

Joel Alejandro Mejia, Ph.D.

Associate Professor

College of Education and Human Development

College of Engineering and Integrated Design

The University of Texas at San Antonio

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EDUCATION

- 2014 **Ph.D. in Engineering Education, Utah State University**
Dissertation: “A Sociocultural Analysis of Latino High School Students’ Funds of Knowledge and Implications for Culturally Responsive Engineering Education”
Advisors: Amy Wilson-Lopez, Ph.D. and V. Dean Adams, Ph.D.
- 2013 **M.S. in Metallurgical Engineering, University of Utah**
Thesis: “Characterization, Analysis and Simulation of Fine Coal Filtration”
Advisor: Jan D. Miller, Ph.D.
- 2007 **B.S. in Metallurgical and Materials Engineering, University of Texas at El Paso**

ACADEMIC EXPERIENCE

- 2021 – Present *Associate Professor*, Department of Bicultural-Bilingual Studies & Department of Biomedical and Chemical Engineering, The University of Texas at San Antonio
- 2017 – 2021 *Assistant Professor*, Department of Integrated Engineering, University of San Diego
- 2019 – 2021 *Affiliate Faculty*, Joan B. Kroc School of Peace Studies, University of San Diego
- 2018 *Visiting Assistant Professor*, Universidad de Los Andes, Bogotá, Colombia
- 2015 – 2017 *Assistant Professor*, Department of Civil Engineering, Angelo State University
- 2014 - 2015 *Assistant Professor*, Fundamentals Engineering Program, West Virginia University

HONORS AND PROFESSIONAL RECOGNITION

- 2021 Center for Educational Excellence’s Freire and hooks Decolonial Pedagogy Award Nominee - University of San Diego
- 2021 ASEE Pre-College Engineering Education Division - Best Paper Award Nominee for the paper "Teachers Navigating Educational Systems: Reflections on the Value of Funds of Knowledge"
- 2021 ASEE Pre-College Engineering Education Division - Best Diversity, Equity, and Inclusion Paper Award Nominee for the paper "Teachers Navigating Educational Systems: Reflections on the Value of Funds of Knowledge"
- 2020 Keynote Speaker, X-DBER Symposium - University of Nebraska-Lincoln
- 2019 National Science Foundation Faculty Early Career Development Program (CAREER) Award
- 2019 Engineering for Social Justice (ExSJ) Scholar Award - University of San Diego

- 2019 NSF ASSIST Travel Grant to attend the Society of Hispanic Professional Engineering (SHPE) Conference
- 2018 ASEE Committee on Diversity, Equity, and Inclusion - Best Diversity Paper for the paper "Translating theory on color-blind racism to an engineering education context: Illustrations from the field of engineering education"
- 2018 ASEE Committee on Diversity, Equity, and Inclusion - Nominee for Best Overall PIC Paper for the paper "Translating theory on color-blind racism to an engineering education context: Illustrations from the field of engineering education"
- 2017 NSF ASSIST Travel Grant to attend the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Conference
- 2017 William Elgin Wickenden Award for "highest standards of scholarly research" in the Journal of Engineering Education for the paper "Latino/a adolescents' funds of knowledge related to engineering"
- 2017 Changemaker Faculty Fellows Development Program – University of San Diego
- 2016 NSF ASSIST Travel Grant to attend the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Conference
- 2016 NSF ASSIST Travel Grant to attend the Society of Hispanic Professional Engineers (SHPE) Faculty Development Institute
- 2015 Society for the Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS) Summer Leadership Institute Fellow
- 2015 ASEE Conference Best Diversity Paper, K-12 and Pre-college Engineering Division for the paper "Changes in Latino/a Adolescents' Engineering Self-Efficacy and Perceptions of Engineering after Addressing Authentic Engineering Design Challenges"
- 2014 AERA Division G Graduate Students Program – From Dissertation to Completion and Beyond: A Mentoring Seminar for Graduate Students of Color
- 2013 Community for Advancing Discovery Research in Education (CADRE) Fellowship by the National Science Foundation
- 2013 Utah State University Graduate Research Symposium – Honorable Mention Research in Engineering Education
- 2007 Magna Cum Laude – The University of Texas at El Paso
- 2007 Alpha Sigma Mu Metallurgical Honor Society
- 2005 Tau Beta Pi Engineering National Honor Society
- 2003 Gates Millennium Scholar

RESEARCH GRANTS

External

Joel Alejandro Mejia (PI). (02/01/20 – 01/31/25). *CAREER: Breaking the Tradition of Silence through Conocimiento and Consciousness Raising among Latinx Engineers.* National Science Foundation (EEC) Award # 1944807 (\$579,399). **Funded.**

Joel Alejandro Mejia (PI), Vitaliy Popov (Co-PI), and Alberto Esquinca (Co-PI). (08/01/18 – 07/31/21). *Asset-based Practices in Engineering Design (APRENDE): Formation of Engineers through a Funds of Knowledge Approach*. National Science Foundation (EEC) Award # 1826354 (\$349,812). **Funded.**

Joel Alejandro Mejia (PI). (06/01/20 – 05/31/24). *Building Undergraduate Capacity in STEM at a Hispanic Serving Institution utilizing Culturally-Relevant Instruction with Micro-Credentialing*. National Science Foundation (HER/HSI) Award # 1953606 (\$91,259). **Funded.**

Gordon Hoople (PI), **Joel Alejandro Mejia (Co-PI)**, Diana Chen (Co-PI), and Susan Lord (Co-PI). (10/01/18 – 09/30/21). *Reimagining energy: Exploring inclusive practices for teaching energy concepts to undergraduate engineering majors*. National Science Foundation (DUE) Award # 1836504 (\$255,592). **Funded.**

Eli Tucker-Raymond (PI), **Joel Alejandro Mejia (Co-PI)**, Alberto Esquinca (Co-PI), and Amy Wilson-Lopez (Co-PI). (09/15/16 – 09/14/19). *Conference on Literacies in Engineering for Access and Participation (LEAP)*. National Science Foundation (DRL) Award # 1644976 (\$184,672). **Funded.**

Azadeh Bolhari (PI), Daniel Castaneda (Co-PI), and **Joel Alejandro Mejia (Co-PI)**. (09/01/17 – 08/31/19). *EAGER: PPER Developing Drought-Resilient Communities by Utilizing Acrylic Concrete Structures for Rainwater Harvesting*. National Science Foundation (CBET) Award # 1744006 (\$99,997). **Funded.**

Joel Alejandro Mejia (PI). (06/01/20 – 05/31/24). *Collaborative Research: Culturally relevant science teacher preparation: Cultural immersion for dual language teachers*. National Science Foundation (EHR/DRK12) (\$174,442). **Declined (rated highly competitive).**

Joel Alejandro Mejia (PI). (06/01/19 – 05/31/23). *Collaborative Research: Culturally relevant science teacher preparation: Cultural immersion for dual immersion for Georgia teachers*. National Science Foundation (EHR/DRK12) (\$224,451). **Declined (rated highly competitive).**

Alberto Esquinca (PI), **Joel Alejandro Mejia (Co-PI)**, Katherine Mortimer (Co-PI), and Maria de la Piedra (Co-PI). (07/01/17 – 06/30/20). *Broadening Participation by Working with English Learners Doing Engineering Design*. National Science Foundation (DRL) (\$499,180). **Declined (rated highly competitive).**

Internal

Diana Chen, **Joel Alejandro Mejia**, and Mark Chapman. (2019). *Exploring Homelessness in User-Centered Design by Partnering with Think Dignity*. University of San Diego Urgent Challenges Collective Grant (\$625). **Funded.**

Diana Chen, **Joel Alejandro Mejia**, and Mark Chapman. (2019). *Exploring Homelessness through a User-Centered Design Mobile Shower: Guest Lecture by Merlynn Watanabe (Think Dignity)*. University of San Diego SMSE Student Project Enhancement Grant (\$200). **Funded.**

Joel Alejandro Mejia (PI), Odesma Dalrymple (Co-PI), and Alberto Pulido (Co-PI). (03/01/18 – 02/28/20). *Discovering the Engineer Within: Asset-based Approaches for Teaching and Revealing Engineering Knowledge for Low-income Students of Color*. University of San Diego Strategic Initiative (\$15,000). **Funded.**

Odesma Dalrymple (PI), Susan Lord (Co-PI), Gordon Hoople (Co-PI), Caroline Baillie (Co-PI), **Joel Alejandro Mejia (Co-PI)**, and Elisa Lurkis (Co-PI). (03/01/18 – 02/28/20). *Engineering*

- Exchange for Social Justice (ExSJ)*. University of San Diego Strategic Initiative (\$90,000). **Funded.**
- Perla Myers (PI), **Joel Alejandro Mejia (Co-PI)**, Susie Babka (Co-PI). (01/01/19 – 12/31/19). *Education to Employment Initiative- Carson Elementary and Kearny High School*. USD School of Leadership and Education Sciences– Jacobs Institute for Innovation in Education (\$3,500). **Funded.**
- Joel Alejandro Mejia (PI)**. (04/01/19– 08/31/19). Grant to present the research titled: *Anti-Deficit Reframing in Engineering Education: A Model for the Development of Critical Consciousness among Researchers*. USD International Advisory Council - International Opportunity Grant (\$1,750). **Funded.**
- Joel Alejandro Mejia (PI)**. (04/01/18– 08/31/18). Grant to conduct research in Argentina: *Analysis of the Mbyá Guaraní Cultural Practices Associated with Engineering Design*. USD International Advisory Council - International Opportunity Grant (\$1,300). **Funded.**
- Joel Alejandro Mejia (PI)**, and Odesma Dalrymple (Co-PI). (10/01/17 – 09/30/18). *Asset-based approaches in Engineering Education Curriculum for Middle School Adolescents*. Shiley-Marcos School of Engineering – Engineering Research Committee (\$3,400). **Funded.**

JOURNAL PUBLICATIONS

- Gelles, L.A., **Mejia, J.A.**, Lord, S.M., Hoople, G.D., Chen, D.A., (2021). Is it All About Efficiency? Exploring Students' Conceptualizations of Sustainability in an Introductory Energy Course. *Sustainability*, 13(13), 7188. <https://doi.org/10.3390/su13137188>
- Secules, S., Groen, C., **Mejia, J. A.**, Beebe, C., Masters, A. S., Sanchez-Peña, M., & Svyantek, M. (2021). Positionality Practices and Dimensions of Impact on Equity Research: A Collaborative Inquiry and Call to the Community. *Journal of Engineering Education*, 110(1), 1-25. <https://doi.org/10.1002/jee.20377>
- Secules, S., & **Mejia, J. A.** (2021). Contextualizing the Past to Guide the Future: Situating Three Critical Theoretical Frameworks for Educational Culture. *Studies in Engineering Education*, 1(2), 156–171. DOI: <http://doi.org/10.21061/see.51>
- Mejia, J. A.**, Revelo, R. A., & Pawley, A. (2020). Thinking about racism in engineering education in new ways. *IEEE Technology and Society Magazine*, 39(4), 18-27. <https://doi.org/10.1109/mts.2020.3031776>
- Hoople, G.D., Chen, D. A., Lord, S. M., Gelles, L.A., Bilow, F., & **Mejia, J. A.** (2020). An Integrated Approach to Energy Education in Engineering. *Sustainability*, 12(21), 9145. <https://doi.org/10.3390/su12219145>
- Gelles, L.A., Lord, S.M., Hoople, G.D., Chen, D.A., **Mejia, J.A.** (2020). Compassionate Flexibility and Self-Discipline: Student Adaptation to Emergency Remote Teaching in an Integrated Engineering Energy Course during COVID-19. *Education Sciences*, 10(11), 304. <https://doi.org/10.3390/educsci10110304>
- Chen, D. A., Chapman, M. A., **Mejia, J. A.** (2020). Balancing Complex Social and Technical Issues in Design: Exposing Engineering Students to Homelessness Issues. *Sustainability*, 12, 5917. <https://doi.org/10.3390/su12155917>
- Bertrand, M., Hoople, G.D., Chen, D. A., **Mejia, J. A.**, & Lord, S. M. (2020). Broadening the Engineering Canon: How Culturally Responsive Pedagogies Can Help Educate the Engineers

- of the Future. *Mumurations Journal: Emergence, Equity and Education*, 2(1), 6-21.
<https://doi.org/10.31946/meee.v2i1.32>
- Hoople, G. D., **Mejia, J.A.**, Hoffoss, D., & Devadoss, S. L. (2020). Makerspaces on the Continuum: Examining Undergraduate Student Learning in Formal and Informal Settings. *International Journal of Engineering Education*, 36(4), 1184-1195.
- Chen, D. A., **Mejia, J. A.**, & Breslin, S. (2019). Navigating equity work in engineering: contradicting messages encountered by minority faculty. *Digital Creativity*, 1-16.
 doi:10.1080/14626268.2019.1678486
- Mejia, J. A.**, Revelo, R.A., Villanueva, I., & Mejia, J. (2018). Critical theoretical frameworks in engineering education: An anti-deficit and liberative approach. *Education Sciences*, 8(158), 1-13. <https://doi.org/10.3390/educsci8040158>
- Castaneda, D. I., & **Mejia, J. A.** (2018). Culturally relevant pedagogy: An approach to foster critical consciousness in civil engineering. *Journal of Professional Issues in Engineering Education and Practice*, 144(2), 1-8. [https://doi.org/10.1061/\(ASCE\)EI.1943-5541.0000361](https://doi.org/10.1061/(ASCE)EI.1943-5541.0000361)
- Wilson-Lopez, A., **Mejia, J. A.**, Hasbún, I., & Kasun, G. S. (2016). Latino/a adolescents' funds of knowledge related to engineering. *Journal of Engineering Education*, 105(2), 278-311.
<https://doi.org/10.1002/jee.20117>
- Long III, L.L., & **Mejia, J. A.** (2016). Conversations about diversity: Institutional barriers for underrepresented engineering students. *Journal of Engineering Education*, 105(2), 211-218.
<https://doi.org/10.1002/jee.20114>
- Sias, C., Wilson-Lopez, A. A., & **Mejia, J.A.** (2016). Connecting students' background experiences to engineering design. *Technology and Engineering Teacher*, 76(1), 30-35.
- Mejia, J. A.** & Wilson-Lopez, A. A. (2015, March/April). STEM education through funds of knowledge: Creating bridges between formal and informal resources in the classroom. *The Agricultural Education Magazine*, 87(5), pp. 14-16.
- Huang, S., **Mejia, J. A.**, Becker, K., & Neilson, A. (2015). High school physics: An interactive instructional approach that meets the Next Generation Science Standards. *Journal of STEM Education: Innovations and Research*, 16(1), pp. 31-40.
- Lin, C.L., Miller, J. D., Videla, A. R., & **Mejia, J. A.** (2010). Fine coal filtration as revealed by 3D Lattice-Boltzmann simulations. *International Journal of Coal Preparation and Utilization*, 30, pp. 217-238.

EDITED BOOKS

- Wilson-Lopez, A., Tucker-Raymond, E., **Mejia, J. A.**, & Esquinca, A. (Eds.). (in press, 2021). *The literacies of design: Studies of equity and imagination with engineering and making*. West Lafayette, IN: Purdue University Press.
- Baillie, C., Rondon, G., & **Mejia, J. A.** (Eds.). (2020). *Mining and human rights in Peru: a guide for future mining engineers*. London, UK: Morgan and Claypool Publishers.

BOOK CHAPTERS

- Esquinca, A., & **Mejia, J. A.** (in press, 2021) Latinx Engineering Students Designing Professional Identities: A Critical Multimodal Analysis. In Y. Medina and M. Machado-Casas (Eds.), *Critical Understandings of Latinx and Global Education*.
- Mejia, J. A.**, & Revelo, R.A. (in press, 2021). Critical literacies in practice: Deconstructing engineering through an engineering social justice course. In A. Wilson-Lopez, E. Tucker, J.A. Mejia, and A. Esquinca (Eds.), *The literacies of design: Studies of equity and imagination with engineering and making*. West Lafayette, IN: Purdue University Press.
- Wilson-Lopez, A., Tucker-Raymond, E., Esquinca, A., & **Mejia, J. A.** (in press, 2021). Literacy and design for equity. In A. Wilson-Lopez, E. Tucker, J.A. Mejia, and A. Esquinca (Eds.), *The literacies of design: Studies of equity and imagination with engineering and making*. West Lafayette, IN: Purdue University Press.
- Mejia J.A.**, & Wilson-Lopez, A.A. (2016). Sociocultural Analysis of Engineering Design: Latino High School Students' Funds of Knowledge and Implications for Culturally Responsive Engineering Education. In S. Marx (Ed.), *Qualitative Research in STEM: Studies of Equity, Access, and Innovation* (pp. 60-82). New York: Routledge.

PEER REVIEWED CONFERENCE PROCEEDINGS

- Mejia, J. A.**, Betancourt, L. R., Esquinca, A., & Popov, V. (2021). Teachers Navigating Educational Systems: Reflections on the Value of Funds of Knowledge (Fundamental). *Proceedings of the 2021 American Society for Engineering Education (ASEE) Annual Conference*, Long Beach CA (Virtual). <https://peer.asee.org/37805>
- Mejia, J. A.**, Chen, D., Chapman, M. A., & Fledderman, B. (2021). “Drugs, Alcohol, Joblessness, and Lifestyle”: Engineering Students’ Perceptions of Homelessness and Implications for Social Justice Education. *Proceedings of the 2021 American Society for Engineering Education (ASEE) Annual Conference*, Long Beach CA (Virtual). 10.18260/1-2--36531
- Hoople, G. D., Chen, D., **Mejia, J. A.**, Gelles, L. A., & Lord, S. M. (2021). Reimagining Energy Year 3: Reflections on a Course Offering. *Proceedings of the 2021 American Society for Engineering Education (ASEE) Annual Conference*, Long Beach CA (Virtual). <https://peer.asee.org/37653>
- Forbes, M. H., Dalrymple, O. O., Lord, S. M., Baillie, C., Hoople, G. D., & **Mejia, J. A.** (2021). The Engineering Exchange for Social Justice (ExSJ): Advancing Justice Through Sociotechnical Engineering and Equitable Partnership Exchanges. *Proceedings of the 2021 American Society for Engineering Education (ASEE) Annual Conference*, Long Beach CA (Virtual). <https://peer.asee.org/37861>
- Chen, D. A., Gelles, L. A., Lord, S. M., Hoople, G. D., **Mejia, J. A.**, & Chapman, M. A. (2021). Lessons Learned: How Our Agile Department Survived the COVID-19 Pivot. *Proceedings of the 2021 American Society for Engineering Education (ASEE) Annual Conference*, Long Beach CA (Virtual). <https://peer.asee.org/37448>
- Palero Aleman, R., Roberto, M. B., **Mejia, J. A.**, Lord, S. M., Gelles, L. A., Chen, D., & Hoople, G. D. (2021). Mind the Gap: Exploring the Perceived Gap Between Social and Technical Aspects of Engineering for Undergraduate Students. *Proceedings of the 2021 American Society for Engineering Education (ASEE) Annual Conference*, Long Beach CA (Virtual). <https://peer.asee.org/37507>

- Mejia, J. A.,** Chen, D. A., & Chapman, M. (2020). Engineering as a challenging vocation: How students align personal values to the dominant engineering discourse. *Proceedings of the 2020 American Society for Engineering Education (ASEE) Annual Conference*, Montreal, Canada (Virtual).
- Mejia, J. A.,** Esquinca, A., Popov, V., Arana, M. Roberto, M., & Reyes, N. (2020). Integrating Asset-based Practices, Engineering, and NGSS: Lessons from Working with Teachers through a Community-focused Approach. *Proceedings of the 2020 American Society for Engineering Education (ASEE) Annual Conference*, Montreal, Canada (Virtual).
- Mejia, J. A.,** Arana, M. Roberto, M. & Reyes, N. (2020). ¿Por qué no los dos? The Importance of Translanguaging in Bridging Language, Literacy, and Engineering. *Proceedings of the 2020 American Society for Engineering Education (ASEE) Annual Conference*, Montreal, Canada (Virtual).
- Hoople, G., **Mejia, J. A.,** Chen, D., & Lord, S. (2020). Reimagining Energy Year 2: Integrating CSPs into Course Development. *Proceedings of the 2020 American Society for Engineering Education (ASEE) Annual Conference*, Montreal, Canada (Virtual).
- Nelson, M., Hoople, G., **Mejia, J. A.,** Chen, D., & Lord, S. (2020). What is Energy? Examining Engineering Students' Conceptions of Energy. *Proceedings of the 2020 American Society for Engineering Education (ASEE) Annual Conference*, Montreal, Canada (Virtual).
- Lord, S. M., **Mejia, J. A.,** Hoople, G., Chen, D. A. (2019). Special Session: Exploring Decolonization in Engineering Education. *Proceedings of the 2019 Frontiers in Education (FIE) Annual Conference*. Cincinnati, OH.
- Villanueva, I., Revelo, R. A., & **Mejia, J. A.** (2019). Professional development of Latinx engineers on hidden curriculum: An exploratory study. *Proceedings of the 2019 Frontiers in Education (FIE) Annual Conference*. Cincinnati, OH.
- Mejia, J. A.,** Revelo, R.A., Villanueva, I., & Mejia, J. (2019). Anti-Deficit Reframing in Engineering Education: A Model for the Development of Critical Consciousness among Researchers. *Proceedings of the 2019 Research in Engineering Education Symposium (REES)*, Cape Town, South Africa.
- Mejia, J. A.,** Esquinca, A., Popov, V. & Ruiz, D. (2019). Asset-Based Practices in Engineering Design (APRENDE): Development of a Funds of Knowledge Approach for the Formation of Engineers. *Proceedings of the 2019 American Society for Engineering Education (ASEE) Annual Conference*, Tampa, FL.
- Mejia, J. A.,** Popov, V., Rodriguez, V. C., Ruiz, D., Myers, P., Dalrymple, O. & Spencer, J. (2019). Connecting to the Physical Space through Funds of Knowledge: Lessons Learned from a STEM Summer Enrichment Program. *Proceedings of the 2019 American Society for Engineering Education (ASEE) Annual Conference*, Tampa, FL.
- Mejia, J. A.,** & de Paula, M. (2019). "Ingeniero como vos": An analysis of the Mbyá Guaraní Cultural Practices Associated with Engineering Design. *Proceedings of the 2019 American Society for Engineering Education (ASEE) Annual Conference*, Tampa, FL.
- Chen, D., Peters, M., Hoople, G., **Mejia, J. A.,** & Lord, S. (2019). Vocation Across The Engineering Curriculum: Challenging Students to Recognize Their Values. *Proceedings of the 2019 American Society for Engineering Education (ASEE) Annual Conference*, Tampa, FL.
- Hoople, G., Chen, D., **Mejia, J. A.,** & Lord, S. (2019). Reimagining Energy Year 1: Identifying Non-Canonical Examples of Energy in Engineering. *Proceedings of the 2019 American Society for Engineering Education (ASEE) Annual Conference*, Tampa, FL.

- Lord, S.M., **Mejia, J. A.**, Hoople, G., Chen, D., Dalrymple, O., Reddy, E., Przestrzelski, B., & Choi-Fitzpatrick, A. (2018). Creative curricula for changemaking engineers. *Proceedings of the VIII World Engineering Education Forum (WEEF)*. Albuquerque, NM.
- Villanueva, I., **Mejia, J. A.**, & Revelo, R.A. (2018). Uncovering the hidden factors that could compromise equitable and effective engineering education. *Proceedings of the 2018 Frontiers in Education (FIE) Annual Conference*, San Jose, CA.
- Mejia, J. A.**, Chen, D., Lord, S. & Dalrymple, O. (2018). Revealing the invisible: Conversations about –isms and power relations in engineering courses. *Proceedings of the 2018 American Society for Engineering Education (ASEE) Annual Conference*, Salt Lake City, UT.
- Mejia, J. A.**, & Pulido, A. (2018). Fregados pero no jodidos: A case study of Latinx Rasquachismo. *Proceedings of the 2018 American Society for Engineering Education (ASEE) Annual Conference*, Salt Lake City, UT.
- Pawley, A., **Mejia, J. A.**, & Revelo, R.A. (2018). Translating theory on color-blind racism to an engineering education context: Illustrations from the field of engineering education. *Proceedings from the 2018 American Society for Engineering Education (ASEE) Annual Conference*, Salt Lake City, UT.
- Hoople, G., Chen, D., **Mejia, J.A.**, & Lord, S. (2018). Reimagining energy: Deconstructing and decolonizing traditional engineering silos. *Proceedings of the 2018 American Society for Engineering Education (ASEE) Annual Conference*, Salt Lake City, UT.
- Mejia, J. A.**, Villanueva, I., & Revelo, R.A. (2018). Using literacy to identify hidden factors that jeopardize equity in engineering. *Proceedings of the 2018 American Educational Research Association (AERA) Annual Conference*, New York, NY.
- Revelo, R.A., & **Mejia, J. A.** (2017). Social and critical consciousness across the engineering curriculum. *Proceedings of the 7th Research in Engineering Education Symposium (REES)*, Bogotá, Colombia.
- Mejia, J. A.**, Wilson-Lopez, A. A., Revelo, R., & Robledo, A. (2017). Nepantleros and Nepantleras: How Latinx adolescents participate in social change in engineering. *Proceedings of the 2017 American Society for Engineering Education (ASEE) Annual Conference*, Columbus, OH.
- Mejia, J. A.**, Revelo, A., & Villanueva, I. (2017). The “Fibonacci Sequence” of critical theoretical frameworks: Breaking the code of engineering education research with underrepresented populations. *Proceedings of the 2017 American Society for Engineering Education (ASEE) Annual Conference*, Columbus, OH.
- Revelo, A., **Mejia, J. A.**, & Villanueva, I. (2017). Who are we? Beyond monolithic perspectives of Latinxs in engineering. *Proceedings of the 2017 American Society for Engineering Education (ASEE) Annual Conference*, Columbus, OH.
- Jackson, J., **Mejia, J. A.**, Holmes, M., & Stoiko, R. (2016). Dialogues Toward Gender Equity: Engaging Engineering Faculty to Promote an Inclusive Department Climate. *Proceedings of the 2016 ASEE Annual Conference & Exposition*, New Orleans, LA.
- Revelo, R., **Mejia, J.A.**, & Mitchell, M. (2016). Special session: culturally responsive practices in K-16 engineering education. *Proceedings of the 2016 Frontiers in Education (FIE) Conference*, Erie, PA.
- Mejia, J. A.**, Goodridge, W., Call, B. J., & Wood, S. D. (2016). Manipulatives in engineering: supplementing analytical techniques with physical models. *Proceedings of the 2016*

- American Society for Engineering Education (ASEE) Conference and Exposition, New Orleans, LA.*
- Mejia, J. A.,** Wilson-Lopez, A. A., & Drake, D. (2015). Changes in Latino/a Adolescents' Engineering Self-Efficacy and Perceptions of Engineering after Addressing Authentic Engineering Design Challenges. *Proceedings of the 2015 American Society for Engineering Education (ASEE) Annual Conference and Exposition, Seattle, WA.*
- Wilson-Lopez, A., Boatright, M., & **Mejia, J. A.** (2015, December). *Information gathering in adolescents' engineering design. Proceedings of the Literacy Research Association, Carlsbad, CA.*
- Mejia, J. A.,** Goodridge, W., & Green, C. (2014). Using Web-based Learning Logs to Analyze Students Conceptual Understanding of Truss Analysis in an Engineering Statics Course. *Proceedings of the 2014 Frontiers in Education (FIE) Conference, Madrid, Spain.*
- Mejia, J. A.,** Wilson-Lopez, A., Hasbun, I., & Householder, D. (2014). Funds of knowledge in Hispanic students' communities and households that enhance engineering design thinking. *Proceedings of the 2014 American Society for Engineering Education (ASEE) Annual Conference, Indianapolis, IN.*
- Boyer-Thurgood, J. M., Tucker, S. I., **Mejia, J. A.,** & Norman, P. (2014). The socio-cultural importance of writing and sharing autoethnographic research. *Proceedings of the 12th Annual Hawaii International Conference on Education (HICE),* (pp. 1115-1116), Honolulu, Hawaii, ISSN# 1541-5880.
- Mejia, J. A.,** Lin, C. L., & Miller, J. D. (2014). Fundamental aspects of fine coal filtration. *Proceedings of the 2014 Society for Mining, Metallurgy and Exploration (SME) Annual Meeting and Exhibit, Salt Lake City, UT.*
- Mejia, J. A.,** Lin, C. L., & Miller, J. D. (2014). Fundamental aspects of fine coal filtration. *Proceedings of the 2014 Society for Mining, Metallurgy and Exploration (SME) Annual Meeting and Exhibit, Salt Lake City, UT.*
- Mejia, J. A.,** Goodridge, W., & Green, C. (2013). Enhancing engineering mechanics-statics instruction using manipulative truss models. *Proceedings of the 2013 Frontiers in Education Conference, Oklahoma City, OK.*
- Lin, C. L., Miller, J. D., Videla, A. R., & **Mejia, J. A.** (2010). Fine coal filtration as revealed by 3D Lattice-Boltzmann simulations. *Proceedings of the 2010 International Coal Preparation Congress, Littleton, CO,* pp. 504-515.
- Lin, C. L., Miller, J. D., Videla, A. R., & **Mejia, J. A.** (2010). Fundamental analysis and simulation of fine coal filtration. *Proceedings of the 2010 Society for Mining, Metallurgy and Exploration (SME) Annual Meeting and Exhibit, Phoenix, AZ.*

CONFERENCE PRESENTATIONS (no proceedings)

- Mejia, J. A.,** & Lucena, J. (2020). *Engineering for Social Justice: A Multi-space and Multi-strategy Approach for Transforming Engineering Education.* Presentation at the Engineering Deans of Catholic Universities Symposium, San Diego, CA.
- Bertrand, M., Hoople, G. D., Chen, D. A., **Mejia, J. A.,** and Lord, S. M. (2019). *Creating a Culturally Sustaining Engineering Course,* Poster presented at the Annual Diversity, Inclusion, and Social

- Justice Excellence Showcase, USD School of Leadership and Education Sciences (SOLES), San Diego, CA.
- Mejia, J. A., Revelo, R. A., & Villanueva, I.** (2017). *Critical theoretical frameworks in engineering education research*. Paper presented at the Association for the Study of Higher Education (ASHE) National Conference, Houston, TX.
- Mejia, J. A.** (2017). *Stories from the other side of the blurry tunnel: It gets better after all*. Paper presented at the Society for Advancement of Hispanic/Chicanos and Native Americans in Science (SACNAS) National Conference, Salt Lake City, UT.
- Mejia, J. A.** (2017). *Nepantla in Engineering: Recognizing the epistemologies of Latinx adolescents*. Paper presented at the Society for Advancement of Hispanic/Chicanos and Native Americans in Science (SACNAS) National Conference, Salt Lake City, UT.
- Mejia, J. A., Wilson-Lopez, A. A., & Drake, D.** (2015). *Changes in Latino/a Adolescents' Engineering Self-Efficacy and Perceptions of Engineering after Addressing Authentic Engineering Design Challenges*. Paper presented at the 2015 American Society for Engineering Education (ASEE) Annual Conference and Exposition. Seattle, WA.
- Mejia, J. A., & Wilson-Lopez, A. A.** (2015). *Latino High School Students' Funds of Knowledge: A Sociocultural Analysis of Engineering Design Challenges*. Paper presented at the 2015 American Educational Research Association (AERA) Conference. Chicago, IL
- Wilson-Lopez, A. A., **Mejia, J. A., & Sias, C. M.** (2015). *Fundamental Literacies in English Learners' Engineering Design Work*. Paper presented at the 2015 American Educational Research Association (AERA) Conference. Chicago, IL.
- Wilson-Lopez, A., **Mejia, J. A., & Hasbún, I.** (2014, December). *Exchanges of capital in Latino/a adolescents' engineering designs*. Paper presented at the annual meeting of the Literacy Research Association, Marco Island, FL.
- Mejia, J. A., Goodridge, W., & Green, C.** (2014). *Using Web-based Learning Logs to Analyze Students Conceptual Understanding of Truss Analysis in an Engineering Statics Course*. Paper presented at the 2014 Frontiers in Education (FIE) Conference. Madrid, Spain.
- Mejia, J. A., & Wilson-Lopez, A.** (2014). *Community-based engineering design problems: Analyzing Latino students' linguistic, cultural and social resources*. Paper presented at the Society for Advancement of Hispanic/Chicanos and Native Americans in Science (SACNAS) National Conference, Los Angeles, CA.
- Wilson-Lopez, A., Hailey, C., Householder, D., & **Mejia, J. A.** (2014). *Community-based engineering design challenges for adolescent English learners*. Paper presented at the National Science Foundation's Community for the Advancing Discovery Research in Education (CADRE) PI Conference, Washington, DC.
- Mejia, J. A., Wilson-Lopez, A., Hasbun, I., & Householder, D.** (2014). *Funds of knowledge in Hispanic students' communities and households that enhance engineering design thinking*. Paper presented at the American Society for Engineering Education (ASEE) Annual Conference, Indianapolis, IN.
- Wilson-Lopez, A., Smithee, A., **Mejia, J. A., & Hasbun, I.** (2014). *Literacies in engineering: forms of capital used in immigrant youths' engineering designs*. Paper presented at the American Educational Research Association (AERA) Annual Meeting, Philadelphia, PA.

- Mejia, J. A.,** Lin, C. L., & Miller, J. D. (2014). *Fundamental aspects of fine coal filtration*. Paper presented at the Society for Mining, Metallurgy and Exploration (SME) Annual Meeting and Exhibit, Salt Lake City, UT.
- Wilson-Lopez, A., **Mejia, J. A.,** Hasbun, I., Householder, D., & Hailey, C. (2013). *Funds of knowledge and literacies in Latino/a youth's community-based engineering design work*. Paper presented at the Literacy Research Association (LRA) Annual Conference, Dallas, TX.
- Mejia, J. A.,** Goodridge, W., & Green, C.. (2013). *Enhancing engineering mechanics-statics instruction using manipulative truss models*. Paper presented at the Frontiers in Education (FIE) Conference, Oklahoma City, OK.
- Mejia, J. A.** (2013). *Examining Latino students' linguistic and cultural resources when addressing engineering design activities*. Paper presented at the American Society of Engineering Education (ASEE) Annual Conference, Atlanta, GA.
- Mejia, J. A.** (2013). *A loss to explain: Identity*. Paper presented at the Utah State University Graduate Research Symposium, Logan, UT.
- Lin, C. L., Miller, J. D., Videla, A. R., & **Mejia, J. A.** (2010). *Fundamental analysis and simulation of fine coal filtration*. Paper presented at the Society for Mining, Metallurgy and Exploration (SME) Annual Meeting and Exhibit, Phoenix, AZ.

GUEST LECTURES AND WORKSHOPS

- Mejia, J.A.** (2021). *Conocimiento in engineering education: Latinxs reclaiming and affirming epistemologies of the South*. Invited lecture Purdue University School of Engineering Education, West Lafayette, IN (virtual).
- Mejia, J.A.** (2021). *Choques y arebatos: Acknowledging the racialized history and social realities of Latinx engineering students*. Invited lecture The Ohio State University Department of Engineering Education, Columbus, OH (virtual).
- Mejia, J.A.** (2021). *Broadening the participation of Latinx students in engineering education through asset-based practices*. Invited Keynote Speaker X-DBER 2021 Conference, Lincoln, NE (virtual).
- Mejia, J.A.** (2021). *A conversation on Critical Theoretical Frameworks*. Invited lecture Florida International University School of Universal Computing, Construction, and Engineering Education, Miami, FL (virtual).
- Mejia, J.A.** (2020). *A conversation on Funds of Knowledge*. Invited lecture Virginia Tech Department of Engineering Education, Blacksburg, VA (virtual).
- Hoople, G., Chen, D., **Mejia, J. A.,** & Lord, S. (2020). *Exploring anti-racism & social justice in engineering curricula: Where to start? A guide for Catholic Universities*. Workshop presented for engineering faculty at Catholic Universities, San Diego, CA (virtual).
- Mejia, J.A.** (2020). *Asset-based practices in engineering education: Demolishing stereotypes and the "pobrecito" syndrome*. Invited guest speaker at Engineering Exchange for Social Justice, University of San Diego, San Diego, CA (virtual).
- Villanueva, I., & **Mejia, J.A.** (2019). *Mentoring students ethically and critically in engineering*. Workshop presented at the annual meeting of the Society of Hispanic Professional Engineers, Phoenix, AZ.

- Lord, S., **Mejia, J. A.**, Chen, D., & Hoople, G. (2019). *Special Session Exploring decolonization in engineering education*. Special session presented at the 2019 Frontiers in Education (FIE) Annual Conference, Cincinnati, OH.
- Mejia, J.A.** (2019). *STEM Pathways and Success for Latinx Students*. Invited guest speaker at The Encuentros Leadership and Education Conference, Cuyamaca College, San Diego, CA.
- Mejia, J.A.** (2019). *ASEE Safe Zone Training*. Workshop presented at the Pacific ASEE Regional Conference, California State University - Los Angeles, Los Angeles, CA.
- Lord, S., **Mejia, J.A.**, Lockett, K., Wolmarans, N., Mochekeane, N., & Mukhar, V. (2019) *Decolonizing Engineering Education: Where do we start?* Workshop presented at the 2019 Research in Engineering Education Symposium (REES), Cape Town, South Africa.
- Mejia, J. A.** (2019). *Broadening participation of underrepresented students in engineering through asset-based practices*. Workshop presented at Colorado School of Mines, Golden, CO.
- Mejia, J. A.** (2019). *Culturally Responsive Education in Engineering*. Guest Lecture presented at the Colorado/Wyoming Louis Stokes Alliance for Minority Participation Conference, Denver, CO.
- Camacho, M., & **Mejia, J. A.** (2019). *Academic Bullying*. Workshop presented at the California State University Program for Education & Research in Biotechnology, Anaheim, CA.
- Mejia, J. A.** (2019). *Ethical mentoring of minoritized students*. Guest lecture presented at USD Center for Educational Excellence, San Diego, CA.
- Mejia, J. A.** (2018). *CIE/IES: How can faculty incorporate social justice into STEM Disciplines?* Guest lecture presented at USD Center for Educational Excellence, San Diego, CA.
- Mejia, J. A.**, Chen, D., Lord, S. & Dalrymple, O. (2018). *Revealing the invisible: Conversations about -isms and power relations in engineering courses*. Workshop presented at the 2018 American Society for Engineering Education (ASEE) Annual Conference, Salt Lake City, UT.
- Mejia, J. A.** (2018). *Fondos de conocimiento: Como utilizarlos en ingeniería*. Workshop presented to the Universidad de Los Andes TESO Research group, Bogotá, Colombia.
- Mejia, J.A.** (2017). *Cultural competence in program development and implementation*. Workshop presented at the STELAR ITEST PI and Evaluator Summit, Arlington, VA.
- Villanueva, I., **Mejia, J.A.**, & Revelo, R. (2017). *Exploration of hidden factors that compromise equitable and effective engineering education through literacy*. Workshop presented at the annual meeting of the Society of Hispanic Professional Engineers, Kansas City, MO.
- Mejia, J.A.** (2016). *Connecting engineering design challenges to funds of knowledge and implications for culturally responsive engineering education*. Guest lecture presented at the University of New Mexico, Albuquerque, NM.
- Revelo, R., **Mejia, J.A.**, & Mitchell, M. (2016). *Special session: culturally responsive practices in K-16 engineering education*. Special session presented at the annual meeting of the 2016 Frontiers in Education (FIE) Conference, Erie, PA.
- Mejia, J.A.**, Revelo, R. & Villanueva, I. (2016). *Dismantling the education pipeline: Structural changes that impact Latin@ participation in engineering*. Symposium presented at the annual meeting of the American Educational Research Association, Washington, DC.

Wilson-Lopez, A., & **Mejia, J. A.** (2016). *Literacy practices embedded in transnational Latino/a adolescents' engineering design work*. Symposium presented at the annual meeting of the Literacy Research Association, Carlsbad, CA.

Boyer-Thurgood, J. M., Tucker, S. I., **Mejia, J. A.**, & Norman, P. (2014). *The socio-cultural importance of writing and sharing autoethnographic research*. Symposium presented at 12th Annual Hawaii International Conference on Education (HICE), Honolulu, Hawaii.

PEER REVIEWED CURRICULAR MATERIALS

Sias, C., Wilson-Lopez, A., & **Mejia, J. A.** (2015). *Considering trade-offs and maximizing efficiency at a fast food restaurant: A literacy-infused engineering unit*. Boulder, CO: TeachEngineering. Retrieved from:
https://www.teachengineering.org/view_activity.php?url=collection/usu_/activities/usu_fastfood/usu_fastfood_activity1.xml

Wilson-Lopez, A., Sias, C., & **Mejia, J. A.** (2016). *Engineering ethics*. Boulder, CO: TeachEngineering. Retrieved from:
https://www.teachengineering.org/view_activity.php?url=collection/usu_/activities/usu_ethics/usu_ethics_activity1.xml

PODCASTS

Mejia, J. A. (The K12 Engineering Education Podcast). (2017, July). *Engaging Hispanic Students in Engineering* [Audio Podcast]. Retrieved from <https://soundcloud.com/piuswong/engaging-hispanic-students-in-engineering>

COURSES TAUGHT

University of San Diego

2020 - 2021 GENG 384: Remediation and Treatment Separation Processes
 2020 - 2021 HUMC 294: Black Lives Matter (team taught)
 2020 ENGR 311: Materials Science and Engineering
 2017 - 2021 GENG 350: Engineering and Social Justice
 2019 MENG 260: Introduction to Thermal Sciences
 2018 - 2021 ENGR 103: User-Centered Design
 2017 - 2018 ENGR 101: Introduction to Engineering

Universidad de Los Andes

2018 IIND 4346: Ingeniería y Justicia Social

Angelo State University

2015 - 2017 ENGR 1201: Introduction to Engineering
 2015 - 2017 ENGR 2301: Engineering Mechanics - Statics
 2015 - 2017 ENGR 2302: Engineering Mechanics – Dynamics
 2017 GS 1181: Engineering Disasters and Social Justice
 2016 - 2017 ENGR 2332: Mechanics of Materials

2015 - 2016 ENGR 1304: Engineering Graphics

West Virginia University

2014 - 2015 ENGR 101: Introduction to Engineering

STUDENT MENTORING

Graduate Students

- 2021–Present Gabriela Sanchez Killorin (The University of Texas at San Antonio)
Ph.D. Students Bicultural-Bilingual Education
- 2018–2021 Andres Acero (Universidad de Los Andes Department of Industrial Engineering)
Doctoral Dissertation Committee Member (graduated 2021)
- 2018–2021 Camilo Navarro (Universidad de Los Andes Department of Industrial Engineering)
Doctoral Dissertation Committee Member (graduated 2021)
- 2018–2020 Briseida Elenes (USD School of Leadership and Education Studies)
Doctoral Dissertation Committee Member (graduated 2020)
- 2020–2021 Ricardo Betancourt (SDSU Department of Bilingual Education)
Graduate Research Mentor
- 2019–2020 Jessica Blandon (USD Joan B. Kroc School of Peace Studies)
Graduate Research Mentor (graduated 2020)
- 2018–2019 Damian Ruiz (SDSU Department of Multicultural Education)
Graduate Research Mentor (graduated 2019)

Undergraduate Students

- 2020–2021 Bryce Fledderman (USD SMSE Department of Integrated Engineering)
Undergraduate Research Mentor
- 2020–2021 Austin Peters (USD SMSE Department of Integrated Engineering)
Undergraduate Research Mentor
- 2020–2021 Nicole Koutelos (USD SMSE Department of Mechanical Engineering)
Undergraduate Research Mentor
- 2020–2021 Regina Palero Alemán (USD SMSE Department of Integrated Engineering)
Undergraduate Research Mentor (graduated 2021)
- 2019–2021 Mireya Roberto (USD SMSE Department of Integrated Engineering)
Undergraduate Research Mentor (graduated 2021)
- 2019–2021 Melissa Arana (USD SMSE Department of Industrial & Systems Engineering)
Undergraduate Research Mentor (graduated 2021)
- 2019–2020 Nicole Reyes (USD SMSE Department of Mechanical Engineering)
Undergraduate Research Mentor
- 2019 Danielle Gadbois (USD SMSE Department of Mechanical Engineering)
Undergraduate Research Mentor (graduated 2019)

SERVICE

University of San Diego

2020–Present	Engaged Scholarship Task Force
2020–Present	Anti-Racism Task Force
2019–2020	Committee Member for the University-wide SAT Admissions Test Working Group
2019–2020	University Senate Ad Hoc Committee on Transfer of Credit Procedures
2019–2020	Office of the Provost Chief Diversity Officer Search Committee Member
2019–2020	USD Faculty Senate Alternate
2018–2020	Center for Educational Excellence, University of San Diego - STEM Liaison
2018–2020	USD Turning Wheels Project, Advisory Committee
2018–2019	USD Impact Linda Vista Initiative
2017–2019	USD Humanities Center - Collaborative Research Advisory Committee

Shiley-Marcos School of Engineering (USD)

2020–Present	Diversity, Inclusion and Social Justice Task Force
2019–Present	Online Teaching Evaluations Task Force
2019–Present	Society of Hispanic Professional Engineers (SHPE), University of San Diego - Advisor
2019	SMSE Engineering Representative at Cuyamaca College STEM Day
2018	LLC Faculty Member
2018	LLC Student Advising (24 students)
2017–Present	Committee member Engineering Exchange Working Group
2017–2018	Global Engineering Brigades, University of San Diego – Advisor
2017–2018	Changemaker Faculty Fellow, Changemaker HUB, University of San Diego

Department of Integrated Engineering

2018–Present	Major advisor, Integrated Engineering (19 students)
2018–Present	Bilingual Parent and Family Orientation
2018–2019	Shiley-Marcos School of Engineering Industry Scholars Program
2017–Present	Integrated Engineering curriculum development and ABET accreditation efforts

Editorial and Review Activities

2019–Present	Associate Editor - Journal of Women and Minorities in Science and Engineering
2019–Present	Journal of Science Education - Peer Reviewer
2019–Present	Journal of Contemporary Water Research and Education - Peer Reviewer
2019–Present	International Journal of STEM Education - Peer Reviewer
2017–Present	Editorial Board Member – Journal of Hispanic Higher Education

2017–Present	Online Journal of Global Engineering Education - Peer Reviewer
2017–Present	International Journal of Engineering, Social Justice and Peace - Peer Reviewer
2016–Present	Journal of Pre-College Engineering Education Research (JPEER) peer-reviewer
2016–Present	Journal of Engineering Education (JEE) peer-reviewer
2016–Present	Journal of Multicultural Education peer-reviewer
2015–Present	National Science Foundation Peer Reviewer
2014–Present	Conference paper reviewer, American Educational Research Association
2014–2019	Conference paper reviewer, Literacy Research Association
2013–Present	Conference paper reviewer, Frontiers in Education Conference
2012– Present	Conference paper reviewer, American Society for Engineering Education

Professional Service

2020–Present	American Society for Engineering Education Steering Committee on Curriculum
2020–Present	Secretary/Treasurer – Educational Research and Methods Division, American Society for Engineering Education
2020	Best Paper Award Committee – Educational Research and Methods Division, American Society for Engineering Education
2020	Best Paper Award Committee PIC IV, American Society for Engineering Education
2019–2020	Division Chair – Engineering Ethics Division, American Society for Engineering Education
2019–2020	ASEE Constituent Committee on Equity, Culture and Social Justice in Education
2018–2019	Program Chair – Engineering Ethics Division, American Society for Engineering Education
2017–2018	Secretary/Treasurer – Engineering Ethics Division, American Society for Engineering Education
2017–2019	Co-Director, Pre-College Program, Society of Hispanic Professional Engineers
2016–2018	AERA Hispanic SIG Outstanding Dissertation Award Committee
2016–Present	ASEE LGBTQIA+ Safe Zone Training and Virtual Community of Practice
2016–2017	Representative at Large – Ethics Division, American Society for Engineering Education

PROFESSIONAL EXPERIENCE

2011 - 2013	<i>Project Engineer, FLSmidth Minerals</i>
2010	<i>Graduate Intern – Technical Services, Rio Tinto,</i>
2007 - 2009	<i>Materials Engineer, Tinker Air Force Base</i>
2005	<i>Tech-Student Engineer Intern, Raytheon Missile Systems</i>

PROFESSIONAL MEMBERSHIPS

- American Educational Research Association (AERA)
- Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)
- American Society for Engineering Education (ASEE)
- Society of Hispanic Professional Engineers (SHPE)
- Tau Beta Pi Engineering National Honor Society
- Society for Mining, Metallurgy, and Exploration (SME)
- The Minerals, Metals and Materials Society (TMS)