Dr. Meagan Renee Kendall

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CURRENT POSITION

Associate Professor, September 2021 - Present
The University of Texas at El Paso, El Paso, TX
- Engineering Education and Leadership Department
- Graduate Program Director, MS of Engineering

PROFESSIONAL EXPERIENCE

Co-Founder, January 2022 – Present
Educational Design Collaborative, El Paso, TX
- Faculty and program development consulting group

Acting Chair, June 2022 – December 2022
The University of Texas at El Paso, El Paso, TX
- Engineering Education and Leadership Department

Assistant Professor, September 2015 – August 2021
The University of Texas at El Paso, El Paso, TX
- Engineering Education and Leadership Department

Argosy Fellow, January 2015 - May 2015
The Franklin W. Olin College of Engineering, Needham, MA
- Immersive experience developing engineering education courses with a focus on design

Visiting Assistant Professor, September 2014 - August 2015
The University of Texas at El Paso, El Paso, TX
- Engineering Education and Leadership Program

Design Consultant, September 2013 - September 2014
- Conducted design methodology research on modular and open architecture for the US Air Force Research Lab Munitions Directorate

NSF Graduate Research Fellow, September 2009 - August 2013
Mechanical Engineering, The University of Texas at Austin, Austin, TX
- Advisor: Dr. Richard H. Crawford

Research & Teaching Assistant, September 2007 - August 2009
Mechanical Engineering, The University of Texas at Austin, Austin, TX
- Advisor: Dr. Richard H. Crawford

EDUCATION

Doctor of Philosophy, *NSF Graduate Research Fellow*, August 2014
The University of Texas at Austin, Austin, TX

- Concentration: Mechanical Engineering - Biomechanics

Master of Science in Engineering, December 2009
The University of Texas at Austin, Austin, TX
- Concentration: Mechanical Engineering - Biomechanics

Bachelor of Science in Engineering, May 2007
LeTourneau University, Longview, TX
- Concentration: Mechanical

Associate in Science, May 2004
Cedar Valley Community College, Lancaster, TX

RESEARCH

Current Research Interests
- Development and application of the Contextual Engineering Leadership Development framework.
- Professional formation of engineers through engineering leadership development.
- Developing engineering instructional faculty as leaders of educational change at Hispanic-Serving Institutions
- Exploring the factors that influence change in the engineering educational system.

Doctoral Research
Advising Professor: Dr. Richard H. Crawford
Dissertation Title: A *Low-Cost Volume Adjustable Lower Limb Prosthetic Socket: Design and Evaluation*
- Developed a collaborative design methodology for low-cost biomechanical devices.
- Evaluated the effectiveness of concept generation techniques in different cultural settings by studying the results from similar concept generation sessions in Bolivia and Texas.
- Compared traditional design strategies with collaborative design strategies implemented with empathic lead users, lead users, and traditional users designing a low-cost prosthetic socket.
- Designed a low-cost volume adjustable lower limb prosthetic socket using the methodology.
- Developed a protocol for subject testing and analysis of the socket design in collaboration with researchers from the South Texas Veteran Health Care System.

Masters Research
Advising Professor: Dr. Richard H. Crawford
Thesis Title: *Design and Analysis of a Volume Adjustable Transtibial Prosthetic Socket for Pediatric Amputees in Developing Countries*
- Generated design concepts for a low-cost lower limb prosthetic socket to be manufactured using Selective Laser Sintering (SLS).
- Validated the design of fastener and inflatable volume adjustment mechanisms for use in a modular volume adjustable SLS prosthetic socket with theoretical and experimental results.

Undergraduate Research
LeTourneau Engineering Global Solutions (LEGS), Fall 2005 - Summer 2007
Senior Design Project, LeTourneau University
- Assisted in the development of a low-cost prosthetic limb for use in developing countries.
- Tested and developed low-cost prosthetic feet for underdeveloped countries.
- Conducted a comparison of low-cost prosthetic foot options using Roll-Over Shape testing (see publications).
- Served as the Sierra Leone site leader by assisting in the establishment of an international deployment site, including travel to complete a site evaluation.
- LEGS has since become LIMBS International, El Paso, TX. www.limbsinternational.org

Undergraduate Research Assistant, Summer 2006
Engineering Department, LeTourneau University

- Developed instructional labs, for undergraduate engineering students, covering first and second order responses of mechanical, electrical, and thermal systems and modeling basic electrical components using fluid analogies. (See publications)

TEACHING EXPERIENCE

Courses Taught

*The University of Texas at El Paso (*graduate level courses)*

- EL3331 Engineering Design: People to Products, Fall terms '15-'21, '23, '24
- EL3332 Engineering Entrepreneurship: Products to People, Spring terms '16-'21, '24
- EL1050 Engineering Leadership I (Intro to Engr. Leadership), FA15, SP16, FA16, SP17
- EL1205 Graphic Fundamentals in Engr Design, FA15, FA16 (Cross-listed with EL1050)
- EL1405 Fundamentals of Engineering Leadership & Graphics, FA17- SP20
- EL2301 Modeling and Simulation, FA14, FA 20, FA 21
- EL3302 Engineering Measurements, SP 20, SP 21
- EEL5330* Innovation in Technology, FA '23
- EEL5310* Foundations of Engineering Education and Leadership, FA18
- EEL5390* Special Topics in Engineering
    - Research Methods in Engineering Education, FA21
    - Statistical Methods in Engineering Education Research, SP21
    - Foundations of Engineering Education Leadership & Research, FA20

Franklin W. Olin College of Engineering

- ENGR2250 User Oriented Collaborative Design, Spring 2015

New Curriculum Development

ENGR 1302 Engineering Design Experience

- Led the design of the first-year engineering design experience course for the college.

EL2301 *Modeling and Simulation*

- Redesigned course to create year-long integrated course sequence with EL3302

EL3302 *Engineering Measurements*

- Redesigned course to create year-long integrated course sequence with EL2301

EEL5390* *Special Topics in Engineering*

- Research Methods in Engineering Education
- Statistical Methods in Engineering Education Research
- Foundations of Engineering Education Leadership & Research

EL3331 *Engineering Design: People to Products*

- First course in a design and entrepreneurship integrated sequence
- Human centered design course emphasizing user engagements and prototyping
- Developed entire curriculum for course

EL3332 *Engineering Entrepreneurship: Products to People*

- Second course in a design and entrepreneurship integrated sequence
- Lean Startup approach to teaching entrepreneurship modeled after the I-Corps program

- Developed entire curriculum for course

EL1050 *Engr Leadership I* & EL1205 *Graphic Fundamentals in Engr Design*
- Supervised development of curriculum for the cross-listed courses by student teachers.

Teaching Assistant Positions

Mechanical Engineering Department, The University of Texas at Austin
- ME266P Senior Design Laboratory, FA07 - SU08, SP09 - SU09, SP12
- UGS 302 The Engineered World: Products and Innovations, Fall 2011
- ME279M Engineers Without Borders, Fall 2008

UTeachEngineering Summer 2012, *The University of Texas at Austin*
- ME 379M Design of Machines and Systems
- CHE379/384 Engineering Energy and Biomedical Systems
- CHE379/384 Fundamentals of Engineering Design.

Instructor Training

Faculty Developer, Fall 2016-Present
- Continuous improvement while delivering workshops and institutes

National Effective Teaching Institute (NETI-1B), June 11-13, 2015
Seattle, WA, American Society for Engineering Education
- Required nominated by the Dean of the COE to attend

New Instructor Training Workshop, August 18-19, 2015
Center for Excellence in Teaching and Learning, The University of Texas at El Paso

Olin Collaboratory Summer Institute, June 2-6, 2014
Olin College of Engineering, Needham, MA,
- Workshop topic: Meeting the Needs of the 21st Century: Designing for Student Engagement.

Future Faculty Group, Fall 2008 - Spring 2011
Department of Mechanical Engineering, The University of Texas at Austin
- Mentored by Dr. Janet L. Ellzey in preparation for an academic career.

Workshop for Developing and Sustaining Productive Graduate Research Groups in Engineering, Arlington, Virginia, July 11-12, 2011, Virginia Tech
- Received training in building effective research groups by sharing experiences with graduate students and faculty from multiple universities.

STUDENT MENTORING AND RESEARCH ADVISING

*PhD Students at UTEP (*Project Advisor/Co-Advisor)*
- Henry Salgado*, Computer Science, Anticipated 5/2026
- Alyssa N. Olivas, Biomedical Engineering, Graduated 5/2022
- Agniprava Banerjee, MASE Interdisciplinary PhD, unknown.
- Dr. Michelle Williams, Doctorate of Education, Graduated 12/2018

*Masters Students at UTEP – Thesis/Project Based (*Thesis/Project Advisor/Co-Advisor)*
- Pamela Campos*, (Dr. Lori Houghtalen Co-advising) Engineering Education & Leadership, Anticipated 5/2026
- Monet Woodhouse*, Engineering Education & Leadership, Anticipated 12/2025
- Caroline Salas*, Engineering Education & Leadership, Anticipated 5/2025

- Jose Reza*, Engineering Education & Leadership, Graduated 12/2023
- Monserrat Molina, Computer Science, Graduated 12/2023
- Yamile A. Urquidi*, Engineering Education & Leadership, Graduated 12/2022
- Henry Salgado*, Engineering Education & Leadership, Graduated 12/2022
- Yazmin Montoya*, Industrial, Manufacturing & Systems Engineering, Graduated 12/2021
- Sarah Ballard, Civil Engineering, Graduated 5/2021
- Alexandro Medina, Engineering Education & Leadership, Graduated 5/2019
- Caesar Venegas*, Industrial, Manufacturing & Systems Engineering, Graduated 12/2018
- Leonardo Orea*, Industrial, Manufacturing & Systems Engineering, Graduated 05/2018
- Alex Rayon, Computer Science, Graduated 5/2017
- Samuel Terrazas Quezada*, Industrial, Manufacturing & Sys Engr, Graduated 05/2017
- Lucas Galey, Biomedical Engineering, Graduated 12/2016

Masters Students at UTEP – Non-Thesis Based
- Leticia D. Miranda Mojica, Biomedical Engineering, Graduated 12/2017

Undergraduate Research Assistants at UTEP
- Pablo Servin, P. (COURI/SURPASS)
- America Fernandez
- Erwin Delgado
- Yazmin Montoya
- Aaron Pacheco
- Isaiah Webb
- Callie Mitchell
- Caroline Salas
- Evelyn Martinez
- Jennifer Diaz
- Audrey Spearman

BUILDing SCHOLARS at UTEP

- Ricardo Vela, Senior Thesis Supervisor, Graduated 5/2019
- Daisy Alvarado, Senior Thesis Supervisor, Graduated 5/2018
- Aibhlin Esparza, Fall 2017, unknown

Team Mentor, World Power*,* Paso Del Norte Venture Competition, Feb - Mar 2017

Electrical Engineering Senior Design Team, Spring 2016
Department of Electrical Engineering, The University of Texas at El Paso

Mechanical Engineering Senior Design Team, Fall 2012
Department of Mechanical Engineering, The University of Texas at Austin

Graduates Linked with Undergraduates Experience (GLUE) Program, Spring 2012
Women in Engineering Program, The University of Texas at Austin
- Student project: *Fastener Design for Volume Adjustable Prosthetic Sockets*
- Guided student through design, fabrication, and testing of fastener mechanism for a volume adjustable lower limb prosthetic socket.
- Student Received GLUE Best Poster Award

Intellectual Entrepreneurship Pre-Grad School Internship Mentor, Fall 2009
Department of Mechanical Engineering, The University of Texas at Austin
- Mentored a minority student weekly, in preparation for applying to graduate schools.

FELLOWSHIPS AND SCHOLARSHIPS

- **National Science Foundation Graduate Research Fellowship**, 2009 - 2013
- Burton Award, The University of Texas at Austin, 2012
- Thrust 2000 Graduate Fellowship in Engineering, The University of Texas, 2009 - 2012
- Women in Engineering Program Participant Scholarship, The University of Texas, 2012
- Temple Foundation Graduate Fellowship, The University of Texas at Austin, 2007
- The Leopold Schepp Foundation Scholarship, 2007 (Declined for alternative funding source)
- LeTourneau Transfer Scholarship, LeTourneau University, 2003 - 2007
- Phi Theta Kappa Scholarship, LeTourneau University, 2003 - 2007

RECOGNITIONS AND HONORS

- UTEP College of Engineering Dean's Award for Teaching Excellence, 2021
- 2018 BUILDing SCHOLARS Research-Teaching Integration Program Award
- Best Teaching Paper Award, "Developing the entrepreneurial self: Integrating professional growth in an engineering design and entrepreneurship course sequence." ASEE Annual Conference, 2018. Engineering Entrepreneurship Division.
- Inventor of the Week, August 1-6, 2016, UTEP Office of Technology Commercialization.
- WEP Champion Award, Women in Engineering Program, The University of Texas, 2012
- SFF Symposium Outstanding Paper (1 of 8), "Investigation and design of an actively actuated lower-leg prosthetic socket", Solid Freeform Fabrication Symposium, 2009
- Best Paper Award, "A Hydraulic Circuits Laboratory – To improve student understanding of basic electricity", ASEE Annual Conference, 2007
- Recognition on the Dean's List, LeTourneau University, 2006
- Recognition for graduating with 4.0 GPA, Cedar Valley Community College, 2004
- President's Honor Roll, Cedar Valley Community College, 2003

FUNDING

Title: *UNIDOS HSI Program Network Resource Center for Community Coordination*
UTEP Lead, Co-PI: Meagan Kendall Funding Agency: NSF
Award Amount: $6,968,690 Award Number: 2311267 Award Period: 10/1/23-9/30/2029

Title: *S-STEM Supporting Talented, Financially Challenged Mechanical Engineering Students Studying Robotics, Autonomous Systems, Machine Intelligence and Advanced Manufacturing*
PI: Flores Abad CO-PIs: Kendall, Quintana, Khan, Everett. Funding Agency: NSF
Award Amount: $1,500,000 Award Number: 2221498 Award Period: 10/1/22-9/30/2028

Title: *Developing Engineering Instructional Faculty as Leaders of Educational Change at Hispanic-Serving Institutions*
PI: Meagan Kendall Funding Agency: NSF
Award Amount: $1,297,317 Award Number: 1953560 Award Period: 6/2020-5/31/2025

Title: *Collaborative HSI Conference: Co-designing An Engineering Education Research Agenda*
PI: Meagan Kendall Funding Agency: NSF
Award Amount: $62,350 Award Number: 1764378 Award Period: 1/2018-12/31/2018

Title: *Curriculum Innovation: Bringing I-Corps to the Undergraduate Experience*

PI: Meagan Kendall Funding Agency: VentureWell Faculty Grants
Award Amount: $30,000 Award Number: 1548316 Award Period: 3/1/2017–8/31/2020

Title: *Collaborative Research: Engineering Identity, its Predictors, and its Impact on Retention across Educational Stages* (with UT Austin)
PI: Meagan Kendall Funding Agency: NSF Division of Engineering Education and Centers, Research in the Formation of Engineers
Award Amount: $21,642 Award Number: 1636449 Award Period: 8/1/2016–7/31/2019

Title: *Proposed Pilot Study on the Impact of Peer Designed and Delivered Curriculum on Student Motivation in Engineering Courses*
PI: Meagan Kendall Funding Agency: The University of Texas at El Paso, CETaL
Award Amount: $1,000 Award Number: N/A Award Period: 6/1/2017–8/31/2017

Title: *I-Corps Teams: Aperture Prosthetic Technologies*
PI: Meagan Kendall Co-Pi: David Novick Funding Agency: NSF I-Corps Program
Award Amount: $50,000 Award Number: 1646196 Award Period: 8/1/2016 – 1/31/2017

Title: *A Better Fit: The Quest for A Method to Assess Prosthetic Socket Comfort*
PI: Meagan Kendall Funding Agency: The University of Texas at El Paso
Award Amount: $5,000 Award Number: N/A Award Period: 2/15/2016–8/31/2016

PROFESSIONAL AFFILIATIONS AND LEADERSHIP POSITIONS

American Society for Engineering Education, 2007 - Present

- ASEE LEAD Division Positions held: Past Division Chair, Division Chair, Program Chair, Program Co-Chair, Membership and Nominating Committee Chair, Strategic Planning Committee Member
- ASEE ERM Division Positions held: FIE 2022 Vice Chair, FIE 2021 Jr. Vice Chair, Vice Chair FIE 2020 Special Sessions, Panels, and Pre-Conference Workshops Chair
- Student Chapter Vice President, The University of Texas at Austin, Fall 2008 - Summer 2010

Text and Academic Authors Association, 2015 – 2016

ASME, 2005 - 2018

Women In Mechanical Engineering, 2008 – 2014
Student Organization, The University of Texas at Austin
- Office held: Organization Leader, Fall 2009 – Summer 2013
- Achievements: Received WEP Champion award
- Organization Website: http://www.engr.utexas.edu/wep/leadership/7441-wme

Phi Theta Kappa, Fall 2003 - Spring 2004
International Honor Society of Two-Year Colleges, Cedar Valley Community College
- Office held: Vice-President of Service, Alpha Zeta Omicron Chapter
- Achievements: Most Distinguished Chapter Award in the Texas Region.

PROFESSIONAL AND UNIVERSITY SERVICE

Committee Chair, UTEP College of Engineering, First Year Experience, Spring 2023 - Present

Member, Hispanic Serving Research Council, UTEP, Fall 2023 – Summer 2024

Faculty Search Committee Chair, Department of Engineering Education and Leadership, UTEP, Fall 2023 – Spring 2024

Committee Member Representing College of Engineering, UTEP Faculty Senate, Teaching Effectiveness and Development Committee, Fall 2020 – Fall 2022

Technical Program Chair - ERM, 2022 Frontiers in Education Conference, Fall 2021 – Fall 2022

Division Chair, ASEE LEAD Division, Summer 2021 – Summer 2022

Jr. Technical Program Chair - ERM, 2021 Frontiers in Education Conference, Fall 2020 - Fall 2021

Senator, UTEP Faculty Senate, Spring 2018-Summer 2021

Program Chair/Division Chair-Elect, ASEE LEAD Division, Summer 2020 - Summer 2021

Special Sessions, Panels, and Pre-Conference Workshops Chair, 2020 Frontiers in Education Conference, Fall 2019 - Fall 2020

Program Co-Chair, ASEE LEAD Division, Summer 2019 - Summer 2020

Membership Chair, ASEE LEAD Division, Summer 2017 - Summer 2019

Committee Member Representing College of Engineering, Provost's Committee on Community Engagement, Aug. 2016 – Spring 2018, University committee focused on encouraging community engagement in all colleges. Spearheading the strategic plan for increasing engagement in the College of Engineering.

Committee Member for Department of Engineering Education and Leadership, Engineering Faculty Council, UTEP College of Engineering, Fall 2015-Summer 2016

Committee Chair, Academic Policy, UTEP, Fall 2016 – Sum 2018

Committee Member for College of Engineering, Academic Policy, UTEP, Fall 2015 – Sum 2016

Committee Member, Strategic Planning, ASEE LEAD Division, Fall 2015-Sum. 2016

Conference Session Chair, Session: Innovation and Entrepreneurship I, Frontiers in Education Conference, El Paso, TX, *October 22, 2015*

Faculty Search Committee Member, Department of Engineering Education and Leadership, UTEP, Fall 2015 – Spring 2016

Student Representative, Cockrell School of Engineering Standing Committee - Women in Engineering Program Committee, UT Austin, Fall 2011 – Spring 2013

Member, Women in Engineering Program Leadership Collaborative, The University of Texas at Austin, Fall 2011 – Spring 2013

Manuscript Reviewer, The Rapid Prototyping Journal, ASEE Annual Conference, ASME Journal of Mechanical Design, Journal of Engineering Education, IEEE Transactions on Education, Journal of Women and Minorities in Science and Engineering, Studies in Engineering Education

Volunteer, GirlStart (An after-school science fair program for 4^{th}-5^{th} grade girls), Nov. 2009

RESEARCH PRODUCTS AND PUBLICATIONS

Peer-Reviewed Journal Articles

- Vanderlinden, A., Kendall, M., Manning, R., Eggleston J. (Under 2^{nd} review) *Dynamic Stability is Not Altered in Various Gait Speeds in Children with Autism.* Gait & Posture.
- Salgado, H., Coso Strong, A., Kendall, M. (Under Review) Exploring Departmental Cultures of Engineering Instructional Faculty at Hispanic Serving Institutions. *J. of STEM Ed.*
- Bracho Perez, V., Salgado, H., Coso Strong, A., & Kendall, M. R. (Under 2^{nd} review). Narratives of Educational Change: Amplifying the Agency and Voices of Engineering Instructional Faculty at Hispanic Serving Institutions. *Journal of Engineering Education.*

- Tallman, B., Dansu, V., Kendall, M. (Draft) How Engineering Instructional Faculty Navigate Leadership of Educational Change.
- Molano, J.R.S., Salgado, H., Coso Strong, A., Kendall, M. (Development) Group Coaching as a Model for Building Collaborative Interactions between Faculty.
- Patrick, A. Andrews, M. Bachman, C. Borrego, M., Kendall, M.R., (2023). Sense of Belonging in Engineering and Identity Centrality among Undergraduate Students at Hispanic Serving Institutions. *J. of Engineering Education*,112(2).
- Andrews, M., Kendall, M., Rodriguez, S., Borrego, M. (2023). Career Plans of Latinx Mechanical Engineering Undergraduates Studying at Hispanic Serving Institutions. *J. Women and Minorities in Engineering and Science*, 29(1).
- Olivas, A. N., Kendall, M. R., Parada, A., Manning, R., & Eggleston, J. D. (2022). Children with autism display altered ankle strategies when changing speed during over-ground gait. *Clinical Biomechanics*, *100*, 105804.
- Kendall, M.R., Strong, A.C., Henderson, G., Basalo, I., (2021). Perceptions of Educators on Engineering Curriculum Innovation at Hispanic Serving Institutions. *J. Women and Minorities in Engineering and Science,* 27(6):21–57. https://doi.org/10.1615/JWomenMinorScienEng.2021034722
- Kendall, M.R., Denton, M., Choe, N.H., Procter, L.M., Borrego, M., (2019). Factors Influencing Engineering Identity Development of Latinx Students. *IEEE Transactions on Education.* https://doi.org/10.1109/TE.2019.2909857
- Choe, N.H., Martins, L.L., Borrego, M., Kendall, M.R., (2019). Professional Aspects of Engineering Improve Prediction of Undergraduates' Engineering Identity. *J. Prof. Issues Eng. Educ. Pract,* 145(3). https://doi.org/10.1061/(ASCE)EI.1943-5541.0000413
- Vaughan, M. R., & Crawford, R. H. (2013). Effectiveness of virtual models in design for Additive Manufacturing: A Laser Sintering case study. *Rapid Prototyping Journal*, 19(1).
- Montgomery, J. T., Vaughan, M. R., & Crawford, R. H. (2010). Design of an actively actuated prosthetic socket. *Rapid Prototyping Journal,* 16(3), 194-201.

Peer-Reviewed Conference Papers (*Presenter)

- Houghtalen, L.*, & Kendall, M. R. (2024, June), *Faculty Transformation: a Study of Professional Transition* Paper presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon. 10.18260/1-2--47460
- Henderson, G.*, & Basalo, I., & Strong, A. C., & Kendall, M. R. (2024, June), *Lessons Learned about Empowering Engineering Instructional Faculty through a Group Coaching Model* Paper presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon. 10.18260/1-2—47725
- Ortega, A. G.*, & Kendall, M. R., & Flores Abad, A., & Bonilla, V. M., & Everett, L. J. (2024, June), *Predicting Outcomes of Aerospace and Mechanical Engineering Students via Artificial Intelligence* Paper presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon. 10.18260/1-2—47857
- Dansu, V.*, Coso Strong, A., Kendall, M. (2023) What does an Engineering Instructional Faculty do? Voices of Engineering Instructional Faculty at Hispanic-Serving Institutions. *Proceedings of CoNECD Conference.*
- Novoselich, B.*, Handley, M., Kendall, B. (2023). Shaping the Engineering Leadership Research Agenda: Results of a 2022 Special Session. *2023 ASEE Annual Conference & Exposition.*

- Novick, D.*, Kendall, M. R., Realyvasquez, M. A., Palacios, S. (2022). Teaching Engineers to Form and Share Vision. *Proceedings of the 2022 ASEE Virtual Annual Conference.* Minneapolis, MN.
- Kendall, M. R.* Novoselich, B. J., Handley, J., Hormann, J. E. L., Perez, C. M., Dabkowski, M. (2022). Mapping ASEE Engineering Leadership Development Research through an AI-enabled Systematic Literature Review. *Proceedings of the 2022 ASEE Virtual Annual Conference.* Minneapolis, MN.
- Bracho Perez, V. V.*, Kendall, M. R., Perez, C. M., Henderson, G. (2022). WIP: Faculty Developers' perceptions of Engineering Instructional Faculty engagement in instructional professional development at HSIs. *Proceedings of the 2022 ASEE Virtual Annual Conference.* Minneapolis, MN.
- Montoya, Y.*, Chalil Madathil, S., Kendall, M. R., Subramani, I. (2022). Predicting Zero-Bin in the Semiconductor Manufacturing Industry: Machine Learning Algorithms. *Proceedings of the IISE Annual Conference and Expo 2022.* Seattle, WA.
- Kendall, M. R.*, Joslyn, C. (2021). Navigating and reconciling identity interference and values conflicts associated with our engineering identities: A conceptual framework. American Society for Engineering Education/IEEE: *Proceedings of the ASEE/IEEE Frontiers in Education Conference.* Lincoln, NE.
- Salgado, H.*, Bracho Perez, V., Coso Strong, A., & Kendall, M. R. (2021). Engineering instructional faculty perceptions of students' backgrounds at Hispanic Serving Institutions. American Society for Engineering Education/IEEE: *Proceedings of the ASEE/IEEE Frontiers in Education Conference.* Lincoln, NE.
- Urquidi, Y.*, Kayyali, M.*, Kendall, M.R., & Coso Strong, A. (2021). Motivational factors influencing engineering faulty pursuit of instructional faculty positions at HSIs. American Society for Engineering Education/IEEE: *Proceedings of the ASEE/IEEE Frontiers in Education Conference.* Lincoln, NE.
- Salgado, H.*, & Urquidi Cerros, Y. A.*, & Kendall, M. R., & Strong, A. C. (2021). Faculty Perceptions of, and Approaches Towards, Engineering Student Motivation at Hispanic-serving Institutions. *Proceedings of the 2021 ASEE Virtual Annual Conference.* https://peer.asee.org/37186
- Joslyn, C. H.*, & Kendall, M. R.* (2021). A Sojourn of Engineering Identity Conflict: Exploring Identity Interference Through a Performative Lens. *Proceedings of the 2021 ASEE Virtual Annual Conference.* 10.18260/1-2--36610
- Kendall, M. R.*, Procter, L. M., & Patrick, A. D. (2019). Assessing Methods for Developing an Engineering Identity in the Classroom. *Proceedings of the ASEE Annual Conference & Exposition,* Tampa, FL, June 2019.
- Henderson, G.*, Kendall, M., Coso Strong, A., & Basalo, I. (2019) Rethinking Undergraduate Engineering Education at Hispanic Serving Institutions: Emerging Research Areas from a Travelling Workshop Series. *Proceedings of the 2019 ASEE Annual Conference & Exposition*, Tampa, FL, June 2019.
- Coso Strong, A.*, Kendall, M., Basalo, I., & Henderson, G. (2019) Impact of faculty development workshops on instructional faculty at Hispanic-serving institutions. *Proceedings of the 2019 ASEE Annual Conference & Exposition*, Tampa, FL, June 2019.
- Kendall, M.R., Strong, A.C.*, Basalo, I., Henderson, G. (2019). Exploring Faculty Perceptions of Students Characteristics at Hispanic Serving Institutions, *Proceedings of the ASEE CoNECD Conference,* Crystal City, VA, April 14-17, 2019.
- Kendall, M.R., Martinez, E.*, Salas, C.*, Gonzalez, R.V. (2018*)* Integrating Engineering Leadership Throughout an Undergraduate Engineering Degree. *Proceedings of the Frontiers in Education Conference,* San Jose, CA, October 4-6, 2018.

- Kendall, M.R.*, Choe, N.H., Denton, M, Borrego, M., (2018) Engineering Identity Development of Hispanic Students. *Proceedings of the ASEE Annual Conference and Exposition,* Salt Lake City, UT, June 24-27, 2018.
- Kendall, M.R.*, Chachra, D.*, Roach, K., Tilley, E., Gipson, K.* (2018) Towards New Approaches for Developing Engineering Leadership in Undergraduates. *Proceedings of the ASEE Annual Conference and Exposition,* Salt Lake City, UT, June 24-27, 2018.
- Novick, D.*, Kendal, M.R.*, (*2018*). Developing the entrepreneurial self: Integrating professional growth in an engineering design and entrepreneurship course sequence. *Proceedings of the ASEE Annual Conference and Exposition,* Salt Lake City, UT, June 24-27, 2018. **Best Teaching Paper Award.**
- M. Borrego, A. Patrick*, L. Martins, M. Kendall. (2018) A New Scale for Measuring Engineering Identity in Undergraduates. *Proceedings of the ASEE Gulf Southwest Annual Conference,* Austin, TX, 2018.
- Patrick, A.D.*, Bouregо, M., Choe, N., Kendall, M.R., Martins, L., Riegle-Crumb, C., Seepersad, C.C., (2017). Constructing a Measure of Affect Towards Professional Practice: What matters for Engineers?, *Proceedings of the Research in Engineering Education Symposium,* Bogota*,* Columbia, July 6-8, 2017.
- Kendall, M.R., Williams, M.C.* (2017). Student Motivation in a Peer Designed and Delivered Course. *Proceedings of the ASEE Annual Conference and Exposition,* Columbus, OH, June 26-29, 2017.
- Novick, D.*, Kendall, M.*, Cervantes, A. (2017). Integrating the I-Corps Experience into Undergraduate Engineering Education. *Proceedings of the VentureWell Open Conference,* Washington DC, March 23-25, 2017.
- Patrick, A.D.*, Bouregо, M., Choe, N., Kendall, M.R., Martins, L., Riegle-Crumb, C., Seepersad, C.C., (2017). A Measure of Affect towards Key Elements of Engineering Professional Practice, *Proceedings of the ASEE Annual Conference and Exposition,* Columbus, OH, June 26-29, 2017.
- Mendoza, L. R., Orea-Amador, L., Kendall, M. R.* (2016). Mixed Method Study of the Evolution of Leadership Traits during a Leadership Experience, *Proceedings of the ASEE Annual Conference and Exposition,* New Orleans, LA, June 26- 29, 2016.
- Fernandez, A.*, Delgado, E.*, Montoya, Y.* Gonzalez, R. Vaughan, M. R. (2015). Student Led Curriculum Development and Instruction of Introduction to Engineering Leadership Course. *Frontiers in Engineering Education*, El Paso, TX, October 2015.
- Golding, P.*, Gonzalez, R., Schoephoerster, R., Starks, S., Vaughan, M. R., Townsend, J. (2015). The Creation and Inauguration of Engineering Leadership: UTEP and Olin College Innovation Project. *Frontiers in Engineering Education*, El Paso, TX, October 2015.
- Montoya, Y.*, Pacheco, A., Delgado, E.*, Webb, I. & Vaughan, M. R. (2015) Developing Leaders by Putting Students in the Curriculum Development Driver Seat. *2015 ASEE Annual Conference and Exposition*, Seattle, WA, June 2015.
- Vaughan, M. R.*, Seepersad, C. C., & Crawford, R. H. (2014). Creation of empathic lead users from non-users via simulated lead user experiences. *Proceedings of ASME IDETC/CIE 2014*, Buffalo, NY.
- Vaughan, M. R.* & Crawford, R. H. (2013). Use of concept generation techniques in different cultural settings, *2013 ASEE Annual Conference and Exposition*, Atlanta, GA.
- Vaughan, M. R.* & Crawford, R. H. (2009). Design of a volume adjustable below knee SLS prosthetic socket for pediatric amputees in developing countries. *International Solid Freeform Fabrication Symposium*, Austin, TX, Aug. 2009.

- Montgomery, J. T.*, Vaughan, M. R. & Crawford, R. H. (2009). Investigation and design of an actively actuated lower-leg prosthetic socket. *International Solid Freeform Fabrication Symposium*, Austin, TX, Aug. 2009. **SFF Symposium Outstanding Paper.**
- Vaughan, M. R.* & Ellzey, J. L. (2009). Training engineering leaders through international community development projects. *ASEE Annual Conference and Exposition*, Austin, TX.
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- Graff, R. W.*, Lieffer, P. R., Neimi, J., & Vaughan, M. R. (2007). A Hydraulic Circuits Laboratory – To improve student understanding of basic electricity. *ASEE Annual Conference and Exposition*, Honolulu, HI. **Best Paper Award Winner**.

Edited Books and Book Chapters

- Coso Strong, A., Kendall, M., & Henderson, G. (2022*)*. Voices of Engineering Faculty at the Margins: Supporting Professional Agency through Faculty Development. In Linder S.M., Lee, C., and High, K. (Eds.), *Handbook of STEM Faculty Development.*
- Kendall, M.R. & Rottmann, C. (Sourcebook Eds.). (2022*)*. Student Leadership Development in Engineering. *New Directions for Student Leadership: No. 173. Student leadership development in engineering.* Wiley.
- Kendall, M. R., Chachra, D., Gipson, K., & Roach, K. (2022). Motivating the need for an engineering-specific approach to student leadership development. In M. R. Kendall & C. Rottmann (Eds.). *New Directions for Student Leadership: No. 173. Student leadership development in engineering* (pp. 13-21). Wiley.
- Rottmann, C., & Kendall, M. R. (2022). Looking to the future: Four key purposes of engineering leadership education. In M. R. Kendall & C. Rottmann (Eds.). *New Directions for Student Leadership: No. 173. Student leadership development in engineering* (pp. 149-155). Wiley.

Reports

- Kendall, M.R., Williams, M., Strong, A.C., Basalo, I., Ural, D., Henderson, G., (2018). Co-Designing an Engineering Education Research Agenda. Public Report. Available online: http://eel.utep.edu/hsi/workshop-outcomes.html

Invited Seminar, Panels, & Workshop Presentations

- Keynote Presenter: Kendall, M.R. (2024). *Soft Skills aren't Soft: Reframing how we approach professional skills development in STEM Education*. TALIS Day, University of Miami.
- Special Session: Kendall, M. R.* Novoselich, B. J., & Handley, J., (2022). Mapping ASEE Engineering Leadership Development Research through an AI-enabled Systematic Literature Review. *LEAD Special Session, 2022 ASEE Virtual Annual Conference.* Minneapolis, MN.
- Panel Moderator: Kendall, M.R. & Rottmann, C. (2021). *Research Methods in Engineering Leadership Education,* Virtual ASEE Annual Conference and Exhibition, June 2021.
- Contributor: Coso Strong, A., Henderson, G., Kendall, M.R., & Basalo, I. (2020). *The Power of Narrative: Reflective Strategies to Foster Instructional Agency*. POD Network Virtual Conference.
- Kendall, M.R., Rottmann, C., Hadley, M., Gipson, K. (Spring 2020 & 2022) *Leader's Lounges.* ASEE LEAD Division Sponsored Webinar Series.

    - January 13, 2020 - Contributor: *Leaders' Lounge Kickoff.*
    - March 9, 2020 - Leader: *Evaluation & Assessment (Part 1): Why do we bother and who cares?*
    - May 26, 2022 – Leader: Meet the Authors: NDSL Issue 173.
- Contributor: Henderson, G., Kendall, M., Strong, A.C., Basalo, I., (2019) A Workshop Framework to Investigate and Amplify Innovations in Engineering Education*, POD Network conference,* Pittsburgh, PA., Nov. 13-17, 2019.
- Co-Facilitator: Quiñones, S., Kendall, M.R., (January 9, 2019) MMBME Department Faculty Retreat: *Introduction to Design Thinking and Student Motivation.* UT El Paso.
- Co-Facilitator: Kendall, M.R., Coso Strong, A., Basalo, I., & Henderson, G. (2018). Sunday Workshop: *Co-designing a Research Agenda to Amplify Engineering Education Efforts at HSIs.* In 2018 ASEE Annual Conference & Exposition. Salt Lake City, UT, June 2018.
- Invited Panelist: *Addressing Leadership Requirement in new ABET Criteria*, (June 2018) ASEE Annual Conference and Exhibition, Salt Lake City, UT, June 24-27, 2018. Moderator: Ron Bennett
- Co-Facilitator: Kendall, M.R., Strong, A.C., Basalo, I., Henderson, G., Ural, D. (2018). Rethinking Engineering Education at HSI, UT El Paso and University of Miami.
- Invited Panelist: *I&E at Commuter Schools: Reaching Students who Work*, (March 2018). VentureWell Open Conference, Austin, TX. Moderator: David Novick
- Co-Facilitator: Kendall, M.R., Chachra, D., Roach, K., Tilley, E., Gipson, K. (2018). Special Session: Rethinking Engineering Leadership. *Proceedings of the Frontiers of Education Conference*, San Jose, CA, Oct 3- 6, 2018.
- Facilitator: Kendall, M. R. (April 18, 2018). *A Design Thinking Approach to Crafting Leadership Development Curriculum*, UTEP Campus Edge Innovative Teaching Series, El Paso, TX. https://campusedge.utep.edu/event/1787-innovative-teaching
- Co-Facilitator: Kendall, M.R. & Novick, D. (October 26, 2017). *Engineering Leadership and Entrepreneurship.* COMPLETE Meeting at UTEP.
- Co-Facilitator: Kendall, M.R., Strong, A.C., Fernandez, A. (October 5, 2017 - UT RGV; October 6, 2017 – UT San Antonio) Workshop. *Using Design Thinking to Create Engineering Educational Experiences*.
- Co-Facilitator: Singhal, A., Dura, L., Kosyluk, K., Kendall, M., Sandoval, V., Perez, L. (August 25, 2017). *Transforming Classrooms Through Liberating Structures*. UTEP Fall Instructor Retreat, El Paso, TX.
- Facilitator: Kendall, M. (March 22, 2017). *Cardboard Carpentry: Using Familiar Materials for Personalized Solutions*. Workshop. UTEP Food for Changed Thought Seminar Series, El Paso, TX.
- Facilitator: Kendall, M. (March 4, 2017). *Cardboard Carpentry: Using Familiar Materials for Personalized Solutions*. Workshop. UTEP, El Paso, TX. Host: UTEP Social Justice Initiative.
- Speaker: Kendall, M. (March 1, 2017). *Designing Things that Matter*. Presentation to UTEP Women in Engineering, El Paso, TX.
- Speaker: Vaughan, M. R., (March 27, 2015). *Collaborative Design and Analysis of the Low-Cost Aperture Prosthetic Socket.* Gordon College, Wenham, MA.
- Speaker: Vaughan, M. R., (April 5, 2013). *Co-Creating an Innovative Prosthetic Socket in Bolivia: Lessons from Walking Through the Design Process WITH the End-user.* Shell Energy Security and Climate Change Seminar Series: UTEP, El Paso, TX.

Conference Abstracts (*Presenter)

- Terrazas, S.* & Kendall, M. (2016). A Redesigned Volume Adjustment Mechanism for Transtibial Prosthetic Sockets. *Proceedings of the LIMBS International Summit,* El Paso, TX, June 3, 2016.
- Golding, P.*, Gonzalez, R., Kendall, M. Moreno, G. Jr., Schoephoerster, R., Starks, S. (2016). Bridging The Divide: Pathways to Building Engineering Education & Leadership At A Public, Urban University Having A 21st Century Demographic. *Proceedings of the Engineering & Liberal Education Symposium*, Schenectady, NY, June 3-4, 2016. http://muse.union.edu/ele-symposium/2016/04/18/pgolding/
- Vaughan, M. R., Gonzalez, R. V.*, & Ayers, S. (2007). Assessment of roll-over shape testing as a design tool for improved prosthetic feet in the developing world. *12th World Congress of ISPO*, Vancouver, Canada, Aug. 2007.
- Vaughan, M. R.* & Gonzalez, R.V. (2006). Roll-over shapes of prosthetic feet commonly used in developing nations. *23rd Annual Houston Conference on Biomedical Engineering Research*, Houston, TX, Feb. 2006.
- Gonzalez, R. V.*, Vaughan, M. R., & Ayers, S. (2006). Roll-over characteristics of prosthetic feet used in developing nations. *Journal of Biomechanics (39 / S1) S551; 5th World Congress of Biomechanics*, Munich, Germany, Aug. 2006.

Poster Presentations (*Presenter)

- Molano, J.R.S.*, Salgado, H., Henderson, G., Coso Strong, A., Basalo, I., Dansu, V., Kendall, M., Tallman, B., Urquidi, Y.A., (2023) Board 210: AMPLIFY Institute: A Professional Development Program Designed for and with Engineering Instructional Faculty. *2023 ASEE Annual Conference & Exposition.*
- Urquidi, Y. A.*, Salgado, H., Bracho Perez, V. Perez, C. M., Kendall, M. R., Coso Strong, A., Henderson, G., Basalo, I. (2022). The AMPLIFY Project: Experiences of Engineering Instructional Faculty at Hispanic Serving Institutions. NSF Grantees Poster Presentation. *Proceedings of the 2022 ASEE Virtual Annual Conference.* Minneapolis, MN.
- Vela, R.*, Kendall, M. (2019). Development of A Vibrotactile Biofeedback Device for Clinical Use During Lower-Limb Amputee Rehabilitation: A Pilot Study. Poster Presentation. *COURI Symposium,* UTEP.
- Vela, R.*, Kendall, M. (2018). Work In Progress: A Vibrotactile Biofeedback Device for Clinical Use in Lower-Limb Amputee Rehabilitation. Poster Presentation. *COURI Symposium*, UTEP.
- Alvarado, D. C.*, Kendall, M. R. (2018). Assessment of Sensory Function in Individuals Dealing with Homelessness. Poster Presentation. *COURI Symposium*, UTEP.
- Alvarado, D. C.*, Kendall, M. R. (2017). Home-Free Community Needs Assessment within the Paso Del Norte Region. Poster Presentation. *COURI Symposium*, UTEP.
- Kosyluk, K.*, Kendall, M.*, Ostos, A., Chapman, S., Chew, L., Acosta, J. (April 25, 2016). Applying Positive Deviance Inquiry and Human Centered Design to Issues of Assistive Technology Access in the Paso del Norte Region. *2016 UTEP Interdisciplinary Research and Education Symposium*, El Paso, TX.
- Montgomery, J. T.*, Vaughan, M. R., & Crawford, R. H. (2009). Design of an actuated, volume compensating SLS prosthetic socket. *Journal of Medical Devices*, 3(2).
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- Mojica, L. D. M., Kendall, M.R., and Terrazas, S. Q. (2017) Prosthetic Socket Fit Sensor. Patent Application #15/727,191.
- Vaughan, M. R., Crawford, R. H., & Gordon, B. W., Radial Volume Adjustment Device for Prosthetic Sockets. (Patent Application #61/805,811, PCT# US1432015)