah State University, Logan, Utah

Develops curricula and instructs mechanical engineering courses within the thermal-fluids area.

PROFESSIONAL EXPERIENCE

2004 - 2010 President and Principal Engineer

CastleRock Engineering, Inc., Logan, UT

Small business owner/founder. Secured federal/ state sponsored research grants (SBIR, STTR, Utah COE) and industry engineering contracts. Conducted research and provided engineering services including thermal-fluids analysis (CFD, FEA) and mechanical design (CAD).

2002 - 2006 Senior Mechanical /Thermal Engineer

Space Dynamics Laboratory, Utah State University Research Foundation, North Logan, UT

Lead Mechanical / Thermal Engineer for military-grade electronic systems supporting customers including Raytheon, Lockheed Martin, the Naval Research Laboratory, and NASA.

1998 - 2002 Research and Development Engineer

Ft Collins Systems & Technology Laboratory, Hewlett Packard Company, Ft Collins, CO

Lead Thermal Engineer on a high-availability, 32-processor UNIX server product line.

1997 - 1998 Manufacturing Engineer

All-in-One Division, Hewlett Packard Company, San Diego, CA

Engineer responsible for troubleshooting manufacturing issues for the *Office Jet* product line.

1994 - 1997 Graduate Research Assistant

NSF Microsystems Packaging Research Center, Georgia Institute of Technology, Atlanta, GA

1987 – 1994 Active Duty U.S. Army Commissioned Officer (Aviation Branch)

CH-47 C/D (Chinook) Medium Lift Helicopter Pilot. Operation Desert Shield/Storm veteran. As an U.S. Army officer commissioned in the Aviation Branch, served in five countries across two continents. Held wide-ranging leadership positions including Detachment Commander,

Flight Operations Officer, Flight Platoon Leader, and CH47D Night Vision Goggle Pilot-in-Command. Over 1000 hours flown (58 combat hours). Air Medal recipient.

UNITED STATES PATENTS

Kiara, A., Malmendier, A., Richards, G., & **Minichiello, A.** “*EMA: Artificial Intelligence Platform for Instructure Augmentation*,” patent disclosure submitted June 2018.

Clements, B. & **Minichiello, A.** “*Mounting Apparatus for Coupling Control Circuitry to an Air-Moving Device*,” US Patent # 6,924,979, August 2, 2005.

Simon, G., V. Srinivas, V., **Minichiello, A.**, Clements, B., & Lucas, C. “*Fan-securing device for use with a heat transfer device*,” US Patent # 6,650,541, November 18, 2003 and US Patent # 6,879,487, April 12, 2005.

Clements, B., & **Minichiello, A.** “*Externally Mounted Online Replaceable Fan Module*,” US Patent # 6,690,576, February 10, 2004.

Rubenstein, B. Clements, B., & **Minichiello, A.** “*Mushroom Head Clip Fastener*,” US Patent # 6,662,411, December 16, 2003.

Clements, B. & **Minichiello, A.** “*Electro-Magnetic Interference (EMC) Gasket Providing Air Ventilation Holes while Spacing Cards on 0.9 inch Centers*,” (Pending, July 2001).

HONORS and AWARDS

Co-Researcher of the Year, Utah State University, College of Engineering, Department of Engineering Education, February 2019.

Undergraduate Research Mentor of the Year, Utah State University, College of Engineering, Department of Engineering Education, February 2019.

Nominated for the American Society of Civil Engineering (ASCE) Educator of the Year Award, USU ASCE Student Chapter, February 2018.

Outstanding Teacher of the Year. Utah State University, College of Engineering, Department of Engineering Education, February 2018.

Washington D.C. Faculty Fellow, Office of Research and Graduate Studies (RGS). Distinction awarded by the College of Engineering, Utah State University (USU). Travel award to Washington D.C. to visit federal funding agencies provided by the USU RGS Office, December 2017.

Outstanding Graduate Scholar, College of Engineering, Utah State University, April 2016.

Exemplary Online Course, MAE 2300 Thermodynamics I, Distinction awarded by the Center for Instructional Design and Innovation (CIDI), Utah State University, November 2015.

Graduate Student International Travel Award, Utah State University Office of Research and Graduate Studies, \$400 to attend the 6th Research in Engineering Education Symposium, Dublin Ireland, July 2015.

Doctoral Student Travel Award, Utah State University, College of Engineering, \$250 to attend the 6th Research in Engineering Education Symposium, Dublin Ireland, July 2015.

Research Mentor of the Year. Utah State University Regional Campuses, August 2014.

Undergraduate Research Mentor of the Year. Utah State University, Brigham City Regional Campus, May 2014.

Outstanding Graduate Student of the Year. Utah State University, College of Engineering, Department of Engineering Education, April 2014.

Online Teaching Fellow. For demonstrating “outstanding skills and commitment to excellence” in online teaching, Utah State University, September 2013-September 2014.

Small Business Commerce Association Best of Business Award. CastleRock Engineering Inc., Logan, Utah, 2009.

NASA Langley Group Achievement Award. “For exceptional achievements in the successful development and flight of the Far-Infrared Spectroscopy of the Troposphere Experiment,” 2006.

Space Dynamics Laboratory Outstanding Performance Award. “In recognition of outstanding performance and innovation in solving our Navy customer’s reliability and capability problems with the Common Data Link hardware,” 2005.

National Science Foundation Graduate Research Fellowship. 1994-1997.

Distinguished Honor Graduate. (1st in class), US Army Aviation Officer’s Advanced Course, 1993.

Commandant’s List Graduate. (Top 10% of class) US Army Aviation Rotary Wing Flight School, 1988.

Graduate. U.S. Army Airborne and Air Assault Schools, 1987.

First Female Graduate. US Army JFK Special Warfare Center High Risk SERE School, 1987.

Distinguished Graduate. (Top 5% of graduating class, 14th of 1032), United States Military Academy (USMA), 1987.

RESEARCH SUPPORT

Currently Funded

1. Claiborn, C. (PI), Adesope, O. (Co-PI), & **Minichiello, A. (Co-PI)**. “*Research Initiation: Engineering Student Success, Persistence, and Participation in Multiple High Impact Engagement Activities at Land Grant Universities*,” \$199,453, National Science Foundation, EEC-RIEF, Award No.1927218, **Sept 1, 2019 to Aug 31 2021**.
2. **Minichiello, A. (PI)**, Kulyukin, V. (Co-PI), & Truscott, T. (Co-PI). “*Mobile Instructional Particle Image Velocimetry (mI-PIV): Hands-on Flow Visualization and Experimentation for Improved Student Interest and Technical Capacity in Navy-relevant Engineering Careers*,” \$799,438, United States Department of Defense, Office of Naval Research, Award No. N00014-18-1-2770, **Sept 1, 2018 to Aug 31 2021**.
3. **Minichiello, A. (PI)**. “*Learning from Engineers to Develop a Model of Disciplinary Literacy in Engineering*,” \$317,000, National Science Foundation, Engineering Education and Centers EEC-RFE Award No. 1664228, **July 1, 2017 to June 30, 2020**. Amy Wilson-Lopez (former PI) and Angela Minichiello (former Co-PI).

Pending

1. **Minichiello, A. (PI)**. “*CAREER: Narrating the Professional Formation of Engineers: Understanding Student Veterans and Service Members’ Experiences of Transition and Identity as ‘Stories to Live By*,” \$557, 832, National Science Foundation, EEC-RFE, **submitted July 16, 2019**.
2. Richards, G. (PI), Gunther, J. (Co-PI), Malmendier, A. (Co-PI), **Minichiello, A. (Co-PI)**, & Reeve, K. (Co-PI). “*ECR PEER: MechOverflow: Transforming Engineering Education in Mechatronics for the Aerospace and Transportation Industries*,” \$1,609,946, National Science Foundation, ECR-PEER, **submitted May 14, 2019**.
3. Lawanto, O. (PI) & **Minichiello, A. (Co-PI)**. “*Self-Regulation of Cognition and Motivation During Problem Solving in Science, Technology, Engineering and Mathematics (STEM)*,” \$594,699, IUSE, National Science Foundation, **submitted December 11, 2018**.

In Preparation

1. Sorenson, A. (PI), **Minichiello, A. (Co-PI)**, Thomas, R. J. (Co-PI), Macguire, M. (Co-PI), & Higbee, T. (Co-PI). “*Engineering Outreach Interventions for Adolescents with Autism Spectrum Disorder*,” \$500,000, EHR CORE, National Science Foundation, **to be submitted October, 2019**.

Completed

1. **Minichiello, A. (PI)** & Hailey, C. (Co-PI) “*Online Learning Forums for Improved Engineering Student Outcomes in Calculus*,” \$199,979, National Science Foundation, Division of Undergraduate Education (DUE), Award No. DUE-1245194, **February 1, 2013 to January 31, 2018**.

2. Wendell, S. (PI), Graham, J. (Co-PI), & **Minichiello, A. (Co-PI)**. "Developing an Introduction to MAE Course for Improved Student Retention," \$47,000, Utah State University, Office of the Provost, Curriculum Innovation and Reform Proposal, **September 13, 2016 to September 12, 2017**.
3. **Minichiello, A. (PI)** & Smith, B. L. "STTR Phase I: Direction and Profile Control for Thermal Sprays," \$149,993, National Science Foundation, Division of Innovation and Industrial Partnerships (IIP), Award No. **January 1, 2008 to June 1, 2009**.
4. Kulyukin, V. (PI) & **Minichiello, A. (Co-I)** "STTR: A Wearable Multi-Sensor Navigation Device for the Visually Impaired," \$129,062, National Institutes of Health, National Eye Institute (NEI), Award No. 1 R41 EY017516-01A1, **September 30, 2006 to August 31, 2008**.
5. **Minichiello, A. (PI)** & Smith, B. L. "SBIR Phase I: Particle Sorting via Aerodynamic Vectoring," \$115,674, National Institutes of Health, National Institute of Environmental Health Sciences (NIEHS), Award No.1 R43 ES014506-01, **August 15, 2006 to February 14, 2008**.
6. **Minichiello, A. (PI)** & Smith, B. L. "STTR Phase I: Particle Sorting via Aerodynamic Vectoring," \$99,980, National Science Foundation, Division of Manufacturing Innovation (DMI), Award, No. DMI-0512525, **July 1, 2005 to June 30, 2006**.

JOURNAL PUBLICATIONS

(⁺corresponding author, [✧]graduate advisee, ^{✧✧}undergraduate advisee)

1. Wilson-Lopez⁺, A., Strong, A., Sias, C., Garlick, J., **Minichiello, A.**, Weingart, S., & Jorge Acosta-Feliz, J. (under review). A systematic review of argumentation in K-16 engineering education. *Journal of Engineering Education*.
2. Lawanto⁺, O., **Minichiello, A.**, Uziak, J., & Febrian, A. (2019). Task affect and task understanding in engineering problem solving. *Journal of Technology Education*, 30(2).
3. **Minichiello⁺, A.**, Hood[✧], J. R., & Harkness[✧], D. S. (2018). Bringing user experience design to bear on STEM education: A narrative literature review. *Journal for STEM Education Research*, 1(1), 7-33, <https://doi.org/10.1007/s41979-018-0005-3>
4. Lawanto⁺, O., **Minichiello, A.**, Uziak, J., & Febrian, A. (2018). Students' task understanding during engineering problem solving in an introductory Thermodynamics course. *International Education Studies*, 11(7), 43-53, <https://doi.org/10.5539/ies>.
5. **Minichiello⁺, A.** (2018). From deficit thinking to counter storytelling: A narrative inquiry of nontraditional undergraduate experience in engineering education. *International Journal of Education in Mathematics, Science and Technology*, 6(3), Special Issue on Engineering Education, 266-284.

6. **Minichiello⁺, A.**, Marx, S., McNeill, L., & Hailey, C. (2018). Exploring student study behaviours in engineering: How undergraduates prepared textbook problems for online submission. *European Journal of Engineering Education*, doi:10.1080/03043797.2018.1474342
7. Wilson-Lopez⁺, A. & **Minichiello, A.** (2017). Disciplinary literacy in engineering. *Journal of Adolescent & Adult Literacy*, 61(1), 7-14.
8. **Minichiello⁺, A.**, Glezer, A., Hartley, J. G., & Black, W. Z. (1997). Thermal management of sealed electronic enclosures using synthetic jet technology. *Advances in Electronic Packaging, 1997: Proceedings of the Pacific Rim/ASME International Intersociety Electronic & Photonic Packaging Conference*, INTERpack '97, EEP-Vol.19-2, pp. 1809-1812, New York, N.Y: American Society of Mechanical Engineers.

CHAPTERS in EDITED VOLUMES

(⁺corresponding author, [✧]graduate advisee, ^{✧✧}undergraduate advisee)

1. **Minichiello⁺, A.** (2016). Examining academic integrity in the postmodern: Undergraduates' use of solutions to complete textbook-based engineering coursework. In S. Marx (Ed.), *Qualitative research in STEM education: Studies of equity, access and innovation*. New York: Routledge.
2. **Minichiello⁺, A.**, Blake, T., Goodridge, W., & Sam, D. (2015). Interdisciplinary team instruction in a distance-delivered, first year engineering course. In A. Blackstock & N. Straight (Eds.), *Connected classrooms: Interdisciplinary approaches to distance teaching*. Routledge Research in Education Series. New York: Routledge/Taylor & Francis.
3. **Minichiello⁺, A.** (2006). Chapter 40: A first-order thermal analysis of balloon-borne air-cooled electronics. In M. Kuntz (Ed.), *Heat transfer calculations*, McGraw-Hill.

REFEREED CONFERENCE PROCEEDINGS

(⁺corresponding author, [✧]graduate advisee, ^{✧✧}undergraduate advisee)

1. Caldwell^{✧+}, L., Armijo[✧], D., Mukerjee[✧], S., **Minichiello, A.**, Truscott, T., & Kulyukin, V. (2019). Work in progress: Mobile instructional particle image velocimetry for STEM outreach and undergraduate fluid mechanics education. *Proceedings of the 126th Annual ASEE Conference & Exposition*, Tampa, FL.
2. Green^{✧+}, T., Wilson-Lopez, A., & **Minichiello, A.** (2019). Developing a model of disciplinary literacy instruction for K-12 engineering education: Comparing the literacy practices of electrical and mechanical engineers (Fundamental). *Proceedings of the 126th Annual ASEE Conference & Exposition*, Tampa, FL.

3. **Minichiello⁺, A.** (2019). The methodological promise of ‘Narrative Inquiry’ for exploring student veteran and service member experience as ‘People in Relation.’ *Proceedings of the 126th Annual ASEE Conference & Exposition*, Tampa, FL.
4. Wilson-Lopez⁺, A., **Minichiello, A.**, & Green[✧], T. (2019). An inquiry into the use of intercoder reliability measures in qualitative research. *Proceedings of the 126th Annual ASEE Conference & Exposition*, Tampa, FL.
5. Lawanto⁺, O., **Minichiello, A.**, & Iqbal, A. (2019). WIP: Understanding student self-regulation during engineering problem solving: A preliminary study. *Proceedings of the 126th Annual ASEE Conference & Exposition*, Tampa, FL.
6. Elliott^{✧✧+}, J., **Minichiello, A.**, & Ellsworth, J. (2019). Work in Progress: Examining the Formation and Effects of Student Interactions on Engineering Course Performance using Social Network Analysis. *Proceedings of the ASEE Rocky Mountain Section Conference*, Laramie, WY.
7. **Minichiello⁺, A.** & Jouffray^{✧✧}, M. (2018). Communicating findings about online forum use among undergraduates in distance-delivered calculus: Developing a help seeking usage model. *Proceedings of the 125th Annual ASEE Conference & Exposition*, Salt Lake City, UT.
8. Green^{✧+}, T., **Minichiello, A.**, & Wilson-Lopez, A. (2018). Examining the literacy practices of engineers to develop a model of disciplinary literacy instruction for K-12 engineering (Work in Progress). *Proceedings of the 125th Annual ASEE Conference & Exposition*, Salt Lake City, UT.
9. Lawanto⁺, O., **Minichiello, A.**, Uziak, J., and Febrian, A. (2018). Engineering undergraduates’ task interpretation during problem solving in Thermodynamics. *Proceedings of the 125th Annual ASEE Conference & Exposition*, Salt Lake City, UT.
10. Wilson-Lopez⁺, A., Sias, C., Strong, A., Garlick, J., Weingart, S., **Minichiello, A.**, & Acosta, J. (2018). Argumentation in K-12 engineering education: A review of the literature (Fundamental). *Proceedings of the 125th Annual ASEE Conference & Exposition*, Salt Lake City, UT.
11. Wendel⁺, S., **Minichiello, A.**, Graham, K., Graham, J., & Zundel^{✧✧}, J. (2017). Developing an Introduction to Mechanical Engineering Course at Utah State University based upon National Science Foundation-Sponsored Foundation Coalition findings and methodologies. *Proceedings of the ASEE Rocky Mountain Section Conference*, Provo, UT.
12. **Minichiello⁺, A.**, Hood[✧], J., & Harkness[✧], D. (2017). WIP: Methodological considerations for constructing nontraditional student personas with scenarios from online forum usage data in calculus. *Proceedings of the 124th Annual ASEE Conference & Exposition*, Columbus, OH.
13. Harkness[✧], D., **Minichiello⁺, A.** & Marquit, J. (2016). Exploring nontraditional undergraduate resistance to active learning in an online discussion forum in calculus. *Proceedings of the 123rd Annual ASEE Conference & Exposition*, New Orleans, LA.

14. **Minichiello⁺, A.**, Hailey, C., Campbell, T., Dorward, J., Harkness[✧], D., & Marquit, J. (2016). Understanding student participation in a first-year calculus online support forum. *Proceedings of the NSF/AAAS Envisioning the Future of Undergraduate STEM Education: Research and Practice Symposium*, Washington, D.C.
15. **Minichiello⁺, A.**, Marx, S., Hailey, C., & McNeill, L. (2015). Learning practices of contemporary engineering undergraduates assigned online homework. *Proceedings of the 6th Research in Engineering Education Symposium*, Dublin, Ireland.
16. **Minichiello⁺, A.**, Campbell, T., Dorward, J., & Marx, S. (2015). Perspectives of pedagogical change within a STEM classroom. *Proceedings of the 122nd Annual ASEE Conference & Exposition*, Seattle, WA.
17. **Minichiello⁺, A.**, Marquit, J., Dorward, J. T., & Hailey, C. (2014). Emerging themes in a distance-delivered Calculus I course: Perceptions of collaboration, community and support. *Proceedings of the 121st Annual ASEE Conference & Exposition*, Indianapolis, IN.
18. **Minichiello⁺, A.**, Hailey, C., Legler, N., & Adams, V. D. (2013). Online engineering course design, part I: Toward asynchronous, web-based delivery of a first course in thermodynamics. *Proceedings of the 43rd Annual Frontiers in Education (FIE) Conference*, Oklahoma City, OK.
19. **Minichiello⁺, A.** & Hailey, C. (2013). Engaging students for success in calculus with online learning forums. *Proceedings of the 43rd Annual Frontiers in Education (FIE) Conference*, Oklahoma City, OK.
20. **Minichiello⁺, A.**, McNeill, L., & Hailey, C. (2012). Comparing engineering student use of solution manuals and student/ faculty perceptions of academic dishonesty. *Proceedings of the 119th Annual ASEE Conference & Exposition*, San Antonio, TX.
21. **Minichiello⁺, A.**, Blake, T., Goodridge, W., & Sam, D. (2011). Team teaching that goes the distance: Team instruction for a broadcast introductory engineering course. *Proceedings of the 118th ASEE Annual Conference & Exposition*, Vancouver, BC.
22. Smith⁺, B. L., Humes, Z., & **Minichiello, A.** (2006). Aerodynamic vectoring particle sorting. *Proceedings of FEDSM2006 ASME 2nd Joint U.S.-European Fluids Engineering Summer Meeting*, Paper number 2006-98266.
23. **Minichiello⁺, A.** (2006). COTS in space: Developing an environmental control system for balloon-borne air-cooled electronics. *Proceedings of the 10th InterSociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM)*, San Diego, CA, pp. 1390-1399.
24. **Minichiello⁺, A.** & Belady, C. (2002). Thermal design methodology for electronic systems. *Proceedings of the 8th InterSociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM)*, San Diego, CA, pp. 696-704.

25. **Minichiello**⁺, A. (2000). Flow network modeling: A case study in expedient system prototyping. *Proceedings of the 7th Inter Society Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM)*, Volume 1, Las Vegas, NV, pp. 70-77. (**Best Paper Award Finalist**)

OTHER PUBLICATIONS

(⁺corresponding author, [✧]graduate advisee, ^{✧✧}undergraduate advisee)

1. Smith⁺, B. L., Humes, Z. E., & **Minichiello**, A. (2007). Classification of particles by size using aerodynamic vectoring. *Bull. Am. Phys. Soc.* 52.
2. Humes, Z. E., Smith⁺, B. L., & **Minichiello**, A. (2005). Particle sorting by aerodynamic vectoring. *Bull. Am. Phys. Soc.* 50, p. 251.
3. Belady⁺, C., & **Minichiello**, A. (2003, May). Effective thermal design for electronics systems. *Electronics Cooling Magazine*, 9(2), 16-21.

OTHER CREATIVE ENDEAVORS

(⁺corresponding author, [✧]graduate advisee, ^{✧✧}undergraduate advisee)

1. **Minichiello**⁺, A. (2015). *Sheri Sheppard: Teaching and Learning Scholarship in Engineering*. Engineering Education Pioneers and Trajectories of Impact Project, University of Washington: Seattle, WA. Pioneer profile published online at <http://depts.washington.edu/celtweb/pioneers-wp/>

REFEREED CONFERENCE PRESENTATIONS (presenter is underlined)

(⁺corresponding author, [✧]graduate advisee, ^{✧✧}undergraduate advisee)

1. **Minichiello**⁺, A. (expected April, 2020). “*Experiencing Success: Nontraditional Undergraduates in a Distance-delivered, Engineering Transfer Program*,” submitted to the 2020 American Education Research Association (AERA) Annual Meeting, San Francisco, CA.
2. **Minichiello**⁺, A. (June, 2019). “*The Methodological Promise of ‘Narrative Inquiry’ for Exploring Student Veteran and Service Member Experience as ‘People in Relation,’*” 126th Annual ASEE Conference & Exposition, Tampa, FL.
3. Wilson-Lopez⁺, A., **Minichiello**, A., & Green[✧], T. (June, 2019). “*An Inquiry into the Use of Intercoder Reliability Measures in Qualitative Research*,” 126th Annual ASEE Conference & Exposition, Tampa, FL.
4. Lawanto⁺, O., **Minichiello**, A., & Iqbal, A. (June, 2019). “*WIP: Understanding Student Self-Regulation during Engineering Problem Solving: A Preliminary Study*.” 126th Annual ASEE Conference & Exposition, Tampa, FL.

5. Caldwell^{♦+}, L., Armijo[♦], D., Mukerjee[♦], S., **Minichiello, A.**, Truscott, T., & Kulyukin, V. (June, 2019). “*Work in Progress: Mobile Instructional Particle Image Velocimetry for STEM Outreach and Undergraduate Fluids Mechanics Education*,” 126th Annual ASEE Conference & Exposition, Tampa, FL.
6. Elliott^{♦♦+}, J., **Minichiello, A.**, & Ellsworth, J. (May, 2019). “*Work in Progress: Examining the Formation and Effects of Student Interactions on Engineering Course Performance using Social Network Analysis*,” ASEE Rocky Mountain Section Conference, Laramie, WY.
7. **Minichiello⁺, A.** & Jouffray^{♦♦}, M. (May, 2019). “*A User-Centered Design Approach for Sharing Research Findings with Teaching Practitioners*,” ASEE Rocky Mountain Sections Conference, Laramie, WY.
8. **Minichiello⁺, A.** & Hanks^{♦♦}, E. (April, 2019). “*Exploring Narrative Inquiry as Pedagogy for Professional Identity Formation in Engineering Education*,” 2019 American Education Research Association (AERA) Annual Meeting, Toronto, CA.
9. Green^{♦+}, T., Wilson-Lopez, A., & **Minichiello, A.** (April, 2019). “*Examining the Literacy Practices of Electrical Engineers: A Comparative Case Study*,” 2019 American Education Research Association (AERA) Annual Meeting, Toronto, CA.
10. Wilson-Lopez⁺, A., Sias, C., **Minichiello, A.**, Garlick, J., Acosta, J., & Strong, A. (November, 2018). “*A Systematic Review of Research on Argumentation in Engineering Education*,” Literacy Research Association (LRA) Annual Conference, Indian Wells, CA.
11. Lawanto⁺, O., **Minichiello, A.**, Uziak, J., & Febrian, A. (June, 2018). “*Engineering Undergraduates’ Task Interpretation during Problem Solving in Thermodynamics*,” 125th Annual ASEE Conference & Exposition, Salt Lake City, UT.
12. Wilson-Lopez⁺, A., Sias, C., Strong, A., Garlick, J., Weingart, S., **Minichiello, A.**, & Acosta, J. (June, 2018). “*Argumentation in K-12 Engineering Education: A Review of the Literature (Fundamental)*,” 125th Annual ASEE Conference & Exposition, Salt Lake City, UT.
13. **Minichiello⁺, A.** (April, 2018). “*Using Narrative Inquiry to Explore Veteran Undergraduate Experience in Engineering Education*,” American Education Research Association (AERA) Annual Meeting, New York City, NY.
14. **Minichiello⁺, A.** (April, 2018). “*Applying Usage Model Concepts to Describe Nontraditional Undergraduate Online Forum Help-seeking Behaviors in Calculus*,” American Education Research Association (AERA) Annual Meeting, New York City, NY.
15. Wendel⁺, S., **Minichiello, A.**, Graham, K., Graham, J., and Zundel^{♦♦}, J. (September, 2017). “*Developing an Introduction to Mechanical Engineering Course at Utah State University based upon National Science Foundation-Sponsored Foundation Coalition Findings and Methodologies*,” ASEE Rocky Mountain Section Conference, Provo, UT.

16. **Minichiello⁺, A.**, Hood[✧], J., & Harkness[✧], D. (June, 2017). *“WIP: Methodological Considerations for Constructing Nontraditional Student Personas with Scenarios from Online Forum Usage Data in Calculus,”* 124th Annual ASEE Conference & Exposition, Columbus, OH.
17. **Minichiello⁺, A.** (April, 2017). *“Living Deficit-ly? Nontraditional Transfer Student Experience in Undergraduate Engineering,”* American Education Research Association (AERA) Annual Meeting, San Antonio, TX.
18. **Harkness[✧], D.** & **Minichiello⁺, A.** (June, 2016). *“Exploring Student Resistance to Online Discussion Forums in Calculus,”* 123rd Annual ASEE Conference & Exposition, New Orleans, LA.
19. **Minichiello⁺, A.** (May, 2016). *“Narratives of the Nontraditional: Stories along a Road Less Traveled in Engineering Education,”* Twelfth International Congress of Qualitative Inquiry, University of Illinois, Champaign-Urbana, IL.
20. **Minichiello⁺, A.** (May, 2016). *“Examining Academic Integrity in the Postmodern: Undergraduates’ Use of Solutions to Complete Textbook-based Engineering Coursework,”* Twelfth International Congress of Qualitative Inquiry, University of Illinois, Champaign-Urbana, IL.
21. **Minichiello⁺, A.**, Hailey, C., Campbell, T., Dorward, J., Harkness[✧], D., & Marquit, J. (April, 2016). *“Understanding Student Participation in a First-year Calculus Online Support Forum,”* NSF/AAAS Envisioning the Future of Undergraduate STEM Education: Research and Practice Symposium, Washington, D.C.
22. **Minichiello⁺, A.**, Marx, S., Hailey, C., & McNeill, L. (July, 2015). *“Learning Practices of Contemporary Engineering Undergraduates Assigned Online Homework,”* 6th Research in Engineering Education Symposium (REES), Dublin, Ireland.
23. **Minichiello⁺, A.**, Campbell, T., Dorward, J. T., & Marx, S. (June, 2015). *“Perspectives of Pedagogical Change within a STEM Classroom,”* 122nd Annual ASEE Conference & Exposition, Seattle, WA.
24. **Minichiello⁺, A.**, Marx, S., Hailey, C., & McNeill, L. (May, 2015). *“Deconstructing Academic Integrity: Understanding the Use of Solutions by Engineering Undergraduates During Textbook-Based Homework Preparation,”* Eleventh International Congress of Qualitative Inquiry, University of Illinois, Champaign-Urbana, IL.
25. **Minichiello⁺, A.**, Hailey, C., Legler, N., & Adams, V.D. (October, 2013). *“Online Engineering Course Design, Part I: Toward Asynchronous, Web-based Delivery of a First Course in Thermodynamics,”* 43rd Annual Frontiers in Education Conference, Oklahoma City, OK.

26. **Minichiello⁺, A.** & Hailey, C. (October, 2013). “*Engaging Students for Success in Calculus with Online Learning Forums*,” 43rd Annual Frontiers in Education Conference, Oklahoma City, OK.
27. **Minichiello⁺, A.**, McNeill, L., & Hailey, C. (June, 2012). “*Comparing Engineering Student Use of Solution Manuals and Student/Faculty Perceptions of Academic Dishonesty*,” 119th ASEE Annual ASEE Conference & Exposition, San Antonio, TX.
28. **Minichiello⁺, A.**, Blake, T., Goodridge, W., & Sam, D. (June, 2011). “*Team Teaching that Goes the Distance: Team Instruction for a Broadcast Introductory Engineering Course*,” 118th ASEE Annual Conference & Exposition, Vancouver, BC.
29. **Smith⁺, B. L.**, Humes, Z., & **Minichiello⁺, A.** (July, 2006). “*Aerodynamic Vectoring Particle Sorting*,” FEDSM2006 ASME 2nd Joint U.S.-European Fluids Engineering Summer Meeting, Miami, FLA.
30. **Minichiello⁺, A.** & Belady, C. (June, 2002). “*Thermal Design Methodology for Electronic Systems*,” 8th InterSociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM), San Diego, CA.
31. **Minichiello⁺, A.** (May, 2000). “*Flow Network Modeling: A Case Study in Expedient System Prototyping*,” 7th Inter Society Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM), Las Vegas, NV. (***Best Paper Award Finalist***).
32. **Minichiello⁺, A.**, Glezer, A., Hartley, J. G., & Black, W. Z. (June, 1997). “*Thermal Management of Sealed Electronic Enclosures using Synthetic Jet Technology*,” Pacific Rim/ASME International Intersociety Electronic and Photonic Packaging Conference, Kohala Coast, HI.

REFEREED POSTER PRESENTATIONS (presenter is underlined)

(⁺corresponding author, [✧]graduate advisee, ^{✧✧}undergraduate advisee)

1. **Green^{✧+}, T.**, Wilson-Lopez, A., & **Minichiello⁺, A.** (June, 2019). “*Developing a Model of Disciplinary Literacy Instruction for K-12 Engineering Education: Comparing the Literacy Practices of Electrical and Mechanical Engineers (Fundamental)*,” 126th Annual ASEE Conference & Exposition, Tampa, FL.
2. **Minichiello⁺, A.** & Hanks^{✧✧}, E. (February, 2019). “*Becoming Engineers: Exploring Undergraduate Identity Recognition and Reconstruction within a Technical Engineering Course through Student-authored Narratives*,” 31st Annual Ethnographic & Qualitative Research Conference (EQRC), Las Vegas, NV.
3. **Green^{✧+}, T.**, **Minichiello⁺, A.**, & Wilson-Lopez, A. (June, 2018). “*Examining the Literacy Practices of Engineers to Develop a Model of Disciplinary Literacy Instruction for K-12*

Engineering (Work in Progress),” 125th Annual ASEE Conference & Exposition, Salt Lake City, UT.

4. Minichiello⁺, A., Jouffray^{❖❖}, M., & Olson^{❖❖}, E. (June, 2018). “*Communicating Findings about Online Forum Use among Undergraduates in Distance-Delivered Calculus: Developing a Help Seeking Usage Model,*” 125th Annual ASEE Conference & Exposition, Salt Lake City, UT.

5. Minichiello⁺, A., Jouffray^{❖❖}, M., & Olson^{❖❖}, E. (March, 2018). “*STEM Students as Product Users? Synthesizing Nontraditional Undergraduate Help-Seeking via a User-Centered Design Framework,*” ASEE Zone IV Conference, Boulder, CO.

6. Minichiello⁺, A. (June, 2015). “*Alternative Pathways in Engineering Education: Nontraditional Student Success in a Distance-Delivered Engineering Transfer Program,*” Graduate Student Division Poster Session, 122nd Annual ASEE Conference & Exposition, Seattle, WA.

7. Minichiello⁺, A., Marquit, J., Dorward, J. T., Hailey, C., Fisher^{❖❖}, A., & Holt^{❖❖}, E. (June, 2014). “*Emerging Themes in a Distance-Delivered Calculus I Course: Perceptions of Collaboration, Community, and Support,*” NSF Grantees Poster Session, 121st Annual ASEE Conference & Exposition, Indianapolis, IN.

8. Minichiello⁺, A. (June, 2006). “*COTS in Space: Developing an Environmental Control System for Balloon-Borne Air-Cooled Electronics,*” 10th InterSociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM), San Diego, CA.

OTHER PRESENTATIONS (presenters are underlined)

(⁺corresponding author, [❖]graduate advisee, ^{❖❖}undergraduate advisee)

1. Armijo^{❖+}, D., Caldwell[❖], L., Mukerhee[❖], S., **Minichiello, A.**, Truscott, T., & Kulyukin, V. (November, 2019). “*Mobile Instructional Particle Image Velocimetry for Fluid Physics Education,*” American Society of Mechanical Engineering (ASME), International Mechanical Engineering Congress and Exposition (IMECE), Salt Lake City, UT. **(Oral Presentation)**

2. Mork^{❖❖}, J. (October, 2018). “*Increasing the Diversity and Inclusion in the USU AIAA Student Chapter,*” Utah State University Inclusive Excellence Symposium, Logan, UT. **(Poster Presentation)**

3. Minichiello⁺, A. (August, 2017). “*Positioning Yourself for Success at Utah State: Faculty Perspectives,*” Faculty Panel, New Faculty Orientation, Office of the Provost, Utah State University, Logan, UT. **(Invited Panelist).**

4. Minichiello⁺, A. (June, 2017). “*A Narrative Qualitative Methodology,*” Guest lecturer for Qualitative Methods I doctoral course, School of Teacher Education and Leadership (TEAL),

Emma Eccles Jones College of Education and Human Services, Utah State University, Logan, UT. **(Invited Speaker).**

5. Minichiello⁺, A. (June, 2016). “*Community in Engineering Education: Past, Present, and Future*,” Interactive Session held for the NSF- Sponsored Engineering Education Pioneers and Trajectories of Impact project, 123rd Annual ASEE Conference & Exposition, New Orleans, LA. **(Small group discussion leader).**

6. Minichiello⁺, A. (April, 2016). “*Nontraditional Student Experience in Engineering Education*,” Narrative Research Special Interest Group (SIG), Doctoral Student Seminar, American Educational Research Association (AERA) Annual Meeting, Washington D.C. **(Doctoral Student Seminar Presenter).**

7. Minichiello⁺, A. (February, 2016). “*Asynchronous Learning Networks: Accessing the Potential of Online Interaction*,” Invited presentation for the Department of Engineering Education, The Ohio State University, Columbus, OH. **(Invited Speaker).**

8. Farrell⁺, S., Chan, B., & Minichiello, A. (June 2015). “*Year of Action on Diversity Session: Safe Zone/Positive Space Ally Training I (Level I)*,” 122nd Annual ASEE Conference & Exposition, Seattle, WA. **(Workshop Co-Presenter).**

9. Minichiello⁺, A., Campbell, T., & Fisher⁺, A. (August, 2014). “*Engaging Students with Technology: Online Learning Forums*,” Empowering Teaching Excellence Conference, Utah State University, Logan UT. **(Workshop Co-Presenter).**

10. Minichiello⁺, A. (March, 2014). “*Beyond Active Learning: Traversing the Constructivist Continuum in e-Learning Courses*,” Online Teaching Fellows Webinar Series, Utah State University, Logan, UT. **(Online Workshop Presenter).**

11. Minichiello⁺, A. (March, 2014). “*Faculty Research Highlight: Exploring the Perceptions of Collaboration, Community and Support in a Distance-Delivered Calculus I Course*,” Engineering Education Research Seminar, Department of Engineering Education, College of Engineering, Utah State University, Logan, UT. **(Invited Speaker).**

12. Legler⁺, N., Leike, J., Minichiello, A., & Radford, C. (February, 2014). “*FAQ Panel: Assessment and Grading in e-Learning Courses*,” Online Teaching Fellows Webinar Series, Utah State University, Logan, UT. **(Invited Panelist).**

13. Etchberger⁺, L. & Minichiello, A. (August, 2011). “*Starting at the End: Teaching with Learning Outcomes*,” Workshop given at the Utah State University Regional Campuses Annual Faculty Retreat, Logan, UT. **(Workshop Co-Presenter).**

14. Minichiello⁺, A. (March, 2011). “*The Future of Engineering and the USU Associates in Pre-Engineering (APE) Program*,” Guest Speaker, Brigham City Kiwanis Club, Brigham City, UT. **(Invited Speaker).**

15. **Minichiello⁺, A.** (October, 2010). “*ENGR 2030 Engineering Mechanics: Dynamics FE Review*,” Guest Lecturer, Fundamentals of Engineering (FE) Exam Review, College of Engineering, Utah State University, Logan, UT. **(Invited Technical Lecture).**
16. **Minichiello⁺, A.** (October 2005, October 2009; December 2010). “*Engineering my Life*,” Guest Speaker, Women in Engineering Seminar, College of Engineering, Utah State University, Logan, UT. **(Invited Speaker).**

WORKSHOP PARTICIPATION

1. **Minichiello, A.** Selected Participant: “*International Workshop for Narrative Inquiry*,” Philosophisch-Theologische Hochschule (PTHV), Vallendar Germany, June 2019 **(Participant).**
2. **Minichiello, A.** Selected Participant and Honorarium: “*Maturity, Complexity, Engagement: Support Adult Engineering Students on Your Campus*,” NSF-sponsored workshop held at University of Colorado, Boulder, CO, April 2018 **(Participant).**
3. **Minichiello, A.** Selected Participant and Travel Award: “*Who’s Not at the Table? Building Research Capacity for Underserved Communities in Engineering*,” NSF-sponsored workshop held at Clemson University, Clemson, SC, October 2016 **(Participant).**
4. **Minichiello A.** Selected Participant: *2016 Doctoral Student Seminar of the Narrative Research Special Interest Group of the American Educational Research Association (AERA)*, 2016 AERA Annual Meeting, Washington, D.C., April 2016 **(Participant).**
5. **Minichiello, A.** Selected as an Engineering Education Pioneer Interviewer and Travel Award to 2014 ASEE annual conference: NSF-sponsored *Engineering Education Pioneers and Trajectories of Impact* project, University of Washington, Seattle, WA, June 2014, **(Participant).**
6. **Minichiello, A.** Selected Participant and Travel Award: *Hands-on Workshop for Three NSF-Funded Innovations in Mechanics Education*, NSF-sponsored workshop held at Pennsylvania State University, State College, PA, August 2009 **(Participant).**

TEACHING and CURRICULUM DEVELOPMENT EXPERIENCE

‡ Indicates course with a full laboratory component

* Indicates course taught via IVC Interactive Video Conferencing

‡ Indicates course taught asynchronously online

Graduate Courses

Utah State University, Department of Engineering Education, Logan Campus

EED 7230 Foundations of Engineering Education (3 credits)

EED 7810 Engineering Education Research Seminar (1 credit)

Undergraduate Courses

Utah State University, Engineering, Logan Campus

ENGR 2030 Engineering Mechanics: Dynamics (3 credits)

MAE 2300 (also taught as MAE 2400) Thermodynamics I (3 credits)

MAE 3440 Heat and Mass Transfer (3 credits)

Utah State University, Engineering, Regional Campuses

*‡ ENGR 1000 Introduction to Engineering Design (2 credits)

Co-developed and taught with Drs. David Sam, Wade Goodridge, and Tracy Blake

* ENGR 2010 Engineering Mechanics: Statics (3 credits)

* ENGR 2030 Engineering Mechanics: Dynamics (3 credits)

* ENGR 2140 Strength of Materials (3 credits)

‡ ENGR 2450 Numerical Methods for Engineers (3 credits)

* MAE 2300 Thermodynamics I (3 credits)

Utah State University, Engineering, Distance Education

* MAE 2300 Thermodynamics I (3 credits)

Certificate in Engineering Education (CEED) Courses

*EEDC 6450, Principles of Engineering Teaching and Learning

Co-developed with Dr. Kurt Becker

SUPERVISED GRADUATE STUDENTS

Alison Sunderland, January 2019-P, Ph.D. student (Engineering Education)

Lori Caldwell, August 2018-P, Ph.D. student (Engineering Education), *Mobile Instructional Particle Image Velocimetry (mI-PIV): Hands-on Flow Visualization and Experimentation for Improved Student Interest and Technical Capacity in Navy-relevant Engineering Careers,* (ONR N00014-18-1-2770).

- *Naval Research Enterprise Internship Program (NREIP) Fellow*, May-August 2019, one of 75 graduate students nationwide selected for paid research internship in engineering and science education outreach (\$11,000 stipend + housing allowance)
- *College of Engineering Research Week Poster Session Graduate Student Awardee*, April 9, 2019, Poster entitled “Developing a Mobile Instructional Particle Velocimetry (mI-PIV) Tool for STEM Outreach and Undergraduate Education” prepared under my advisement
- *Utah State University Student Research Symposium Graduate Poster Presentation Award in Engineering*, April 12, 2019, Poster entitled “Developing a Mobile Instructional Particle Velocimetry (mI-PIV) Tool for STEM Outreach and Undergraduate Education” prepared under my advisement

Theresa Green, July 2017- P, Concurrent Master's (Mechanical Engineering) and Ph.D. student (Engineering Education), *Learning from Engineers to Develop a Model of Disciplinary Literacy in Engineering* (NSF EEC RFE 1664228)

Joel R. Hood, August 2016 – January 2017, Concurrent Master's (Mechanical Engineering) and Ph.D. student (Engineering Education), *Online Learning Forums in Calculus* (NSF DUE-1245194)

Derrick Shawn Harkness, May 2015- August 2016, Master's Student (Mathematics and Mathematics Education), *Online Learning Forums in Calculus* (NSF DUE-1245194)

GRADUATE STUDENT RESEARCH MENTORSHIP

Member. *Masters (M.S.) Thesis Committee* for David Armijo, Department of Mechanical and Aerospace Engineering, March 2019-P.

Member. *Ph.D. Dissertation Committee* for Kate Youmans, Department of Engineering Education, January 2019-P.

Chair. *Ph.D. Dissertation Committee* for Alison Sunderland, Department of Engineering Education, Jan 2019-P

Chair. *Ph.D. Dissertation Committee* for Lori Caldwell, Department of Engineering Education, Aug 2018-P.

Member. *Ph.D. Dissertation Committee* for Amie Baisley, Department of Engineering Education, May 2018-P.

Member. *Ph.D. Dissertation Committee* for William Tidwell, Department of Mathematics and Statistics, Interdisciplinary Mathematics Education Program, April 2018-P.

Member. *Masters (M.S.) Thesis Committee* for Md. Abdullah Al Sarfin, Department of Civil and Environmental Engineering, February 2018-August 2019.

Chair. *Ph.D. Dissertation Committee* for Theresa Green, Department of Engineering Education, Aug 2017-P.

SUPERVISED UNDERGRADUATE RESEARCH ASSISTANTS

Andrea Peterson, March 2019-P, Biological Engineering, *Mobile Instructional Particle Image Velocimetry (mI-PIV): Hands-on Flow Visualization and Experimentation for Improved Student Interest and Technical Capacity in Navy-relevant Engineering Careers* (ONR N00014-18-1-2770).

Oliver Hume, March 2019-P, Mechanical and Aerospace Engineering, *Mobile Instructional Particle Image Velocimetry (mI-PIV): Hands-on Flow Visualization and Experimentation for Improved Student Interest and Technical Capacity in Navy-relevant Engineering Careers* (ONR N00014-18-1-2770).

Joel Mork, July 2018 – Oct 2018, Mechanical and Aerospace Engineering, Faculty Sponsor for participation in USU Inclusive Excellence Symposium.

Jack Elliott, May 2018 – P, Mechanical and Aerospace Engineering, *Online Thermodynamics* (internal funding), *Social Network Analysis in Engineering Education* (internal funding, College of Engineering funding)

- College of Engineering Research Week Poster Session Undergraduate Awardee, April 9, 2019, Poster entitled “Using Social Network Analysis to Understand Student Interactions in Large, Undergraduate Courses” prepared under my advisement
- Engineering Undergraduate Research Fellow, January 2019- January 2020. Engineering education research project entitled “Using Social Network Analysis to Explore the Formation and Effects of Student Interactions on Engineering Undergraduate Performance” prepared under my advisement was funded by the USU College of Engineering Undergraduate Research Program (EURP) (\$4,500 over 3 semesters)

Emily Hanks, May 2018 – December 2018, Mechanical and Aerospace Engineering, *Professional Formation Narrative Inquiry* (internal funding)

Erik Olson, Jan 2018 – April 2019, Mechanical and Aerospace Engineering, *Online Learning Forums in Calculus* (NSF DUE-1245194), *Self Efficacy in Engineering Education* (internal funding), *Modular Micro Ethics Curriculum for Mechanical Engineering Education* (internal funding)

Matthew Jouffray, May 2017- June 2019, Mechanical and Aerospace Engineering, *Online Learning Forums in Calculus* (NSF DUE-1245194), *Social Network Analysis in Engineering Education* (internal funding), *Modular Micro Ethics Curriculum for Mechanical Engineering Education* (internal funding)

Jayden Zundel, August 2016 – May 2018, Mechanical and Aerospace Engineering, *Developing an Introduction to MAE Course for Improved Student Retention; Social Network Analysis in Engineering Education* (internal funding)

Abby Fisher, August 2013 - August 2015, Mathematics and Statistics, *Online Learning Forums in Calculus* (NSF DUE-1245194)

- Undergraduate Student Researcher of the Year, Utah State University, Brigham City Regional Campus, May 2014.

Elise Holt, January 2014 - August 2014, Mathematics Education, *Online Learning Forums in Calculus* (NSF DUE-1245194)

SUPERVISED GRADUATE TEACHING ASSISTANTS

Matthew Nelson, Ph.D. student (Mechanical Engineering), MAE 2300 Thermodynamics, Fall 2017, Spring 2018, Fall 2018, Spring 2019

Zeke Villareal, Ph.D. student (Mechanical Engineering), MAE 2300 Thermodynamics, Fall 2016, Spring 2017

SUPERVISED UNDERGRADUATE PEER LEARNING ASSISTANTS

Jonah Turcsanski, Mechanical Engineering, MAE 2300, Thermodynamics, Spring 2019

Jade Snyder, *Undergraduate Teaching Fellow*, Civil and Environmental Engineering, MAE 2300, Thermodynamics, Fall 2018, Spring 2019

Landon Bauer, Mechanical Engineering, MAE 2300, Thermodynamics, Fall 2018, Spring 2019

Jack Elliott, Mechanical Engineering, MAE 2300, Thermodynamics, Spring 2018, Fall 2018, Spring 2019

Emily Hanks, Mechanical Engineering, MAE 2300 Thermodynamics, Fall 2017, Spring 2018

Michael Hansen, Mechanical Engineering, MAE 2300 Thermodynamics, Fall 2017, Spring 2018

Hank Costner, Mechanical Engineering, MAE 2300 Thermodynamics, Fall 2016, Spring 2017

Mahala Saekada, Mechanical Engineering, MAE 2300 Thermodynamics, Fall 2016, Spring 2017

Seth Thompson, Civil and Environmental Engineering, MAE 2300 Thermodynamics, Fall 2016, Spring 2017

Laura Birkhold, Mechanical Engineering, MAE 2300 Thermodynamics I (online), Spring 2015, Fall 2015

- *Co-Teaching Assistant of the Year*, Mechanical Engineering, Utah State University, May 2015.

Blake Garff, Mechanical Engineering, MAE 2300 Thermodynamics I (online), Spring 2015

- *Co-Teaching Assistant of the Year*, Mechanical Engineering, Utah State University, May 2015.

SUPERVISED UNDERGRADUATE TEACHING ASSISTANTS

Kyle Jones, Mechanical Engineering, ENGR 2030 Dynamics, Spring 2010

Nathan Inkley, Mechanical Engineering, ENGR 2030 Dynamics, Spring 2010

PROFESSIONAL SERVICE

Member, Veterans' Committee, *Military Veterans Division*, American Society of Engineering Education (ASEE), June 2019 - P.

Member, Nominating Committee, *Engineering Ethics Division*, American Society of Engineering Education (ASEE), June 2017 - June 2020.

Immediate Past Chair, *Engineering Ethics Division*, American Society of Engineering Education (ASEE), June 2017 - June 2018.

Division Chair, *Engineering Ethics Division*, American Society of Engineering Education (ASEE), June 2016 - June 2017.

Program Chair, *Engineering Ethics Division*, American Society of Engineering Education (ASEE), June 2015 - June 2016.

Member, *National Outstanding Teaching Award Committee*, American Society of Engineering Education (ASEE), June 2015 - June 2018.

Secretary/Treasurer, *Engineering Ethics Division*, American Society of Engineering Education (ASEE), June 2014- June 2015.

ABET Program Evaluator, Engineering Accreditation Committee (EAC) on behalf of the American Society of Mechanical Engineering (ASME), November 2010-P.

Journal Reviewer

Advances in Engineering Education, 2016 (1)

Computers & Education, 2019 (1)

Current Issues in Education, 2013 (1), 2014 (3), 2015 (3)

International Journal of Education in Mathematics, Science and Technology, 2017 (1)

International Journal of Multicultural Education, 2018 (1)

Journal of Engineering Education, 2017 (1), 2018 (3), 2019 (1)

Journal of the Association for Information Science and Technology, 2017 (1), 2018 (1)

Journal for Empowering Teaching Excellence, 2019 (2)

Journal for STEM Education Research, 2018 (1)

NSF Proposal Reviewer, Engineering Education and Centers (EEC), 2019-P

Conference-Related

Reviewer. American Educational Research Association (AERA) Annual Meeting, San Francisco, CA, April 2020 (total of 40 papers reviewed across four divisions).

- Division C: Learning and Instruction, Section 1e: Engineering and Computer Science- (10 papers)
- Division J: Postsecondary Education, Section 2a: College Student Access- (10 papers)
- Online Teaching and Learning Special Interest Group (SIG)- (10 papers)
- Narrative and Research Special Interest Group (SIG)- (10 papers)

Peer Reviewer. Educational Research Methods Division, Military and Veterans Division, Computers in Education Division, Pre-College Engineering Education Division, and the Engineering Ethics Division, American Society of Engineering Education Conference (ASEE), Tampa, FL, June 2019 (11 papers).

Reviewer. Collaborative Network for Engineering and Computing Diversity (CoNECD) Annual Conference, Crystal City, VA. April 2019. (2 papers)

Reviewer. American Educational Research Association (AERA) Annual Meeting, Toronto, Canada, April 2019 (total of 21 papers reviewed across three divisions).

- Division C: Learning and Instruction, Section 1e: Engineering and Computer Science- (5 papers)
- Online Teaching and Learning Special Interest Group (SIG)- (10 papers)
- Narrative and Research Special Interest Group (SIG)- (6 papers)

Session Moderator. Empowering Teaching Excellence Conference, Center for Instructional Innovation and Design, Utah State University, August, 2018.

Member, Best Paper Committee. Professional Interest Council (PIC) IV, American Society of Engineering Education (ASEE), April - May 2018.

Peer Reviewer. Educational Research Methods Division, Military and Veterans Division, Graduate Student Division, and the NSF Grantees Poster Session, American Society of Engineering Education Conference (ASEE), Salt Lake City, UT, June 2018.

Reviewer. Online Teaching and Learning Special Interest Group (SIG), American Educational Research Association (AERA) Annual Meeting, New York, NY, April 2018. (10 papers)

Peer Reviewer. American Society of Engineering Education (ASEE) Zone IV Meeting, Boulder, CO, March 2018.

Peer Reviewer. American Society of Engineering Education (ASEE) Rocky Mountain Section Regional Meeting, Provo, UT, September 2017.

Session Moderator. Engineering Ethics Division, American Society of Engineering

Education Conference (ASEE), Columbus, OH, June 2017.

Peer Reviewer. Engineering Ethics Division, Educational Research Methods Division, American Society of Engineering Education Conference (ASEE), Columbus, OH, June 2017.

Peer Reviewer, Frontiers in Education Conference (FIE), Indianapolis, IN, October 2017.

Session Moderator. Online Teaching and Learning SIG, American Educational Research Association (AERA) Annual Meeting, San Antonio, TX, April 2017.

(Graduate) Student Reviewer. Online Teaching and Learning Special Interest Group (SIG). American Educational Research Association (AERA) Annual Meeting, San Antonio, TX, April 2017. (10 papers)

Peer Reviewer. Frontiers in Education Conference (FIE), Erie, PA, October 2016.

Session Moderator. American Society of Engineering Education (ASEE) Rocky Mountain Section Regional Meeting, Cedar City, UT, September 2016.

Peer Reviewer. Mathematics Division, American Society of Engineering Education Conference (ASEE), New Orleans, LA, June 2016.

Peer Reviewer. Engineering Ethics Division and Mathematics Division, American Society of Engineering Education Conference (ASEE), Seattle, WA, June 2015.

Peer Reviewer. Frontiers in Education (FIE) Conference, Madrid, Spain, October 2014.

Peer Reviewer. Engineering Ethics Division, American Society of Engineering Education Conference (ASEE), Indianapolis, IN, June 2014.

Session Moderator. Women in Engineering Division, American Society of Engineering Education Conference (ASEE), Indianapolis, IN, June 2014.

Peer Reviewer. Frontiers in Education (FIE) Conference, Oklahoma City, OK, October 2013.

Session Moderator. Mechanics Division, American Society of Engineering Education Conference (ASEE), San Antonio, TX, June 2012.

Professional Affiliations

Member, *American Educational Research Association (AERA)*, 2014-P

Member, *American Society of Engineering Education (ASEE)*, 2009-P

Member, *American Society of Mechanical Engineers (ASME)*, 1998-P

Member, *Institute of Electrical and Electronics Engineers (IEEE)*, 1998-2013

INSTITUTIONAL SERVICE

Utah State University

Member. *Utah State University Diversity and Inclusion Task Force*, College of Engineering Working Group, March, 2019 –P.

Reviewer. Utah State University Undergraduate Honors Program Applications, January-February, 2019.

Panelist. *New Faculty Orientation Panel*, Office of Research and Graduate Studies, August 15, 2017.

Member. *Empowering Teaching Excellence (ETE) Faculty Committee*, Standing Committee that helps administer the ETE program across the statewide USU system, July 2017- July 2019.

Member. *USU Allies on Campus*, June 2015-P, Logan, UT.

Member. *Promotion Committee* for Dr. Jessica Habashi, Department of Biology, College of Science, October 2013-P.

Online Teaching Fellow. USU Center for Innovative Design and Instruction (CIDI). September 2013 - September 2014.

Member. *Promotion Committee* for Ms. Nikole Eyre, Department of English, Lecturer to Senior Lecturer, February 2012- April 2013.

Utah State University, College of Engineering

Member. *Undergraduate College Curriculum Committee*, June 2019- P.

Panelist. *College of Engineering Tutor Workshop*, Office of Research and Graduate Studies, February 2019.

Member. *Faculty Search Committee*, Associate Dean for Undergraduate Affairs/Engineering Education Department Head, September 2011- May 2012.

Utah State University, Department of Engineering Education

Member. *Faculty Search Committee*, Assistant Professor of Engineering Education, April 2019 –P.

Utah State University, Regional Campuses and Distance Education (RCDE)

Member. *USU Regional Campus Distance Education (RCDE) Teaching Excellence Committee*, Standing Committee to plan annual RCDE faculty retreats (Spring and Fall), May 2010-March 2012.

Member. *Peer Evaluation of Teaching Ad Hoc Committee*, USU Brigham City, March 2010-March 2011.

Faculty Co-Advisor. *Regional Campus Student Engineering Club (FATE)*, January 2009 - April 2012.