

**Gisele Ragusa, Ph.D.**  
University of Southern California  
Viterbi School of Engineering  
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## PRESENT POSITION

### **Professor of Engineering Education Practice**

**University of Southern California**

**Viterbi School of Engineering**

**Engineering in Society Program**

**Division of Engineering Education**

1042 Downey Way

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## EDUCATION

**Doctor Of Philosophy** (Educational Psychology-Literacy, Language, and Learning emphasis)  
*University of Southern California. 2002.*

**Master of Science, Education** *University of Southern California. 1992*

**Bachelor of Science** (Liberal Studies-Education, Biology minor) - *University of Southern California. 1982*

**Bachelor of Science** (Business Administration) - *University of Southern California. 1982.*

**California Teaching Credentials and Certifications**, *University of Southern California and California State University, Los Angeles, 1981-1984* (Secondary STEM-Multiple endorsements, Elementary and Special Education- Resource Specialist Certification, Bilingual Certification-Spanish)

**Certification:** Center for Excellence in Teaching, (Maximizing Course Accessibility by Minimizing Ableism,) Faculty Teaching Institute, *University of Southern California, 2022*

**Certification:** Center for Excellence in Teaching, (Intensive Faculty Teaching Institute), *University of Southern California, 2022*

**Certification:** Center for Excellence in Teaching, (STEM Intensive Faculty Teaching Institute), *University of Southern California, 2020*

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## PROFESSIONAL EMPLOYMENT HISTORY

2014-Present

### **Professor of Engineering Education Practice**

*Viterbi School of Engineering, Engineering in Society Program, Division of Engineering Education, University of Southern California.*

2012-2014

### **Associate Professor of Engineering Education Practice**

**Director, Education and Outreach, Center for Energy Nanoscience**

**Associate Director, Education, CREATE Center for Homeland Security Research**

**Associate Director, Educational Assessment, Biomimetic MicroElectronic Systems, Engineering Research Center**

*Viterbi School of Engineering, Division of Engineering Education, University of Southern California.*

2007-2012

**Associate Professor of Research in Education and Engineering**

**Director, Center for Outcomes Research and Evaluation**

**Director, Education and Outreach, Center for Energy Nanoscience**

**Director, Teacher Education**

**Associate Director, Education, CREATE Center for Homeland Security Research**

**Associate Director, Educational Assessment, Biomimetic MicroElectronic Systems, Engineering Research Center**

*Rossier School of Education, Viterbi School of Engineering, Division of Engineering Education, University of Southern California.*

2006-2007

**Assistant Professor of Clinical Education, Director of Teacher Education, Chair, Division of Educational Psychology, Chair, Faculty Council- Rossier School of Education, University of Southern California.**

2004-2006

**Assistant Professor of Clinical Education, Program Director- MS.Ed. Reading and Writing- Rossier School of Education, University of Southern California.**

2002-2004

**Assistant Professor of Clinical Education, Program Director- MS.Ed. Deaf and Hard-of-Hearing- Rossier School of Education, University of Southern California**

1998-2002

**Assistant Professor-** Departments of Elementary and Special Education- *California State University, Northridge*

1996-1998

**Assistant Professor-** Department of Teacher Education- Director, Cross Cultural Language Academic Development (CLAD), Bilingual Cross-cultural Language Academic Development (BCLAD) Program- *Pacific Oaks College*

1993-1996

**Director-** Los Angeles County-wide Early Intervention Project, US Department of Education, Planning Program for Implementation of the Early Intervention Services Act.

1981- 1993

**Teacher-** General, Biological Science, and Special Education (*various grades/positions: early childhood through middle school across employment years + adult education*), **Resource Specialist, Acting Director, Pupil Services-** Los Angeles Unified, Azusa Unified, and Mountain View School Districts

## **HONORS AND AWARDS**

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American Society for Engineering Education (ASEE) Best Paper Award, *June 2020*

United States Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM), *October 2019*

American Society for Engineering Education (ASEE) Pacific Southwest Outstanding Teaching Award, *April 2019*

HENAAC Vanguard Award. *October 2016.*

Orange County Engineering Council (OCEC) Outstanding STEM Program Award: Research Experience for Teachers. *January 2015.*

University of Southern California Viterbi School of Engineering, Dean's Special Service Award. *May 2010*

EDUCARE Doctoral Fellowship

## **PUBLICATIONS**

### **Peer Reviewed Journals:**

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Ragusa, G., Huang, S., & Levonisova, S. (in press- December 2023). Middle School Mathematics Achievement: Effects of Teacher Professional Development. Submitted to *International Journal of Teacher Education and Professional Development*.

Ragusa, G. Gupta, S.K., Huang, Q., Chen, Y. Madni, A. Koenig, S. & Leung, L. (2023). Use of a Delphi Research Process for Designing, Developing, and Assessing the Importance of Contemporary Advanced Manufacturing Curriculum. *International Journal of Engineering Education*. 39 (2) 1-12.

Ragusa, G. & Leung, L. (2023) The Impact of Early Robotics Education on Students' Understanding of Coding, Robotics Design and Interest in Computing Careers. *Sensors*. 23(23), 9335; 1-10.

Ragusa, G., Levonisova, S., & Huang, S. (2022). Improving Middle School Science Achievement, Literacy and Motivation: A Longitudinal Study of a Teacher Professional Development Program. *Journal of STEM Education: Innovations and Research*. 23(4) 22-35.

Clabaugh, C.E., Mahajan, K., Jain, S., Pakkar, R., Becerra, D., Shi, Z., Deng, E., Lee, R., Ragusa, G., & Mataric, M.J. (2019) Long-Term Personalization of an In-Home Socially Assistive Robot for Children with Autism Spectrum Disorders. *Frontiers in Robotics and AI*, (section: *Human-Robot Interaction*).

Regalado, M., Schneiderman, J.U., Duan, L., & Ragusa, G. (2018) A Parent-Child Relational Framework for Teaching Child Development Assessment to Pediatric Residents: Description and Preliminary Validation in a Sample of Preterm Infants. *Academic Pediatrics*. 74-78.

Bell, B.M., Martinez, L., Gotsis, M., Lane, H.C., Davis, J.N., Antunez-Castillo, L., Ragusa, G. and Spruijt-Metz, D. (2018). Virtual Sprouts: A Virtual Gardening Pilot Intervention Increases Self-Efficacy to Cook and Eat Fruits and Vegetables in Minority Youth. *Games for Health Journal*.

- Spruijt-Metz, D, Wen, C.K., O'Reilly, G., Li, M., Lee, S., Emken, B.A., Mitra, U., Annavaram, M., Ragusa, G., & Narayanan, S. (2015, epub ahead of print, 2016) Innovations in the Use of Interactive Technology to Support Weight Management. *Current Obesity Reports*. 19-23.
- Ragusa, G. (2014) Engineering Global Preparedness: Parallel Pedagogies, Experientially Focused Instructional Practice. *International Journal of Engineering Education*. 30(2) 1-12. [doi:10.1016/j.ece.2012.03.001]
- Unrau, N., Ragusa, G., & Bowers, E. (2014) Teachers Focus on Motivation for Reading: "It's All About the Knowing Relationship." *Reading Psychology*. 4(1). 0-40. [doi/full/10.1080/02702711.2013.836582.]
- Ragusa, G. & Lee, C.T. (2012) The Impact of Focused Degree Projects in Chemical Engineering Education on Students' Achievement, and Efficacy. *Education for Chemical Engineers*.7(3) 69-77.
- Quirk, M., Unrau, N. Ragusa, G., Rueda, R., Lim, H. Bowers, E. Loara, G. & Velasco, A. (2010) Teacher Beliefs about Reading Motivation and Their Enactment in Classrooms: The Development of a Survey Questionnaire. *Journal of Reading Psychology*. 31(2) 93-120.
- Ragusa, G. (2008) Born Too Soon: What Can We Expect? Academic Expectations of Children With Very Low Birth Weight. *Early Childhood Development and Care*. 179 (5) 651-670.
- Kaye, C., & Ragusa, G. (1998) Boal's Mirror: Mentorship of Beginning Educators. *Issues in Teacher Education*. 23 (4) 34-41.

**Book:**

- Tierney, W.G., Corwin, Z. B., Fullerton, T. & Ragusa, G. (2014) (Eds.). *Postsecondary Play: The Role of Games and Social Media in Higher Education*. Baltimore, MD: John Hopkins Press. 1-20, 262-282.

**Book Chapters:**

- Corwin, Z. B., Danielson, R. Ragusa, & G., Tierney, W. G., & (2015- e version, 2016 hard copy) Chapter 11: Can Games Facilitate Access to College? In *Using Games and Simulations for Teaching and Assessment*. Harold F. O'Neil, Jr., Eva Baker, Ray S. Perez, editors, New York: Taylor Francis.
- Stillman, J., Ragusa, G. & Whittaker, A. (2015) Chapter 9: Teacher Performance Assessment: Readiness for Practice. In *Designing Teacher Preparation for Quality Teaching*. Etta R. Hollins, editor. New York: Routledge.
- Ragusa, G. (2014) Chapter 5: Gender, Social Media, Games, and the College Landscape. In W.G. Tierney, Z.B. Corwin, T. Fullerton & G. Ragusa (Eds.). *Postsecondary Play: The Role of Games and Social Media in Higher Education*. Baltimore, MD: John Hopkins Press. 262-282.
- Rueda, R. & Ragusa, G. (2012) Social Capital in Education in *The Encyclopedia of Diversity in Education*, James A. Banks, editor. 1<sup>st</sup> Edition. Sage. 4: 1967-69.

- Rueda, R. & Ragusa, G. (2010) Second Language Learners with Special Needs. in *The Encyclopedia of Education*, Festus Obakior, editor. 3<sup>rd</sup> Edition. Elsevier. 1779-1794.
- Ragusa, G. (2009) Chapter 5: Reactions to Divorce: Communication and Child Writing Practices, in *Literacy Practices in Times of Crisis*. Laurie MacGillivray, editor. New York: Routledge. 47-65.
- Ragusa, G. (2009) Chapter 8: Disability Identification: Shifts in Home Literacy Practices, in *Literacy Practices in Times of Crisis*. Laurie MacGillivray, editor. New York: Routledge. 100-118.

#### **Manuscripts Under Review/In Preparation:**

- Rueben, M., Lee, R., Groechel, T., Chen, H., Lee, H., Ragusa, G., & Mataric, M. (under review; Submitted December 2022, under revision) Multi-Week, In-Class Deployments of Telepresence Robots with Four Homebound K-12 Students: Benefits, Challenges, and Recommendations. Submitted to *Transactions on Learning Technologies*.
- Bruckhaus, A., Bennett, A., Brawer-Cohen, M., Ramirez, G., Sinclair, M., Ragusa, G., & Duncan D. (under review; submitted July 2023; resubmitted December 2023) Evaluation of Students' Digital Literacy through an Immersive University-High School Collaboration. Submitted to *Journal of STEM Outreach*.
- Ragusa, G., & Huang, S.. (in preparation) Case Study Pedagogy for Teaching Engineering Ethics. To be submitted to *International Journal of Engineering Pedagogy*.

#### **Peer Reviewed, Published Conference Proceedings:**

- Ragusa, G. (2024, abstract accepted) The Use of Home Technology in Preschoolers' Families in Urban Settings: Experiences and Potential Impacts *2024 American Society for Engineering Education Conference Proceedings*. Session AC-2024 42172, Portland, OR.
- Ragusa, G. (2024) The Impact of College Students' Service Learning on Their Communication, Leadership and Mentorship Skills. *Conference Proceedings INTED 2024- International Technology, Education, and Development Conference, 2024 Valencia, Spain*.
- Ragusa, G. (2023) The Impact of a Pre-Engineering Professional Development Program on Teachers' Understanding and Developmentally Appropriate Practices in Using Technology in Diverse Early Childhood Settings. *Conference Proceedings ICERi 2023- 6th annual International Conference of Education, Research and Innovation, 2023 Seville, Spain*.
- Ragusa, G. & Leung, L. (2023) The Impact of Academic Support Practices on Two-year College Students' Achievement in STEM Education: An Exploration of Factors. *Conference Proceedings ICHE 2023-International Conference on Higher Education, 2023 Montreal, Canada*.
- Ragusa, G. (2023) A Comparison of Covid-19 Distance Learning and Face-To- Face Experiences in Using Project-Based Pedagogies For Undergraduate Engineering Students. *Conference Proceedings- EDULEARN23- 15<sup>th</sup> Annual International Conference on Education and New Learning Technologies, Palma, Spain (virtual)*

- Ragusa, G. & Leung, L. (2023) Enhancing Early Childhood Educators' Knowledge of Computer Science and Engineering Concepts to Spark Young Children's Early Interest in STEM Careers. *2023 American Society for Engineering Education Conference Proceedings*. Session AC-2023 37688, Baltimore, MD.
- Ragusa, G. & Johnson, E. (2023) Engaging First-year Engineering Students Through Makerspace Project-based Pedagogy. *2023 American Society for Engineering Education Conference Proceedings*. Session AC-2023 40105, Baltimore, MD.
- Ragusa, G. & Allen, E., & Meneses, G. (2020) Impacts Resulting from a Large-Scale First-Year Engineering and Computer Science Program on Students' Successful Persistence Toward Degree Completion. *2020 American Society for Engineering Education Conference Proceedings*. Session AC-2020 30317, Montreal, Quebec, Canada (virtual).
- Won, D., Ragusa, G. Meneses, G., Shaverdi, M., Sharif, A. Pacheco, A., & Li, N., (2020) BOOSTing Preparedness Through Engineering Project-based Service Learning. *2020 American Society for Engineering Education Conference Proceedings*. Session AC-2020 27879, Montreal, Quebec, Canada (virtual). **\*Best Paper Award\***
- Rueben, M., Groechel, T., Zhang, Y., Matarić, M., & Ragusa, G. (2020). Increasing Telepresence Robot Operator Awareness of Speaking Volume Appropriateness: Initial Model Development *HRI '20: Companion of the 2020 ACM/IEEE International Conference on Human-Robot Interaction* March, 2020, pp 421–423  
<https://doi.org/10.1145/3371382.3378388>
- Ragusa, G. & Matarić, M., & Juarez, C. (2019) A Nine-Year Study of the Impact of Middle and High School Teachers' Participation in Research Experiences for Teachers Programs: Connections Between Teacher Performance and Student Achievement. *2019 American Society for Engineering Education Conference Proceedings*. Session AC-2019 27253, Tampa, FL.
- Ragusa, G. & Juarez, C. (2019) Student Persistence and University Transitions in STEM Majors: Community College Students' Challenges and Successes. *2019 American Society for Engineering Education Conference Proceedings*. Session AC-2019 27276, Tampa, FL.
- Menezes, G. B., & Allen, E. L., & Ragusa, G., & Schiorring, E., & Nerenberg, P. S. (2019), Quantitative and Qualitative Assessment of Large-scale Interventions in a First-year Experience Program *2019 American Society for Engineering Education Conference Proceedings*. Session AC-2019 32117, Tampa, FL.
- Won, D., Meneses, G., Shaverdi, M., Sharif, A. Pacheco, A., Li, Ni, & Ragusa, G. (2019) BOOSTing Preparedness Through Engineering Project-based Service Learning. *2019 American Society for Engineering Education Conference Proceedings- Pacific Southwest Division*. Session AC- PSW-2019, Los Angeles, CA.- **\*Best Regional Paper Award\***
- Clabaugh, C., Jain, S., Thiagarajan, B., Shi, Z., Mathur, L., Ragusa, G. & Matarić, M. J. (2018) Attentiveness of Children with Diverse Needs to a Socially Assistive Robot in the Home. *International Symposium on Experimental Robotics*, November 5-8, 2018, Buenos Aires, Argentina.
- Ragusa, G. & Juarez, C. (2018) Student Innovation and Persistence in STEM Majors: What

- Works and What Doesn't for Community College Students. *2018 American Society for Engineering Education Conference Proceedings*. Session AC-2018 22693 Salt Lake, UT.
- Clabaugh, C. Becerra, D., Deng, E, Ragusa, G., & Matarić, M. J. (2018) Month-long, In-home Case Study of a Socially Assistive Robot for Children with Autism Spectrum Disorder. *Companion of the Twenty-Second ACM/IEEE International Conference on Human-Robot Interaction (HRI)* March 5-8, 2018, Chicago, IL.
- Ragusa, G. & Slaughter, J. B. (2017) The Impact of Community College Students' Propensity for Innovation on Persistence in STEM Majors. *2017 American Society for Engineering Education Conference Proceedings*. Session AC-2017 20168, Columbus, OH.
- Ragusa, G., Matarić, M. & Juarez, C. (2017) A Seven-Year Study of Middle and High School Teachers Participating in Research Experiences For Teachers Programs: Exploring the Relationship Between Teacher Performance and Student Achievement. *2017 American Society for Engineering Education Conference Proceedings*. Session AC-2017 20169, Columbus, OH.
- Won, D., Meneses, G., & Ragusa, G. (2017) Boosting Engineering Identity of Rising Sophomore Engineering Majors Through Service Learning Based Bridge Program. *2017 American Society for Engineering Education Conference Proceedings*. Session AC-2017 20608, Columbus, OH.
- Shuman, L.S. Streiner, Besterfield-Sacre, M., Ragusa, R., Matherly, C. & Benson, L. (2017). Assessing the Spectrum of International Undergraduate Engineering Educational Experiences: A Cross-Institutional Study, *2017 American Society for Engineering Education Conference Proceedings*. Session AC-2017 20308, Columbus, OH.
- Regalado, M. Schneiderman, J., Dei, J. & Ragusa, G. (2017) A Parent-Child Relational Framework for Teaching Child Development Assessment to Pediatric Residents: Description and Preliminary Validation in a Sample of Preterm Infants. *ICM Conference, 2017*.
- Ragusa, G. & Slaughter, J. B. (2016) Research on Innovation and Creativity in Higher Education in Engineering and Science for Community Colleges: Student Strengths and Challenges. *2016 American Society for Engineering Education Conference Proceedings*. Session AC-2016 17349. New Orleans, LA.
- Besterfield-Sacre, M.E., Shuman, L., Ragusa, G., & Matherly, C. (2016) Assessing the Spectrum of International Undergraduate Engineering Educational Experiences. *2016 American Society for Engineering Education Proceedings*. New Orleans LA. Session AC-2016 16381.
- Ragusa, G. & Matarić, M. (2016) Research Experiences For Teachers: Linking Research to Teacher Practice and Student Achievement in Engineering and Computer Science. *2016 American Society for Engineering Education Conference Proceedings*. New Orleans, LA. Session AC-2016 17351.
- Shamsian, S. & Ragusa, G. (2016) Teaching Large Computer Science Classes. *2016 American Society for Engineering Education Conference Proceedings*. New Orleans, LA. Session AC-2016 15329.

- Matherly, C., Ragusa, G. & Phillips, S. (2016). International vs. Domestic Research Experiences for Undergraduates (REU): A Three-Year Assessment of the Preparation of Students for Global Workforces. *2016 American Society for Engineering Education Conference Proceedings*. New Orleans, LA. Session AC-2016 16659.
- Clabaugh, C. Ragusa, G., Sha, F., & Matarić, M. (2016) Designing a Socially Assistive Robot for Personalized Number Concepts Learning in Preschool Children. *IEEE: The Sixth Joint IEEE International Conference Developmental Learning and Epigenetic Robotics Conference Proceedings*. Paris, France.
- Liyanagamage, S., Bertuccio, M., Ragusa, G., & Sanger, T.D. (2016). Role of Visualization Techniques in Motor Skill Learning. *Society for Neural Control of Movement (NCM) Annual Meeting*, Session #4-E-19. Montego Bay, Jamaica. April 24-29, 2016.
- Ragusa, G. & Slaughter, J. B. (2015) Research on Innovation and Creativity in Higher Education in Engineering and Science for Community Colleges. *2015 American Society for Engineering Education Conference Proceedings*. Session AC-2015 14020. Seattle, WA.
- Besterfield-Sacre, M.E., Shuman, L., Ragusa, G., & Matherly, C. (2015) Assessing the Spectrum of International Undergraduate Engineering Educational Experiences. *2015 American Society for Engineering Education Proceedings*. Session AC 2015- 11746. Seattle, WA.
- Streiner, S.; McCave, E., Levonisova, S., Savage, R; Besterfield-Sacre, M.E., Ragusa, G., Matherly, C., Benson, L., & Shuman, L. (2015) An Inductive Qualitative Analysis of Student Interviews on Engineering Global Preparedness. *2015 American Society for Engineering Education Proceedings*. Session AC 2015- 11801. Seattle, WA.
- Levonisova, S., Savage, R., Streiner, S.; McCave, E., Ragusa, G., Besterfield-Sacre, M.E., Matherly, C., Benson, L., & Shuman, L. (2015) Identifying Factors that Enhance Undergraduate Students' Engineering Global Preparedness. *2015 American Society for Engineering Education Proceedings*. Session AC 2015- 12356. Seattle, WA.
- Menezes, G.B.; Sharif, A.A., Pacheco-Vega, A., Won, D.S., Rodriguez-Nikl, T., Ragusa, G., & Khachikian, C.S. (2015) Sophomore Unified Core Curriculum for Engineering Education (SUCCEED) at Cal State LA. *2015 American Society for Engineering Education Proceedings*. Session AC 2015- 13705. Seattle, WA.
- Rodriguez-Nikl, T., Won, D.S., Menezes, G.B., Pacheco-Vega, A., Sharif, A.A., & Ragusa, G., (2015) Integrated Project for Sophomore Engineering Course Contextuality. *2015 American Society for Engineering Education Proceedings*. Session AC 2015- 13717. Seattle, WA.
- Clabaugh, C., Ragusa, G., Sha, F. & Matarić, M. (2015) Designing a Socially Assistive Robot for Personalized Number Concepts Learning in Preschool children, in *Fifth International Conference on Development and Learning and on Epigenetic Robotics (ICDL-EPIROB)*, Providence, RI, August 2015.



- Clabaugh, C. Sha, F. Ragusa, G. & M. Matarić, M. (2015) Towards a personalized model of number concepts learning in preschool children, in *ICRA Workshop on Machine Learning for Social Robotics*, Seattle, Washington, May 2015.
- Ragusa, G. Matherly, C. & Phillips, S. (2014) Comparison of Two Study Abroad Programs' Impacts on Preparing Students for Global Workforces. *44th ASEE/IEEE Frontiers in Education Conference Proceedings, 2014*, Session DIS3: 796- 1569919057 Madrid, Spain.
- Ragusa, G. Matarić, M., & Huang, S. (2014) Research Experiences For Teachers: Linking Research to Teacher Practice and Student Achievement. *American Society for Engineering Education Conference Proceedings*. Session AC-2014 10193. Philadelphia, PA.
- Huang, S., Levonisova, S., Streiner, S., Cunningham, S., Ragusa, G. Besterfield-Sacre, M., Matherly, C., & Shuman, L. (2014) Moving Toward a Research Informed Conceptual Model of Engineering Global Preparedness. *American Society for Engineering Education Conference Proceedings*. Session AC-2014 . Philadelphia, PA.
- Streiner, S., Cunningham, S., Huang, S., Levonisova, S., Besterfield-Sacre, M., Matherly, C., , & Shuman, L. & Ragusa, G. (2014) Exploring Engineering Education in Broader Contexts: A Framework of Engineering Global Preparedness. *American Society for Engineering Education Conference Proceedings*. Session AC -2014. Philadelphia, PA.
- Short, E., Swift-Spong, K., Greczek, J., Ramachandran, A., Litoiu, A., Grigore, E.C., Feil-Seifer, D., Shuster, S., Lee, J.J., Huang, S., Levonisova, S., Litz, S., Li, J., Ragusa, G., Spruijt-Metz, D., Matarić, M., & Scassellati, B. (2014) How to Train Your DragonBot: Socially Assistive Robots for Teaching Children about Nutrition through Play. *23rd IEEE International Symposium on Robot and Human Interactive Communication*, Session 181.
- Ragusa, G. (2013) STEM Literacy and Textbook Bias in K-12. *43rd ASEE/IEEE Frontiers in Education Conference Proceedings, 2013*, Session S1C: pK-12 STEM III. 978-1-4673-5261-1/13
- Lui, A., Lu, S. C., Ragusa, G & Dai, Y. (2013) Employing Technologies to Enhance Students' Global Preparedness: iPodia. *2013 International Conference on Engineering Education and Research Conference Proceedings*, Session 139. Marrakesh, Morocco.
- Redekopp, M. & Ragusa, G. (2013) Evaluating Flipped Classroom Strategies and Tools for Computer Engineering. *2013 American Society for Engineering Education Conference Proceedings*. Session AC 2013- 7063. Atlanta, GA.
- Besterfield-Sacre, M.E., Ragusa, G., Matherly, C., Phillips, S. & Shuman, L. (2013) Assessing the Spectrum of International Undergraduate Engineering Educational Experiences. *2013 American Society for Engineering Education International Forum Proceedings*. Session AC 2013- 47. Atlanta, GA.
- Ragusa, G. (2013) Science Literacy and Text Book Biases. *2013 American Society for Engineering Education, Conference Proceedings*. Session AC 2013-7508. Atlanta, GA.
- Ragusa, G. (2012) Teacher Training and Science Literacy: Linking Teacher Intervention to Students' Outcomes in STEM Courses in Middle and High School Classes. *2012 American*

- Society for Engineering Education Conference Proceedings*. Session AC 2012-5242. San Antonio, TX.
- Wilczynski, D. & Ragusa, G. (2012) Teams Design, Mentoring and Managing For Computer Science Underclassmen. *2012 American Society for Engineering Education Conference Proceedings*. Session AC 2012-3215. San Antonio, TX.
- Wilczynski, D. & Ragusa, G. (2012) A Practical and Comprehensive Approach of Assessing ABET Outcome Achievement in Computer Science and Computer Engineering. *2012 American Society for Engineering Education Conference Proceedings*. Session AC 2012-3216. San Antonio, TX.
- Ragusa, G. (2011) Teacher Training and STEM Student Outcome: Linking Teacher Intervention to Students' Success in STEM Middle and High School Classes. *2011 American Society for Engineering Education Conference Proceedings*. Session AC 2011-2751. British Columbia, Vancouver, Canada.
- Ragusa, G. (2011) Engineering Preparedness for Global Workforces: Curricular Connections and Experiential Impacts. *2011 American Society for Engineering Education Conference Proceedings*. Session AC 2011-2750. British Columbia, Vancouver, Canada.
- Ragusa, G. (2011) Engineering Creativity and Propensity for Innovative Thinking In Undergraduate and Graduate Students. *2011 American Society for Engineering Education Conference Proceedings*. Session AC 2011-2749. British Columbia, Vancouver, Canada.
- Ragusa, G. (2011) Engineering Creativity and Propensity for Innovative Thinking in Engineering Students. *41<sup>st</sup> ASEE/IEEE Frontiers in Education Conference Proceedings, 2011*, Session F2D, Rapid City, SD.
- Rizzo, A., Requejo, P., Winstein, C., Lange, B., Ragusa, G., Merians, A., Patton, J. Banerji, P, & Aisen, M. (2011). Virtual Reality Applications for Addressing the Needs of Those Aging Into and With a Disability. *Medicine Meets Virtual Reality*. 18 J.D. Westwood et al. (Eds.) IOS Press, doi:10.3233/978-1-60750-706-2-510.
- Ragusa, G. (2010) Preparing University Students For Global Workforces: Comparisons Between Engineering and Business School Students. *40<sup>th</sup> ASEE/IEEE Frontiers in Education Conference Proceeding, 2011*, Session F4J. Louisville: KY.
- Ragusa, G. (2009) Preparing Engineers for Global Workforces: A Research University's Response. *2009 American Society for Engineering Education Conference Proceedings*. Session AC 2009-2186. Austin, TX.
- Bardet, J. P. & Ragusa, G. (2009) Analysis of Body of Knowledge in Civil Engineering. *2009 American Society for Engineering Education Conference Proceedings*. Session AC 2009-2293. Austin, TX.
- Ragusa, G. & Coccozza, J. (2009) Research, Collaboration and Interconnected Outreach for Underrepresented Groups: Success from RET and REU Collaborations. *2009 American Society for Engineering Education Conference Proceedings*. Session AC 2009-2238. Austin, TX.

- Redekopp, M. Raghavendra, C. Wilbur, T. & Ragusa, G. (2009) A Fully Interdisciplinary Approach to Capstone Design Courses. *2009 American Society for Engineering Education Conference Proceedings*. Session AC 2009-1805. Austin, TX.
- Lee, T., & Ragusa, G. (2009) A Degree Project in Chemical Engineering. *2009 American Society for Engineering Education Conference Proceedings*. Session AC 2009-2283. Austin, TX.
- Ragusa, G. & Coccozza, J. (2008) Engineering Outreach: Connecting Biomimetic Research to Urban K-12 Classrooms. *2008 American Society for Engineering Education Conference Proceedings*. Session AC-2008-2625. Pittsburgh, PA.
- Ragusa, G. Khoo, M., & Meng, E. (2008) Engineering Education In Biomimetic Microelectronic Systems: An Urban Engineering Research Center's Response. *2008 American Society for Engineering Education Conference Proceedings*. Session AC 2008-2616. Pittsburgh, PA.
- Bardet, J. P., Ragusa, G. & Meyer, K. (2008) Performance Assessment for Civil and Environmental Engineering Curricula. *2008 American Society for Engineering Education Conference Proceedings*. Session AC 2008-1285. Pittsburgh, PA.
- Bardet, J.P., McLeod, D. & Ragusa, G. (2008) Ontology and Web Semantics for Improvement of Curriculum in Civil Engineering. *2008 American Society for Engineering Education Conference Proceedings*, Session AC 2008-1449. Pittsburgh, PA.
- Coccozza, J. & Ragusa, G. (2008) The Engineering for Health Academy: A Specialized Secondary Program Preparing High School Students for a Career in the Biomedical Engineering Profession. *2008 ICEE Conference Proceedings*. Hungary.

**Peer Reviewed Conferences Presentations:**

- Ragusa, G. (2024) "Enhancing Young Urban Preschooler's Understanding of Computer Science and Pre-Engineering Concepts to Spark Their Early Interest in STEM Careers" Symposium Moderator and Paper Presentation. 2024 International Conference of the National Association of Research on Science Teaching (NARST). March 17-20, 2024, Denver, CO.
- Ragusa, G. (2023) "The Impact of Global Experiences Using Case-based Pedagogy on Students' Learning." Sixteenth International Conference on E-learning and Innovative Pedagogies, April 13-14, 2023. Malta (+ virtual)
- Ragusa, G. (2023) "The Impact of a One-on-One Literacy Tutoring Intervention on Elementary Students' Reading Outcomes." International Conference on Education. January 5-8, 2023. Honolulu, HI (+virtual).
- Ragusa, G., Ramsey, H. & Townsend, M. (2021) "The USC Viterbi Ethos Project." Virtual Conference of the Coalition for Life Transformative Education (CLTE) September 22, 2021.
- Regalado M., Duan L., Ragusa G. & Schneiderman J.U., (2018) "A Relationship-Based Framework to Build Child Development Assessment Skills in Pediatric Residents." *Zero to Three*, Los Angeles, CA. Feb 2018.

- Bell, B.M., Cook, L., Gotsis, M., Lane, H.C., Davis, J.N., Atunéz-Castillo, L., Ragusa, G., & Spruijt-Metz, D. (2017) "Virtual Sprouts: A virtual gardening pilot intervention increases self-efficacy to cook and eat fruit and vegetables in minority youth." Annual Meeting of the Society of Behavioral Medicine San Diego, CA, 2017.
- Wen C.K.F., Auerbach D, Turpin D, Hashemian Y, Gotsis M, Lane HC, O'Reilly GA, Davis JN, Ragusa G, & Spruijt-Metz D. (2014) "User-centered Design of Virtual Sprouts: A Mobile Device-Based Gardening and Cooking Game for Promoting Dietary Behavior Change Among Minority School Children. Presented at Wireless 2014, National Institutes of Health, October 29-31, Bethesda, MD.
- Short, E. Swift-Spong, K. Greczek, J. Mataric, M.J. Ragusa, G. & Spruijt-Metz, D. (2014). "How to Train Your DragonBot: Socially Assistive Robots for Teaching Children About Nutrition Through Play." International Society for Behavioral Nutrition and Physical Activity. San Diego, CA.
- Ragusa, G., Levonisova, S., & Huang, S. (2013) "The Influence of Formal and Informal Pedagogical Practices on Non-traditional College Students' Achievement and Persistence in STEM Education." Association for the Study of Higher Education. St. Louis, MO.
- Ragusa, G. & Baezconde, L. (2013) "Extending Across Research Boundaries: A Comparison of Disciplinary Processes in Bringing Research to Practice in Medicine, Science, and Teacher Education." Vice Presidential Invited Session. American Education Research Association, San Francisco, CA.
- Spruijt-Metz, D., Gotsis, M., Lane, H.C., Ragusa, G., Davis, J., O'Reilly, G.A, Hashemian, Y., Turpin, D., Farmer, N., Zhang, J.R., Auerbach, D. (2013) "Virtual Sprouts: Developing a Mobile Gardening Game to Prevent and Treat Obesity." Oral presentation, 34<sup>th</sup> Annual Meeting and Scientific Sessions of the Society for Behavioral Medicine, San Francisco, California, March 20-23, 2013
- Perkins, J., Corwin, Z. & Ragusa, G. (2012) "Digital Impact: Examining the Effects of an Online College Access intervention." Association for the Study of Higher Education. Las Vegas, Nev.
- Spruijt-Metz, D. Gotsis, M., Ragusa, G. Lane, H.C. & Davis, J. (2012) "A Virtual Gardening Game for the Prevention of Obesity in Minority Youth." MED EX- Stanford University. Palo Alto, CA.
- Corwin, Z., Ragusa, G.; Tierney, W.M., & Fullerton, T. (2012) "The Impact of Game Strategy on the Development of College Literacy" American Education Research Association, Vancouver, British Columbia, Canada.
- Reles, S., Tierney, W. M. & Ragusa, G. (2012) "College Writing Exams and College Access: An Opportunity for Improvement." American Education Research Association, Vancouver, British Columbia, Canada.
- Mateo, X., Ragusa, G. & Girguis, N. (2012) "Transformative Education and Innovation: Developing Sources of STEM Teacher Efficacy." American Education Research Association, Vancouver, British Columbia, Canada.

- Pelayo, I, Mateo, X, Mendoza, D.E., Ragusa, G. & Rueda, R. (2012) "A Culturally Responsive Coaching Model for Culturally Responsive Teaching Practices: An Early Childhood Case Study." American Education Research Association, Vancouver, British Columbia, Canada.
- Ragusa, G. (2011) "Enabling Career Development: A Confluence of Pedagogical Support Services Designed to Support Emergent Early Childhood Educators in Career Advancement," Presented: American Education Research Association, New Orleans, LA.
- Tierney, W. G. Hentschke, G., & Ragusa, G. (2011) "For-Profit Universities and the Public Good: Oxymoron or Shining Example," American Education Research Association, New Orleans, LA.
- Ragusa, G & Corwin, Z. (2011) "Ready or Not (for College) Here we Play!" Association for the Study of Higher Education. Charlotte, N.C.
- Haubert, L.L., Requejo P., Mulroy, S., Ragusa, G., & Winstein, C. (2011) "Car Transfer Evaluation Toolkit: Assessment and Intervention to Facilitate Transitions in the Home and Community for Individuals Aging with a Disability." Festival of International Conferences on Caregiving, Disability, Aging and Technology (FICCDAT). Toronto, Canada.
- Ragusa, G; Winstein, C.; Requejo, & Clark, F. (2010) "Honoring Voices, Building Theory: A Grounded Theoretical Approach to Data Analyses of Focus Group Participant Data From People Aging Into and With Disabilities." Presented at: NARRTC. Arlington, VA.
- Loera, G. Rueda, R; Molten, K; Ragusa, G. Oh, Y & Nakamoto, J. (2010) "Learning and Motivational Characteristics of Urban High School Students," American Education Research Association. Denver, CO.
- Ragusa, G. (2010) "Preparing STEM Middle and High School Students for Teaching Urban Students: An Inservice Approach." *NSF Engineering Education Awardees Conference*, 2010.
- Ragusa, G., Quirk, M. Unrau, N, & Rueda, R. (2009) "Reading Motivation and Struggling Urban Readers: Its Relationship to Reading Activity, Achievement, and Interest," American Education Research Association. San Diego, CA.
- Ragusa, G., Ardell, A. and Bowers, E. (2009) "Situative Microteaching and Teacher Development: Relationships Between Teacher Educators and Support of the Confluence of Cognition, Affect and Teacher Development," American Education Research Association. San Diego, CA.
- Ragusa, G., Unrau, N., & Bowers, E. (2009) "Teachers' Beliefs about Urban Students' Motivation for and Engagement In Reading: The Role of Social Contexts and Reading Development" National Reading Conference. Albuquerque, New Mexico.
- Ragusa, G. Quirk, M. Unrau, N, & Rueda, R. (2008) "A Cross-sectional Study of Reading Engagement for Struggling Readers in Urban Schools," American Education Research Association. New York, N.Y.

- Ragusa, G., Unrau, N., & Bowers, E. (2008) "Teachers' Beliefs about Urban Students' Motivation for Reading: Teachers Respond to a Focus Group" National Reading Conference. Orlando, FA.
- Ragusa, G. Quirk, M. Unrau, N, Bowers, E. & Rueda, R. (2007) " Teacher Beliefs about Reading Motivation and Their Enactment in Urban Classrooms," National Reading Conference. Austin, TX.
- Ragusa, G. Choi, S., & Mora Flores, E. (2007) "The Role Preservice Teacher Efficacy and Self-Regulation on Instructional Success in Urban Environments," American Education Research Association. Chicago, IL.
- Ragusa, G. & Chen, C.H. (2007) "The Effects of a Book Loan Program in an Inner City Preschool on Home Literacy Practices," American Education Research Association. Chicago, IL.
- Ragusa, G. & Choi, S. (2007) "The Role Preservice Teacher Efficacy and Self-Regulation on Instructional Success in Urban Environments," American Education Research Association. Chicago, IL.
- Ragusa, G. (2007) "The Role Preservice Teacher Efficacy on Perceived Instructional Success in Urban Environments," American Association of Colleges of Teacher Education. New York, N.Y.
- Ragusa, G. (2007) "The Role Preservice Teacher Efficacy on Perceived Instructional Success in Urban Environments," Association of Teacher Educators. San Diego, CA.
- Ragusa, G. (2006) Project Triple L: Leadership In Literacy Learning: An Inservice Approach." American Education Research Association. San Francisco, CA.
- Ragusa, G. (2006) "Born Too Soon: What Can We Expect? The Home Literacy Experiences of Low Birth Weight Children," National Reading Conference. Miami, FA.
- Ragusa, G. (2005) "Using Videoconferencing for Supervision of Preservice Teachers," American Education Research Association. Montreal, Canada.
- Ragusa, G. (2002) "Distance Education and Teacher Education- Triumphs and Challenges," Alexander Graham Bell Association for the Deaf. St. Louis, MI.
- Ragusa, G. (1999) "Early Childhood Special Education: Building Family Centered Services and Support." International Congress on Education. Belize City, Belize.
- Ragusa, G. & Kaye, C. (1998) "Boal's Mirror: Mentorship of Beginning Educators," American Education Research Association. San Diego, CA.
- Ragusa, G. (1997) "Teacher Education At A Distance." International Congress on Education. Maui, HI.
- Ragusa, G. (1997) "Born Too Soon: What Can We Expect From Low Birth Weight Children?" West Coast Early Literacy Conference. Anaheim, CA.

- Ragusa, G. & Kaye, C. (1997) "Wearing My Multicultural Face: Mentorship of Novice Teachers," American Education Research Association. Chicago, IL.
- Ragusa, G. (1996) "Born Too Soon: What Can We Expect?" West Coast Special Education Conference. Anaheim, CA.
- Ragusa, G. (1996) "Born Too Soon: The Impact of Low Birth Weight on Child Outcome." International Congress on Education, Aruba.
- Ragusa, G. & Kaye, C. (1996) "The Classroom as a Theater," Pedagogy of the Oppressed. Omaha, NA.
- Kaye, C. & Ragusa, G. (1996) "Teachers as Culture Guides," American Education Research Association. New York, N.Y.
- Ragusa, G. & Kaye, C. (1996) "Senior Female Educators as Model Mentors for Beginning Teachers," Enduring Spirit. Omaha, NA.
- Ragusa, G. (1994) "Emergent Literacy with Children with Disabilities Who Also Have Bilingual Needs" Bilingual Special Education Conference. Los Angeles, CA.
- Ragusa, G. (1994) "Early Intervention, Past, Present and Future." Coalition For Children With Special Needs. Pasadena, CA.
- Ragusa, G. (1993) "Addressing the Health Care Needs Of the Economically Deprived Young Child" California Department of Health Services. Sacramento, CA.

**Unreviewed Journal Articles:**

- Ragusa, G. & Moore, J. E. (2016) Common Denominators of Learning: *Last Word, ASEE Prism*. 68. America Society for Engineering Education.
- Tierney, W. G., Ragusa, G., Corwin, Z. & Fullerton (2013) *Ready or Not, Here We Play! The Impact of Collegeology Games on College Readiness, Access, and Student Success*. Publication of the USC Pullius Center for Higher Education.
- Corwin, Z. Tierney, W. G., Swensen, E., Brouchard, S., Fullerton, T. & Ragusa, G. (2012) *Gaming the System: Fostering College Knowledge Through Play*. Publication of the USC Pullius Center for Higher Education.
- Ragusa, G. & Mora-Flores, E. (2005) Preparing Teachers to Become Literacy Educators: The Importance of Linking Preservice to Inservice Training. *Urban Education Magazine*. 3 (1).

**Technical Reports:**

- Ragusa, G. (2016) Project Vistas: An Evaluative Report on Workforce Development for In Home Child Care Services. First 5 of Los Angeles.
- Ragusa, G. (2013) The Impact of Science Teacher Professional Develop and Integrated Science of Middle School Students and Teachers Performance: Full Report to the California Department of Education.

Ragusa, G. (2011) School Readiness Initiative: Preparing Children and Families for School in Eastern Los Angeles. Final Technical Report of Program Evaluation.

Ragusa, G. (2011) Mild / Moderate Educational Specialist Credential Program Document to the California Commission on Teacher Credentialing.

Ragusa, G. (2010) The Impact of A Voluntary Tutoring Program in Improving Students' Reading Performance: An Evaluation of the Koreh LA Reading Program. Technical Report. Jewish Federation.

Ragusa, G. (2010) School Readiness Initiative: Preparing Children and Families for School in Eastern Los Angeles. Technical Report of Program Evaluation.

Rueda, R., Loera, G., Fujii, K., Moulton, K., Ragusa, G. Oh, Y.J. & Nakamoto, J. (2008) Learning and Motivational Characteristics of Urban High School Students. Technical Report to Mental Health America, Los Angeles.

Ragusa, G. (2005) California Reading Certificate Program Document to the California Commission on Teacher Credentialing.

Ragusa, G. (2001) Deaf and Hard of Hearing Educational Specialist Credential Program Document to the California Commission on Teacher Credentialing.

**Invited Talks/Presentations (recent, partial listing):**

Ragusa, G. (2023) *Challenges, Opportunities and Successes in Transitioning to Research Graduate Universities*. California State University, Los Angeles, November 11, 2023.

Salam, S. & Ragusa, G. (2023) *Exploring the Impact of Socio-Demographic Background Factors on College Self-Efficacy Levels from College Pedagogical Practices Inventory Survey*, Los Angeles Community College, Los Angeles, August 4, 2023

Ragusa, G. (2023) *Key Factors for Applying to STEM Ph.D. Programs: Issues and Answers*. California State University, Los Angeles, April 21, 2023.

Ragusa, G. (2023) *Case-based Pedagogy for Teaching Ethics in Engineering*. University of Southern California, Center for Excellence in Teaching- Faculty Showcase, Los Angeles, March 3, 2023.

Ragusa, G. (2022) *HENAAC Student Leadership Award Show*, Pasadena, CA. October 27, 2022.

Ragusa, G. (2022) *Preparing to Transfer to a Research University*. Los Angeles City College, Los Angeles, August 2, 2022.

Ragusa, G. (2022) *Engaging in Undergraduate Research as a Community College Student*. East Los Angeles College, Los Angeles, July 20, 2022.

Ragusa, G. (2021) *Keys to Success as an Intern in a University Research Laboratory*. Los Angeles City College, Los Angeles, December 16, 2021.



- Ragusa, G. (2021) *HENAAC Student Leadership Award Show*, Pasadena, CA. October 23, 2021.
- Ragusa, G. (2021) Convened/Moderated Diversity Ph.D. Student Panel: *Keys to Successful Ph.D. Applications for Underrepresented Students in STEM*. California State University, Los Angeles, May 28, 2021.
- Ragusa, G. (2021) *Strategies and Skills for Applying to Ph.D. Programs as a First Generation College Student in Engineering*. California State University, Los Angeles, February 26, 2021.
- Ragusa, G. (2020) Convened/Moderated Diversity Ph.D. Student Panel: *Keys to Successful Ph.D. Applications for Underrepresented Students in STEM*. California State University, Los Angeles, November 06, 2020.
- Ragusa, G. (2020) *Strategies and Skills for Applying to Ph.D. Programs as Underrepresented, Under-resourced Students in STEM*, California State University, Los Angeles, October 09, 2020.
- Ragusa, G. (2020) *Successes and Challenges for College Transitions in STEM Higher Education*, Annual Faculty Training, East Los Angeles College, May 26, 2020.
- Ragusa, G. (2020) *Robotics, CTE and Common Core Standards for Elementary Students- Results of a 9-Year Study*, Los Angeles Unified School District, January 15, 2020.
- Ragusa, G. (2020) *First-Year Minority Students' Experiences in Engineering Education*. Faculty Seminar, California State University, Los Angeles, January 30, 2020.
- Ragusa, G. (2019) *So You Want to Get into a Ph.D. Program: Advice to Underrepresented Students in STEM*, California State University, Los Angeles, November 15, 2019.
- Ragusa, G. (2019) *Mentorship and STEM Higher Education- Student Mentorship*, California State University, Los Angeles, August 21, 2019.
- Ragusa, G. (2019) *Engaged Learning and STEM Higher Education*, Annual Faculty Training, East Los Angeles College, May 29, 2019.
- Ragusa, G. (2019) *Ph.D. Panel Presentation, Insights into the Ph.D.*, CEaS California State University, Los Angeles, April 19, 2019.
- Ragusa, G. (2019) *Common Core and Next Generation Science Standards for Middle Schoolers*, Los Angeles Unified School District, February 19, 2019.
- Ragusa, G. (2019) *Engaged Learning and STEM Higher Education*, Faculty Training, California State University, Los Angeles, January 7, 2019.
- Ragusa, G. (2018) *HENAAC Early Career STEM Pedagogy Workshop*, Pasadena, CA. October 20, 2018.
- Ragusa, G. (2018) *HENAAC Student Leadership Award Show*, Pasadena, CA. October 19, 2018.

Ragusa, G. (2018) *Engaged Learning and STEM Higher Education*, Faculty training, California State University, Los Angeles, September 14, 2018.

Ragusa, G. (2018) *Common Core and Next Generation Science Standards for Learners with Special Needs*, Arcadia Unified School District, April 23, 2018.

Ragusa, G. (2018) *Socially Assistive Robotic and Learners with Special Needs*, Montebello Unified School District, March 13, 2018.

Ragusa, G. (2018) *Engaged Learning and STEM Higher Education*, Faculty training, East Los Angeles College, March 6, 2018

Ragusa, G. (2018) *Common Core and Next Generation Science Standards for Middle Schoolers*, Los Angeles Unified School District, February 19, 2018

### **CURRENT FUNDED RESEARCH PROJECTS**

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**Convergence Accelerator Track H: Determining Community Needs for Accessibility Tools that Facilitate Programming Education and Workforce Readiness for Persons with Disabilities (PACT4PWD)**- National Science Foundation (NSF) – Co-PI. USC Viterbi School of Engineering, Occupational Therapy Department and Community Partners. January 2023 – January 2024. \$698,161.

**ITEST- Early Childhood Education (ECE) STEM** – National Science Foundation (NSF) – Principal Investigator. USC Viterbi School of Engineering and the Los Angeles area community colleges. April 2022 – September 2025. \$1,142,810

**Embedding Engineering and Computer Science in Middle and High School**- Engineer’s Foundation. Principal Investigator. USC Viterbi School of Engineering. October 2021 – November 2026. \$500,000.

**Revision of Freshman Academy** Coalition for Life Transformative Education (CLTE). Principal Investigator. USC Viterbi School of Engineering. June 2022-December 2023. \$15,000

**ECR: PEER: Development of Modular, Scalable, and Extensible Advanced Manufacturing Curriculum.** National Science Foundation (NSF) - Co-PI. USC Viterbi School of Engineering. September 2019-September 2024. \$1,999,846

**Robotics and Coding Academy.** Good Neighbors Fund +Donor Funding: Principal Investigator. USC Viterbi School of Engineering. August 2015-June 2024. \$288,845.

**FMSG: Eco-Teambuilding, Training, Manufacturing Efficiency and Recycling for Sustainable Polymer Composites.** National Science Foundation (NSF)- Co-PI. USC Viterbi School of Engineering. January 2022-January 2025. \$499,999.

**Center for Neuronal Longevity (CNL):** University of Southern California (USC) President’s Office- Director of Education and Outreach. Multidisciplinary Grant- USC Viterbi School of Engineering, Keck School of Medicine, Mann School of Pharmacy. April 2022- July 2024. \$186,140.

**IRES Track II/Collaborative Research: PREEMPTIVE Multidisciplinary Natural Hazards Engineering Institute Series for Advanced Graduate Students**– National Science Foundation (NSF) – Co-PI. Multidisciplinary grant: USC’s Viterbi School of Engineering and several other universities. August 2018 – August 2024. \$323,828.

### **COMPLETED FUNDED RESEARCH PROJECTS**

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**IUSE: Advancing Scholars in Successful Undergraduate Research Experiences (ASSURE)** National Science Foundation (NSF) - Principal Investigator. USC Viterbi School of Engineering With Los Angeles City College. September 2020-October, 2023. \$60,000 USC, (\$299,092 total).

**HS STEM de Jardin:** U.S. Department of Education (Dept of Ed.)- Site Principal Investigator. Multidisciplinary Research Project: USC’s Viterbi School of Engineering and several other universities. October 2016-September 2022. \$631,288.00

**Collaborative Research: First Year Experience for Engineering, Computer Science & Technology**-National Science Foundation (NSF)- Site Principal Investigator. Multidisciplinary Research Project: USC’s Viterbi School of Engineering and California State University, Los Angeles College of Engineering. October 2017- November 2022. \$135,000 USC, (250,000 total)

**Ethos Project**- Coalition for Life Transformative Education (CLTE). Principal Investigator. USC Viterbi School of Engineering. June 2021-June 2022. \$50,000

**Teaching Machine Learning in High School (TML\_HS)**- Department of Defense (DoD)- Site Principal Investigator. USC Viterbi School of Engineering and the Coding School. February 2022 – June 2022. \$500,000

**Research on Innovation and Creativity in Higher education in Engineering and Science (RICHES) for Community Colleges** – National Science Foundation (NSF) – Principal Investigator. USC Viterbi School of Engineering and the Los Angeles area community colleges. September 2014 – August 2020. \$300,000

**Advanced Content in Computational Engineering and Science Standards for Teachers (ACCESS 4Teachers) – RET in Engineering and Computer Science Site** – National Science Foundation (NSF): Co-PI. USC Viterbi School of Engineering. June 2014 – November 2019. \$500,000

**Collaborative Research: Socially Assistive Robots** National Science Foundation (NSF) Expeditions – Co-PI. Multidisciplinary Research Project: USC Viterbi School of Engineering and several other universities (Yale, MIT, Stanford). September 2011-September 2019. \$2,625,000

**Co-Robots as Gateways to Access to K-12 In-school Education.** National Science Foundation (NSF) – Co-PI. USC Viterbi School of Engineering. September 2015-September 2021. \$1,1025,000.

**SAVI/Collaborative Research: Pacific Rim Earthquake Engineering Mitigation Protective Technologies International Virtual Environment**– National Science Foundation (NSF) – Co-PI. Multidisciplinary grant: USC Viterbi School of Engineering and University of Connecticut. September 2014 – August 2019. \$222,711

**CSMARTS in Middle School: Computer Science Mentorship for the Advancement of Teachers and Students in Middle School.** Principal Investigator. Donor Funding: USC Viterbi School of Engineering. November 2015- October 2018. \$1,005,000.

**Research in Engineering Education: A Collaboration Research: Assessing the Spectrum of International Undergraduate Engineering Educational Experiences:** National Science Foundation (NSF) - Principal Investigator. Multidisciplinary Project: USC Viterbi School of Engineering and several other universities. January 2012- December 2017. \$150,000

**CREATE Center for Homeland Security:** Department of Homeland Security (DHS)- Director of Education. Multidisciplinary Research Center: USC Viterbi School of Engineering, Sol Price School of Public Policy and several universities. October 2010- August 2017. \$3,300,000

**DHS STEM: Career Development Program:** Department of Homeland Security (DHS)- Director of Education and Co-PI. USC Viterbi School of Engineering, Sol Price School of Public Policy and several universities. September 2010- October 2016. \$600,000

**SEPA: Virtual Sprouts: Community Health Prevention:** National Institute of Health (NIH). Co-PI. Multidisciplinary Research Project-USC Viterbi School of Engineering, School of Cinematic Arts, and Keck School of Medicine. April 2011-August 2017. \$1,338,123

**Engineering Medical Therapeutic Technologies-Research Experiences for Teachers (EM2-RET)** National Science Foundation (NSF). Senior Personnel. Multidisciplinary Research Project: USC Viterbi School of Engineering and Keck School of Medicine. March 2013-April 2016. \$445,765

**Goals and Needs in Accelerated STEM (GANAS) STEM:** U.S. Department of Education (Dept of Ed.)- Site Principal Investigator. Multidisciplinary Research Project: USC Viterbi School of Engineering and several other colleges/universities. October 2011-March 2017. \$1,200,000

**Strategizing for College: A Game-based Approach to Increasing College Access:** Institute of Educational Sciences (IES)-Co-PI. Multidisciplinary Research Project: USC Rossier School of Education and Viterbi School of Engineering. January 2011- December 2014. \$1,464,508

**New GK-12: BE-LA: Body Engineering Los Angeles** National Science Foundation (NSF)- Co-PI. USC Viterbi School of Engineering. January 2011- December 2014. \$1,335,321

**Project MSLAHMS: Middle School Literacy Achievement in Health, Math and Science:** California Commission on Postsecondary Education: Improving Teacher Quality (CDE-CPEC ITQ). Principal Investigator. USC Rossier School of Education and Viterbi School of Engineering. October 2009- October 2013. \$1,016,685

**AHRQ: Comparative Effectiveness Research:** Autism Spectrum Disorder: National Institute of Health: (NIH) AHRQ. Co-PI. USC Viterbi School of Engineering and School of Cinematic Arts. August 2010- October 2012. \$1,486,262

**Biomimetic MicroElectronic Systems Engineering Research Center (BMES ERC.)** National Science Foundation (NSF). Multi-University, Multi-school Research Center. Associate Director, Assessment of Education and Outreach. USC Keck School of Medicine, Rossier School of

Education, and Viterbi School of Engineering and other universities (UC Santa Cruz, UCLA, Cal State LA, Wakeforest). August 2005- August 2014. \$13,099,998

**Societally Relevant Engineering Technologies-Research Experiences for Teachers (SRET-RET)** National Science Foundation (NSF). Senior Personnel. USC Viterbi School of Engineering and Rossier School of Education. March 2010-April 2014. \$390,000

**Minority Youth Health in Los Angeles (MYLA) Project 3:** National Institute of Health (NIH)-Co-PI. Multidisciplinary Research Project with USC Viterbi School of Engineering, Keck School of Medicine. January 2009- December 2012. \$1,471,978

**Center for Energy Nanoscience.** US Department of Energy (DoE). Director, Education and Outreach. Multidisciplinary Research Center USC Viterbi School of Engineering and Dornsife College. August 2010- August 2014. \$165,311

**OPTT Rehabilitative Engineering Research Center (OPTT RERC):** US Department of Education (NDDRR). Co-PI, Project Evaluator and Dissemination Coordinator. Multidisciplinary Research Center: USC Division of Physical Therapy, Rossier School of Education, and Viterbi School of Engineering. October 2008- December 2013. \$4,750,000

**Emerging Research-Empirical Research- Measuring the Impact of Online Discourse in Undergraduate STEM Courses:** National Science Foundation (NSF) - Co-PI. Multidisciplinary Research Project: USC Viterbi School of Engineering's Information Sciences Institute. January 2011- December 2014. \$100,000

**USC CSMARTS in LA: Computer Science Mentorship for the Advancement of Teachers and Students in Los Angeles.** Google Small Grant: CS4HS. Principal Investigator. USC Viterbi School of Engineering. April 2013-December 2014. \$15,000

**DETER CCLI Phase II.** National Science Foundation (NSF)- Senior Personnel. Multidisciplinary Research Project USC Rossier School of Education and Viterbi School of Engineering's Information Sciences Institute. Evaluator. September 2009- August 2012. \$150,000

**PedWorkflow: Workflows for Assessing Student Learning**

National Science Foundation (NSF)- Co-PI. Multidisciplinary Research Project: USC Rossier School of Education and Viterbi School of Engineering's Information Sciences Institute. October 2009- November 2012. \$498,379

**Telemedicine and Minority Health- KNOWME Networks:** National Institute of Health (NIH)-Co-PI. Multidisciplinary Research Project: USC Keck School of Medicine, Rossier School of Education, and Viterbi School of Engineering. October 2008- April 2011. \$250,000

**First 5 Los Angeles- Para Los Niños- School Readiness Early Literacy Initiative.** First 5 of California- Principal Investigator. USC Rossier School of Education. July 2005 – June 2012. \$340,000

**Pathfinder: Increasing College Access using Games.** TG Foundation- Co-PI. USC Rossier School of Education December 2010-December 2011. \$150,000

**Inner City Civil and Environmental Engineering Academy.** National Science Foundation (NSF)- Principal Investigator. USC Rossier School of Education and Viterbi School of Engineering. January 2009- December 2010. \$150,000

**Curricular and Laboratory Innovations- CCLI Degree Projects in Chemical Engineering.** National Science Foundation (NSF)- Co-PI. USC Viterbi School of Engineering and Rossier School of Education. January, 2007- June 2009. \$290,000

**Koreh LA: Evaluating an Afterschool Reading Program.** California Community Foundation (CCF). Principal Investigator, USC Rossier School of Education. May 2008- October 2010. \$64,000

**Performance Assessment of California's Teachers (PACT):** Spencer Foundation- Site Principal Investigator. USC Rossier School of Education. October 2008-June 2009. \$15,000

**Preparing New Teachers of Deaf and Hard-of-Hearing Children- A Distance Learning Approach to Teacher Education** US Department of Education Personnel Preparation Grant-OSEP. Principal Investigator. 2003- 2005. \$1,500,000

**Preparing New Teachers of Deaf and Hard-of-Hearing Children: Two Program Options-** US Department of Education-Personnel Preparation Grant-OSEP- Principal Investigator. USC Rossier School of Education. 2002- 2005. \$1,325,000

**Preparing New Teachers in Early Childhood Education: Content to Practice-** Internal Dean's Grant. California State University, Northridge, School of Education. Principal Investigator. 2001. \$25,000

## UNIVERSITY SERVICE

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**Member, University of Southern California (USC) General Education Committee,** *August 2022-Present.*

**Member, USC Center for Excellence in Teaching (CET) Advisory Board,** *August 2017-Present.*

**Member, USC Viterbi School of Engineering, Division of Engineering Education,** *2007-Present.*

**Member, USC Viterbi Engineering/ Dornsife College/ Rossier School of Education- Review of Various Faculty Promotions and Renewals:** *August 2007-Present.*

**Advisory Board Member, USC COMPASS Program: Keck School of Medicine:** *September 2022-Present*

**Chair, USC STEM Education Consortium** (Provost's Collaboration Fund + NSF), *2010- Present.*

**USC Good Neighbor's Campaign, Viterbi School of Engineering Faculty Lead,** *2022-2023*

**Member, USC Viterbi Engineering in Society: Faculty Hiring Committee:** *August 2021-July 2023.*

**Member, USC Joint Academic Senate/Provost's Committee on Mentorship,** *September 2021-August 2022.*

**Member, Chair, Co-Chair, USC Joint Academic Senate/Provost's Committee on University Libraries, November 2011- August 2021.**

**Co-Chair, USC Viterbi Engineering Writing Program: Strategic Development Committee: August 2020- July 2021.**

**Member, USC Viterbi Engineering Writing Program: Curriculum Committee: August 2020-August 2021.**

**Member, USC Viterbi Engineering Writing Program / Engineering in Society: AFR Committee: August 2020-August 2022.**

**Member USC Viterbi Dean's Diversity and Inclusion -Education and Research Working Group: October 2020-May 2021.**

**Member, USC Viterbi School of Engineering Ad Hoc Committee for Development of the Viterbi Center for Excellence in Teaching, September 2016- August 2019.**

**Member, USC Ad Hoc Group on University-wide Course Evaluation Revision, August 2017-June 2019**

**Member, USC Viterbi School of Engineering Ad Hoc Committee for Undergraduate Honors Program Revision, September 2016- March 2017.**

**Member, USC Government and Community Relations Faculty Advisory Council, May 2011-2016.**

**Member, USC University Wide Undergraduate Curriculum Committee-Social Sciences, August 2010-May 2015.**

**Member, USC Academic Senate's Committee on Development and Implementation of University Policies, August 2013- August 2014 .**

**Member, USC Board of Trustees Alumni Affairs Committee, August 2011- August 2012.**

**Senator, USC Academic Senate August 2008- August 2010.**  
*Subcommittees: Faculty Handbook*

**Chairperson, USC Rossier School of Education Faculty Council August 2006-August 2007.**

**Chairperson, USC Rossier School of Education Psychology in Education Concentration August 2005-August 2007.**

**Member, USC Rossier School of Education Ed.D. Governance Committee August 2005-August 2008.**

**Member, USC Rossier School of Education Diversity Committee August 2004-August 2006.**

**Member, USC Rossier School of Education Curriculum Committee August 2004-August 2006.**

**Alternate, USC Academic Senate August 2006- August 2007.**

**Member, USC Distance Education Task Force August 2001- 2004.**

## **FEDERAL GRANT REVIEWS, AWARDS REVIEWS, AND JOURNAL REVIEWS**

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**National Science Foundation** Various directorates competitions. *2006-Present*

**National Institute for Health** Various competitions *2013-2020*

**US Department of Education** Office of Special Education Programs Personnel Preparation Grants Panels. *2006-Present*

**HENAAC- Great Minds in STEM Awards Reviewer-** *2017-Present*

**Journal of Engineering Education** *2011- Present*

**Journal of Adolescent Reading** *2009- Present*

**Journal of Adolescent Development** *2012- Present*

**Journal of Service Learning in Engineering** *2014-Present*

**International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship** *2023-Present*

**Child Development** *2003- 2020*

**Associate Editor-American Education Research Journal:** Section on Teaching, Learning and Human Development. *2012-14*

**Associate Editor- International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship,** *2016*

## **COURSES TAUGHT AT USC**

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ENGR 102: Engineering Freshman Academy

Various Senior Capstone Ethics in Engineering and Computer Science Modules

ENGR 270: Ethics in Global Engineering and Scientific Innovation

BME 566a: Topics in Health, Technology and Engineering (Interdisciplinary Teams Module)

EDUC 642: Controversies in Learning and Instruction

EDPT 642: Measurement Theory

EDUC 525: Challenges in Urban Education-Learning

EDUC 713: Issues in Human Development

EDUC 511: Reading and Writing Methods For Elementary Teaching

EDUC 503: Teaching and Learning in US Schools

EDPT 310: Parental Influences on Children's Education Development

EDUC 520: Foundations of Language Education

EDUC 792: Critique of Research in Education

EDUC 790: Doctoral Research Design

EDUC 794: Doctoral Dissertation

CTSE 528: Foundations of Reading Instruction

CTSE 529: Teaching of Writing: Research and Practice

CTSE 534: Diagnosis of Reading Disability

CTSE 535: Remediation of Reading Disability

CTSE 593: Master's Seminar



CTSE 586: Typical and Atypical Infant and Child Development  
CTSE 587: Public Policies and Service Delivery Systems in Early Intervention  
CTSE 579: Directed Teaching and Methods in Early Childhood Settings Including Special Education  
EDCO 580: Working with Families of Children With Special Needs

Dissertation Committees Chaired:

Felicia Curry, Mikya Mori, NaiYing Chang, Chia-heng Chen, JiHyun Park, Nancy Guirguis, Kimberly Shotwell, Janice Myck-Wayne, LaShawn Moore, Ting Ching, Julie Huang, Veronica DelRio, Aubrey Bird, Julia Johnson, Deborah Hamm, Veronica Placencias, Julie Reese, Anita Webb, Alex Pierre, Young Mi Park

Post-Doctoral Mentorship

Amy Ardell: 2006-2007, Youn Oh: 2007, Katie Moulton: 2011-12, Nancy Guirguis: 2011-2012, Shaobo Huang 2012- 2014, Svetlana Levonisova: 2012-January 2016, Matthew Rueben, 2019-2021.

**PROFESSIONAL CONSULTATION /BOARD MEMBERSHIP**

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**San Gabriel Pomona Regional Center-** Board of Directors [2017 to 2023]

Board President [2019-2021 and 2022-2023]

Executive Committee [2017-Present]

Board Treasurer [2017- 2019]

Legislative Advisory Committee [2016-2021]

Strategic Development Committee, Chair [2017-2019 and 2021-Present]

**Los Angeles Chamber of Commerce Member-** STEM Hub: [2014-Present]

**CEEL: NSF QUEST Advisory Board-**Loyola Marymount University [2015-Present]

**ACCESO Academy Board of Directors** [2015-Present]

**CEEMS Math Science Partnership:** University of Cincinnati [2013-2017]

**Quality of Life Engineering Research Center** Education and Outreach Advisory Board- Carnegie Mellon University [2008-2015]

**First 5 of Los Angeles:** Advisory Council [2009-2014]

**CIAN Engineering Research Center** Education and Outreach Advisory Board- University of Arizona [2010-2014]

**FREEDM Engineering Research Center** Education and Outreach Advisory Board- University of North Carolina [2012-2014]

**Gamedesk Advisory Board** [2009-2011]

**PROFESSIONAL ORGANIZATIONS AND ASSOCIATED SERVICE**

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American Education Research Association (AERA)

2013, 2014, 2015 and 2016: *Division K: Awards Committee Chair*  
2011 and 2012 *Program Committee Division K: Section 1- STEM Program Chair*  
American Association for the Advancement of Science (AAAS)  
National Science Teaching Association (NSTA)  
American Evaluation Association (AEA)  
American Society of Engineering Education (ASEE)  
Institute of Electrical and Electronics Engineers (IEEE)  
Council For Exceptional Children (CEC)  
American Indian Science and Engineering Society (AISES)  
Society for Hispanic Professional Engineers (SHPE)  
American Association of Colleges of Teacher Education (AACTE)