

CURRICULUM VITAE
IDALIS VILLANUEVA, Ph.D.
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COUNTRY OF CITIZENSHIP: United States

EDUCATION

2009-2011	Post-Ph.D.	Analytical Cell Biology	National Institutes of Health
2007-2009	Ph.D.	Chemical & Biological Engineering	Univ. of Colorado-Boulder
2004-2007	M.S.	Chemical & Biological Engineering	Univ. of Colorado-Boulder
1998-2004	B.S.	Chemical Engineering	Univ. of Puerto Rico- Mayagüez

Dissertation Title: “The effects of biochemical & biomechanical cues on cartilage cells using synthetic, photopolymerizable hydrogels.” Advisor: S.J. Bryant

FACULTY APPOINTMENTS

University of Florida, Gainesville, FL

2022-present Associate Chair for Research and Graduate Studies, Engineering Education
2020-present Associate Professor (tenured), Engineering Education
2021-present Affiliate Faculty (non-tenure track), Civil and Coastal Engineering; Environmental Engineering; Chemical Engineering; Electrical and Computer Engineering

Utah State University, Logan, UT

2013-2020 Assistant Professor (tenured-track), Engineering Education
2014-2020 Adjunct Faculty (non-tenure track), Biological Engineering

University of Maryland, College Park, MD

2011-2013 Lecturer (non-tenure track), Fischell Department of Bioengineering

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- ICQCM Critical Data Science Certificate, 2022
- Multicultural Mentoring Certificate, University of Florida, 2020-2021
- Camp Orientation Online Learning, 2020-2021
- Biometric Research & Education Credits, iMotions, 2017
- STEM Women of Color Leadership Academy; 8 continuing education credits, 2016
- Policy Analysis & Research Certificate, RAND Policy Institute, Santa Monica, CA, 2015
- SolidWorks Computer Aided Design, Bridgerland Technical College, Logan, UT, 2014
- Scientist Teaching Science Certificate, National Institutes of Health, Office of Intramural Training & Education, Bethesda, MD, 2010

U.S. PATENTS

- 12,616,113 (Filed 11/10/2009). Apparatus & Methods for Loading Soft Materials.
- *Provisional Patent* (Filed 01/24/2020). I. Villanueva, M.D. Khan, P. Vicioso, E. Marte, & J. Husman. (2019). A method to filter electrodermal activity through accelerometer data. Utah State University Invention ID D19024.

HONORS & AWARDS

1. Best Edited Volume Book Award, American Association of Hispanics in Higher Education, 2024
2. Best Overall Conference Paper Award, American Society of Engineering Education, 2023
3. Best Professional Interest Council (PIC) II Paper Award, American Society of Engineering Education, 2023
4. Best Paper Award, Faculty Development Division, American Society of Engineering Education, 2023
5. Appointed White House Briefing Representative for Society of Hispanic Professional Engineers, Office of Public Engagement, 2023
6. Finalist, ASEE Curtis McGraw Research Award, 2023
7. National Science Foundation Summer Institute in Advanced Quantitative and Computational Methods for STEM education research (NSF SIARM for STEM) Fellow, 2021-2022
8. Institute of Critical Quantitative, Computational, & Mixed Methodologies Fellow, 2021-2023
9. National Science Foundation CAREER Award, 2017-2022
10. Exemplary Online Award, Quality of Course Materials, University of Florida, 2021
11. Best Paper Finalist, Applied Human Factors and Ergonomics (AHFE)/ Human Side of Service Engineering (HSSE) Conference (virtual), 2021.
12. Best Diversity Paper Award, American Society of Engineering Education Virtual Conference, Women in Engineering Division (ASEE WIED), 2021
13. Undergraduate Faculty Mentor of the Year, Engineering Education Department, Utah State University, 2020
14. Presidential Early Career Awards for Scientists and Engineers (PECASE) Award, White House Office of Science, Technology, and Policy, 2019
15. Utah State University Robins Award, Faculty Researcher of the Year, 2019
16. Research of the Year, College of Engineering, Utah State University, 2019
17. Co-Researcher of the Year, Engineering Education Department, Utah State University, 2019
18. Scholarly Consortium for Innovative Psychology in Education Founders Award, Most Creative and Interactive Conference Session, 2019
19. Society of Hispanic Professional Engineers (SHPE) Advisor Excellence Award for Region 3 (includes Colorado, Idaho, Kansas, Montana, New Mexico, North Dakota, Nebraska, South Dakota, Utah, and Wyoming), 2019
20. Distinguished Paper Award, Northern Rocky Mountain Educational Research Association, 2018
21. Best Diversity Paper Award, Engineering Ethics Division, American Society of Engineering Education, 2018
22. Journal of Engineering Education (JEE) Selects, an honor conferred to the best engineering education papers in engineering education; JEE is the premier journal of this discipline
23. Graduate Research Mentor of the Year, Engineering Education Department, Utah State University, 2018
24. Researcher of the Year, Engineering Education Department, Utah State University, 2018
25. American Association of Hispanics in Higher Education Fellow, 2018
26. Undergraduate Research Mentor of the Year, Engineering Education Department, Utah State University, 2017
27. Utah State University Sustainability Faculty Fellow in Planetary Thinking, 2016-2017
28. Center for Women & Gender Faculty Fellow, 2016
29. Research Catalyst SEED Grant Faculty Fellow, 2015
30. RAND Policy Institute Faculty Fellow, 2015
31. RGS Washington D.C. Faculty Fellow, Utah State University, 2014

32. QEM/CAREER Workshop Faculty Fellow, National Science Foundation, 2014
33. Best Paper Award, American Society of Engineering Education, Biomedical Engineering Division, 2013
34. Chesapeake Bay Project Faculty Fellow, University of Maryland-College Park, 2011-2013
35. Center for Teaching Excellence Faculty Fellow, University of Maryland-College Park, 2012-2013
36. SACNAS Leadership Institute Fellow, 2010
37. U.S. Department of Education Graduate Assistantship in Areas of National Need, University of Colorado-Boulder, Duration: July 2006-December 2008, Amount: \$12,000
38. Colorado Diversity Initiative Graduate Student Travel Grant, University of Colorado-Boulder, Duration: December 2006, December 2007, March 2008; Amount: \$3,000
39. NASA Harriett G. Jenkins Pre-Doctoral Fellowship, University of Colorado-Boulder, Duration: July 2005-October 2008, Amount: \$66,000 over 3 years
40. Alliance for Graduate Education and the Professoriate Travel Grant, University of Colorado-Boulder, Duration: July 2007, Amount: \$1,500
41. Mini NASA Research Award through the Harriett G. Jenkins Fellowship, University of Colorado-Boulder, Duration: June 2006-August 2006, Amount: \$7,000
42. Academic Excellence in Science & Engineering Dean's Award, University of Puerto Rico at Mayagüez, 2004.
43. Puerto Rico NASA Space Grant for Research in Engineering & Science, University of Puerto Rico-Mayagüez, Duration: 2003-2004, Amount: \$5,000
35. American Institute of Chemical Engineers Student Poster Competition, 2nd place, San Francisco, California, 2003.
36. HESS Foundation Scholarship for Academic Excellence, University of Puerto Rico-Mayagüez, 2002, Amount: \$500.

SCHOLARSHIP & CREATIVE PUBLICATIONS

Senior/principal author(s) = Underline; Self = bold; Fellow = F; Graduate Student = G; Undergraduate Student=U; Other = O; Post-Doctoral Associate/Fellow = P; Resident=R

A. Refereed Journal Publications

2024

1. **I. Villanueva Alarcón**, C.E. Sunny^O, & J. Kesse^O. (2024). Quantifying the Intersectional Dynamics of Hidden Curriculum Pathways in Engineering. *International Journal of STEM Education*, (In Preparation).
2. E. Marte Zorrilla^G, **I. Villanueva Alarcón**, J. Husman, R. Pekrun, & M. Graham^P. (2024). Exploring the relationships between electrodermal activity, performance, and academic emotions in engineering exams. *Education Sciences*, (In Preparation).
3. E. Marte Zorrilla^G & **I. Villanueva Alarcón**. (2024). Exploring the utility of natural language processing to uncover emotions connected to hidden curriculum in engineering, *Social Sciences*, (In Preparation).
4. A. Esquinca, M. Di Stefano, **I. Villanueva Alarcón** (2024). Language policy and translanguaging praxis in DLBE classrooms in Massachusetts and Puerto Rico. *Journal of Research in Science Teaching* (In Preparation).
5. G. Aslam^G & **I. Villanueva Alarcón**. (2024). State of Engineering Education Research in the US: 2003 to 2023. *Journal of Engineering Education*, (In Preparation).
6. **I. Villanueva Alarcón**. (2024). The Dim Prospects of a Child Find: A Journaling Exercise for an Academic, Engineer, and Mother Navigating Special Education Services. *Journal of Pre-College Engineering Education* (Under Review).

7. R. Revelo, **I. Villanueva Alarcón**, A. Mejia, & J. Mejia. (2024). Beyond the Monolith: A Critical, Systematic Review of the Literature on Latiné/x/a/o Students in Engineering. *Journal of Engineering Education*, (In-Press).
8. **S.H. Jones**, B. Campbell, **I. Villanueva Alarcón**, & L.G. Putney. (2024). I think I can, I hope I can: Professional efficacy, hope, and identity among undergraduate engineering students. *Educational Research, Theory, & Practice*, 35 (1), 104-117. ISSN: 2637-8965.

2023

9. V. Sellers^P & **Idalis Villanueva Alarcón**. (2023). From message to strategy: A pathways approach to characterize the hidden curriculum in engineering. *Studies in Engineering Education, Studies in Engineering Education*, 4(2), doi: <https://doi.org/10.21061/see.113> , p. 176–200.
10. **I. Villanueva Alarcón**, S. Anwar, & Z. Atiq. (2023). How multi-modal approaches support engineering and computing education research. *Australasian Journal of Engineering Education*, <https://www.tandfonline.com/doi/full/10.1080/22054952.2023.2274513> , p. 1-16.
11. Castañeda-Kessel, M., **Villanueva Alarcón, I.**, & Berke, R. (2023). Research Development & Early-career Faculty: Catalysts of Change for Diversity, Equity, and Inclusion in STEM, *Journal of Research Administration*, MS2205, <https://www.srainternational.org/blogs/srai-jra2/2023/06/08/research-development-early-career-faculty-catalyst>.
12. L. Berdie^G, R.J. Downey^P, J. Muñoz, & **I. Villanueva Alarcón** (2023). Learning from Hidden Realities of Latinx Contingent STEM Faculty at Hispanic Serving Institutions (HSIs): Policies to Support Latinx Contingent STEM Faculty. *Journal of Higher Education Policy and Management*, 28 (2), https://issuu.com/aaual0/docs/jhem_38_2_2023_issuu.com], p. 19-31.
13. **I. Villanueva Alarcón** & J.A. Muñoz. (2023). Exploring the Hidden Realities of Latinx Contingent Faculty in STEM, *Journal of Latinos and Education*, <https://doi.org/10.1080/15348431.2023.2175683>, p. 1-9.

2022

14. **I. Villanueva Alarcón**, A. Mejia, J. Mejia & R. Revelo. (2022). Latiné, Latinx, Latina, Latino, or Hispanic: Problematising terms often used in engineering education. *Journal of Engineering Education*, DOI: 10.1002/jee.20486, p. 1-5.
15. R.J. Downey^P, K. Youmans, **I. Villanueva Alarcón**, L.S. Nadelson, & J. Bouwma-Gearhart. (2022). Building Knowledge Structures in Context: An Exploration of How Constructionism Principles Influence Engineering Student Learning Experiences in Academic Making Spaces. *Education Sciences*, 12(11), 733; <https://doi.org/10.3390/educsci12110733>, p. 1-15.
16. **I. Villanueva Alarcón** & E. Moore. (2022). Diversity, Context, and Complexity in Regenerative Medicine, Regenerative Engineering and Translational Medicine, <https://doi.org/10.1007/s40883-022-00266-x>, p. 1-3.
17. M. Di Stefano, **I. Villanueva Alarcón**, B. McEaney, E. Marte^G & A. Esquinca. (2022). Exploring Bilingual and Dual Language Teachers' Perspectives on Asset-Based Professional Development in Science and Engineering. *Bilingual Research Journal*, <https://doi.org/10.1080/15235882.2022.2118195>, p. 1-20.
18. M. Graham^P, J. Husman, R. Pekrun^O, **I. Villanueva**, & D. Christensen. (2022). The dynamic experience of taking an exam: Ever changing cortisol and confidence. *British Journal of Educational Psychology*, 93 (1) <https://doi.org/10.1111/bjep.12521>, p. 195-210.
19. J.A. Mejia, **I. Villanueva Alarcón**, R. Revelo, & J. Mejia. (2022). Legitimized Tongues: Breaking the Traditions of Silence in Mainstream Engineering Education Research. *Journal of Women and Minorities in Science and Engineering*, 28, [10.1615/JWomenMinorScienEng.2022036603](https://doi.org/10.1615/JWomenMinorScienEng.2022036603). p. 53-77.

20. **K. Cook-Chennault, I. Villanueva Alarcón,** & G. Jacob^G. (2022). Usefulness of digital serious games in engineering for diverse undergraduate students, *Education Sciences*, 12, 27; <https://www.mdpi.com/2227-7102/12/1/27>, p. 1-30
21. **I. Villanueva Alarcón** & **S. Anwar**. (2022). Situating multi-modal approaches in engineering education research, *Journal of Engineering Education*, Guest Editorial; <https://doi.org/10.1002/jee.20460>, p. 1-6.

2021

22. **J. Bouwma-Gearhart, Y.H. Choi^G, L.S. Nadelson, I. Villanueva,** E. Soto^U, & C. Lenhart^G. (2021). Undergraduate Students Becoming Engineers: The Affordances of University-Based Makerspaces. *Sustainability* 13, 1670. <https://doi.org/10.3390/su13041670>, p. 1-25.
23. **Y.H. Choi^G, J. Bouwma-Gearhart, C.A. Lenhart^G, I. Villanueva,** & **L. Nadelson**. (2021). Student Development at the Boundaries: Makerspaces as Affordances for Engineering Students' Development. *Sustainability* 13, 3058. <https://www.mdpi.com/2071-1050/13/6/3058/html>, p. 1-23.
24. **I. Villanueva Alarcón,** R.J. Downey^P, **L.S. Nadelson,** Y. Choi^P, **J. Bouwma-Gearhart** & C. Tanoue^U, & (2021). Understanding Equitable Access in Engineering Education Making Spaces. *Social Sciences*, 10, 384. <https://www.mdpi.com/2076-0760/10/10/384/html>, p. 1-17.
25. **I. Villanueva Alarcón,** R.J. Downey^P, Y. Choi^G, **J. Bouwma-Gearhart,** & **L.S. Nadelson**. (2021). Light blue walls and tan flooring: A culture of belonging in engineering making spaces (or not?). *Education Sciences*, 11, 559, <https://www.mdpi.com/2227-7102/11/9/559>, p. 1-15.

2020

26. **L. Almeida^G, K. Becker,** & **I. Villanueva**. (2020). Engineering communication in industry and cross-generational challenges: An exploratory study. *European Journal of Engineering Education*; [doi: 10.1080/03043797.2020.1737646](https://doi.org/10.1080/03043797.2020.1737646). p. 1-13.
27. **C. Lenhart^G, J. Bouwma-Gearhart, I. Villanueva,** K. Youmans^G, & **L. Nadelson**. (2020). Engineering faculty members' perceptions of university makerspaces: potential affordances for curriculum, instructional practices, and student learning. *International Journal of Engineering Education*, 36(4), p. 1-12.
28. **I. Villanueva,** M. Di Stefano^P, L. Gelles^G, K. Youmans^G, & A. Hunt^O. (2020). Development and Assessment of a Vignette Survey Instrument to Identify Responses due to Hidden Curriculum among Engineering Students and Faculty. *International Journal of Engineering Education*, 36(5), p. 1549–1569.

2019

29. **J. Muñoz** & **I. Villanueva** (2019). Latino STEM Scholars, Barriers, and Mental Health: A Review of the Literature. *Journal of Hispanic Higher Education*, <https://doi.org/10.1177/1538192719892148>, p. 3-16.
30. **I. Villanueva,** M. Di Stefano^P, L. Gelles^G, P. Vicioso^G, & S. Benson^O. (2019). A race re-imaged, intersectional approach to academic mentoring: Exploring the perspectives and responses of womxn in science and engineering research. *Contemporary Educational Psychology*, 59 (101786); <https://doi.org/10.1016/j.cedpsych.2019.101786>, p. 1-17.
31. L. Gelles^G, **I. Villanueva,** M. Di Stefano^P. (2019). “Mentoring is ethical, right?”: Women graduate students & faculty in science & engineering speak out. *International Journal of Gender, Science, & Technology*, Special Issue in Gender & Intersectionality in Engineering, 11 (1), 108-133; <http://genderandset.open.ac.uk/index.php/genderandset/article/view/578/1041>, p. 108-133.
32. **I. Villanueva,** **J. Husman,** D. Christensen^G, K. Youmans^G, M.T.H. Khan^P, P. Vicioso^G, S. Lampkins^G, & M. Graham^G. (2019). A cross-disciplinary and multi-modal experimental design for studying near-real-time authentic examination experiences. *Journal of Visualized Experiments* (151)e60037,

<https://www.jove.com/v/60037/a-cross-disciplinary-multi-modal-experimental-design-for-studying>.
p. 1-10.

33. **S. Jones**, **B. Campbell**, & **I. Villanueva**. (2019). An investigation of self-efficacy and topic emotions in entry-level engineering design learning activities. *International Journal of Engineering Education*, 35 (1A), p. 15-24.

2018

34. **J. Uziak**, **R. Barlow**^G, **I. Villanueva**, **O. Lawanto**, & **K. Becker**. (2018). Development of an online certificate program in engineering education. Special Issue in “Educating Engineering Educators: Keeping Pace with Scientific-Technological Change & Socio-Economic Development, *International Journal of Engineering Education*, 34 (5), p. 1549-1561.
35. **I. Villanueva**, **B. Campbell**, **A. Raikes**^G, **S. Jones**, & **L. Putney**. (2018). A multi-modal exploration of engineering students’ emotions and electrodermal activity in design activities. *Journal of Engineering Education*, 107 (3) doi.org/10.1002/jee.20225. p. 414-441.
36. **I. Villanueva**, **T. Carothers**^G, **M. Di Stefano**^P, & **M.T.H. Khan**^P. (2018). “There is never a break”: The hidden curriculum of professionalization for engineering faculty. *Education Sciences*, 8 (4), 157: doi.org/10.3390/educsci8040157. p.1-21.
37. **J.A. Mejia**, **R. Revelo**, **I. Villanueva**, & **J. Mejia**. (2018). Critical theoretical frameworks in engineering education: an anti-deficit and liberative approach. *Education Sciences*, 8 (4), 158: [doi:10.3390/educsci8040158](https://doi.org/10.3390/educsci8040158). p.1-13.
38. **I. Villanueva**, **S. Jones**, **L. Putney**, & **B. Campbell**. (2018). Puzzling the pieces: conceptual blocks of engineering student ideas in a service-learning project. *International Journal of Engineering Education*, 34 (1), p. 56–68.

2017

39. **I. Villanueva** & **M. Di Stefano**^P. (2017). Narrative inquiry on the teaching of STEM to blind high school students, Special Issue In “Teaching and Learning in STEM Education”, *Education Sciences*, 7 (89), p. 1-16.
40. **O. Lawanto**, **J. Uziak**, **I. Villanueva**, & **M. Scheaffer**^O. (2017). Continuing engineering education: A needs assessment for the introduction of a graduate certificate program. *Global Journal of Engineering Education*, 19 (3), p. 186-193.
41. **I. Villanueva** & **L. Nadelson**. (2017). Are we preparing the engineers of the future or the past? *International Journal of Engineering Education*, 33 (2A), p. 639–652.

2016

42. **I. Villanueva**, **M. Valladares**^G, & **W. Goodridge**. (2016). Use of galvanic skin responses, salivary biomarkers, and self-reports to assess undergraduate student performance during a laboratory exam activity. *Journal of Visualized Experiments*, 108, e53255, [doi:10.3791/53255](https://doi.org/10.3791/53255), p. 1-8.
43. **B. Call**^G, **W. Goodridge**, **I. Villanueva**, **N. Wan**^G, & **K. Jordan**. (2016). Utilizing electroencephalography measurements for comparison of task-specific neural efficiencies: spatial intelligence tasks. *Journal Visualized Experiments*, 114, e53327, [doi:10.3791/53327](https://doi.org/10.3791/53327), p. 1-13.
44. **N. Fang**, **O. Lawanto**, **W. Goodridge**, **I. Villanueva** & **K. Becker**. (2016). A research experience for undergraduates (REU) site program on engineering education research. *International Journal of Engineering Education*, 32 (5A), p. 1836–1846.

2014

45. N.B. Pivovarova, R.I. Stanika^P, G. Kazanina^O, **I. Villanueva^P**, & S.B. Andrews. (2014). The interactive roles of zinc and calcium in mitochondrial dysfunction and neurodegeneration. *Journal of Neurochemistry*, 128 (4), p. 592-602. doi: [10.1111/jnc.12489](https://doi.org/10.1111/jnc.12489).

2012

46. R.I. Stanika^P, **I. Villanueva^P**, G. Kazanina, N.B. Pivovarova & S.B. Andrews. (2012). Comparative impact of voltage-gated calcium channels and NMDA receptors on mitochondria-mediated neuronal injury. *Journal of Neuroscience*, 32 (19), p. 6642-6650.

2010

47. **I. Villanueva^G**, S.K. Gladem^U, J. Kessler^U & S.J. Bryant. (2010). Dynamic loading stimulates chondrocyte biosynthesis when encapsulated in charged hydrogels prepared from poly(ethylene glycol) and chondroitin sulfate. *Matrix Biology*, 29(1), p. 51-62. doi:[10.1016/j.matbio.2009.08.004](https://doi.org/10.1016/j.matbio.2009.08.004)

2009

48. **I. Villanueva^G**, N.L. Bishop^G, & S.J. Bryant. (2009). Medium osmolarity and PCM development improves chondrocyte survival when photoencapsulated in PEG hydrogels at low densities. *Tissue Engineering-Part A*, 15(10), doi:[10.0189/ten.TEA.2009.001](https://doi.org/10.0189/ten.TEA.2009.001). p. 3037-3048.
49. **I. Villanueva^G**, C.A. Weigel^U, & S.J. Bryant. (2009). Cell-matrix interactions and dynamic mechanical loading influence chondrocyte gene expression & bioactivity in PEG-RGD hydrogels. *Acta Biomaterialia* 5(8), doi:[10.1016/j.actbio.2009.05.039](https://doi.org/10.1016/j.actbio.2009.05.039). p. 2832-2846.

2008

50. **I. Villanueva^G**, B. Klement^O, D. von Deutsch^O, D.M. Klaus^O, & S.J. Bryant. (2008). Crosslinking density alters early metabolic activities in chondrocytes encapsulated in poly(ethylene glycol) hydrogels and cultured in the rotating wall vessel. *Biotechnology & Bioengineering*, 102 (4), doi: [10.1002/bit.22134](https://doi.org/10.1002/bit.22134), p. 1242-1250.
51. S. J. Bryant, G.D. Nicodemus^G, & **I. Villanueva^G**. (2008). Designing 3D photopolymer hydrogels to regulate biomechanical cues and tissue growth for cartilage tissue engineering. *Pharmaceutical Research*, 25 (10), (Invited Original Research Article), doi: [10.1007/s11095-008-9619-y](https://doi.org/10.1007/s11095-008-9619-y). p. 2379-2386.
52. **I. Villanueva^G**, D.S. Hauschulz^O, D. Mejc^O, & S.J. Bryant. (2008). Static and dynamic compressive strains influence nitric oxide production and chondrocyte bioactivity when encapsulated in PEG hydrogels of different crosslinking densities, *Osteoarthritis & Cartilage*, Volume, 16 (8), doi:[10.1016/j.joca.2007.12.003](https://doi.org/10.1016/j.joca.2007.12.003). p. 909-918.

2007

53. G.D. Nicodemus^G, **I. Villanueva^G**, & S.J. Bryant. (2007). Mechanical stimulation of TMJ condylar chondrocytes encapsulated in PEG hydrogels, *Journal of Biomedical Materials Research Part A*, 83 (2), doi:[10.002/jbm.a.31251](https://doi.org/10.002/jbm.a.31251). p. 323-331.

2006

54. **I. Villanueva^G**, B. Klement^O, D. von Deutsch^O, & S.J. Bryant. (2006). Effects of simulated microgravity on nitric oxide production and proteoglycan synthesis by chondrocytes encapsulated in 3D PEG hydrogels, *Gravitational and Space Biology Bulletin*, 20 (1). p. 1-2.

B. Refereed Book & Book Chapter Publications

2024

1. **I. Villanueva Alarcón**, K. Cross, O. Pierrakos, D. Simmons (2024). *Becoming Academic Leaders in Engineering: A Reflective Narrative Amongst Diverse Gender Identities and Backgrounds*. Springer Women in Engineering. (Invited; Under Review).

2. **I. Villanueva Alarcón**, M. Graham, & J. Husman. (2024). Centering People and Context in Educational Psychology Studies Using Multimodal Methods. In Handbook of Equity, Asset-based, Race-reimagined Theories, Methods, Practices, and Policies in Educational Psychology (Invited; Under Review).

2023

1. M.S. Miller, S. Warner, M.T., Gumbo, **I. Villanueva Alarcón, I.**, S. Petrina. (2023). Lenses for Critiquing and Improving the Standards: Design, Indigeneity, Access and Equity, and Literacy. In *Standards-Based Technology and Engineering Education: 63rd Yearbook of the Council on Technology and Engineering Teacher Education* (pp. 287-309). Singapore: Springer Nature Singapore. https://link.springer.com/chapter/10.1007/978-981-99-5704-0_18.
2. Integrando STEAM: A Guide for Elementary Bilingual and Dual Language Programs. (2023). **M. Di Stefano, A. Esquinca, I. Villanueva Alarcón** (eds.), *Velázquez Press*, <https://velazquezpress.com/products/integrando-steam-a-guide-for-elementary-bilingual-and-dual-language-programs>, 227 pages. **Best Edited Volume Book Award, AAHHE, 2024***
3. M. Di Stefano, A. Esquinca, & **I. Villanueva Alarcón**. (2023). Overview: Why Should Bilingual and Dual Language Education Programs have a STEAM Focus Across Languages? In *Integrando STEAM: A Guide for Elementary Bilingual and Dual Language Programs*. (2023). M. Di Stefano, A. Esquinca, I. Villanueva Alarcón (eds.), *Velázquez Press*, <https://velazquezpress.com/products/integrando-steam-a-guide-for-elementary-bilingual-and-dual-language-programs>, p. 16-27.
4. M. Di Stefano, A. Esquinca, & **I. Villanueva Alarcón**. (2023). How do I Start an Elementary Bilingual and Dual Language Education Program with a STEAM Focus Across Languages? In *Integrando STEAM: A Guide for Elementary Bilingual and Dual Language Programs*. (2023). M. Di Stefano, A. Esquinca, I. Villanueva Alarcón (eds.), *Velázquez Press*, <https://velazquezpress.com/products/integrando-steam-a-guide-for-elementary-bilingual-and-dual-language-programs>, p. 28-45.
5. E. Marte Zorrilla^G, **I. Villanueva Alarcón**, **M. Di Stefano**, & **A. Esquinca**. (2023). Design and development of a Curriculum Unit Template to Teach STEAM in Bilingual and Dual Language Classrooms. In *Integrando STEAM: A Guide for Elementary Bilingual and Dual Language Programs*. (2023). M. Di Stefano, A. Esquinca, I. Villanueva Alarcón (eds.), *Velázquez Press*, <https://velazquezpress.com/products/integrando-steam-a-guide-for-elementary-bilingual-and-dual-language-programs>, p. 100-117.
6. **I. Villanueva Alarcón**, V. Sellers^P, R.M. Paul^G, & B. Smith. (2023). Chapter 18: Transforming Engineering Education through Social Capital in Response to Hidden Curriculum. In *International Handbook of Engineering Education*; Aditya Johri (ed.), DOI: [10.4324/9781003287483-22](https://doi.org/10.4324/9781003287483-22), Routledge, New York, p. 380-401.

2022

7. **I. Villanueva Alarcón** & V. Sellers^P. (2022). Faculty Development in the Third Space: Influence of Hidden Curriculum Amid Engineering Educators. *Handbook of STEM Faculty Development*. Sandy Linder, Cindy Lee, & Karen High (ed.), *Information Age Publishers*, <https://www.infoagepub.com/products/Handbook-of-STEM-Faculty-Development>, p. 49-60.
8. **M. Di Stefano, I. Villanueva**, & **A. Esquinca**. (2022). Chapter 3: Reconceptualizing bilingual/dual language teacher education to promote disciplinary biliteracies in STEM. In *Innovating Curricular and Pedagogical Designs in Bilingual Teacher Education: Bridging the Distance with School Contexts*; C.R. Aquino-Sterling, M. Gort, & B.B. Flores (eds.), (pp. 35-50), *Charlotte, NC: Information Age Publishers*, <https://www.infoagepub.com/products/Innovative-Curricular-and-Pedagogical-Designs-in-Bilingual-Teacher-Education>, p.35-50.

2020

9. **I. Villanueva**, L. Gelles^G, & M. Di Stefano^P. (2020). Chapter 14: Understanding ethical peer mentoring. *In* Navigating the Peer Mentoring Relationship: A Handbook for Women and other Underrepresented Populations in STEM; Amanda Rockinson-Szapkiw, Jillian Wendt, and Katie Wade-James (eds.). Kendall Hunt Publishing, <https://he.kendallhunt.com/product/navigating-peer-mentoring-relationship-handbook-women-and-other-underrepresented-populations>, p. 183-192.

2018

10. **I. Villanueva**. (2018). The bigger picture: My journey to a purposeful life and career in academia. *In* K. Woznack, A. Charlebois, R. Cole, C. Marzabadi, & G. Webster (Eds.), Mom the Chemistry Professor, 2nd edition, (pp. 485-499), Springer International Publishing, https://link.springer.com/chapter/10.1007/978-3-319-78972-9_1.

C. Refereed & Published Conference Papers

2025

1. G. Aslam^G, Y. Wang^G, & **I. Villanueva Alarcón**. (2025). Natural Language Process Models to Track Emotive Fluctuations of Engineering Faculty and Students Responding to Hidden Curriculum. Research in Engineering Education Symposium. El Paso, TX, (Submitted).
2. G. Aslam^G, J. Shin, & **I. Villanueva Alarcón**. (2025). Using Natural Language Processing to Explore Emerging Trends of Peer Mentoring in Engineering Education. Research in Engineering Education Symposium. El Paso, TX, (Submitted).

2024

3. **I. Villanueva Alarcón**, A. Esquinca, & M. Di Stefano. (2024). Elementary Engineering Design Virtual Professional Development at the Intersection of Language and Culture: A Comparative Case Study of Puerto Rico and Massachusetts. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
4. N. Gerard^G, **I. Villanueva Alarcón**, & J. Pan. (2024). Early Exploration of Biological and Physiological Performance of Engineering Students to Quizzes. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
5. G. Aslam^G & **I. Villanueva Alarcón**. (2024). Missing Pieces in Engineering Education Research. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
6. I. Victoria^G, E. Marte, G. Aslam^G, N. Gerard^G, & **I. Villanueva Alarcón**. (2024). Multimodal Methods to Assess Students' Development of Applied Computational and Biomedical Laboratory Knowledge and Skills. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
7. **I. Villanueva Alarcón**, I. Victoria^G, N. Gerard^G, D. Simmons, & J. McNealy. (2024). A Critical Conversation between Graduate Students and their Faculty on the Role of Hidden Curriculum for Ph.D. Student Success in a New Engineering Education Department. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
8. E. Marte & **I. Villanueva Alarcón**. (2024). Revealing the Hidden Curriculum: Analyzing Emotional Responses Using Advanced Computational Sentiment Analysis Techniques. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
9. S. Rivera-Jimenez & **I. Villanueva Alarcón**. (2024). Faculty Professional Development Within Engineering Professional Societies through Communities of Practice in Action. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
10. **I. Villanueva Alarcón**. (2024). Mediation of Difficult Graduate Student and Faculty Discussions in Engineering and Computing. IEEE Frontiers in Education Conference. Washington, D.C. (Accepted).
11. K. Cook-Chennault & **I. Villanueva Alarcón**. (2024). Engineering Mothers of Color: The Struggle of Juggling Work and Children with a Specific Learning Difficulty. American Society of Engineering Education. Women in Engineering Division. Portland, OR, June 23-26, 2024 (Accepted).

12. E. Marte, **I. Villanueva Alarcón**, D. Christensen, J. Husman, & M. Graham. (2024). Unraveling the Nexus: Engineering Student Effort, Coding Protocols, and Academic Performance. American Society of Engineering Education. Women in Educational Research Methods Division. Portland, OR, June 23-26, 2024 (Accepted).
13. N. Gerard^G, **I. Villanueva Alarcón**, E. Marte, G. Aslam^G, & I. Victoria^G. (2024). Exploring physiological and biological measurement techniques in multi-modal studies in engineering and computing performance. American Society of Engineering Education. Design in Engineering Education Division. Portland, OR, June 23-26, 2024 (Accepted).
14. I. Victoria^G, L. Cruz Castro, & **I. Villanueva Alarcón**. (2024). A Systematized Literature Review on Workforce Development Programs for Engineering Graduate Students. American Society of Engineering Education. Graduate Studies Division. Portland, OR, June 23-26, 2024 (Accepted).
15. G. Aslam^G & **I. Villanueva Alarcón**. (2024). A Cross-Institutional Study of Engineering Education Faculty Profiles. American Society of Engineering Education. First-Year Programs Division. Portland, OR, June 23-26, 2024 (Accepted).
16. G. Aslam^G & **I. Villanueva Alarcón**. (2024). Diversity in Faculty Profiles: A cross-institutional study of engineering education.

2023

17. G. Aslam^G & **I. Villanueva Alarcón**. (2023). Exploring contributions of U.S. Engineering Education Centers. *IEEE Frontiers in Education Conference*, Texas A&M University, College Station, TX, October 18-21, 2023.
18. E. Marte Zorrilla^G, **I. Villanueva Alarcón**, G. Aslam^G, I. Victoria^G, N. Gerard. (2023). Overview of physiological and biological measurement techniques to assess engineering students' responses during exams: A literature review. *IEEE Frontiers in Education Conference*, Texas A&M University, Texas A&M University, College Station, TX, October 18-21, 2023.
19. **I. Villanueva Alarcón**, Saira Anwar, & Zahra Atiq. (2023). Multi-modal approach: Why, What, When, and How? *IEEE Frontiers in Education Conference*, Texas A&M University, Texas A&M University, College Station, TX, October 18-21, 2023.
20. E. Marte Zorrilla, G. Aslam, N. Gerard, **I. Villanueva Alarcón**, I. Victoria. (2023). Estimating Multi-sensorial experiences: Designing and Implementing a Multi-modal lab. *IEEE Frontiers in Education Conference*, Texas A&M University, Texas A&M University, College Station, TX, October 18-21, 2023.
21. G. Aslam^G, R.J. Downey^P, & **I. Villanueva Alarcón**. (2023). Missing Pieces in Engineering Education Research, CONVERGE Conference, Baltimore, MD, August 2-4, 2023.
22. R.J. Downey^P, G. Aslam^G, & **I. Villanueva Alarcón**. (2023). Where is the Education in Engineering Education? CONVERGE Conference, Baltimore, MD, August 2-4, 2023.
23. D. Christensen & **I. Villanueva Alarcón**. (2023). What Makes an Effective Peer Mentor? Perceptions of Undergraduate Engineering Students During COVID-19. *American Society of Engineering Education, First-Year Program Division*, Baltimore, MD, June 25-29, 2023, Paper ID #38070.
24. R.J. Downey^P & **I. Villanueva Alarcón**. (2023). Hidden Curriculum and Emotions: Does Active or Passive Perceptions of the Hidden Curriculum impact students' emotions. *American Society of Engineering Education, Liberal Education, Engineering & Society Division*, Baltimore, MD, June 25-29, 2023, Paper ID #37894.
25. R.J. Downey^P, J. Muñoz, & **I. Villanueva Alarcón**. (2023). Listening to Those That Matter: Deans' Responses to the Barriers that Latiné/x/a/o Contingent faculty at HSI's face. *American Society of Engineering Education, Minorities in Engineering Division*, Baltimore, MD, June 25-29, 2023, Paper ID #37859.
26. **I. Villanueva Alarcón**, D. Simmons, & J. McNealy. (2023). Work in Progress: Towards a Participatory Action Research Approach to improve representation of Black Ph.D.s in engineering. *American Society of Engineering Education, Minorities in Engineering Division*, Baltimore, MD, June 25-29, 2023, Paper ID #39565.

27. **I. Villanueva Alarcón**, **L. Cruz Castro**, **J.A. Mendoza**, **E. Latorre-Navarro**, **D. Alvarado**, & **L. Virguez**. (2023). Nuestro Impacto: An insider look into the connections between our past experiences and current teaching and mentoring practices, *American Society of Engineering Education, Faculty Development Division*, June 25-29, 2023, Paper ID #38526. ***2023 Best Overall ASEE Conference Paper, Best PIC II Paper, Best FDD Division Paper***
28. **I. Villanueva Alarcón**, **H. Murzi**, & **M. Martinez-Cola**. (2023). Work-in-Progress: Towards advancing grassroots transformative advocacy strategies for work justice of BIPOCx contingent faculty, *American Society of Engineering Education, Faculty Development Division*, June 25-29, 2023, Paper ID #38534.
29. R.J. Downey^P & **I. Villanueva Alarcón**. (2023). Emotional states of first-generation engineering students when introduced to hidden curriculum. *CoNECD Conference*, New Orleans, LA, February 25-28, 2023.
30. V. Sellers^P, **I. Villanueva Alarcón** & R.J. Downey (2023). Resistance to advocacy around hidden curriculum in engineering. *CoNECD Conference*, New Orleans, LA, February 25-28, 2023.
31. **I. Villanueva Alarcón**, **M. Martinez-Cola**, & **H. Murzi**. (2022). Applying conceptual and critical theoretical frameworks in STEM: Advancing grassroots transformative advocacy strategies for work justice of BIPOCx contingent faculty. *American Society of Engineering Education, Faculty Development Division*, (accepted).
32. G. Aslam^G & **I. Villanueva Alarcón**. (2023). U.S. Engineering Education Centers. *IEEE Frontiers in Education*, (in preparation).

2022

33. E. Marte Zorrilla^G, **I. Villanueva Alarcón**, **J. Husman**, & **M. Graham**^P. (2022). Artificial Intelligence and Social Computing: Generating a Multimodal Dataset Using a Feature Extraction Toolkit for Wearable Sensor and Machine Learning: A Pilot Study. In: Ahram, T., Kalra, J., Karwowski, W. (eds). *Artificial Intelligence and Social Computing. AHFE 2022. Proceedings of the 13th Annual AHFE International Conference (virtual)*, July 24-28, 2022, vol. 28, https://openaccess.cms-conferences.org/#!/publications/book/978-1-958651-04-9/article/978-1-958651-04-9_8, p. 67–76.
34. **I. Villanueva Alarcón**. (2022). *IEEE Frontiers in Education Conference*, Ethical Practices and Tips for Improving Engineering Faculty-Student Research Relationships, Stockholm, Sweden, October 8-11, 2022.
35. **I. Villanueva Alarcón**. (2022). Practical Tips and Strategies to Mentor around Hidden Curriculum Pathways in Engineering. *IEEE Frontiers in Education Conference*, Stockholm, Sweden, October 8-11, 2022.
36. **D. Christensen** & **I. Villanueva Alarcón**. (2022). Peer mentorship: Identifying the needs of current mentees. *European Society of Engineering Education*, Barcelona, Spain, September 19-22, 2022.
37. **D. Christensen** & **I. Villanueva Alarcón**. (2022). What do undergraduate engineering students at the onset of emergency hybrid learning during COVID-19 say about peer mentorship? *American Society of Engineering Education, First Year Engineering Division, St. Paul, Minneapolis, MN, June 26-29, 2022*, Paper ID 37372, p. 1-19.
38. R.J. Downey^P & **I. Villanueva Alarcón**. (2022). Reading the world of engineering education: An exploration of active and passive hidden curriculum awareness. *American Society of Engineering Education, Liberal Education, Engineering & Society Division, St. Paul, Minneapolis, MN, June 26-29, 2022*, Paper ID 37254, p. 1-12.
39. **I. Villanueva Alarcón** & C. Elizabeth Sunny^P & (2022). Engineering students' conceptions of the hidden curriculum in different institution types: A comparative study. *American Society of Engineering Education, Minorities in Engineering Division, St. Paul, Minneapolis, MN, June 26-29, 2022*, Paper ID 36562, p. 1-17.
40. **P. Dickrell**, **J. Waisome**, **A. Goncher**, **L. Virguez**, & **I. Villanueva Alarcón**. (2022). Student Perceptions of Ideation and Prototyping Tools in an Introductory Engineering Human-Centered

Design Course. American Society of Engineering Education, *Design in Engineering Education Division Paper Submission, St. Paul, Minneapolis, MN, June 26-29, 2022*, Paper ID 37713, p. 1-22.

41. R. Revelo, I. Villanueva Alarcón, A. Mejia, & J. Mejia. (2022). Beyond the Monolith Discussion: Research about Latina/o/é/x in Engineering. *American Society of Engineering Education, Special Session, St. Paul, Minneapolis, MN, June 26-29, 2022*.

2021

42. H. Murzi, J.A. Mejia, I. Villanueva, S. Rivera-Jimenez, L. Virguez, R. Revelo & J. Mejia. (2021). “Juntos pero no revueltos”: Debunking the aggregated lives of Latinx faculty in engineering. *Proceedings of the American Society of Engineering Education Annual Conference & Exposition, ECSJ Division (virtual), Long Beach, CA, June 27-30, 2021*.
43. V. Sellers^P & I. Villanueva. (2021). What strategies do diverse women in engineering use to cope with situational hidden curriculum? *Proceedings of the American Society of Engineering Education Annual Conference & Exposition (virtual), Women in Engineering Division, Long Beach, CA, June 27-30, 2021*, Paper ID #32762, p. 1-16. (*Best Diversity Paper in the ASEE Women in Engineering Division*)
44. A. Saleem, S. Rivera-Jimenez, & I. Villanueva. (2021). Work in Progress: Early Exploration of Engineering Students' Perspectives about Diversity, Equity, and Inclusion in an Introductory Materials Science and Engineering Course, *Proceedings of the American Society of Engineering Education Annual Conference & Exposition (virtual), Long Beach, CA, June 27-30, 2021*, Paper ID #34759, p.1-9.
45. K. Youmans, I. Villanueva, L. Nadelson, J. Bouwma-Gearhart, Y. Choi^G, & C. Lenhart^G. (2021). Beyond Making: Application of Constructionist Learning Principles in Engineering Prototyping Centers. *Proceedings of the American Society of Engineering Education Annual Conference & Exposition (virtual), Long Beach, CA, June 27-30, 2021*, Paper ID # 34374, p.1-9.
46. K. Cook-Chennault, I. Villanueva, A. Shojaee^U, & H.W. Kim^U. (2021). Your eyes do not lie- What does facial expression and eye motion tell us about educational games? *44th International Convention on Information, Communication, and Electronic Technology, May 24-28, 2021, Opatija, Croatia* (presented virtually).
47. I. Villanueva Alarcón, E. Marte Zorrilla^G, J. Husman, & M. Graham^P. (2021). Human-Technology Frontier: Measuring Student Performance-Related Responses to Authentic Engineering Education Activities via Physiological Sensing. In: Leitner C., Ganz W., Satterfield D., Bassano C. (eds) *Advances in the Human Side of Service Engineering. AHFE 2021. Lecture Notes in Networks and Systems, July 25-29, 2021*, vol 266. Springer, Cham. https://doi.org/10.1007/978-3-030-80840-2_39, p. 1-9 (* Best Paper Award Finalist*)

2020

48. L. Nadelson, I. Villanueva, J. Bouwma-Gearhart, E. Soto^U, S. Lenhart^G, C. Lenhart^G, K. Youmans^G, & Y. Choi^G. (2020). Student Perceptions of and Learning in Makerspaces Embedded in their Undergraduate Engineering Preparation Programs. *American Society of Engineering Education (Virtual Conference, June 22-26, 2020)*, p. 1-18.
49. J. Huff, J. Lönngren, T. Adawi, N. Kellam, I. Villanueva. (2020). Special Session: Emotions in engineering education – A roadmap to possibilities in research and practice, 2020 IEEE Frontiers in Education Conference, *October 21-24, 2020 (Virtual Conference due to COVID-19; originally scheduled for Upsala, Sweden)*, p.1-3.
50. L. Gelles^G & I. Villanueva. (2020). Co-constructing engineering doctoral identities through career prospects, 2020 IEEE Frontiers in Education Conference, *October 21-24, 2020 (Virtual Conference due to COVID-19; originally scheduled for Upsala, Sweden)*, p.1-5.
51. K. Cook-Chennault & I. Villanueva. (2020). Exploring perspectives and experiences of diverse learners' acceptance of online educational engineering games as learning tools in the classroom,

2020 IEEE Frontiers in Education Conference, *October 21-24, 2020* (Virtual Conference due to COVID-19; originally scheduled for Upsala, Sweden). p.1-9.

2019

52. **I. Villanueva**, J.A. Mejia, & R. Revelo. (2019). Professional development of Latinx engineering faculty on hidden curriculum: an exploratory study. *IEEE Frontiers in Education Conference, October 16-19, 2019*, Cincinnati, OH. p.1-5.
53. M.T.H. Khan^P, P. Vicioso^G, **I. Villanueva**, & J. Husman. (2019). Exploring relationships between electrodermal activity, skin temperature, and performance during engineering exams, *IEEE Frontiers in Education Conference, October 16-19, 2019*, Cincinnati, OH. p.1-5.
54. K. Cook-Chennault & **I. Villanueva**. (2019). An initial exploration of the perspectives and experiences of diverse learners' acceptance of online educational games as learning tools in the classroom, *IEEE Frontiers in Education Conference, October 16-19, 2019*, Cincinnati, OH. p.1-9.
55. D. Christensen^G, M.T.H. Khan, **I. Villanueva**, & J. Husman. (2019). Stretched Too Much? A Case Study of Engineering Exam-Related Predicted Performance, Electrodermal Activity, and Heart Rate, *European Society of Engineering Education (SEFI), Budapest, Hungary, September 16-19, 2019*, p.1481-1492.
56. L. Gelles^G, K. Youmans^G, & **I. Villanueva**. (2019). Sparking Action: How Emotions Fuel or Inhibit Advocacy around Hidden Curriculum in Engineering, *European Society of Engineering Education (SEFI), Budapest, Hungary, September 16-19, 2019*, p.1-10.
57. L. Nadelson, **I. Villanueva**, J. Bouwma-Gearhart, K. Youmans^G, S. Lanci^O, & C.A. Lenhart^G. (2019). Knowledge in the making: what engineering students are learning in makerspaces. *American Society of Engineering Education, Design in Engineering Education Division, June 15-19, 2019*, Tampa, FL, p.1-17.
58. K. Cook-Chennault & **I. Villanueva**. (2019). Understanding pedagogically motivating factors for underrepresented and nontraditional students in online engineering learning modules. *American Society of Engineering Education, June 15-19, 2019*, Tampa, FL, p.1-17.
59. L.M. de Souza Almeida^G, K.H. Becker, & **I. Villanueva**. (2019). Understanding industry's expectations of engineering communication skills. *American Society of Engineering Education, June 15-19, 2019*, Tampa, FL, p.1-20.
60. L. Gelles^G, K. Youmans^G, **I. Villanueva** & M. Di Stefano^P. (2019). Hidden Curriculum Advocacy and Resources for Graduate Students in Engineering. *CONECD Conference, Crystal City, VA, April 14-17, 2019*. p. 1-30.

2018

61. D. Christensen^G, **I. Villanueva**, & S. Benson^O. (2018). Understanding first-year engineering students' perceived ideal learning environments. *World Engineering Education Forum, November 12-16, 2018*, Albuquerque, NM. p.1-6.
62. K. Youmans^G, **I. Villanueva**, & J. Uziak. (2018). Global engineering leadership for societal impact: perspectives among engineering faculty worldwide. *World Engineering Education Forum, November 12-16, 2018*, Albuquerque, NM. p.1-5.
63. **I. Villanueva**, M. Di Stefano^P, L. Gelles^G, & K. Youmans^G. (2018). Hidden curriculum awareness: a qualitative comparison of engineering faculty, graduate students, and undergraduates. *World Engineering Education Forum, November 12-16, 2018*, Albuquerque, NM. p.1-6.
64. K. Youmans^G, **I. Villanueva**, L. Nadelson, J. Bouwma-Gearhart, A. Lenz^G, & S. Lanci^O. (2018). Makerspaces vs. engineering shops: initial undergraduate student perspectives. *IEEE Frontiers in Education Conference, Paper ID #1570430903, October 2-6, 2018*, San Jose, CA. p.1-5.
65. **I. Villanueva**, J.A. Mejia, & R. Revelo. (2018). Uncovering the hidden factors that could compromise equitable and effective engineering education, *IEEE Frontiers in Education*

- Conference, Paper ID #1570430439, October 2-6, 2018, San Jose, CA. p.1-3.
66. K. Youmans^G, I. Villanueva, L. Nadelson, J. Bouwma-Gearhart, A. Lenz^G, & S. Lanci^O. (2018). Engineering students' perceived value of makerspaces in relation to future career preparation. *International Symposium on Academic Makerspaces, August 3-5, 2018, Stanford, CA. p.1-3.*
 67. I. Villanueva, W. Goodridge, & B. Call^G. (2018). An initial exploration of engineering students' emotive responses to mechanics and statics problems, *Proceedings of the American Society of Engineering Education Annual Conference & Exposition, Mechanical Engineering Division, June 24-27, 2018, Salt Lake City, UT, Paper ID # 21881, p. 1-15.*
 68. I. Villanueva, L. Gelles^G, M. Di Stefano^P, B. Smith, R. Tull, S. Lord, L. Benson, A. Hunt, D. Riley & G. Ryan. (2018). What does hidden curriculum in engineering look like & how can it be explored? *Proceedings of the American Society of Engineering Education Annual Conference & Exposition, Minorities in Engineering Division, June 24-27, 2018, Salt Lake City, UT, Paper ID # 21884, p. 1-16.*
 69. L. Gelles^G, I. Villanueva, & M. Di Stefano^P. Perceptions of ethical behavior in ethical mentoring relationships between women graduate students and faculty in science and engineering. (2018). *Proceedings of the American Society of Engineering Education Annual Conference & Exposition, Engineering Ethics Division, June 24-27, 2018, Salt Lake City, UT, Paper ID # 21889, p. 1-20. * selected Best Diversity Paper in the ASEE Engineering Ethics Division**
 70. I. Villanueva, L. Nadelson, J. Bouwma-Gearhart, K. Youmans^G, S. Lanci^O, & A. Lenz^G. (2018). Exploring students' and instructors' perceptions of engineering: case studies of professionally-focused and career exploration courses, *Proceedings of the American Society of Engineering Education Annual Conference & Exposition, Liberal Education/Engineering Studies Division, June 24-27, 2018, Salt Lake City, UT, Paper ID # 21891, p. 1-14.*
 71. S. Lanci^O, L. Nadelson, J. Bouwma-Gearhart, I. Villanueva, K. Youmans^G, & A. Lenz^G. Developing a measure of engineering students' makerspace learning, perceptions, and interactions. (2018). *Proceedings of the American Society of Engineering Education Annual Conference & Exposition, June 24-27, 2018, Salt Lake City, UT, Paper ID # 22089, p.1-12.*

2017

72. R. Barlow^G, J. Uziak, I. Villanueva, O. Lawanto, & K. Becker. (2017). Work-In-Progress: Online engineering education certificate program, *2017 American Society of Engineering Education, Paper ID # 18057, June 25-28, 2017, Columbus, OH. p.1-10.*
73. R. Revelo, J.A. Mejia, & I. Villanueva. (2017). Work-In-Progress: Who are we? Beyond monolithic perspectives of Latinxs in engineering. *2017 American Society of Engineering Education, Paper ID # 18393, June 25-28, 2017, Columbus, OH. p.1-16.*
74. J.A. Mejia, R. Revelo, & I. Villanueva. (2017). Work-In-Progress: The Fibonacci sequence of critical theoretical frameworks: Breaking the code of engineering education research with underrepresented populations. *2017 American Society of Engineering Education, Paper ID # 18784, Columbus, June 25-28, 2017, OH. p.1-11.*

2016

75. N. Fang, O. Lawanto, W. Goodridge, & I. Villanueva. (2016). Research experiences for undergraduates (REU) on self-regulated learning in engineering education. *IEEE Frontiers in Education Conference, October 12-15, 2016, Erie, PA. p.1-5.*
76. N. Fang, O. Lawanto, W.H. Goodridge, & I. Villanueva. (2016). Self-regulated learning in engineering education: a research experience for undergraduates (REU) site program. *2016 American Society of Engineering Education, Paper ID # 14431, June 26-29, 2016, New Orleans, LA. p.1-11.*

2015

77. **I. Villanueva**. An exploration of Bloom's knowledge, skills, and affective-based goals in promoting development of freshmen engineering students' professional identities. (2015). *IEEE Frontiers in Education Conference, El Paso TX, October 21-24, 2015*. p.1-5.

2014

78. W.H. Goodridge, **I. Villanueva**, M.M. Valladares^G, N. Wan^G, & C. Green^G. (2014). Cognitive strategies and misconceptions in introductory statics problems. *IEEE Frontiers in Education Conference under 'Cognitive strategies and misconceptions in introductory statics problems' session, October 22-25, 2014, Madrid, Spain*. p.1-4.
79. **I. Villanueva**, A. Raikes^G, N. Ruben^G, S. Schaefer, & J. Gunther. (2014). The use of physiological tools to identify changes in affective responses for graduate students recently admitted into a scientific discipline. *IEEE Frontiers in Education Conference under the 'Student Beliefs, Motivation, and Persistence Through the College Years' session, October 22-25, 2014, Madrid, Spain*. p.1-5.

2013

80. **I. Villanueva**, R. Manthe^G, & K. Knapstein. (2013). Development of a design- and project-based framework to include scientific reasoning in an undergraduate, introductory-level bioengineering laboratory course. *2013 American Society of Engineering Education, Proceeding Paper #6347, p.1-18, June 23-26, 2013, Atlanta, GA. (*Best Paper Award in ASEE Biomedical Engineering Division*)*

RESEARCH PRESENTATIONS

Senior/principal author(s) = Underline; Self = bold; Fellow = F; Graduate Student = G; Undergraduate Student=U; Other = O; Post-Doctoral Associate/Fellow = P; Resident=R; presenter is denoted by the * symbol while co-authors with equal contributions are denoted by the # symbol

A. Refereed Conference Presentations & Posters

2023

1. M. Di Stefano, **I. Villanueva Alarcón**, A. Esquinca. (2023). Integrando STEAM: A Guide for Elementary Bilingual and Dual Language Programs. *National Association for Bilingual Education, Portland, OR, February 22-25, 2023*.
2. R.J. Downey, **I. Villanueva Alarcón**, J. Muñoz, & L. Berdie. (2023). Ni De Aquí Ni De Allá: Exploring Hidden Realities of STEM Contingent Faculty in HSIs in Servingness in STEM Education for Latiné/a/o/x/* Students across Hispanic-Serving Institutions, *American Educational Research Association, Chicago, IL, April 13-16, 2023*.
3. **I. Villanueva Alarcón**, E. Marte^G, M. Di Stefano, & A. Esquinca (2023). Integraciones y Restricciones: The Delicate Balance of Science and Engineering Instruction in Bilingual and Dual Language K-5. *In Bilingual Education SIG-Equity and Social Justice in Science and Engineering Education in Bilingual and Dual Language Education, American Educational Research Association, Chicago, IL, April 13-16, 2023*.

2022

4. A. Esquinca, M. Di Stefano, & **I. Villanueva Alarcón**. (2022). Creating equitable access to engineering learning for English learners in Bilingual and Dual-Language Education (Work in Progress). *American Society of Engineering Education, Pre-College Engineering Education Division, St. Paul, Minneapolis, MN, June 26-29, 2022*.

5. K. Cook-Chennault & **I. Villanueva Alarcón**. (2022). Perceptions of engineering learning software in classrooms with diverse student populations using an expanded technology acceptance model. *American Society of Engineering Education, NSF Grantees Poster Session, St. Paul, Minneapolis, MN, June 26-29, 2022*.
6. D. Christensen* & **I. Villanueva Alarcón**. (2022). Peer Mentorship: Exploring the Unmet Needs of Current Mentees During COVID-19. European Society of Engineering Education (SEFI), Barcelona, Spain, September 19-22, 2022.
7. M. Graham*^P, **I. Villanueva**, J. Husman, K. Zvoch, M.T.H. Khan^P, S. Lampkins^P. (2022). Assessing the Relation of Passive and Active Data Streams on Performance in Exam Setting, *American Association of Education Research (AERA), Authenticating the Signal: Validating Digital Traces of Student Learning Using Concurrent, Corroborating Data Sources Symposium, San Diego, CA, April 21-26, 2022 (presented on April 21, 2022)*.
8. M. Di Stefano*, **I. Villanueva***, & A. Esquinca. (2022). Teaching Science and Engineering in Elementary Bilingual Classes in Massachusetts and Puerto Rico, *American Association of Education Research (AERA), Sociocultural Perspectives on Teaching Science and Engineering in Bilingual and Dual-language Programs: Professional Development Issues Symposium, San Diego, CA, April 21-26, 2022 (presented on April 24, 2022)*.

2021

9. R. Revelo*, **I. Villanueva***, A. Mejia*, & J. Mejia. (2021). Heterogeneity within Latinx population in higher education research: A critical, systematic review of the literature. *2021 Association for the Study of Higher Education (ASHE) Conference, Grappling with Heterogeneity and Subpopulations in Contemporary Scholarship Breakout Session, San Juan, Puerto Rico, November 3-5, 2021*. ** Selected as an ASHE Spanning the Borders session, which comprise a newly envisioned track of sessions focused on being in community across subfields**
10. J. Mejia, **I. Villanueva***, R. Revelo*, & J. Mejia*. (2021). Conocimiento in Engineering Education: Reclaiming and Affirming Epistemologies of the Borderlands. *2021 Association for the Study of Higher Education (ASHE) Conference, Spanning the Borders Session, San Juan Puerto Rico, November 3-5, 2021*.
11. J. Husman*, M. Graham^{P*}, **I. Villanueva***, D. Christensen^G, & R. Pekrun^O. (2021). The dynamic experience of taking an exam: Ever changing cortisol and confidence. *EARLI symposium (virtual), Worsh Field Group Bio-physiology, University of Gothenberg, Gothenburg, Sweden, August 18-20, 2021*.
12. **I. Villanueva Alarcón***, J. Mendoza-Garcia*, & S.M. Rivera-Jiménez*. (2021). Debunking the Hidden Curriculum in Online STEM Courses: A Depiction of Three Latinx Engineering Educators. *Materials Science & Technology 2021 Conference (virtual), October 22, 2021*.
13. M. Di Stefano*, **I. Villanueva Alarcón***, E. Marte Zorrilla^G, N. Gonzalez, & R. Rodriguez-Pion. (2021). *Integrando STEAM: Preparing Teachers and District Leaders for Developing Bilingual and Dual Language Programs. La Cosecha 2021 Conference (hybrid), November 12, 2021*.
14. C.M. Loan^{G*}, M.C. Graham^P, E. Marte^G, **I. Villanueva**, J. Husman, & K. Zvoch^O. (2021). Application of generalized mixed-effect regression trees with multi-modal data [Poster]. *American Psychological Association 2021 Conference (virtual), August 12-14, 2021*; <https://convention.apa.org/>
15. **I. Villanueva***, V. Sellers^P, & K. Youmans^G. (2021, July 30). An exploration of gender responses to situational hidden curriculum in engineering. *Network Gender and STEM Conference (virtual), Sydney, Australia (presented July 30, 2021)*.
16. **I. Villanueva***. (2021, July 30). An intersectionality-informed approach to explore the experiences and perspectives of women graduate students and faculty in STEM. *Network Gender and STEM Conference (virtual), Sydney, Australia*.
17. M. Di Stefano* & **I. Villanueva Alarcón***. (2021). Enhancing Teacher Understanding of Engineering in K-5 Bilingual Programs. *2021 DRK-12 PI Meeting (virtual), National Science*

Foundation, June 16, 2021.

18. J. Brown^{*}, K. Jung^{*}, M. Pacheco^{*}, J. Yeong^{*}, S. Kayumova^{*}, & I. Villanueva Alarcón^{*}. (2021). Considerations for STEM Participation of Emergent Bilinguals During COVID-19. *2021 DRK-12 PI Meeting (virtual)*, National Science Foundation, June 15, 2021.
19. S. Jones^{*}, B. Campbell^{*}, I. Villanueva Alarcón^{*}, & L. Putney^{*}. (2021). Hope, efficacy, and professional identity: Three facets of undergraduate engineering students. 5th Annual Conference on Academic Research in Education (CARE) Conference (virtual), June 14-15, 2021.
20. M. Di Stefano^{*} & I. Villanueva Alarcón^{*}. (2021). Equity Perspectives on Teaching Science and Engineering in Bilingual and Dual-Language K–5 Programs in Massachusetts and Puerto Rico. *In Emergent Bilinguals' Equitable Participation in Engineering Design Activities in Dual-Language Contexts*. Session in 2021 AERA Conference (virtual), Bilingual Education SIG, April 11, 2021.

2020

21. Y.H. Choi^{G,*}, J. Bouwma-Gearhart^{*}, I. Villanueva, L. Nadelson, & E. Soto^{*}. (2020). Engineers in the Making: University-Affiliated Makerspace Users' Perception of Affordances for Students' Development as Engineers. Association for the Study of Higher Education Virtual Conference, November 18-21, 2020.
22. I. Villanueva^{*}, M. Di Stefano, L. Gelles^G, P. Vicioso^G, & S. Benson^O. (2020). Race re-imagining academic mentoring for womxn in science and engineering: An exploratory study. American Association of Educational Research (accepted; conference cancelled due to COVID-19).
23. J. Husman^{*}, M.C. Graham^{P,*}, K. Zvoch, I. Villanueva^{*}, D. Christensen^G, M.T.H. Khan^P, S.8 Lampkins^P, & R. Pekrun. (2020). Electrodermal activity and self-report measures: converging and independent evidence of emotions' impact on exam performance *In The Power and Possibilities of Physiological data to Explore Students' and Teachers' Experiences Special Session*. American Association of Educational Research (accepted; conference cancelled due to COVID-19).
24. M. Di Stefano^{*} & I. Villanueva^{*}. (2020). Exploring the development of bilingual STEM teachers' identities through a mixed-research approach. American Association of Educational Research (accepted; conference cancelled due to COVID-19).

2019

25. D. Christensen^{G,*}, I. Villanueva, J. Wheeler^U, P. Vicioso^G, J. Husman, S. Lampkins^P, & K. Youmans^G. (2019). *Exploring potential relationships between self-efficacy, performance, and electrodermal activity in engineering exams*. American Educational Research Association. April 5-9, 2019, Toronto, Canada.
26. D. Christensen^{G,*}, C. Rigby^U, I. Villanueva, & J. Husman. (2019). An exploration of engineering student effort: correlations to exam performance. Northern Rocky Mountain Educational Research Association, October 10-11, 2019, Denver, CO.
27. K. Youmans^{G,*}, R. Campos^{U,#}, L. Campos^{U,#}, I. Villanueva, J. Bouwma-Gearhart, C. Lenhart^G, & L. Nadelson. (2019). Professionalism in engineering prototyping centers: an exploratory study. Northern Rocky Mountain Educational Research Association, October 10-11, 2019, Denver, CO.
28. I. Villanueva^{*}, L. Gelles^G, M. Di Stefano^P, & K. Youmans^G. (2019). Developing a mixed-method survey to explore hidden curriculum in Engineering Education. Northern Rocky Mountain Educational Research Association, October 10-11, 2019, Denver, CO.
29. D. Christensen^{G,*}, M.T.H. Khan^P, I. Villanueva, & J. Husman. (2019). Stretched too much? A case study of exam-related predicted performance, electrodermal activity, and heart rate. *European Society of Engineering Education*, September 16-19, 2019, Budapest, Hungary.
30. L. Gelles^G, K. Youmans^{G,*}, & I. Villanueva. (2019). Sparking action: how emotions fuel or inhibit advocacy around hidden curriculum in engineering. *European Society of Engineering Education*, September 16-19, 2019, Budapest, Hungary.
31. I. Villanueva^{*}, J. Husman^{*}, M.C. Graham^{P,*}, D. Christensen^G, & M.T. Khan^{P,*}. (2019). The

- possibility and peril of using multimodal physiological approaches to measure academic emotions, race and gender bias, and motivation. The Scholarly Consortium for Innovative Psychology in Education, October 3-4, 2019, Savannah, GA. (*Scholarly Consortium for Innovative Psychology in Education Founders Award, Most Creative and Interactive Conference Session Award*)
32. R. Revelo^{*}, J.A. Mejia, **I. Villanueva**, & J. Mejia. (2019). Beyond monolithic perspectives of Latinx students in Engineering and their identification with the field of Engineering. American Society of Higher Education. November 14-16, 2019, Portland, OR.
 33. J. Bouwma-Gearhart^{*}, **I. Villanueva**, L. Nadelson, S. Lanci^O, K. Youmans^G, & C.A. Lenhart^G. (2019). University makerspaces and faculty practices: potential affordances for diverse students' STEM role identity development, *NARST*, March 31-April 3, 2019, Baltimore, MD.
 34. J. Husman, M.C. Graham^{P,*}, **I. Villanueva**, D. Christensen^G, K. Youmans^G, R. Wright^U, & B. Bermudez^U. (2019). Connecting to the future, feeling better in the present: academic achievement emotions, future oriented value, and arousal. *American Educational Research Association*, April 5-9, 2019, Toronto, Canada.
 35. D. Christensen^G, **I. Villanueva**, J. Wheeler^U, P. Vicioso^G, J. Husman, S. Lampkins^P, & K. Youmans^G. (2019). Exploring potential relationships between self-efficacy, performance, and electrodermal activity in engineering exams, *American Educational Research Association*, April 5-9, 2019, Toronto, Canada.
 36. J. Husman^{*}, M.C. Graham^P, D. Christensen^G, & **I. Villanueva**. (2019). Keeping your cool: exploring interactions between cortisol and emotional regulation on test performance. *Society for Personality and Social Psychology conference*, February 7-9, 2019, Portland, OR.
 37. M. Di Stefano^{P,*}, A. Esquinca, & **I. Villanueva**. (2019). Promoting STEM Education in dual language Education programs. *Seventh International Conference on Immersion & Dual Language Education*, Proposal Space ID: 867-43737, February 7-9, 2019, Charlotte, NC.
 38. M. Di Stefano^{P,*}, **I. Villanueva**, & A. Esquinca. (2019). Enhancing Engineering Understanding in K-5 TWI Programs: Advocating for Latinx in Engineering Career, *Seventh International Conference on Immersion and Dual Language Education*, Proposal Space ID: 867-43663, February 7-9, 2019, Charlotte, NC.

2018

39. **I. Villanueva**^{*}, M. Di Stefano^P, L. Gelles^G, & K. Youmans^G. (2018). Exploring how engineering faculty, graduates, and undergraduates evaluate hidden curriculum via emotions and self-efficacy. *Northern Rocky Mountain Educational Research Association Conference*, October 17-19, 2018. Salt Lake City, UT (poster presented). (**Distinguished Paper Award**).
40. K. Youmans^{G,*} & **I. Villanueva**. (2018). Engineering and... : Women negotiating their future in the present. *Gender in STEM conference*, July 31-August 2, 2018, Eugene, OR.
41. J. Husman^{*}, S. Lampkins^P, **I. Villanueva**, D. Christensen^G, P. Vicioso^G, & K. Youmans^G. (2018). If I value the test do I feel more or less shame when I fail? Exploration of value and emotions. Poster Presented at the *International Conference on Motivation*, August 15-17, 2018, Aarhus, Copenhagen, Denmark.
42. S. Jones^{*}, B. Campbell, & **I. Villanueva**^{*}. (2018). Perhaps engineering design is not so cold: an investigation of emotions and self-efficacy. *Northern Rocky Mountain Educational Research Association Conference*, October 17-19, 2018. Salt Lake City, UT.
43. M. Di Stefano^P & **I. Villanueva**^{*}. (2018). Promoting mathematics education in dual-language education programs in Spanish towards a growing understanding of engineering, *American Association of Hispanics in Higher Education*, March 9, 2018, Irvine, CA.

2017

44. D. Britt^{*}, M. Potter, A.J. Anderson, **I. Villanueva**, & T. Taylor. (2017). Summer education in nano-

and biological approaches to protect plants against drought stress. Sustainable Nanotechnology Organization, November 5-7, 2017, Los Angeles, CA.

45. M. Di Stefano^{*} & I. Villanueva. (2017). Hidden curriculum, language, & math: How to help emergent bilinguals to succeed in STEM, 22nd Annual Dual Language Conference *La Cosecha 2017*, in Albuquerque, NM, November 1-4, 2017.
46. L. Gelles^{G,*}, I. Villanueva & M. Di Stefano^P. (2017). Hidden players of ethical mentoring for women graduate students in science & engineering. *UNM Mentoring Institute*, October 22-26, 2017.
47. J. Husman^{*}, I. Villanueva^{*}, K. Cheng^{P,*}, & S. Lampkins^{P,*}. (2017). Electrodermal activity and salivary biomarkers for educational psychology research. *Scholarly Consortium for Innovative Psychology for Education Conference*, October 19-20, 2017, Las Vegas, Nevada.
48. I. Villanueva^{*}, J. Husman, & K. Cheng^P. (2017). A motivated look into students' affective response to authentic examination experiences, *European Association for Research & Learning & Instruction Conference Symposium: Understanding the mind through the body: physiology, emotions, & motivations in classroom*, August 29 to September 2, 2017, Tampere, Finland.
49. I. Villanueva^{*}. (2017). Professional identity and culture: An exploration of the historical influences of students' perceptions about engineering, *2017 American Educational Research Association Symposium: How can Ed Psych can become more culturally relevant: Re-imaging traditional Ed psych concepts?*, April 28 to May 1, 2017, San Antonio, TX.
50. I. Villanueva^{*} & M. Di Stefano^G. (2017). Narrative ethnography on the engineering education of blind & visually impaired students, *American Educational Research Association*, April 28 to May 1, 2017, San Antonio, TX.
51. I. Villanueva^{*}, B. Campbell, & S. Jones. (2017). Puzzling the pieces: Using heuristic cues for engineering student design idea generation, *American Educational Research Association*, April 28 to May 1, 2017, San Antonio, TX.
52. B. Campbell, S. Jones, & I. Villanueva^{*}. (2017). The rational heart of engineering: influences of passive & active instruction on students' engagement, *American Educational Research Association*, April 28 to May 1, 2017, San Antonio, TX.

2016

53. S. Jones, B. Campbell, & I. Villanueva^{*}. (2016). Heating up engineering education: An investigation of self-efficacy & emotions during engineering design learning activities. *2016 American Educational Research Association Meeting*, April 8-12, 2016, Washington, D.C.
54. I. Villanueva^{*}, & L. Nadelson. (2016). Do they have the "knack"? Professional identity development of engineering students. *American Educational Research Association Meeting*, April 8-12, 2016, Washington, D.C.
55. J.A. Mejia^{*}, R. Revelo, & I. Villanueva. (2016). Special Invited Session: Dismantling the educational pipeline: structural changes that impact Latin@ participation in engineering. *2016 American Educational Research Association Meeting, Special Session*, April 8-12, 2016, Washington, D.C.
56. J. Graham^{*} & I. Villanueva. (2016). A flipped classroom and distance education approach to enhance engineering professional competencies in a freshmen engineering graphics and design course, 85th Annual Pacific Northwest ASEE Conference, March 31 – April 2, 2016, Boise, ID.
57. J. Espinoza^{U,*}, I. Villanueva, W. Goodridge, & B. Call^G. (2016). Cognitive/emotional engagement & spatial performance during engineering examination activities. *Utah State 2016 Student Research Symposium*, April, 2016, Logan, UT.
58. I. Villanueva. (2016). Teaching engineering design to the high school blind and visually impaired: A case study. *NARST National Conference on Science Education*, Nashville, TN, March 30-31, 2016.
59. B. Fronhofer^{U,*}, S. Schott^U, I. Villanueva, & M. Valladares^G. (2016). Design heuristics: A qualitative research study in engineering education. *2016 Emerging Researchers Conference*,

February 25-27, 2016, Washington, D.C.; (**First Prize in Math & Science Education Oral Presentation Category**).

60. J. Espinoza^{U,*}, I. Villanueva, W. Goodridge, & B. Call^G. (2016). Cognitive/emotional engagement & spatial performance during engineering examination activities. *Utah State 2016 Student Research Symposium*, April, 2016, Logan, UT.

2014

61. W. Goodridge, I. Villanueva, N.J.A. Wan^{G,*}, B. Call^G, M. Valladares^G, B. Robinson^U, & K. Jordan. (2014). Neural efficiency similarities between engineering students solving statics & spatial ability problems, *44th Annual Meeting of the Society of Neuroscience*, November 15-19, 2014, Washington, D.C.
62. I. Villanueva, W. Goodridge, N.J.A. Wan^{G,*}, M. Valladares^G, B.S. Robinson^U, & K. Jordan. (2014). Hormonal & cognitive assessment of spatial ability & performance in engineering examination activities, *44th Annual meeting of the Society of Neuroscience*, November 15-19, 2014, Washington, D.C.
63. I. Villanueva^{*}, L. Abts, J. Turner, R. Reshetar, & E. Vaughn. (2014). Design & use of an 'Energy 101' model curriculum to teach general education undergraduates about energy sustainability through an engineering design lens, *2014 AERA conference, SIG-Science Teaching & Learning*, April 3-7, 2014, Philadelphia, PA.

2011

64. N.B. Pivovarova^{*}, R.I. Stanika, I. Villanueva^P, & S.B. Andrews. (2011). The interplay of zinc and calcium in neuronal injury, *Society of Neuroscience*, November 12-26, 2011, Washington, D.C.

2010

65. R.I. Stanika^{*}, I. Villanueva^P, N.B. Pivovarova, & S.B. Andrews. (2010). Equivalent calcium loading via NMDA receptors or voltage-gated calcium channels induces similar toxicity in hippocampal neurons. *2010 Society for Neuroscience*, November 13-17, 2010, San Diego, CA.

2009

66. I. Villanueva^G, N. L. Bishop^{G,*}, J.L. Christensen^U, & S.J. Bryant. Effects of IL-1 β & medium osmolarity on cell viability & nitrite production in chondrocyte-seeded poly(ethylene glycol) hydrogels. (2009). *55th Annual Orthopaedic Research Society Meeting*, February 22-25, 2009, Las Vegas, NV.
67. I. Villanueva^{G,*}, S.K. Gladem, & S.J. Bryant. (2009). Effects of chondroitin sulfate incorporation on chondrocyte morphology & metabolism in mechanically stimulated poly(ethylene glycol) hydrogels. *55th Annual Orthopaedic Research Society Meeting*, February 22-25, 2009, Las Vegas, NV.

2008

68. I. Villanueva^{G,*}, C.A. Weigel^U, & S.J. Bryant. (2008). Using 3D PEG hydrogel models to elucidate the role of RGD as a mechanoreceptor in chondrocytes. *2008 World Biomaterials Congress, Society of Biomaterials*, May 28-June 1, 2008, Amsterdam, The Netherlands.
69. I. Villanueva^{G,*}, C. Weigel^U, & S.J. Bryant. (2007). Using poly(ethylene glycol) (PEG) hydrogels containing RGD- peptides as models to understand chondrocyte-matrix interactions under mechanical loading, *Midwest Connective Tissue Workshop*, Rush Medical School, October 6, 2007, Chicago, IL.
70. I. Villanueva^{G,*}, C. Weigel^U, & S.J. Bryant. (2007). Using poly(ethylene glycol) (PEG) hydrogels containing RGD- peptides as models to understand chondrocyte-matrix interactions under mechanical loading, *Midwest Connective Tissue Workshop*, Rush University Medical School, October 6, 2007, Chicago, IL.
71. I. Villanueva^{G,*}, C.A. Weigel^U, & S.J. Bryant. (2007). PEG hydrogel models containing RGD-

peptides influence chondrocyte response under mechanical compressional load, *2007 NAFP, JFPF, CIPA Symposium*, Cleveland, OH.

2006

72. **I. Villanueva**^{G,*} & **S.J. Bryant**. (2006). Chondrocyte metabolism & nitric oxide production in mechanically stimulated PEG hydrogel constructs. *Society of Bioengineering's 2nd International Conference on Bioengineering & Nanotechnology*, Santa Barbara, CA.

73. **I. Villanueva**^G & **S.J. Bryant**^{*}. (2006). Mechanically loaded photopolymerized hydrogels as 3D models to probe mechanotransduction pathways in chondrocytes, *World Congress on Biomechanics*, July 29- August 4, 2006, Munich, Germany.

74. **I. Villanueva**^{G,*}, H.E. Davis^U, & **S.J. Bryant**. (2006). Crosslinking density influences nitric oxide production in chondrocytes seeded in PEG hydrogels under dynamic loading, *Regenerate World Congress on Tissue Engineering & Regenerative Medicine*, April 26, 2006, Pittsburgh, PA.

75. **I. Villanueva**^{G,*}, B. Klement, D. von Deutsch, & **S.J. Bryant**. (2006). Effects of simulated microgravity on nitric oxide production & proteoglycan synthesis by chondrocytes encapsulated in 3D PEG hydrogels, *American Society for Gravitational & Space Biology Annual Meeting*, November 2-5, 2006, Arlington, VA.

76. **I. Villanueva**^{G,*} & **S.J. Bryant**. (2006). Nitric oxide production in mechanically stimulated chondrocytes encapsulated in PEG hydrogels, *Dental & Craniofacial Research Conference, University of Colorado- Health Sciences Center*, Aurora, CO.

B. Non-refereed Conference Presentations & Posters

2023

1. **I. Villanueva Alarcón** & **A. Baisley**. (2023). Overview of Engineering Education Research. University of Florida, Department of Engineering Education, March 10, 2023.

2022

2. **I. Villanueva Alarcón**. (2022). What is HC and what does it mean for our engineering students?. University of Florida. Material and Science Engineering Department. November 1, 2022.
3. **I. Villanueva Alarcón** & Robyn Mae Paul. (2022). Engineering Education Taxonomy and Emotions. Umeå University, Umeå, Sweden, October 13, 2022.
4. **I. Villanueva Alarcón**. (2022). What is hidden curriculum and how do people navigate it in engineering? University of Florida. Biomedical Engineering Department. October 3, 2022.
5. **I. Villanueva Alarcón**. (2022). Academic Mentoring. University of Florida Graduate School Mentoring Workshop. January 20, 2022 (virtual).
6. R.J. Downey & **I. Villanueva Alarcón**. (2022). Active and passive awareness of hidden curriculum in engineering: An exploratory study. Institute of Critical Quantitative, Computational, & Mixed Methodologies. March 26, 2022, Baltimore, MD.

2016

7. L. Gelles^{G,*} & **I. Villanueva**. (2016). Integrating sustainability into an “Introduction to engineering” course. planetary thinking in the curriculum, *Utah State University Sustainability Council Meeting*, April 21, 2016.

2015

8. **I. Villanueva**^{*}. (2015). Broadening the landscape in engineering education. *Society of Hispanic Professional Engineers, Invited Speaker, Detroit, Michigan, November 10-15, 2015*.
9. **I. Villanueva**^{*} & **A. Cunningham**^{*}. (2015). It is not what you see but what you know: Creating maker spaces for blind & visually impaired students learning about engineering drawing. *Maker Innovation Conference, Utah State University*.

10. **I. Villanueva***. (2015). Help, instructor overload! The pros & cons of distance education & IVC formats for instruction in an engineering graphics/design computer laboratory course. *Empowering Teaching Excellence Conference, Utah State University*.

2014

11. **M. Scheaffer*** & **I. Villanueva***. (2014). Creating results-oriented application materials for academic interviews. SACNAS National Conference, October 16, 2014, Los Angeles, CA.

2013

12. **L. Abts*** & **I. Villanueva***. (2013). Energy 101 Development. *Department of Energy Webinar*.

2008

13. **I. Villanueva**^{G,*}, C.A. Weigel^U, & **S.J. Bryant**. (2008). RGD's role as a mechanotransducer in chondrocytes embedded in 3D poly(ethylene glycol) hydrogels, *NIH Third Annual Graduate Student Research Festival*, Bethesda, MD.
14. **I. Villanueva**^{G,*}, C.A. Weigel^U, & **S.J. Bryant**. (2008). Poly(ethylene glycol) hydrogel models containing RGD-peptides to understand chondrocyte-matrix interactions under mechanical load, *University of Colorado Health Science Center Research Day*, Aurora, CO.

2007

15. **I. Villanueva**^{G,*}, C.A. Weigel^U, & **S.J. Bryant**. (2007). Chondrocyte-matrix interaction in PEG hydrogels under dynamic load, *StARS Symposium*, University of Colorado-Boulder, Boulder, CO.
16. **I. Villanueva**^{G,*}, C.A. Weigel^U, J. Kessler^U, & **S.J. Bryant**. (2007). Designing 3D photopolymerized PEG hydrogels to study chondrocyte response, *Photopolymerization Fundamentals Conference*, Breckenridge, Colorado.

C. Invited Keynotes, Plenaries, Talks, Panels, Symposia, & Workshops

2024

1. **I. Villanueva Alarcón**. (2024). Exploring how to situate emotions using sentiment analysis and natural language processing. Emotions in Engineering Education Symposium, September 9-11, 2024, Aveiro, Portugal. (**Invited Keynote Speaker**).
2. **I. Villanueva Alarcón**. (2024). Hidden Curriculum in U.S. Engineering Education. our *Integrated Engineering International Symposium (IEIS2024)*, Central London, June 3-5, 2024, (**Invited Panelist**).
3. **I. Villanueva Alarcón**. (2024). The Role of Hidden Curriculum, Advising, and Engineering. University of Virginia, April 29, 2024. (**Invited Virtual Speaker**).
4. **I. Villanueva Alarcón**. (2024). Hidden Curriculum and Its Impact in Engineering Education. School of Engineering Design and Innovation and The Leonard Center, Penn State University, State College, PA, January 11, 2024. **Invited Inaugural Speaker** and Workshop Lead for Racial Equity Bootcamp. -35 attendees.
5. **I. Villanueva Alarcón**. (2024). A hidden curriculum look into the rigor of engineering education research and its impact today. **Inaugural Invited Engineering Education Speaker**. Biomedical Engineering Department Graduate Research Seminar, Georgia Tech, Atlanta, GA, January 26, 2024. – 40 attendees.
6. **I. Villanueva Alarcón**. (2024). Multi-modal methods in engineering education research. Department of Engineering Education, Ohio State University, Columbus, OH, February 1-2, 2024. (**Invited Seminar Speaker**)- 40 attendees.
7. **I. Villanueva Alarcón**. (2024). Hidden Curriculum in Engineering. *Integrated Engineering International Symposium*, Centre for Engineering Education, University of London, June 3-5 2024. (**Special Guest Invited Speaker and Expert**).

2023

2. **I.Villanueva Alarcón**. (2023). Seekers, Bridgers, and Agents of Hidden Curriculum in Engineering. *IEEE Frontiers in Education Conference*. Texas A & M University, College Station, Texas. October 19, 2023. (**Invited Honorable Keynote Speaker**)- 800+ attendees
3. **I. Villanueva Alarcón**. (2023). Navigating hidden curriculum in STEM: Implications for retaining diverse learners. National Academy of Science, Engineering, and Medicine (NASEM) Diversity, Equity, and Inclusion (DEI). September 18, 2023. (**Invited Virtual Speaker**)- 60 attendees.
4. Jeremy Waisome. (2023). ASEE CDEI Keynote Speaker- Modern Figures Podcast Talk Show. **Invited Guests: Idalis Villanueva Alarcón** and Rochelle Williams, June 28, 2023.
5. **I.Villanueva Alarcón**. (2023). What is ethical mentoring? UF McKnight Brain Institute, University of Florida, June 22, 2023. (**Invited Speaker**)- 40 attendees
6. **I.Villanueva Alarcón**. (2023). Diversity, equity, inclusion, and belonging (Part 1). Southeaster Chemical Engineering Department Chairs Meeting, Clearwater, Fl, June 5, 2023. (**Invited Speaker and Workshop Lead**) – 25 attendees
7. **I. Villanueva Alarcón**. (2023). Hidden Curriculum and its impact in engineering education. Brown Biomedical Engineering Spring Retreat, Providence, RI, May 24, 2023. (**Invited, Inaugural Keynote Speaker**) – 50 attendees.
8. **I. Villanueva Alarcón, London, J., Cross, K., Dickerson, D., Mejia, A.** (2023). NSF/ ASEE CAREER Panel on Broadening Participation in Engineering. presentation during the plenary session on Feb. 27, 2023 at the CoNECD Conference in New Orleans, LA. (**Invited Keynote Speaker**) – 120 attendees.

2022

9. **I.Villanueva**. (2022). Panel for Engineering Deans Talking about Hispanic/Latiné issues for non-tenure-track faculty in engineering. Society of Hispanic Professional Engineers Faculty Development Symposium, Charlotte, North Carolina, November 6, 2022. - (**Invited Panel Moderator**)- 50 attendees.
10. C. Hernandez, J. Ocampo, **I.Villanueva**, R. Revelo. (2022). Engineering Faculty Panel. Society of Hispanic Professional Engineers Faculty Development Symposium- Charlotte, North Carolina, November 6, 2022. (**Invited Panelist**)- 50 attendees.
11. **I. Villanueva Alarcón**. (2022). An overview of methods to measure emotions in engineering education. Emotions in Engineering Education Conference, Umeå University, Umeå, Sweden, October 12, 2022. (**Invited Keynote Speaker**) – 40 attendees.
12. **I. Villanueva Alarcón**. (2022). Unpacking the hidden curriculum in engineering. 2022 National Academy of Engineering Frontiers of Education Conference, September 21-23, 2022, Washington, D.C. (**Invited Plenary Speaker**) – 120 attendees.
13. **I.Villanueva Alarcón**. (2022). SHPE Grad Reads: Meet Dr. Villanueva Alarcón talking about hidden curriculum in engineering, May 17, 2022 (**Invited Virtual Speaker**)- 27 attendees.
14. **I. Villanueva Alarcón**. (2022). Writing the Analytical Plan of Mixed Methods Proposals. Institute of Critical Quantitative, Computational, & Mixed Methodologies. March 27, 2022, Baltimore, MD. (**Invited Speaker and Workshop Lead**)- 40 attendees.
15. **I.Villanueva Alarcón***. (2022). Race re-imaging academic mentoring: An exploration of the complex identities and experiences of womxn scientists and engineers. San Jose State University, February 11, 2022, (**Invited Virtual Speaker**) – 50 attendees
16. **I.Villanueva Alarcón***. (2022). From seekers to agents: Uncovering how individuals navigate their engineering environments via hidden curriculum. University of Florida, Chemical Engineering Symposium, January 10, 2022. (**Invited Virtual Speaker**)- 50 attendees.

2021

17. **I. Villanueva Alarcón*** & **E. Marte Zorrilla^{G,*}**. (2021). International Graduate Student Mentoring Panel. University of Florida. November 13, 2021 (**Invited Virtual Speaker**)- 50 attendees.
17. **I. Villanueva Alarcón**. (2021). Step Up! From bystander to action. *American Institute of Chemical Engineers* (AIChE) Virtual Conference, Engineering for Inclusion, November 15, 2021. (**Invited Speaker and Workshop Lead**)- 50 attendees.
18. **I. Villanueva***, M. Di Stefano, L. Gelles, P. Vicioso, & S. Benson. (2021). An intersectionality-informed and multi-modal approach to explore the academic research mentoring perspectives and responses of science and engineering women graduate students and faculty. Network Gender & STEM Conference, Sydney, Australia), July 30 – August 1, 2021. (**Invited Virtual Speaker**)
19. **I. Villanueva***. (2021). Framing the Norm: An exploration of responses and strategies used by students and faculty when introduced to hidden curriculum messages in engineering. Florida International University SUCCEED, DBER Seminar, March 3, 2021 (**Invited Virtual Speaker**).
20. **I. Villanueva***. (2021). Race-reimagined, intersectionality-informed research using multi-modal methods in science and engineering education. NSF-NSERC workshop, February 25, 2021 (**Invited Virtual Plenary Speaker**).
21. NSF workshop on New and Emerging Methods in STEM Education Research. (2021). Session 3: Neurocognitive and physiological measurements (e.g., EEG, fMRI, gaze tracking) and learning Speaker: **Gavin Price***, Vanderbilt University; **Idalis Villanueva***, University of Florida; and **Lucas Parra***, CCNY - City University of New York, February 16, 2021. (**Invited Virtual Speaker**)
22. **I. Villanueva***. (2021). A multi- and mixed-method exploration of hidden curriculum and issues affecting women in science or engineering. Colorado School of Mines Graduate Research Seminar, Chemical Engineering, January 15, 2021 (**Invited Virtual Speaker**).

2020

23. **M. Di Stefano***, **I. Villanueva***, **A. Esquinca*** & **E. Marte***. (2020). Teaching Science and Engineering in the Dual Classroom. La Cosecha Pre-Conference Institute, November 4, 2020 (**Invited Virtual Speaker**).
24. **I. Villanueva***. (2020). Empowering accessible and inclusive teaching. Empowering Teaching Excellence Conference, August 19, 2020, Utah State University, Logan, UT. (**Invited Virtual Keynote Speaker**)- 200 attendees
25. **I. Villanueva*** & **E. Marte***. (2020). Multimodal methods for educational Research. Utah State University Nutrition Course, January 22, 2020, Logan, UT. (**Invited Speaker**)- 40 attendees.

2019

26. **I. Villanueva***. (2019). An initial exploration of hidden curriculum perspectives and pathways in engineering. University of Florida, Department of Engineering Education, Gainesville, Florida, December 9, 2019. (**Invited Speaker**) – 50 attendees.
27. **I. Villanueva***. (2019). Uncovering issues in STEM education through hidden curriculum. Utah State University, Empowering Teaching Excellence Seminar Series, Logan, Utah, November 14, 2019. (**Invited Speaker and Workshop Lead**) –30 attendees.
28. **I. Villanueva*** and **J.A. Mejia**. (2019). Mentoring students ethically and critically in engineering. Society of Hispanic Professional Engineers Faculty Development Symposium, Phoenix, Arizona, October 3, 2019. (**Invited Speaker and Workshop Lead**)- 50 attendees.
29. **I. Villanueva***. (2019). Lost in translation: From engineering norms to identities, Montana State University, September 20, 2019. (**Invited Speaker**) – 50 attendees.
30. **M. Di Stefano***, **I. Villanueva***, & **L. Gelles^G**. (2019). International Scholars Series - Navigating the Hidden Curriculum in STEM. University of Massachusetts – Amherst. The Institute for Teaching Excellence & Faculty Development, February 14, 2019. (**Invited Speaker**) – 30 attendees.
31. **I. Villanueva***. (2019). A glimpse into the dynamic living system of engineering education, Tufts University, February 11, 2019, Medford, MA. (**Invited Speaker**) – 50 attendees.

2018

32. **I. Villanueva***. (2018). Past traditional metrics of engineering education- the next frontier, University of Florida, September 10, 2018, Gainesville, FL. (**Invited Speaker**) – 50 attendees.
33. **I. Villanueva*** & **M. Di Stefano^P**. (2018). Exploring assumptions about engineering education: A new workshop to improve pedagogy for inclusive learning environments, *University of Chicago-Illinois*, May 17, 2018, Chicago, IL. (**Invited Speaker and Workshop Lead**)- 40 attendees.
34. **D. Ireland**, **W. Lee**, **I. Villanueva***, & **S. Jordan**. (2018). Culturally responsive education, Why Bother? *American Society of Engineering Education CONECD Conference*, Plenary Session, May 1, 2018, Crystal City, VA. (**Invited Plenary Speaker**) – 200 attendees.
35. **I. Villanueva***. (2018). Knocking down assumptions in engineering education, *University of California-San Diego*, Invited Speaker, March 12, 2018, San Diego, CA. (**Invited Speaker**) – 40 attendees.
36. **I. Villanueva***. (2018). Utah Valley University, NSF Panel on Grant Writing, March 1, 2018, Orem, UT. (**Invited Panelist**)- 50 attendees.
37. **I. Villanueva***. (2018). An initial exploration of hidden curriculum in engineering, *Purdue University Engineering Education Department Research Seminar*, January 20, 2018, Invited Speaker, West Lafayette, IN. (**Invited Speaker**) – 75 attendees.

2017

38. **I. Villanueva***. (2017). Engineering professional identity development, Texas State University Rising Stars Meeting, January 2017, Invited Speaker, San Marcos, TX. (**Invited Speaker**) – 25 attendees.
39. ETE Faculty Seminar Series, Utah State University. (2017). Objective and subjective truth in the classroom. Invited Panelists: **Norm Jones***, **Rose Judd-Murray***, **Peter Crosby***, **Idalis Villanueva***, and **Moisés Diaz***, October 17, 2017, Logan, UT. (**Invited Panelist**)- 40 attendees.
40. **I. Villanueva**, **J.A. Mejia**, & **R. Revelo**. (2017). Using literacy to identify hidden factors that compromise equitable and effective engineering education. Society of Hispanic Professional Engineers, Invited Speaker, Salt Lake City, UT, November 1-5, 2017. (**Invited Speaker and Workshop Lead**)- 60 attendees.

2016

41. **I. Villanueva**. (2016). The physiological responses of engineering students to their learning environment: an exploratory study. Society of Hispanic Professional Engineers, Faculty Development Symposium, Seattle, WA, November 4, 2016. (**Invited Speaker**) – 25 attendees
42. **I. Villanueva**. (2016). Flipping your classroom for effective teaching. Society of Hispanic Professional Engineers, Faculty Development Symposium, Seattle, WA, November 3, 2016. (**Invited Speaker**) – 25 attendees

2012

43. **I. Villanueva^{P,*}**. (2012). Non-academic research careers. National Institutes of Health Career Symposium, May 2012, Bethesda, MD. (**Invited Workshop Lead**) – 75 attendees

2008

44. **I. Villanueva^{U,*}**. (2008). Puerto Rico Space Grant Consortium External Advisory Board, University of Humacão, Puerto Rico- January 2008, Humacão, Puerto Rico. (**Invited Speaker**) – 100 attendees.

2006

45. **I. Villanueva***. (2006). Diversity in STEM. *NASA STS-116 space shuttle launch meeting*, Kennedy Space Center, Florida- December 2006, Cape Canaveral, FL. (**Invited Panelist**)- 60 attendees.

D. Invited Book Reviews

2021

1. Y. Pearson, C. Martsof, Q. Alexander, & L. Black. (2021). American Society of Civil Engineers Diversity Equity and Inclusion Best Practices Guide. *American Society of Civil Engineers*. [DEI Best Practices Resource Guide | ASCE](#). Reviewer: **I. Villanueva**
2. D. Lombardi & J. Bailey. (2021). Science Learning and Teaching. *In Handbook of Educational Psychology*, 4th edition; P. Schutz & K. Muis (eds.), (In-Press). Reviewer: **I. Villanueva**

E. Creative Works, Performances, Media/Press Releases, and Exhibitions

2023

1. **I.Villanueva Alarcón**. How to Build Engineers for Life. *Issues (40th Anniversary Edition)*, National Academy of Science, Engineering, and Math, <https://issues.org/engineers-for-life-hidden-curriculum-villanueva/>.
2. UF Gator Engineering News: July 2023. Faculty Spotlight: Idalis Villanueva Alarcón- [Winner of 2023 ASEE Annual Conference Best Paper](#).
3. Clearing hurdles: SHPE program propels future leaders in engineering by Samantha Jones discussing the experience of Dr. Idalis Villanueva Alarcón in the White House. <https://www.eng.ufl.edu/newengineer/engineering-education/clearing-hurdles-shpe-program-propels-future-leaders-in-engineering/>
4. The Engineering Professor Speaks Education Podcast. Episode 3- “**Idalis Villanueva Alarcón**- Engineering Education” Interviewed by Sindia Rivera-Jimenez, May 12, 2023.
5. Society of Hispanic Professional Engineers. Post-event report on the "Building the Next Generation of Hispanic Leaders in STEM" briefing at the White House, Among Attendees: **Idalis Villanueva Alarcón**. April 28, 2023. <https://myemail.constantcontact.com/Follow-Up-on-the-Briefing-in-Washington--DC.html?soid=1108867463019&aid=XBdcpPMOKTE>
6. **I. Villanueva Alarcón**. Hidden Curriculum: An Image Holder or Engineering. National Academy of Engineering Perspectives, February 13, 2023, <https://www.nationalacademies.org/news/2023/02/hidden-curriculum-an-image-holder-of-engineering>
7. Luis Herrero & Monica Feliú-Mójer. Noche de Ciencias. Radio Isla PR. Entrevista con la Dra. **Idalis Villanueva Alarcón** sobre el currículo oculto, March 16, 2023, <https://www.podbean.com/media/share/pb-wd6xi-13bbb52>

2022

1. **I.Villanueva Alarcón**. Reflective Teaching in a Digital Age: Hidden Curriculum Podcast Episode. Nicole Pitterson and Natasha Perova-Mello (producers). Episode can be found at: <https://reflectiveteaching.buzzsprout.com/1384834/10343555>

2021

1. Story Collider: Colisionador de Historias en Español. Guest Speakers: Johana Goyes*, **Idalis Villanueva Alarcón***, Ana Maria Porras*, Ruth Marfil Vega*. Hosts/Producers: Lili Be and Gastor Almonte, June 11, 2021 (virtual podcast), <https://www.storycollider.org/shows/2021/6/11/en-espanol>
2. ASEE CDEI Scholar Spotlight Series: **Dr. Idalis Villanueva Alarcón**. Published Online on March 16, 2021; Introduction, editor, and webmaster (Sindia Rivera-Jimenez); Editors: Susan Boerchers, Tershia Pinder-Grover, Homero Murzi, and Elizabeth Litzler. <https://diversity.asee.org/deicommitee/2021/03/16/asee-cdei-scholar-spotlight-series-dr-idalis-villanueva-alarcon/>

2020

3. A. Manassee. (2020). Women of USU: Then and Now, Women in Engineering. Utah State Today, <https://www.usu.edu/today/story/women-of-usu-then-and-now-women-in-engineering>, April 15, 2020; Among the people highlighted was **Idalis Villanueva**
4. **I. Villanueva**. (2019). Behind the masks of academia. Faculty Voices, American Association of Hispanics in Higher Education Magazine, <https://www.hispanicoutlook.com/articles/behind-masks-academia>, March 18, 2019.
5. White House Office of Science and Technology Policy. (2019). President Donald J. Trump announces recipients of the presidential early career award for scientists and engineers, found in <https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-announces-recipients-presidential-early-career-award-scientists-engineers/>, July 2, 2019. Announces **Idalis Villanueva** as one of the recipients.
6. American Educational Research Association. (2019). Education researchers selected as presidential early career awardees, found in <http://www.aera.net/Newsroom/AERA-Highlights-E-newsletter/AERA-Highlights-July-2019/Education-Researchers-Selected-as-Presidential-early-Career-Awardees>. Announces **Idalis Villanueva** as one of the recipients.
7. M. Jensen. (2019). USU professor awarded nation's highest science and engineering honor. Utah State Today, July 8, 2019. Announces **Idalis Villanueva** as the first and only recipient of the institution.
8. I. Mora. (2019). USU faculty member gets presidential award in engineering. The Herald Journal, July 11, 2019. Announces **Idalis Villanueva** as the first and only recipient of the institution.
9. C. Hislop and A. Lewis. (2019). KVNU morning show. Cache Valley Media Group: Interview with Dr. **Idalis Villanueva**, July 16, 2019.
10. C. Hislop. (2019). USU professor earns presidential early career award. Cache Valley Daily. July 17, 2019, found in <https://www.cachevalleydaily.com/news/archive/2019/07/17/usu-professor-earns-presidential-early-career-award/#.XTXYr-hKi70>. Announces **Idalis Villanueva** as the first and only recipient of the institution.
11. W. Hudson. (2019). Dr. **Idalis Villanueva** Teaches by Example, *Diverse Education* magazine, August 5, 2019, found in <https://diverseeducation.com/article/151413/>
12. J. Wright. Faces of Utah Education: **Idalis Villanueva**-Utah State University assistant professor. (2019). September 3, 2019.
13. M. Jensen. (2019). Redefining Power: White House honors USU professor for research into hidden curriculum, Utah State Alumni magazine. Announces **Idalis Villanueva** as the first and only recipient of the institution.

2018

14. **I. Villanueva***, **B. Campbell**, **A. Raikes**, **S. Jones**, & **L. Putney**. (2018). Hearts and Minds: Interdisciplinary approaches and biosensors can help measure student engagement. Journal of Engineering Education Selects, September 3, 2018, found in <http://www.asee-prism.org/jee-selects-sep-3/>.
15. J. Jarman. (2018). Reevaluating the professionalization of engineering faculty. (2018). College of Engineering, Utah State University News, <https://engineering.usu.edu/news/main-feed/2018/reevaluating-engineering-faculty-professionalization>, December 10, 2018. Highlights **Idalis Villanueva's** research.
16. M. Jensen. (2018). Upending assumptions in engineering education. Utah State Magazine, Spring 2018 Issue, https://issuu.com/usuprm/docs/utah_state_magazine_spring_2018/8, February 12, 2018. Highlights **Idalis Villanueva's** research
17. M. Henline. USU professor to study stress levels of engineering students. Cache Valley Daily. <http://www.cachevalleydaily.com/news/archive/2016/12/20/1d503ea2-c62b-11e6-aac3-bffb176b5d79/#.XR0MpOhKi70>, December 20, 2016. Highlights **Idalis Villanueva's** research.

18. **I. Villanueva**. Beauty can come from ashes. (2016). Speech written for James Rodriguez, Chief Executive Officer & President of Fathers & Families Coalition of America, February 16, 2016, National Families & fathers 17th Annual Conference, Los Angeles, CA.

FUNDING

(external funding is bolded)

A. Current Funding

1. **(PI) National Science Foundation, NSF BPE Track 3: Raíces Institute for Transformative Advocacy (RITA; BPE 2217477)**; Duration: August 1, 2022 to July 31, 2027. PI: Idalis Villanueva; co-PI: Marisela Martinez-Cola; co-PI: Homero Murzi; Estimated Total Amount: \$799,994; Villanueva Share: 54.13% (\$433,037).
2. **(co-PI) National Science Foundation, Racial Equity in STEM: Critical Conversations: Systemic and Agentic Empowerment of Black Ph.D. Students and their Faculty Advisors in Engineering (NSF 2140696)** . Duration: July 1, 2022 to June 30, 2026. PI: Denise Simmons; co-PI: Jasmine McNealy; co-PI: Idalis Villanueva; Estimated Total Amount: \$1,208,102; Villanueva Share: 22.4% (\$270,615).
3. **(Senior Personnel) National Science Foundation RIEF: Research Initiation: Facilitating Professional Formation of Engineers through Strategic Agency of Engineering Faculty (NSF 2106206)**. PI: Sindia Rivera-Jimenez; Estimated Total Amount: \$209,499; Duration: August 15, 2021 to July 30, 2024; Villanueva Share: 6.95% (\$14,556).
4. **(Senior Personnel) National Science Foundation RIEF: Factors Affecting Latina Engineering Student Decisions to Enter Graduate School or Engineering Career Pathways (NSF 2306262)**. PI: Bruce Carroll, Kent Crippin, Janice Mejia; Estimated Total Amount: \$149,987; Duration: June 1, 2023 to May 31, 2025; Villanueva Share: 15% (\$22,498).
5. **(co-PI). UF Strategic Funding Award-Phase 1. UF Promoting Interdisciplinary Use of Neurotechnologies to Enhance Education, Research, and Service (PIONEERS)**. PI: Pasha Antonenko, Luis Mejia-Puig, Idalis Villanueva Alarcón; Estimated Total Amount: \$113,754; Duration: August 15, 2024 to July 31, 2024; Villanueva Share: 33% (\$37,918).

B. Former Funding

1. **(PI) National Science Foundation: HSI Conference: Exploring the hidden realities of contingent Latinx faculty in STEM (NSF 2137331 and 2137332)**. Duration: September 1, 2021 to August 31, 2023. PI: Idalis Villanueva; co-PI: José Muñoz; Total Amount: \$203,905; Villanueva Share: 75.96% (\$154,905).
 - **Generated Products:** 2 journal articles; 1 policy brief; 1 professional development conference; 2 surveys; 1 conference proceeding paper; 2 conference presentations
2. **(PI) National Science Foundation, NSF BPE CAREER: Advocating for Engineering through Hidden Curricula: A Multi-Institutional Mixed Method Approach (NSF 1653140 and 2123016)**; Duration: January 15, 2017 to June 30, 2022; PI: Idalis Villanueva, Total Amount: \$722,779; Villanueva Share 100%.
 - **Generated Products:** 1 nationally validated survey instrument; 3 professional development models; 3 published special issues; 8 published journal articles; 1 article in preparation; 3 published book chapters; 15 published conference papers; 3 distinguished or best diversity paper awards; 17 invited talks; 3 keynotes; 3 invited speaker; 14 conference presentations; 2 national fellowship awards; 1 presidential award
3. **(PI) National Science Foundation, EHR CORE, Collaborative Research: Getting Real about engineering: an exploration of the emotional & motivational components of learning in the engineering classroom (NSF 1661100, 1661177, 2120451)**; PI: Idalis Villanueva, co-PI: Jenefer

Husman; Duration: July 1, 2017 to June 30, 2021; Total Amount: \$500,000; Villanueva Share: 46.05%.

- **Generated Products:** 1 ecologically valid protocol; 2 professional development models; 2 published journals; 1 journal article in preparation; 15 conference presentations (3 of which are international); 3 invited talks; 2 conference proceedings; 1 provisional patent; 1 founders award
4. **(co-PI) National Science Foundation, Research in the Formation of Engineers, Collaborative Research: The Making of Engineers: Influence of Makerspaces on the Preparation of Undergraduates as Engineers (NSF 1664271, 1664272, 1664274, and 2113755);** PI: Louis Nadelson, co-PIs: Idalis Villanueva and Jana Bouwma-Gearhart; Duration: September 1, 2017 to August 31, 2021; Total Amount: \$350,000; Villanueva Share: 28.49%
 - **Generated Products:** 1 validated survey instrument; 5 journal articles; 2 journal articles; 6 published conference papers
 5. **(PI) National Science Foundation, Research Initiation: Collaborative Research: Understanding pedagogically motivating factors for under-represented & non-traditional students in an engineering classroom (NSF 1830812, 2113739),** PI: Kimberly Cook-Chennault; co-PI: Idalis Villanueva; Duration: September 1, 2018 to August 31, 2021, \$199,891; Villanueva Share: 9%.
 - **Generated Products:** 1 validated protocol; 1 published article; 1 journal paper in development; 4 published conference proceedings; 1 poster presentation
 6. **(PI) National Science Foundation, DRK-12: Teaching: Enhancing Engineering Understanding in K-5 Bilingual Programs: Advocating for Latinx in Engineering Careers (NSF 1812458, 2128479),** PI: Idalis Villanueva, co-PIs: Marialuisa Di Stefano and Alberto Esquinca, Duration: December 1, 2018 to August 30, 2022, \$449,999, Villanueva Share: 83.33% (\$374,984).
 - **Generated Products:** 1 validated survey instrument; 3 book chapters; 1 edited book; 13 conference presentations; 1 published journal article; 1 journal article under review; 1 conference paper; 2 invited special sessions
 7. **(PI) National Science Foundation, Graduate Research Fellowship Program: Self-efficacy in engineering education (NSF 120214),** Graduate Student Recipient: Darcie Christensen, Duration: July 1, 2017 to June 30, 2020, \$138,000.
 - **Generated Product:** 1 validated instrument; 2 international conferences, 3 refereed and published conference papers; 6 conference presentations; 1 Ph.D. dissertation.
 8. **(PI) National Science Foundation, INTERN Fellowship Program for CAREER (NSF 18-102),** PI: Idalis Villanueva; Duration: February 1, 2019 to May 30, 2019, \$47,137, Villanueva Share: \$47,137.
 - **Generated Products:** 1 graduate student at the time, Laura Gelles, participated as a policy think-tank intern in the Progressive Policy Institute in Washington, D.C. where she generated several blogs about charter education in rural and urban communities and reports that were recognized by the government, including a state senator from West Virginia accused of plagiarizing her work.
 9. **(PI) Steelcase Education/Utah State University: Strong and Healthy Identities in Engineering (SHINE) Center;** Duration: January 1, 2017 to December 30, 2017; PI: Idalis Villanueva; Total Amount: \$75,000; Villanueva Share: 75%.
 - **Generated Products:** 1 fully functional research & teaching classroom space; 1 refereed and published conference publication; 1 NSF funded project as a result of this space
 10. **(PI) Utah State University Center for Women & Gender Studies: Women graduate students & faculty in science & engineering: a case study on ethical mentoring;** Duration: July 1, 2016 to June 30, 2017; PI: Idalis Villanueva; Total Amount: \$13,000; Villanueva Share: 100%.
 - **Generated Outcomes:** 2 journal articles; 1 refereed and published conference paper; 3 conference presentations; 1 award; 3 invited talks
 11. **(PI) Utah State University Research Catalyst SEED: Design Heuristics to Correlate Self-Efficacy and Transfer of Learning in Engineering Students;** Duration: July 1, 2014 to June 30, 2015; PI: Idalis Villanueva, co-PIs: Sydney Schaefer & Suzanne Jones; Total Amount: \$19,932;

Villanueva Share: 55%.

- Generated Products: 3 journal articles; 1 NSF CAREER award stemming from this work; 1 publication honor (JEE Selects); 4 conference presentations in AERA
12. (PI) University System of Maryland Carnegie Course Re-design Grant: Biology for Engineers Course Redesign; Duration: August 2013-August 2015; PI: Idalis Villanueva & co-PI: Ganesh Sriram, Ph.D., Adam Hsieh, Ph.D.; Total Amount: \$40,000; Villanueva Share: 0% (*awarded to I. Villanueva but not transferred due to change of institutions*)
 13. (PI) College for Teaching Excellence Learning Enhancement Mini-Grant; University of Maryland-College Park, Duration: May 2012-May 2013, Amount: \$12,000; Villanueva Share: 100%

C. Pending Funding

14. (PI). **Collaborative Proposal: Emotions are Complicated: The Impact of Valuing STEM Content on Students' Emotions and Self-regulated Learning.** National Science Foundation, EDU, Level 2. Duration: July 1, 2024 to June 30, 2028; Estimated Total Amount: \$1,499,954; Villanueva Share: 49.99% (\$749,971).
15. (co-PI). **PIPP Phase II: Theme 4: Advance Social, Psychological, and Informational Research and Explanation (ASPIRE) Center for Pandemic Prevention. NSF Engineering Research Center.** National Science Foundation Engineering Research Center. Duration: September 1, 2024 to August 31, 2031. Estimated Total Amount: \$18,000,000; Villanueva Share: 5.56% (\$1,000,000).
16. (PI). **Trailblazer: Multi-Modal AI-Enabled Plug-ins and Apps for Engineering Course Adaptations to Learning Disabilities.** NSF EFMA & ENG (by invitation only). Duration: January 15, 2025 to January 14, 2028. Estimated Total Amount: \$3,000,000; Villanueva Share (100%).

CONSULTING/PROGRAM EVALUATION

A. Current Consulting

1. **IUSE/PFE:RED A&I -Sustainable TRansformation of Environmental engineering Education for Modern society (STREEM);** PI: Craig Woolard; Engineering Education Curriculum Consultant: Idalis Villanueva; Duration: September 1, 2020 to August 31, 2024; Total Amount: \$999,194; Villanueva Share: 2.5% (\$24,980).

B. Former Consulting

1. **National Center for Blind Youth in Science Full-Scale Development Project, NSF Advancing Informal STEM Learning;** PI: Mark Riccobono; co-PI: Christine Reich; Curricular Developer: Idalis Villanueva; Duration: September 1, 2013-August 30, 2016, Total Amount: \$842,209; Villanueva Share: 3% (\$25,266).
2. **Designing Tactile Picture Books: Critical making in libraries to broaden participation in STEM education & careers;** PI: Tom Yeh, co-PI: Stacey Forsyth; Advisory Board Member: Idalis Villanueva; Sept. 15, 2016 to August 31, 2019; Total Amount: \$1,199,833; Villanueva Share: 1% (\$11,998).
3. **CAREER: Examining factors that foster low-income Latino middle school students' engineering design thinking in literacy-infused technology & engineering classrooms;** PI: Amy Alexandra Wilson; Advisory Board Member: Idalis Villanueva; January 1, 2016 to January 1, 2021, Total Amount: \$802,000; Villanueva Share: 1% (\$8,020).

C. Pending Consulting

1. **National Science Foundation EHR CORE: The appeal, efficacy, and performance of undergraduates using engineering digital educational games;** PI: Kimberly Cook-Chennault, co-PI: Saira Anwar; September 1, 2022 to August 31, 2024; Estimated Total Amount: \$500,000;

Villanueva Share: 4% (\$20,000).

PEDAGOGICAL METHODS & FORMATS

1. Distance Education (hybrid/blended (interactive video conferencing with face-to-face instruction); bichronous online (blend of synchronous/asynchronous) using Canvas as the learning management system)
2. Flipped Face-to-Face Classroom (using Panopto, Screen Cast-o-Matic, Camtasia)
3. Face-to-Face Active, Experiential, and Service Learning (using i-clicker & e-portfolio with Canvas & Blackboard as the learning management systems)
4. Project- and Problem-Based Learning (using engineering design models & e-portfolios)

COURSES TAUGHT

1. *Research Methods in Engineering Education, EGS 6012*, Spring 2024
2. *Engineering, Design, and Society, EGN 2020C*, University of Florida, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023
3. *Integrated Product and Process Design, EGN 4951 and 4952, Faculty Coach*, University of Florida, Fall 2021-Spring 2022; (*A two-semester course sequence*)
4. *Online Pedagogy for Engineers, EGN 6933*, University of Florida, Fall 2020; (*Received Exemplary Online Award, Quality of Course Materials at UF in April 2021*).
5. *Introduction to Engineering, ENGR 1500*, Utah State University, Engineering Education, Fall 2016-Spring 2019
6. *Qualitative Methods in Engineering Education, EED 7040*, Utah State University, Engineering Education, Spring 2016, Spring 2018, Summer 2018, Spring 2020
7. *Developing an Online Educational Curriculum, EED 6090*, Utah State University, Engineering Education, Summer 2015, Spring 2017, Summer 2018, Spring 2019
8. *Engineering Graphics, MAE 1200*, Utah State University, Mechanical Engineering, Spring 2014 to Spring 2016 (including summers)
9. *Biology for Engineers, BIOE 120*, University of Maryland-College Park, Fischell Department of Bioengineering, Fall 2011-Spring 2013 (including summers)
10. *Biology for Engineers Laboratory, BIOE 121*, University of Maryland-College Park, Fischell Department of Bioengineering, Fall 2011-2013 (including summers)
11. *Designing a Sustainable World, BIOE 289A*, University of Maryland-College Park, Fischell Department of Bioengineering, Spring 2013
12. *Tissue Engineering, BIOE 411/611*, University of Maryland-College Park, Fischell Department of Bioengineering, Spring 2012 (*Dual undergraduate and graduate course*)
13. *Science Writing*, Office of Intramural Training and Education, National Institutes of Health, Summer 2008
14. *Material and Energy Balance*, University of Colorado-Boulder, Chemical & Biological Engineering, Fall 2006 (Teaching Assistant)
15. *General Chemistry Laboratory*, University of Colorado-Boulder, Chemical & Biological Engineering, Spring 2005 (Teaching Assistant)

SERVICE

A. Professional Service

1. Research in Engineering Education Symposium (REES) Scientific Committee, El Paso TX, January 13-16, 2025 (service from January 2024 to January 2025).

2. FLAIRS-37: Special Track in Workforce Development Program, 2024
3. Conference Planning Committee, Emotions in Engineering Education European Research Group, Umeå University, Umeå, Sweden, July 2022-present
4. Support to Vice – President IEEE Education Society Educational Activities, 2024 - present
5. Editorial Board for Special Issue, Emotions in Engineering Education, European Journal of Engineering Education, July 2023 - present
6. Hispanic Faculty Congress Committee, September 2023-present
7. Society of Hispanic Professional Engineers Faculty Institute Planning Committee, July 2021-October 2023
8. Associate Editor, IEEE Transactions in Education, January 2021- March 2024
9. Editorial Board, Journal of STEM Faculty Development, January 2023 - present
10. Associate Editor, Advances in Engineering Education, January 2021-present
11. Program Chair Elect, American Society of Engineering Education, Women in Engineering Division, July 2022-present
12. Task Force to Diversity Leadership, American Society of Engineering Education, March 2022-March 2023
13. Secretary, American Society of Engineering Education, Women in Engineering Division, July 2020-June 2022
14. Guest Editor, CTETE (Council for Technology & Engineering Teacher Education) yearbook, September 2021- present
15. Reviewer for the First Diversity, Equity, and Inclusion Best Practices Guide for the American Society of Civil Engineers, October to December 2020
16. IEEE Frontiers in Education, New Faculty Fellows Program co-Chair, August 2019-August 2021
17. Council of Undergraduate Research Councilor, Engineering Division, June 2017 to June 2021
18. Invited Proposal Reviewer, National Science Foundation, February 2014- present
19. Invited Journal Reviewer, Journal of Engineering Education, November 2013- present
20. Invited Journal Reviewer, Education Sciences, 2016-present
21. Invited Journal Reviewer, British Journal of Educational Psychology, 2021-present
22. Invited Journal Reviewer, Journal of Women and Minorities in Science and Engineering, 2019-present
23. Invited Journal Reviewer, Studies in Engineering Education, 2020-present
24. Invited Reviewer, Handbook of Educational Psychology, 2020
25. NSF/ASEE Engineering and Education Centers Grantees Conference Planning Committee, October 2016 to October 2017;
 - a. Citation: American Society of Engineering Education. (2018). 2017 NSF Engineering Education and Centers Grantees Conference: Meeting Report. October 29-31, 2017, Renaissance Capital View Hotel, Arlington, VA; <https://docs.asee.org/public/EEC/2017EECCConferenceReport.pdf>, p. 1-52.
26. Society of Hispanic Professional Engineers Faculty Institute Planning Committee, July 2015 – July 2017:
 - a. Development of hidden curriculum seminar for 75 engineering faculty across the nation & upcoming development of an effective training and literacy in engineering session hosting 75 faculty in the 2017 Kansas City Conference.
 - b. Development of active learning/flipped classroom seminar for 70 engineering faculty across the nation in the 2016 Seattle Conference.
27. Invited Expert Faculty, NSF PRIME Workshop for the Engineering Design Process Portfolio Scoring Rubric, January 2015 & October 2013:
 - a. Assessed EDPPSR rubrics for Project Lead the Way along with 10 experts to identify examples appropriate for each category of the rubric elements and refine language of the rubric

28. Vice Chair for the IEEE Education Society, January 2014-May 2015:
 - a. Assist the president in the development and refinement of IEEE educational guidelines; Ensure that all members are completed their designated tasks

B. Institutional/Departmental Service

1. University of Florida, Department of Engineering Education, Associate Chair for Research & Graduate Studies, August 2022-present
 - a. Directed and facilitated four “How To” series, coordinated with members of the EED Research Committee, to be disseminated to EED faculty as well as joint and affiliate faculty
 - b. Mentored EED individual faculty on their proposals and research ideas
 - c. Prepared procedural documents, as accompaniment to the EED bylaws, about procedures to attain graduate faculty status in our department for both internal EED faculty as well as affiliate faculty
 - d. Led mentoring groups for tenure track, engineer, and instructional faculty series around promotion and tenure
 - e. Created research projections and revenue planning for the department.
 - f. Led the development and completion of the department vision, mission, and core values.
 - g. Developed procedures and documentation for the graduate student handbook, recruitment procedures, and mediation procedures for national and international students
 - h. Led and completed a EED faculty guide that includes resources and mentoring recommendations and examples to support tenure-track and instructional faculty for their tenure and/or promotion
 - i. Coordinated trainings with the IRB and Strategic Research Planning Offices at UF to augment research portfolio of the EED department
2. University of Florida, Graduate Affairs Committee, 2021 to present
 - a. Helped to plan and organize social events for the departments, recognition of women, Black, and Latiné faculty
 - b. Developed and led the procedures for the pre- and practicum courses in EED, particularly for international graduate students
3. University of Florida, Herbert Wertheim College of Engineering Dean Search Committee, March 2022-October 2022
4. Association of American Universities (AAU), University of Florida, Department of Engineering Education, Learning Community, April 2022- February 2023 ([Learning Community | Association of American Universities \(AAU\)](#))
5. University of Florida, Promotion and Tenure Committee, Department of Engineering Education, August 2021-present.
6. University of Florida, Inclusion, Diversity, Equity, and Access Committee, Department of Engineering Education, July 2020-2022
 - a. Assisted in the creation, editing, and assembly of the graduate student handbook
 - b. Assisted in the course substitution list creation and pertinent approvals for students transferring into the program
 - c. Assist in the learning objectives for both the Ph.D. and M.S. program
7. University of Florida, Ph.D. Curriculum Committee, Department of Engineering Education, July 2020-July 2021
8. University of Florida, Mentoring Affinity Group, September 2020-present
9. Utah State University Diversity & Inclusion Taskforce, Training, Instruction and Research Working Group, July 2019 – June 2020
10. SHPE Student Chapter Faculty Advisor, November 2017 – May 2020
11. Honors Program Mentor and Reviewer, January 2016 – December 2019
12. Utah State University Women’s Leadership Initiative Faculty Mentor, August 2017-May 2019

13. Engineering Education Department Graduate Online Certificate Committee, January 2017-December 2018.
14. Engineering Education Department, Graduate Student Manual Committee, August 2013-May 2020
15. College of Engineering Dean Search & Interview Committee, Utah State University, November 2017-April 2018
16. Empowering Teaching Excellence Committee, Utah State University, August 2015-2017:
 - a. Helped to develop faculty training seminars through the Center of Innovative Design & Instruction around pedagogical strategies & inclusive learning environments
17. Broadening Participation in Engineering Seminars, College of Engineering, Utah State University
 - a. Recruited & hosted a special seminar where engineering education experts on stereotype threat (Dr. Michelle Camacho & Dr. Susan Lord) talked to faculty and students in the College on April 22, 2016
 - b. Hosted a former NSF program office from the Engineering Education & Centers, Broadening Participation in Engineering Division, Dr. James Moore on January 30, 2017.
18. Invited Panelist, Engineering Education graduate research seminar, Utah State, Spring 2014 & Spring 2015:
 - a. Spoke to 20 graduate students about how to properly interview for a faculty position, finding their career paths after their Ph.D. and developed a handout to help guide them through the process
 - b. Participated in a panel about the process of campus interviews when looking for a faculty position
19. Recruiter, Engineering Education Department, Utah State, 2013 & 2015-:
 - a. Recruited for Weber State Career Fair to find potential graduate student Candidates into the Engineering Education graduate program
 - b. Recruited for the Engineering Education Department at the 2015 SACNAS Conference
20. STEM Recruitment Specialist, Montgomery County College Preparation & Scholarship Fair, Universities of Shady Grove, April 21, 2012:
 - a. Mentored parents, students, and interested public in opportunities in STEM
21. Postdoctoral Professional Development Intern, National Institutes of Health, Office of Intramural Training and Education: July to December 2010
 - a. Assisted with the development of materials & slides for the CAREERS IN SCIENCE EDUCATION & OUTREACH: A "HOW TO" WORKSHOP for postdoctoral students
22. Activities Coordinator, National Institutes of Health, Office of Intramural Training & Education, April 2010-:
 - a. Designed 3 modules for the National Institute of Health "Take Your Child to Work Day" workshop entitled "Chemistry, Chemicals, and You" for 75 children ages 5-11; Managed 3 groups of volunteers that aided in each of the modules.
23. Recruiter, University of Colorado at Boulder, Colorado Diversity Initiative, October 2008 & November 2007:
 - a. Staffed orientation booths in the 2008 Advancing Hispanic/Chicano and Native Americans in Science (SACNAS) & the 2007 Annual Biomedical Research Conference for Minority Students (ABRCMS) conferences where interested undergraduate students can obtain information about grants and research opportunities within the University of Colorado-Boulder; Collected resumes and followed-up with information for prospective applicants.

C. Community Service

1. American Society of Engineering Education, Graduate Student Chapter Faculty Advisor, January 2021-2022
2. Society of Hispanic Professional Engineers Faculty Advisor, November 2017-May 2020:
 - a. KiHoMac Engineering Day, April 2018; activity hosted to 25 high school students and their parents in Cache County, Davis County, and Weber County school districts

- b. Logan Library, Hispanic Heritage Festival, September 2018; activity hosted to approximately 100 children (all ages) and their parents across Cache County, UT
 - c. Science and Engineering Day, Engineering Week, Utah State University, February 23, 2019; developed and taught engineering activities on nanomaterial properties for 85 children (ages 8-14) and their parents
3. Families and Fatherhood Coalition Training Committee, May 2014 to December 2015
 - a. Helped to generate blogs and conduct community demographic research to tackle intrinsic issues of fatherhood education in this organization
4. Invited Professional Development Specialist, SACNAS Conference, October 2014:
 - a. Co-developed a professional development session for a group of 10 STEM graduate students
5. Panel Lead, NSF ADVANCE Hispanic Women in STEM Network, “Assessing Needs: Assisting Postdocs, Instructors, and Junior Faculty with Needs for Advancement”, San Juan, Puerto Rico, October 2012.
6. Moderator, Summer Success Institute, University of Maryland Baltimore County, August 2012:
 - a. Moderated mentoring session for PROMISE program summer success institute where cohorts of graduate students, faculty members, and various personnel from industry, government, and institutions meet and discuss their success stories within their profession
7. Moderator, Summer Success Institute, University of Maryland Baltimore County, August 2011:
 - a. Moderated mentoring session for PROMISE program summer success institute where cohorts of graduate students, faculty members, and various personnel from industry, government, and institutions meet and discuss their success stories within their profession
8. Postdoctoral AGEP PROMISE Program Co-developer/Mentor, University of Maryland Baltimore County, August 2009-July 2011:
 - a. Aided in the development of the first postdoctoral program targeted at underrepresented minorities in the University of Maryland Baltimore County
 - b. Mentored graduated students for the Rocky Gap Retreat, a program designed to help graduate students complete their thesis dissertations
 - c. Assisted with the evaluation of the Rocky Gap Retreat and recommended potential changes towards the 2010 program.
9. Graduate Student Mentor, University of Colorado at Boulder June to August 2009 & June to August 2008:
 - a. Mentored 25 undergraduate students selected to participate in the Summer Multicultural Access to Research Training (SMART) in the University of Colorado-Boulder; Supported several workshops related to scientific proposal and abstract writing as well as poster and oral presentation.

POSTDOCTORAL RESEARCH ASSISTANTS MENTORED

(current postdoctoral fellows are bolded)

1. **Robert Jamaal Downey**, *Postdoctoral Fellow of Engineering Education*, July 1, 2021-July 2023
 - Awarded a National Science Foundation fellowship for the Grant Writing Workshop Series for Early Career Scholars Focused on Racial Equity in STEM Education and Learning Sciences (was selected as one of the 10 awardees out of 58 applications)
 - Status: Visiting Assistant Professor at the University of San Diego
2. **Victoria Sellers**, *Postdoctoral Fellow of Engineering Education*, September 2020-January 2023
 - Best Diversity Paper Award, ASEE Women in Engineering Division
 - Status: Research Faculty at Oregon State University STEM Research Center
3. **Md Tarique Hasan Khan**, *Postdoctoral Fellow of Engineering Education*, May 2018-December 2019.
 - Semi-finalist for the Data Science Incubator Fellowship
 - Status: Postdoctoral Fellow at University of Connecticut

4. Marialuisa Di Stefano, *Postdoctoral Fellow of STEM Policy, Diversity, and Inclusion*, August 2017-August 2018

- Status: Assistant Professor position at the College of Education at the University of Massachusetts-Amherst; recently submitted packet for tenure and promotion.

GRADUATE RESEARCH ASSISTANTS MENTORED

(current graduate students are bolded)

1. **Isabella Victoria**, Graduate Research Assistant, August 2023-present
2. **Naqash Gerard**, Graduate Research Assistant, January 2023-present, University of Florida
3. **Gadhaun Aslam**, Graduate Research Assistant, January 2022-present, University of Florida
 - *UF International Center, Certificate of Outstanding Merit Award, 2022*
4. Edwin Marte Zorrilla, Ph.D., January 2019-December 2023
 - *Status: Successfully defended his Ph.D. dissertation on November 13, 2023; hired as an Instructional Assistant Professor at the University of Florida*
 - *First Ph.D. recipient from the Department of Engineering Education in Herbert Wertheim College of Engineering, University of Florida*
 - *AHFE Best Paper Award Finalist, 2021*
5. Darcie Christensen, Ph.D., August 2017-May 2021
 - *Status: Successfully defended her Ph.D. on May 27, 2021; is now an Assistant Professor in the Iron Range Engineering Program at the University of Minnesota -Mankato.*
 - *National Air and Space Museum Academic Year Internship, January 2021 to May 2021*
 - *College of Engineering Graduate Student Teacher of the Year Award, 2019*
 - *Engineering Education Department Graduate Student Teacher of the Year Award, 2019*
 - *Utah State University, College of Engineering Graduate Student Teacher of the Year Award, 2019*
 - *NSF GRFP Fellow and First Graduate Student to Receive this Award in Engineering Education Department at Utah State University, April 2018 to present, acceptance rate: 10% (\$50,000 for 3 years)*
 - *Tau Beta Pi Fellowship Awardee, Utah State University, April 2018 to present, acceptance rate: 6.7%, (\$10,000 for 1 year)*
 - *Utah State University Robin's Undergraduate Student of the Year Recipient, May 2017*
6. Katherine Youmans, Ph.D., August 2017-August 2020
 - *Status: Successfully defended her Ph.D. on August 18, 2020; is an Associate Teaching Faculty in Engineering Design, & Society at the Colorado School of Mines and a Presidential Faculty Fellow for Diversity, Inclusion, and Access*
 - *Engineering Education Department Graduate Student Researcher of the Year Award, 2019*
 - *Society of Women Engineers Fellow, Minneapolis, MN, October 18-20, 2018*
 - *IEEE Frontiers in Education Graduate Student Fellow, San Jose, CA, October 4-6, 2018*
7. Laura Ann Gelles, Ph.D., January 2015-August 2019
 - *Status: Successfully defended her Ph.D. in August 2, 2019; is currently a Lecturer at the University of Knoxville in Tennessee*
 - *NSF INTERN Fellow, February 1, 2019 to May 2019; her work on policies for more accessible K-12 charter schools in rural and urban communities was recognized nationwide and her reports were even believed to be plagiarized by a West Virginia state senator*
 - *Best Diversity Paper Award, Engineering Ethics Division, American Society of Engineering Education, Salt Lake City, UT, June 24-27, 2018.*
 - *First Graduate Student in Engineering Education to complete her qualifying exams*

- without any required changes, February 2018*
 - *Engineering Education Department Graduate Student Researcher of the Year Award, April 2018*
 - *Utah State University, College of Engineering, Graduate Student Teacher of the Year Award, May 2017*
 - *Utah State University Robin's Award Nominee, Graduate Student Teacher of the Year, May 2017*
- 8. Maria Valladares, Graduate Research Assistant, January 2014-December 2015, ABD

FACULTY ADVISED, MENTORED, OR COACHED

1. John Mendoza-Garcia, Instructional Associate Professor, Department of Engineering Education, University of Florida, August 2020-present
2. Laura Cruz Castro, Assistant Engineer, Department of Engineering Education, University of Florida, August 2022-present
3. Sindia Rivera-Jimenez, Assistant Professor, Department of Engineering Education, University of Florida, August 2020-present
4. Gloria Kim, Assistant Professor, Department of Engineering Education, University of Florida, August 2020-present
5. Jeremy Waisome MacGruder, Lecturer, Department of Engineering Education, University of Florida, August 2020-present
6. Amie Baisley, Lecturer, Department of Engineering Education, University of Florida, August 2020-present
7. Pam Dickrell, Associate Chair for Academics, Department of Engineering Education, University of Florida, August 2021- December 2023
8. Saira Anwar, Lecturer, Department of Engineering Education, University of Florida, August 2020-June 2021
9. Diego Alvarado, Lecturer, Department of Engineering Education, University of Florida, January 2021 – present
10. Jeremiah Blanchard, Associate Engineer, Department of Engineering Education, University of Florida, February 2021 – present
11. Sarah Jay, Lecturer, Department of Engineering Education, University of Florida, August 2020 – present
12. Andrea Goncher, Lecturer, Department of Engineering Education, University of Florida, January 2021 – present
13. Edward Latorre, Associate Engineer, Department of Engineering Education, University of Florida, August 2021 – present

ADDITIONAL GRADUATE STUDENTS ADVISED, MENTORED, OR COACHED

1. Yuxuan Wang, University of Florida, Computer Science, Volunteer (2024-present)
2. Suneet Jain, University of Florida, Computer Science, Volunteer (2024-present)
3. Ping Neo, University of Florida, Environmental Engineering, Graduate Committee Member, External, December 2021-present (appointed)
4. Minji Yun, University of Florida, College of Education, May 2023- present, External.
5. Mary Nwanua, Civil & Coastal Engineering, May 2023-present, External.
6. Rodrigo Calvo, Computer Science, May 2023-present, External.
7. Dennis Parnell, Department of Engineering Education, January 2023-present, Internal.
8. Jasmine Smith, Department of Engineering Education, January 2023-present, Internal.
9. Jabari Wilson, Department of Engineering Education, January 2023-present, Internal.
10. Isabella Victoria, University of Florida, Chemical Engineering (M.S. student), August 2021 to December 2023.
11. Elizabeth Volpe, University of Florida, Civil and Coastal Engineering, Graduate Dissertation

- Committee Member, March 2021 to May 2023.
12. Daniel Delgado, University of Florida, Human Computing Design, External Graduate Dissertation Committee Member, February 2021 (appointed)
 13. Carlos Gil, University of Florida, Civil Engineering (M.S. Student), June 2021 to August 2021
 14. Ibukun Osunbunmi, Utah State Engineering Education Department, Graduate Dissertation Committee Members, January 2017 to March 2020 (appointed)
 15. Ahmad Farooq, Utah State Engineering Education Department, Graduate Dissertation Committee Members, January 2017 to March 2020 (appointed)
 16. Abigail Stephan, Clemson University, Educational Psychology, Temporary Research Mentor, October, 2019 (appointed); (*Won Best Graduate Student Presentation Award at the Scholarly Consortium for Innovative Psychology in Education Conference in Savannah, GA*)
 17. Theresa Green, Utah State Engineering Education Department, Graduate Dissertation Committee Member, August 2016 to October 2018 (appointed)
 18. Paul Vicioso, Part-Time Graduate Research Assistant, August 2015-December 2019
 19. Jon Anderson, Utah State Engineering Education Department, Graduate Dissertation Committee Member, April 2019 (appointed)
 20. Yuzhen Luo, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated August 2020.
 21. Ryan Barlow, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated August 2020.
 22. Lilian Almeida, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated December 2018.
 23. Zahra Atiq, Purdue University Engineering Education Department, External Graduate Dissertation Committee Member in Engineering Education, Graduated May 2019.
 24. Amie Baisley, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated May 2019.
 25. Ivan Quezada, Utah State Civil and Environmental Engineering Department, External Graduate Dissertation Committee Member in Civil Engineering, Utah State, Graduated in May 2018
 26. Michael Liu, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated in May 2018
 27. Marialuisa Di Stefano, Part-Time Graduate Research Assistant, August 2016-July 2017
 28. Moe Tajvidi, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated in May 2017
 29. Adam Raikes, Utah State Physical Education & Recreation Department, External Graduate Dissertation Committee Member in Health, Utah State, Graduated in May 2016
 30. Angela Minichiello, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated in May 2016
 31. Stacie Gregory (now Stacie LeSure), Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated in May 2016
 32. Yushi Yanagita, Graduate Teaching Assistant, Utah State Mechanical Engineering Department, Spring 2016
 33. Jon Thorne, Graduate Teaching Assistant, Utah State Mechanical Engineering Department, Spring 2016
 34. Joel Alejandro Mejia, Utah State Engineering Education Department, Graduate Dissertation Committee Member, Graduated in May 2014

UNDERGRADUATE STUDENTS ADVISED, MENTORED, OR COACHED

1. Summer Porter, University of Florida, Biology Department, January 2023 - present
2. Alexander Chang, University of Florida, Mechanical & Aerospace Engineering, August 2023 – December 2023
 - *Undergraduate Research Assistant, Department of Engineering Education, University of Florida*

3. Shrisha Saravana, University of Florida, Data Science, August 2022-December 2022
 - *Undergraduate Research Assistant, Department of Engineering Education, University of Florida*
4. Jessica Le, University of Florida, Environmental Engineering, Peer Mentor Advisor, August 2022-December 2022
5. Rita Hippe, University of Florida, Mechanical & Aerospace Engineering, Peer Mentor Advisor, August 2022-December 2022
6. Alexander Chang, University of Florida, Mechanical & Aerospace Engineering, Peer Mentor Advisor, August 2021-May 2022
7. Mallika Jain, University of Florida, Industrial Science & Engineering, Peer Mentor Advisor, January 2022-present
8. Sumanth Aluri, Computer Science, IPPD Coach, August 2021 to May 2022
9. Ryan Aponte, Computer Science, IPPD Coach, August 2021 to May 2022
10. Erynne San Antonio, Biomedical Engineering, IPPD Coach, August 2021 to May 2022
11. Mariana Viso, Biomedical Engineering, IPPD Coach, August 2021 to May 2022
12. Katherine Lupone, Material Science & Engineering, Peer Mentor Advisor, August 2021 to December 2021
13. Jarrod Sanders, Computer Science, Peer Mentor Advisor, August 2021 to December 2021
14. Patriel Stapleton, University of Florida, (B.S. in Human Computing Design), February 2021 to May 2021
 - *External Undergraduate Senior Project Committee Member*
15. Amirbahador “Amir” Shojaee (B.S. in Chemical Engineering), February 2021 to July 2021
 - *Undergraduate Research Assistant, Department of Engineering Education, University of Florida*
16. Rodrigo Calvo (B.S. Computer Science), January 2020-July 2020
 - *Undergraduate Research Assistant, Department of Engineering Education, Utah State University*
17. Eduardo Cordova (B.S. Computer Science), January 2020-May 2020
 - *Undergraduate Research Assistant, Engineering Education Department, Utah State University*
18. Chaz Tanoë (B.S. Mechanical and Aerospace Engineering), August 2019-May 2020
 - *Undergraduate Research Assistant, Engineering Education Department, Utah State University*
19. Jared Payne (Pre-med), January 2019 –December 2019
 - *Undergraduate Teaching Fellow, Engineering Education Department, Utah State University*
 - *Undergraduate Research Assistant, Engineering Education Department, Utah State University*
20. Cynthia Rigby (B.S. Mechanical and Aerospace Engineering), August 2018- October 2019
 - *Undergraduate Research Assistant, Engineering Education Department, Utah State University*
21. Ruth Campos (B.S. Humanities), July 2018-December 2018
 - *Undergraduate Research Assistant, Engineering Education Department, Utah State University*
22. Lucy Campos (B.S. in Civil and Environmental Engineering), July 2018 – May 2019
 - *Undergraduate Research Assistant, Engineering Education Department, Utah State University*
23. Dale Parkinson (B.S. in Electrical Engineering), August 2018–December 2018
 - *Undergraduate Teaching Fellow, Engineering Education Department, Utah State University*
24. Paola Muñoz (B.S. in Civil and Environmental Engineering), January 2018- May 2018
 - *Undergraduate Research Assistant, Engineering Education Department, Utah State University*
25. Taylor Kesler (B.S. in Civil and Environmental Engineering), May 2017-May 2018
 - *Undergraduate Teacher Fellow of the Year Nominee, Utah State University, May 2018*
26. Jorge Espinoza (B.S. in Civil and Environmental Engineering), August 2014-July 2015
 - *Engineering Undergraduate Research Fellow, College of Engineering, Utah State*
 - *Selected to present findings in 2016 Utah State Student Research Symposium*
27. Darcie Christensen (B.S. in Biological Engineering), August 2016-July 2017
 - *Undergraduate Research Fellow, Engineering Education Department, Utah State*

- *Utah State University Robin's Award Winner, Undergraduate Student of the Year partly under my mentorship*
28. Bethany Fronhofer (B.S. Mechanical and Aerospace Engineering), Summer 2015
 - *Undergraduate REU student in Engineering Education Department at Utah State*
 - *2015 Emerging Researcher Conference, First Place Winner for Math & Science Education Division for her research under my mentorship*
 29. Sarah Schott (B.S. in Math), Summer 2015
 - *Undergraduate REU student in Engineering Education Department at Utah State*
 30. Brendan Teoh (B.S. Mechanical and Aerospace Engineering), Spring 2016
 - *Recognized as distinguished undergraduate teaching fellow for his work in my course under my mentorship in an article about the Undergraduate Teaching Fellow Program at Utah State University*
 31. Jose Campos (B.S. Mechanical and Aerospace Engineering), Spring 2016
 - *Undergraduate Teaching Fellow, Mechanical Engineering & Engineering Education Department, Utah State University*
 - *2016 Outstanding undergraduate teaching fellow winner, Utah State University, College of Engineering*
 32. Whit Bundy (B.S. Mechanical and Aerospace Engineering), Spring 2016
 - *Undergraduate Teaching Fellow, Mechanical Engineering & Engineering Education Department, Utah State University*
 33. Chris Walker (B.S. Mechanical and Aerospace Engineering), Spring 2016
 - *Undergraduate Teaching Fellow, Mechanical Engineering & Engineering Education Department, Utah State University*
 34. Addison Devitry-Smith (B.S. in Technology Education), August 2015-Spring 2016
 - *Undergraduate Teaching Fellow, Mechanical Engineering & Engineering Education Department (at the time of his mentoring experience with me), Utah State University*
 - *Undergraduate Research Assistant, selected to present our work in the National Science Teachers Association Conference*
 35. Camille Bruneel (B.S. Mechanical and Aerospace Engineering), January 2014 & Spring 2016
 - *Undergraduate Teaching Fellow, Mechanical Engineering & Engineering Education Department, Utah State University*
 36. Andrew Latham (B.S. Mechanical and Aerospace Engineering), Fall 2014
 - *Undergraduate Teaching Fellow, Mechanical Engineering & Engineering Education Department, Utah State University*
 - *2015 Outstanding undergraduate teaching fellow winner, Utah State University, College of Engineering*

PROFESSIONAL MEMBERSHIPS

1. American Society of Engineering Education (ASEE)
2. IEEE Frontier in Education (IEEE FIE)
3. Society of Hispanic Professional Engineers (SHPE)
4. American Educational Research Association (AERA)
5. International Mentoring Association (IMA)
6. Emotions in Engineering Education-European Group (EEES)
7. American Association for the Advancement of Science (AAAS)