

# DENISE R. SIMMONS, PhD, PE, PMP, LEED-AP

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## EDUCATION:

**Ph.D. Civil Engineering**, 2012 – Clemson University, Clemson, SC

**Graduate certificate in engineering education**, 2010 – Clemson University, Clemson, SC

**PhD-level coursework in Environmental Engineering** – 24 hours; University of South Carolina, Columbia, SC (2005-2007). *Focus: sustainable infrastructure*

**M.S. Civil Engineering**, 1995 – Clemson University, Clemson, SC

*Thesis title: Development of Engineering & Construction Project Management Guidelines*

**B.S. Civil Engineering**, 1990 – Clemson University, Clemson, SC

## PROFESSIONAL EXPERIENCE:

- 2018-Present: Associate Professor, Department of Civil and Coastal Engineering at the University of Florida
- 2013-2018: Assistant Professor, Myers-Lawson School of Construction; Civil Engineering and Affiliate Faculty, Engineering Education Department at Virginia Tech
- 2012-2013: Postdoctoral Associate, Virginia Tech, Department of Engineering Education, NSF Collaborative Proposal: Developing Engineer of 2020 Traits: How do Non-curricular Activities Impact African American Students?
- 2008-2012: Graduate Research Assistant, Clemson University, Department of Engineering and Science Education
- 2007-2012: Director, Savannah River Environmental Sciences Field Station (SRESFS) managed by SC State University
- 2004-2005: Academic Program Coordinator for Civil Engineering Technology, SC State U.
- 2004-2008: ABET Assessment Coor. – College of Math, Sci., Engring & Tech, SC State U.
- 2004-2008: Assistant Professor, Civil Engineering Technology, SC State University
- 2003-2008: Faculty Practitioner, University of Phoenix Virtual Campus & Columbia, SC
- 2003-2004: Sr. Functional Consultant, Indus International, Columbia, SC
- 2001-2004: President, Denise S. Grant and Associates, Columbia, SC
- 2001-2002: Consultant & Trainer, Project Management Consultants, LLC, Clemson, SC
- 2001-2001: Adjunct Professor, Department of Civil Engineering Tech, Midlands Technical College, Columbia, SC
- 2000-2001: Energy Engineer, Memphis Light, Gas & Water, Memphis, TN
- 1997- 1999: Adjunct Professor, Management Institute Voorhees College, Denmark, SC
- 1996-2000: Project Engineer, SCANA Corp, Columbia, SC
- 1994-1995: Graduate Researcher, developed Project Management Plan for Georgia Pacific
- 1991-1994: Associate Design Civil Engineer, Power Generation Group, Charlotte, NC

## SCHOLARSHIP

### *Publications*

Refereed Journal Articles, in print:

1. Polmear, M.<sup>P</sup>, Chau, A. D.<sup>P</sup>, & Simmons, D.R. (2020). Ethics as an Outcome of Out-of-class Engagement. *Australasian Journal of Engineering Education*.

2. Sands, K.<sup>G</sup>, Pearce, A. R., Suh, M. J., Fiori, C. M., **Simmons, D. R.**, & Mouras, V. A. (in press). Understanding Ethics Education's Influence on the Ethical Sensitivity of Construction Students. *Journal of Civil Engineering Education*.
3. Polmear, M.<sup>P</sup>, Chau, A. D.<sup>P</sup>, & **Simmons, D.R.** (in press). Intersection of Diversity, Out-of-class Engagement, and Engineer of 2020 Outcomes for Civil Engineering Students. *Journal of Management in Engineering*.
4. Karakhan, A., Gambatese, J., **Simmons, D.R.** and Al-Bayati, A. J. (in press). Identifying Pertinent Indicators for Assessing and Fostering Diversity, Equity, and Inclusion of the Construction Workforce. *Journal of Management in Engineering*.
5. Sands, K.<sup>G</sup>, Pearce, A. R., Suh, M. J., **Simmons, D. R.**, Fiori, C. M. & Mouras, V. A. (forthcoming, 2020). Toward a Technique of Evaluating Student Ethical Sensitivity to Professional Issues of the Construction Industry. *Journal of Construction Engineering and Project Management*.
6. McCall, C., McNair, E., and **Simmons, D. R.** (forthcoming, 2020). Advancing from Outsider to Insider: A Grounded Theory of Professional Identity Negotiation for Undergraduate Civil Engineering. *Journal of Engineering Education*.
7. **Simmons, D.**, Clegorne, N., Polmear, M., Scheidt, M. and Godwin, A. (2020). Connecting Engineering Students' Perceptions of Professional Competencies and Their Leadership Development. *Journal of Civil Engineering Education*.
8. **Simmons, D. R.**, Groen-McCall, C.<sup>P</sup> & Clegorne, N. A. (2020). Leadership Competencies for Construction Professionals as Identified by Construction Industry Executives. *Journal of Construction Engineering & Management*, 146(9). doi: 10.1061/(ASCE)CO.1943-7862.0001903
9. Clegorne, N. A., **Simmons, D. R.**, & McCall, C. (2020). Leadership Competencies for Post-secondary Engineering Experiences: A Delphi Study of Industry Perspectives. *Journal of Leadership Education*.
10. McCall, C., Shew, A. **Simmons, D. R.**, Paretti, M. C. and McNair, L. D. (2020). Exploring Student Disability and Professional Identity: Navigating Sociocultural Expectations in U.S. Undergraduate Civil Engineering Programs. *Australasian Journal of Engineering Education*. doi: 10.1080/22054952.2020.1720434
11. Karakhan, A., Gambatese, J., and **Simmons, D.R.** (2020). Development of an Assessment Tool for Workforce Sustainability. *Journal of Construction Engineering and Management*.
12. Garahan, K., Clegorne, N. A., & **Simmons, D. R.** (2020). Understanding Leadership through an Ecological Lens: A Rhetorical Cluster Analysis of the Civil Engineering Body of Knowledge. *International Journal of Engineering Education*, 36(1), 130-141.
13. **Simmons, D. R.**, Hunsu, N. J., & Adesope, O. O. (2019). Enabling Multi-Dimensional Measurement of Engagement in Engineering Learning Environments. *International Journal of Engineering Education*.
14. Turner, M., & **Simmons, D. R.** (2019). Taking a partnered approach to academic stress: A case study of building and construction college students in the United States. *International Journal of Construction Engineering Research*.
15. Quardokus, K., Brickworth, C., Dixon, G., Kaufman, E., Myles, L., & **Simmons, D.**

- R. (2019). Developing scientists as champions of diversity to transform the geosciences. *Journal of Geoscience Education*.
16. **Simmons, D. R.**, & Lord, S. M. (2019). Removing invisible barriers and changing mindsets to improve and diversify pathways of groups underrepresented in engineering. *Advances in Engineering Education*.
  17. Groen, C.<sup>1P</sup>, **Simmons, D. R.**, & Turner, M. (2019). Developing resilience: Experiencing and managing stress in a US undergraduate construction program. *Journal of Professional Issues in Engineering Education and Practice*, 145(2): 04019002. doi: 10.1061/(ASCE)EI.1943-5541.0000407
  18. **Simmons, D. R.**, Mullekom, J. V., & Ohland, M. W. (2018). The popularity and intensity of undergraduate out-of-class activities. *Journal of Engineering Education*, 107(4), 611-635. doi: 10.1002/jee.20235
  19. **Simmons, D. R.**, Iorio, J., Taylor, J. E., & Li, D.<sup>G</sup> (2018). Work values across generations among construction professionals in the United States. *Journal of Construction Engineering and Management*, 144(10): 04018096. doi: 10.1061/(ASCE)CO.1943-7862.0001554 [Editor's Choice for the issue where it appeared]<sup>B</sup>
  20. Bowers, A. W.<sup>G</sup>, Ranganathan, S., & **Simmons, D. R.** (2018). Defining quality in higher education: Directions for future research informed by a literature review. *Higher Learning Research Communications*, 8(1), 51-64. doi: 10.18870/hlrc.v8i1.392
  21. **Simmons, D. R.**, Ye, Y.<sup>G</sup>, Ohland, M. W., & Garahan, K.<sup>G</sup> (2018). Understanding students' incentives for and barriers to out-of-class participation: profile of civil engineering student engagement. *Journal of Professional Issues in Engineering Education and Practice*, 144(2): 04017015. doi: 10.1061/(ASCE)EI.1943-5541.0000353 [Editor's Choice for the issue where it appeared]<sup>B</sup>
  22. **Simmons, D. R.**, Clegorne, N. A. & Woods-Wells, T.<sup>G</sup> (2017). Leadership Paradigms to Develop Professionals in the Construction Industry: A Critical Review Informed Research Agenda. *Journal of Management in Engineering*, 33(4): 02517001. doi: 10.1061/(ASCE)ME.1943-5479.0000518 [Editor's Choice for the issue where it appeared].
  23. **Simmons, D. R.**, Ye, Y.<sup>G</sup>, Hunsu, N. J., & Adesope, O. O. (2017). Development of a survey to explore out-of-class engagement of engineering students. *International Journal of Engineering Education*, 33(4), 1213-1221.
  24. **Simmons, D. R.**, Creamer, E. G., & Yu, R.<sup>G</sup> (2017). Involvement in out-of-class activities: A mixed research synthesis examining outcomes with a focus on engineering students. *Journal of STEM Education: Innovations and Research*, 18(2), 10-16.
  25. **Simmons, D. R.**, & Martin, J. P. (2017). Shaping autonomous decision makers: Familial influence on persisting first generation college engineering students. *Journal of Women and Minorities in Science and Engineering*, 23(1), 53-71. doi: 10.1615/JWomenMinorScienEng.2017016316
  26. **Simmons, D. R.**, & Martin, J. P. (2014). Developing effective engineering fictive kin to

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<sup>1</sup> Publication received an award

support undergraduate first-generation college students. *Journal of Women and Minorities in Science and Engineering*, 20(3), 279-292. doi: 210.1615/JWomenMinorScienEng.2014010979

27. Martin, J. P., **Simmons, D. R.**, & Yu, S. L. (2014). Family roles in engineering students' academic and career choices: does parental education attainment matter? *International Journal of Engineering Education*, 30(1), 136-149.
28. Martin, J. P., Miller, M. K., & **Simmons, D. R.** (2014). Exploring the theoretical social capital "Deficit" of first generation college students: implications for engineering education. *International Journal of Engineering Education*, 30(4), 822-836.
29. Martin, J. P., **Simmons, D. R.**, & Yu, S. L. (2013). The role of social capital in the experiences of Hispanic women engineering majors. *Journal of Engineering Education*, 102(2), 227-243. doi: 10.1002/jee.20010

#### Invited Journal Editorials, in print:

1. Coley, B. C., **Simmons, D. R.**, & Lord, S. M. (in press). Dissolving the Margins: LEANING INto an Antiracist Review Process. *Journal of Engineering Education*.
2. **Simmons, D. R.**, & Lord, S. M. (Summer 2019). Call It By Its Name. *ASEE Prism*. Washington Vol. 28, Iss. 8. Retrieved from <https://search.proquest.com/openview/f6bb6b130908b7ab2d39f3c92d669ad4/1.pdf?pq-origsite=gscholar&cbl=33050>.

#### Non-Refereed Journal Articles, in print:

3. Beuth, C.<sup>U</sup>, Duran, A.<sup>U</sup>, **Simmons, D. R.**, & Turner, M. (2017). Resilience: Buildings aren't the only thing construction students build. *National Undergraduate Research Clearinghouse*, 20. Retrieved from <http://www.webclearinghouse.net/volume/20/Research>
4. Brenner, J. S.<sup>G</sup>, & **Simmons, D. R.** (2017). Undergraduate construction students & perceptions of effective leadership and preparation strategies. *National Undergraduate Research Clearinghouse*, 20. Retrieved from <http://www.webclearinghouse.net/volume/20/Research%20Lab-Undergradu.php>
5. Holliday, C., Ly, N.<sup>U</sup>, & **Simmons, D. R.** (2017). The role of work in developing resilient construction students. *National Undergraduate Research Clearinghouse*, 20. Retrieved from <http://www.webclearinghouse.net/volume/20/Research%20Lab-TheRoleofW.php>
6. Martin, J. T.<sup>U</sup>, Brenner, J. S.<sup>G</sup>, & **Simmons, D. R.** (2017). Comparing and contrasting leadership training of construction project managers in higher education and the workplace. *National Undergraduate Research Clearinghouse*, 20. Retrieved from <http://www.webclearinghouse.net/volume/20/Research%20Lab-Comparinga.php>
7. Periwal, M.<sup>U</sup>, & **Simmons, D. R.** (2017). An exploratory study to understand employers' perspectives on the **competencies** of entering professionals in the construction industry. *National Undergraduate Research Clearinghouse*, 20. Retrieved from <http://www.webclearinghouse.net/volume/20/Research%20Lab-AnExplorat.php>

#### Refereed Journal Articles, under review:

1. Karakhan, A., Nnaji, C. Gambatese, J., and **Simmons, D.R.** (revise & resubmit). Best Practice Strategies for Workforce Development and Sustainability in Construction – An Industry Perspective. *Journal of Management in Engineering*. [invited - special collection series for the ASCE Journal of Management in Engineering (JME) titled “Construction Research Congress: Management Series.” Our conference paper, “How to Improve Workforce Development and Sustainability in Construction,” was considered among the top 10% accepted papers at the 2020 CRC conference. Thank you once more for inviting us to submit a paper to the CRC special collection!]
2. **Simmons, D. R.**, Chau, A. D.<sup>P</sup>, and Adesope, O. O. (under review). The role of gender, grades, and affective engagement in the decision to switch majors into engineering. *Journal of Engineering Education*.
3. Zhao, D., Simmons, D. R., Duva, M. (under 2<sup>nd</sup> review). Implications of Network Position and Centrality on Sense of Class Belonging. *Journal of Management in Engineering*.
4. **Simmons, D. R.**, Ye, Y., Chau, A. D.<sup>P</sup> (revise & resubmit). Predicting co-curricular participation in civil engineering. *Journal of STEM Education: Innovations and Research*.
5. Bae, H.<sup>G</sup>, **Simmons, D. R.**, and McCall, C.<sup>P</sup> (under review). Building Agency: Recruiting and Retaining Construction Professionals in Industry. *Engineering Project Organization Journal*.
6. Bae, H.<sup>G</sup>, **Simmons, D. R.** and Polmear, M. (under review). Promoting the quarry workers’ hazard identification through formal and informal safety training. *Safety and Health at Work*.
7. Bae, H.<sup>G</sup>, **Simmons, D. R.**, McCall, C., and Polmear, M. (under review). Photo elicitation in construction engineering research: The value of coupling participants’ inside perspectives with researchers’ outside perspective. *Construction Management and Economics*.
8. Simmons, D. R., Chau, A.P, & Turner, M. (under review). Measuring resilience of graduate students: A research note on the validation of a survey instrument. *Journal of Management in Engineering*.

#### Refereed Journal Articles, under development

1. Bae, H.<sup>G</sup>, Polmear, M.<sup>P</sup>, and **Simmons, D. R.** (under development). Civil engineering students’ perceptions of professional preparedness in college. *Journal of Management in Engineering*.
2. Chau, A. D.<sup>P</sup>, **Simmons, D. R.**, Adesope, O. (under development). Persistent students accrue more outcomes from out-of-class activities. *Journal of Engineering Education*

#### Refereed Conference Papers, in print:

1. Polmear, M.<sup>P</sup>, & **Simmons, D. R.**, & Clegorne, N.A. (2020). Undergraduate civil engineering students' perspectives on skills for future success. *Frontiers in Education Conference*, 2020. Uppsala, Sweden.
2. **Simmons, D. R.**, Polmear, M.<sup>P</sup>, & Lord, S.M. (2020). Impactful for whom? Exploring the diversity of learning pathways outside of the classroom for engineering students. *Frontiers in Education Conference*, 2020. Uppsala, Sweden.
3. Polmear, M.<sup>P</sup>, **Simmons, D. R.**, Cheung, C., & Zhang, R. (2020). Construction safety training: What role can virtual reality play? *Association of Researchers in Construction Management Conference and Annual General Meeting*, 2020. Glasgow, UK.
4. **Simmons, D.R.** and Chau, A.D.<sup>P</sup> (2020). The Impact of Fraternity and Sorority Participation on NAE's Engineer of 2020 Outcomes for Civil Engineering Undergraduates. *Proceedings of the 11th International Conference on Applied Human Factors and Ergonomics (AHFE 2017) and the Affiliated Conferences*, 2020. San Diego, CA.
5. Bae, H.<sup>G</sup>, Polmear, M.<sup>P</sup>, and **Simmons, D. R.** (2020). "Professional development of civil engineering students through internship." *Proceedings of the 2020 American Society for Engineering Education Annual Conference and Exposition*, 2020. Montreal, Canada.
6. Polmear, M.<sup>P</sup>, & **Simmons, D.R.** (2020). Developing and sustaining a research group: A novel approach to onboarding doctoral students. *Proceedings of the 2020 American Society for Engineering Education Annual Conference and Exposition*, 2020. Montreal, Canada.
7. Polmear, M.<sup>P</sup>, **Simmons, D. R.**, & Clegorne, N.A. (2020). Developing leadership in civil engineering: Turning students' hindsight into others' foresight. *Proceedings of the 2020 American Society for Engineering Education Annual Conference and Exposition*, 2020. Was to be held in Montreal, Canada, but convened virtually due to COVID-19.
8. Polmear, M.<sup>P</sup>, & **Simmons, D. R.** (2020). Defining workforce development: Launching a career from CAREER. *Proceedings of the 2020 American Society for Engineering Education Annual Virtual Conference and Exposition*, 2020. Montreal, Canada.
9. Groen-McCall, C.<sup>P</sup>, Paretto, M. C., McNair, L. D., Shew, A., **Simmons, D. R.**, & Zongrone, C. (2020). Leaving Civil Engineering: Examining the Intersections of Gender, Disability, and Professional Identity. *Proceedings of the 2020 American Society for Engineering Education Annual Conference and Exposition*, 2020. Montreal, Canada.
10. Sands, K.<sup>G</sup>, Pearce, A. R., **Simmons, D. R.**, Suh, M. J. & Fiori, C. M. (2020). Ethics in Undergraduate Construction Curricula: A Two-Stage Exploratory Sequential Approach to Developing and Piloting the HETC Survey. *Proceedings of the 2020 American Society for Engineering Education Annual Conference and Exposition*, 2020. Montreal, Canada.
11. Zongrone, C., McCall, C., Paretto, M. C., Shew, A., Simmons, D. R., & McNair, L. D. (2020). "I'm looking at you, you're a perfectly good person ...": Describing Non-Apparent Disability in Engineering." *Paper presented at the 3rd Annual*

*Collaborative Network for Engineering and Computing Diversity (CoNECD) Conference.*

12. Karakhan, A., Gambatese, J., **Simmons, D.R.** and Nnaji, C. (2020). Development of a Workforce Sustainability Model for Construction. *Proceedings of the 2020 Construction Research Congress.*
13. Bae, H.<sup>G</sup>, **Simmons, D. R.**, & McCall, C.<sup>P</sup> (2019). Construction companies as facilitators of satisfying work environments. *Engineering Project Organization Conference.* Vail, CO.
14. Bae, H.<sup>G</sup>, McCall, C.<sup>P</sup>, & **Simmons, D. R.** (2019). Investigating work, cultural, and life values of construction employees. *Proceedings from Associated Schools of Construction: The Business of the Built Environment*, University of Denver, 2019. San Antonio, TX: Tulio Sulbaran.
15. **Simmons, D. R.**, Kirn, A., Valdes-Vasquez, R., & Pearson, N. (2019). Are constructors experiencing a warm climate? A study of generation in college, citizenship status and affective engagement. *Proceedings of the 2019 American Society for Engineering Education Annual Conference and Exposition*, Tampa Convention Center, 2019. Tampa, Florida.
16. Zhao, D., **Simmons, D. R.** & Duva, M. (2019). Measuring students' class-level sense of belonging: A social-network-based approach. *Proceedings of the 2019 American Society for Engineering Education Annual Conference and Exposition*, Tampa Convention Center, 2019. Tampa, FL.
17. Groen-McCall, C.<sup>P</sup>, McNair, L. D., Paretti, M. C., **Simmons, D. R.**, & Shew, A. (2019). Disability identity experience: Examining nuanced and fluid identity dimensions within engineering education. *Proceedings of the 2019 American Society for Engineering Education Annual Conference and Exposition*, Tampa Convention Center, 2019. Tampa, FL.
18. Groen-McCall, C.<sup>P</sup>, Paretti, M. C., McNair, L. D., **Simmons, D. R.**, & Shew, A. (2018). Experiencing disability: A preliminary analysis of professional identity development in U.S. undergraduate civil engineering students. *Proceedings of the Australasian Engineering Education Conference*, 2018. Hamilton, New Zealand. [Received Best Paper award for the conference]<sup>2B</sup>
19. Groen, C. J.<sup>3P</sup>, **Simmons, D. R.**, & Clegorne, N. A. (2018). Faculty ways of knowing, valuing and assessing leadership in the undergraduate engineering curriculum. *Proceedings of the 2018 American Society for Engineering Education Annual Conference and Exposition*, 2018. Salt Lake City, UT. Retrieved from <https://peer.asee.org/30513>
20. Groen, C. J.<sup>P</sup>, McNair, L. D., Paretti, M. C., **Simmons, D. R.**, & Shew, A. (2018). Exploring professional identity development in undergraduate civil engineering students who experience disabilities. *Proceedings of the 2018 American Society for Engineering Education Annual Conference and Exposition*, 2018. Salt Lake City, UT. Retrieved from <https://peer.asee.org/30052>
21. Knight, D. B., Matusovich, H. M., Artiles, M. S., Davis, K., Kinoshita, T.,

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<sup>2B</sup> Publication received an award

<sup>3G</sup> Graduate Student

- Bairaktarova, D., Hodges, K., Knott, T., Lee, W. C., McGlothlin Lester, M., McNair, E., Reid, K., & **Simmons, D. R.** (2018). Sustaining a study abroad program at scale: What motivates faculty members to engage in such programs? *Proceedings of the 125th Annual Conference of the American Society for Engineering Education*, 2018. Salt Lake City, UT. [Best paper in the International Division]<sup>B</sup>
22. Lutz, B. D., Ironside, A. J., Hunsu, N., Groen, C. J., Brown, S. A., Adesope, O., & **Simmons, D. R.** (2018). Measuring engineering students' in-class cognitive engagement: Survey development informed by contemporary educational theories. *Proceedings of the 2018 American Society for Education Annual Conference and Engineering Exposition*, 2018. Salt Lake City, UT. Retrieved from <https://peer.asee.org/30795>
23. Hunsu, N., **Simmons, D. R.**, Brown, S., & Adesope, O. O. (2018). Developing an instrument of classroom social engagement. *Proceedings of the 2018 American Society for Engineering Education Annual Conference and Exposition*, 2018. Salt Lake City, UT. Retrieved from <https://peer.asee.org/30298>
24. **Simmons, D. R.**, & Groen, C. J.<sup>P</sup> (2018). Increasing impact of the hidden curriculum: Exploring student outcomes from out-of-class activities. *Proceedings of the 2018 American Society for Engineering Education Annual Conference and Exposition*, 2018. Salt Lake City, UT. Retrieved from <https://peer.asee.org/29935>
25. Groen, C. J.<sup>P</sup>, McNair, L. D., Paretti, M. C., **Simmons, D. R.**, & Shew, A. (2018). Experiencing disability in undergraduate civil engineering education: A preliminary analysis of professional identity development during the first semester of college. *Collaborative Network for Engineering and Computing Diversity (CoNECD)*, 2018. Crystal City, VA.
26. **Simmons, D. R.**, Iorio, J., Taylor, J. E., & Li, D.<sup>4G</sup> (2018). Professional progression, company commitment, and project choice: An empirical investigation into professional staff values in construction. *Proceedings of the 2018 Construction Research Congress: Infrastructure and Facility Management*, 2018. New Orleans, LA. doi: 10.1061/9780784481271.055
27. Zhao, D., Valdes-Vasquez, R., **Simmons, D. R.**, & Parrish, K. (2018). Assessing the graduate education in research methodology on sustainability. *Proceedings of the 2018 Construction Research Congress: Infrastructure and Facility Management*, 2018. New Orleans, LA. doi: 10.1061/9780784481301.011
28. Clegorne, N. A., & **Simmons, D. R.** (2018). Engineering professionalism: towards a curricular model for professional skill and leadership competencies for emerging engineers. Accepted for presentation at the *Annual American Educational Research Association Conference*. New York, NY.
29. Clegorne, N. A., & **Simmons, D. R.** (2017). Engineering the best of both worlds: Towards a college curriculum of engaged citizen leadership for emerging engineers. *Proceedings of the Association for the Study of Higher Education Annual Conference*, 2017. Houston, TX.

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<sup>4P</sup> Postdoc Researcher

30. Purchase, J. M.<sup>5G</sup>, & **Simmons, D. R.** (2017). Exploring the meaning of fun: A missed opportunity to retain underrepresented groups in engineering? *Proceedings of the 2017 American Society for Engineering Education Annual Conference and Exposition*, 2017. Columbus, OH. Retrieved from <https://www.asee.org/public/conferences/78/papers/18745/view>
31. Purchase, J.<sup>G</sup>, & **Simmons, D. R.** (2017). Metric-based evaluation of urban greenway public engagement efforts. *Proceedings of the 2017 Engineering Project Organization Conference*, 2017. Lake Tahoe, CA.
32. **Simmons, D. R.** (2017). Developing T-shaped civil engineers through involvement in out-of-class activities. *Proceedings of the 8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017) and the Affiliated Conferences*, 2017. Los Angeles, CA. doi: 10.1007/978-3-319-60486-2\_16
33. Ironside, A., Pitterson, N. P., Brown, S. A., Fisher, K. Q., Gestson, S. L., **Simmons, D.R.**, & Adesope, O. (2017). Incorporating faculty sense making in the implementation and modification of an instrument to measure social and cognitive engagement. *Proceedings of the 2017 American Society for Engineering Education Annual Conference and Exposition*, 2017. Columbus, OH. Retrieved from <https://peer.asee.org/28509>
34. Groen, C. J.<sup>G</sup>, **Simmons, D. R.**, & McNair, L. D. (2017). An introduction to grounded theory: Choosing and implementing an emergent method. *Proceedings of the 2017 American Society for Engineering Education Annual Conference and Exposition*, 2017. Columbus, OH. Retrieved from <https://peer.asee.org/27582>
35. **Simmons, D. R.** (2017). Reflecting on out-of-class involvement of engineering students as a path to retain underrepresented students. *7th International Research in Engineering Education Symposium (REES2017)*, 2017. Bogota, Colombia.
36. Lord, S. M. & **Simmons, D. R.**, & Shuman, L. J. (2016). Innovation through propagation: Pathways to studying engineering, retention and diversifying the learning community. *Proceedings of the 2016 American Society for Engineering Education Annual Conference and Exposition*, 2016. New Orleans, LA. Retrieved from <https://www.asee.org/public/conferences/64/papers/16414/view>
37. Groen, C. J.<sup>G</sup>, **Simmons, D. R.**, & McNair, L. D. (2016). Disciplinary influences on the professional identity of civil engineering students: starting the conversation. *Proceedings of the 2017 American Society for Engineering Education Annual Conference and Exposition*, 2017. New Orleans, LA. Retrieved from <https://www.asee.org/public/conferences/64/papers/15019/view>
38. Valdes-Vasquez, R., **Simmons, D. R.**, Zhao, D., & Parrish, K. (2016). The Michael Horman symposium: Developing a network of researchers and mentorship for sustainability topics. *Proceedings of the 2016 Construction Research Congress: Old*

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<sup>5G</sup> Graduate Student

and New Construction Technologies Converge in Historic San Juan, 2016. San Juan, Puerto Rico. doi: 10.1061/9780784479827.129

39. Spingola, E.<sup>6G</sup>, & **Simmons, D. R.** (2016). Developing and implementing technology-enhanced, pedagogically sound courses for blended classrooms. *Proceedings from the 2016 Conference on Higher Education Pedagogy*, 2016. Blacksburg, VA.
40. Woods-Wells, T.<sup>G</sup>, Clegorne, N. A., & **Simmons, D. R.** (2015). Engineering leaders: A meta-synthesis of leadership themes in engineering literature. *Proceedings of the Association of Leadership Educators annual conference, 2015*. Washington D.C. Retrieved from <https://www.leadershipeducators.org/resources/Documents/2015%20ALE%20Conference%20Proceedings.pdf>
41. **Simmons, D. R.**, & Yu, R.<sup>G</sup> (2015). Conducting a Q study to refine and develop new measures of engineering student co-curricular involvement. *Proceedings of the 2015 Research in Engineering Education Symposium (REES 2015): Translating Research into Practice*. Dublin, Ireland.
42. Creamer, E. G., **Simmons, D. R.**, & Yu, R.<sup>G</sup> (2015). Using mixed methods to conduct a meta-synthesis of the literature: Moving from words to numbers. *Proceedings of the 2015 Conference on Higher Education Pedagogy*, 2015. Blacksburg, VA. Retrieved from <https://vtechworks.lib.vt.edu/bitstream/handle/10919/85327/2015ConferenceProceedings.pdf?sequence=1&isAllowed=y>
43. **Simmons, D. R.**, Tendhar, C.<sup>G</sup>, Yu, R.<sup>G</sup>, Vance, E., & Amelink, C. (2015). Developing the Postsecondary Student Engagement Survey (PosSES) to measure undergraduate engineering students' out of class involvement. *Proceedings of the 2015 American Society for Engineering Education Annual Conference and Exposition*, 2015. Seattle, WA. doi: 10.18260/p.23845.
44. Yu, R.<sup>G</sup>, & **Simmons, D. R.** (2015). Synthesis of engineering undergraduate students' out of class involvement. *Proceedings of the 2015 American Society for Engineering Education Annual Conference and Exposition*, 2015. Seattle, WA. doi: 10.18260/p.24787.
45. Makhmalbaf, M. O.<sup>G</sup>, & **Simmons, D. R.** (2015). Curricular and non-curricular factors impacting development of leadership competencies in undergraduate civil engineering and construction students. *Proceedings of the 2015 American Society for Engineering Education Annual Conference and Exposition*, 2015. Seattle, WA. doi: 10.18260/p.23768.
46. **Simmons, D. R.**, & Young, G. D.<sup>G</sup> (2014). Improving the student academic experience through lean engineering principles. *Proceedings of the 2014 IEEE*

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<sup>6G</sup> Graduate Student

*Frontiers in Education Conference (FIE)*, 2014. Madrid, Spain. doi: 10.1109/FIE.2014.7044326

47. Young, G. D.<sup>7G</sup>, Knight, D., & **Simmons, D. R.** (2014). Co-curricular experiences link to teamwork and reflective behavior skills for African American engineers. *Proceedings of the 2014 IEEE Frontiers in Education Conference (FIE)*, 2014. Madrid, Spain. doi: 10.1109/FIE.2014.7044076
48. **Simmons, D. R.**, Young, G. D.<sup>G</sup>, Adams, S.G., & Martin, J.P. (2014). Non-curricular activities help African American students and alumni develop engineer of 2020 traits: A quantitative look. *Proceedings of the 2014 American Society for Engineering Education Annual Conference and Exposition*, 2014, Indianapolis, IN. Retrieved from <https://peer.asee.org/22870>
49. Sands, K.<sup>G</sup>, & **Simmons, D. R.** (2014). Utilizing a think-aloud protocol to assess the usability of a test for ethical sensitivity in construction. *Proceedings of the 2014 American Society for Engineering Education Annual Conference and Exposition*, 2014, Indianapolis, IN. Retrieved from <https://peer.asee.org/23288>.
50. **Simmons, D. R.**, & Martin, J. P. (2011). Implications of Black Greek letter membership on the development of the engineer of 2020. *Proceedings of the 2011 Frontiers in Education Conference (FIE)*, Rapid City, SD. doi: 10.1109/FIE.2011.6142984
51. **Simmons, D. R.** (2011). Articulations of a novice qualitative researcher. Paper presented at the annual meeting of the *Seventh International Congress of Qualitative Inquiry*, University of Illinois at Urbana-Champaign Illini Union. Urbana, IL (Conference Paper/Unpublished Manuscript).
52. Trenor, J. M., **Grant, D. S.**<sup>8\*\*</sup>, & Archer, E. (2010). The roles of African American Greek organizations in engineering students' educational experiences in a Predominantly White Institution. *Proceedings of the 2010 IEEE Frontiers in Education Conference (FIE)*, Washington, DC. doi: 10.1109/FIE.2010.5673317
53. **Grant, D. S.**<sup>\*\*</sup>, & Trenor, J. M. (2010). Use of the critical incident technique for qualitative research in engineering education: An example from a grounded theory study. *Proceedings of the 2010 American Society for Engineering Education Annual Conference and Exposition*, 2010. Louisville, KY. Retrieved from <https://peer.asee.org/15712>
54. Trenor, J. M., & **Grant, D. S.**<sup>\*\*</sup> (2009) *Work in progress - a research-based tool kit for communicating unique messages about engineering to first generation college students. Proceedings of the 2009 IEEE Frontiers in Education Conference (FIE)*, 2009. San Antonio, TX. doi: 10.1109/FIE.2009.5350856
55. Trenor, J. M., Yu, S. L., **Grant, D. S.**<sup>\*\*</sup>, & Hibah, S. (2009). Participation in a research experience for teachers program: Impact on perceptions and efficacy to teach engineering. *Proceedings of the 2009 American Society for Engineering*

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<sup>7G</sup> Graduate Student

<sup>8\*\*</sup> Former name of Denise R. Simmons

*Education Annual Conference and Exposition*, 2009. Austin, TX. Retrieved from <https://peer.asee.org/4992>

56. Klotz, L., & **Grant, D. S.**<sup>9\*\*</sup> (2009). A balanced view of sustainability in civil engineering and construction. *Proceedings of the 2009 Construction Research Congress: Building a Sustainable Future*, 2009. Seattle, Washington, 1338-1347. doi: 10.1061/41020(339)136.
57. **Grant, D.**<sup>\*\*</sup>, & Haselbach, L. (2007). Building green: A case study at the University of South Carolina. *Proceedings of the 2007 Construction Research Congress: Innovation for Reshaping Construction*, 2007. Grand Bahama Island, Bahamas.

#### Conference Abstracts:

1. Clegorne, N. A., Simmons, D. R., & McCall, C. (2020, April 17-21) Developing Leadership-Coupled Competencies for Engineering Preparatory Pathways : A Delphi Study of Industry Perspectives. *American Educational Research Association (AERA) Annual Meeting*, Virtual Conference.
2. Dixon, P. G., Quardokus Fisher, K., Calagna, O., Kaufman, E., Myles, L., Brinkworth, C., & **Simmons, D.R.** (2020). Results of a Three-year Project to Increase Diversity in Geosciences. *Annual Meeting of the American Association of Geographers* (originally scheduled for Denver, Colorado, but held online due to COVID-19).
3. Bae, H.<sup>G</sup>, **Simmons, D. R.**, & McCall, C.<sup>P</sup> (2019). Developing a conceptual model of construction employees' professional values. *Proceeding of Research in Engineering Education Symposium*. Cape Town, South Africa
4. Myles, L., Dixon, P. G., Brinkworth, C., Kaufman, E., Fisher, K. Q., & **Simmons, D.R.** (2018). Creating and Connecting Champions for Diversity in the Geosciences: Hearts of GOLD. *Annual Meeting of the American Geophysical Union, AGUFM, 2018*, ED44A-03.
5. Fisher, K. Q., Dixon, P. G., Kaufman, E. K., Calagna, O., **Simmons, D. R.**, Brinkworth, C., & Myles, L. (2018, November). Preparing Geoscientists to Lead Diversity, Equity, and Inclusion Cultural Changes in the Geological Sciences: Hearts of GOLD. *In GSA Annual Meeting in Indianapolis, Indiana, USA-2018*. GSA.
6. Myles, L., Brinkworth, C., Dixon, P. G., Kaufman, E. K., Quardokus Fisher, K., & **Simmons, D. R.** (2017). Geo Opportunity for Leadership in Diversity (GOLD): Hearts of gold. *The Geological Society of America (GSA)*.
7. **Simmons, D. R.** (2017). What should your students join? Pathways for African American engineering students' development of 21st century competencies. *National Association of Multicultural Engineering Program Advocates (NAMEPA)*. Blacksburg, Virginia. Retrieved from <http://www.namepa.org/conference2017/speakers/dr-denise-simmons/>

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<sup>9G</sup> Graduate Student

8. Clegorne, N. A., Carlson, K., **Evans, H.**, & Simmons, D. R. (2016, November). The leadership education collaborative: An alternative campus-wide leadership curriculum. *Annual International Leadership Association Annual Conference*. Atlanta, GA.
9. **Clegorne, N. A.**, Evans, H. S., Carlson, K. A., & Simmons, D. R. (2016). The leadership education collaborative: The value of pluralistic leadership philosophies on college campuses. *Proceedings from Association of Leadership Educators 26th Annual Conference*, 696-698. Sacramento, CA. Retrieved from <http://www.leadershipeducators.org/resources/Documents/Annual%20Conference%20Proceedings%202016.pdf>.

#### Refereed Conference Papers, accepted for publication:

- 1.

#### Refereed Conference Papers, under review

1. None.

#### Book Chapter

1. Bowser, G., Roberts, N. S., **Simmons, D. R.**, & Perales, M. K. (2012). *The color of climate: ecology, environment, climate change, and women of color-exploring environmental leadership from the perspective of women of color in science*, in Gallagher, D. R. (ed). *Environmental Leadership*. Thousand Oaks: Sage. Retrieved from [http://sk.sagepub.com/reference/hdbk\\_enviroleadership/n7.xml](http://sk.sagepub.com/reference/hdbk_enviroleadership/n7.xml)
2. Simmons, D. R. (2019). *Developing & Engaging T Engineers Inside and Outside of the Classroom*, in Gardner, P. & Estry, D. (eds.). *A Primer on the T-professional*. New York: Momentum Press.

#### Other Presentations to Professional Societies, Non-refereed

1. Clegorne, N. A., Evans, H. S., Carlson, K. A., & **Simmons, D. R.** (2016). The leadership education collaborative: The value of pluralistic leadership philosophies on college campuses. *Association of Leadership Educators Annual Conference*. July 10-13, 2016. Sacramento, CA.
2. **Simmons, D. R.** (2012). Initial findings: Unbundling the impact of engineering student involvement experiences on the development of professional competencies. *College of Architecture and Urban Studies' Research Forum at Virginia Tech*, April 2, 2014. Blacksburg, VA.
3. **Simmons, D. R.**, Martin, J. P., Young, G.<sup>G</sup>, & Adams, S. G. (2014). Sharpening your vision to 20/20. *Annual Meeting of the National Society of Black Engineers (NSBE40): Engineering and Leadership in Harmony*, March 26-30, 2014. Nashville, TN.
4. **Simmons, D. R.** (2011). Leading transformation through sustaining and enhancing effective team performance. *Women in Engineering ProActive Network, Inc. (WEPAN) National Conference*, June 22, 2011. Seattle, WA.

5. **Simmons, D. R.** (2010). Planning strategically: How to intentional cultivate tomorrow's talent. *WEPAN/NAMEPA National Conference*. Baltimore, MD.

#### Research Reports

1. Liou, A.<sup>U\*</sup>, Zundel, Z.<sup>U\*</sup>, Suhr, J.<sup>U\*</sup>, Lu, J.<sup>U\*</sup>, Bowman, B.<sup>U\*</sup>, Chau, A. D.<sup>P</sup>, & **Simmons, D. R.** (2019). Develop a data visualization system for out-of-class activities data of engineering students, University of Florida, <https://github.com/introNG2E/simmonsDataVis>
2. Lu, J.<sup>U\*</sup>, Bowman, B.<sup>U\*</sup>, Chau, A. D.<sup>P</sup>, & **Simmons, D. R.** (2019). Decision support system for engineering undergraduates on participating in out-of-class activities (under development), University of Florida, <https://github.com/simmonsData/simmonsDataVis2>
3. Gambatese, J., Karakhan, A., and **Simmons, D.** (2019). Development of a Workforce Sustainability Model for Construction. Final Report, Small Study no. 17-8-PS. The Center for Construction Research and Training (CPWR), pp. 1-118.
4. **Grant, D.**, & Haselbach, L. (2016). Research report to the University of South Carolina Research Foundation. USCRF Award 15520- KA06. Sustainable Construction at the University of South Carolina, May 2006, 15 pages estimated.

#### Research Posters:

1. Pfeffer, D.<sup>U\*</sup>, **Simmons, D. R.**, & Polmear, M. (2020). Exploring opportunities to integrate virtual reality into construction and transportation safety training. University of Florida Virtual Spring Undergraduate Research Symposium.
2. Young, G.<sup>U\*</sup>, **Simmons, D. R.**, & Polmear, M. (2020) Integrating virtual reality into construction safety and transportation training. University of Florida Virtual Spring Undergraduate Research Symposium.
3. Paulsen, B.<sup>U\*</sup>, **Simmons, D. R.**, & Polmear, M (2020) Effective implementation of visualization technology in construction safety training. University of Florida Virtual Spring Undergraduate Research Symposium.
4. **Simmons, D. R.** & Chau, A. D.<sup>P</sup> (2019). CAREER: Investigating co-curricular participation of students underrepresented in engineering, NSF EEC Grantees Conference, Arlington, VA, October 21 - 23, 2019.
5. **Simmons, D. R.** & Chau, A. D.<sup>P</sup> (2019). Preparing a 21st century STEM workforce: Defining & measuring leadership in civil engineering education, NSF EEC Grantees Conference, Arlington, VA, October 21 - 23, 2019.
6. **Simmons, D. R.**<sup>10\*</sup> (2018). Professional development of emerging civil engineers for the construction industry occurs through out-of-class engagement. *NSBE ARNL 2018*. Pittsburgh, PA.
7. **Simmons, D. R.**<sup>\*</sup> (2017). Increasing impact of the hidden curriculum: Exploring student outcomes from out-of-class activities. Poster presented at 2017 *NSF EEC*

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<sup>10U</sup> Undergraduate

*Grantees Conference*. Arlington, VA.

8. Periwal, M.<sup>11U\*</sup> & **Simmons, D. R.** (2017). An exploratory study of employers' perspectives on the competencies of entering professionals in the construction industry. *Young Researchers Conference*, University of Maryland College Park, September 2017.
9. Han, J.<sup>12G\*</sup>, Ranganathan, S., & **Simmons, D. R.** (2017). Using social network analysis to examine social engagement in an engineering class [an update]. Poster presented at *University of Connecticut 34rd Quality and Productivity Research Conference (QPRC)*. Storrs, CT, June 13–15, 2017.
10. Beuth, C.<sup>U13\*</sup>, Duran, A.<sup>U\*</sup>, **Simmons, D. R.** & Turner, M. (2017). Resilience: Buildings aren't the only thing construction students build. *ICTAS Research Poster Presentation*. Blacksburg, VA.
11. Holliday, C.<sup>14U\*</sup>, Ly, N.<sup>U\*</sup>, **Simmons, D. R.** and Turner, M. (2017). Role of work in developing resilient construction students. *ICTAS Research Poster Presentation*. Blacksburg, VA.
12. Brenner, J.<sup>15G\*</sup>, Solanki, N.<sup>G\*</sup>, & **Simmons, D. R.** (2017). Leadership competency in students. Poster presented at the *Virginia Tech 33rd Annual Graduate Student Assembly Research Symposium (GSARS)* and the *7th Annual CEE Research Day*, Blacksburg, VA.
13. Desai, D.<sup>G\*</sup>, & **Simmons, D. R.** (2017). Succession planning in construction industry. Poster presented at the *Virginia Tech 33rd Annual Graduate Student Assembly Research Symposium (GSARS)* and the *7th Annual CEE Research Day*. Blacksburg, VA.
14. Han, J.<sup>G\*</sup>, **Simmons, D. R.**, & Ranganathan, S. (2017). Using social network analysis to examine social engagement in an engineering class. Poster presented at the *Virginia Tech 33rd Annual Graduate Student Assembly Research Symposium (GSARS)*. Blacksburg, VA.
15. Purchase, J. M.<sup>G\*</sup>, & **Simmons, D. R.** (2017). Effective community and stakeholder engagement for public infrastructure projects. Poster presented at the *7th Annual CEE Research Day*. Blacksburg, VA.
16. Purchase, J. M.<sup>G\*</sup>, **Simmons, D. R.**, & Hermundstad, A. (2017). Exploring the meaning of fun: A missed opportunity to retain underrepresented students in engineering. Poster presented at the *Virginia Tech 33rd Annual Graduate Student Assembly Research Symposium (GSARS)*. Blacksburg, VA.
17. Groen, C. J.<sup>G\*</sup>, McNair, L. D., & **Simmons, D. R.** (2016). Disciplinary influences on the professional identity of civil engineering students: Starting the conversation.

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<sup>11\*</sup> Presenting Author

<sup>12\*\*</sup> Former name of Denise R. Simmons

<sup>13G</sup> Graduate Student

<sup>14U</sup> Undergraduate

<sup>15\*</sup> Presenting Author

Poster presented at the 123<sup>rd</sup> American Society for Engineering Education Annual Conference & Exposition. New Orleans, LA.

18. Yu, R.<sup>G\*</sup>, & **Simmons, D. R.** (2015). Use of Q methodology to investigate reasons engineering students participate in out of class activities. Poster presented to *Virginia Tech Graduate Student Association Research Symposium*, March 25, 2015.
19. **Simmons, D. R.**, Tendhar, C.<sup>G\*</sup>, & Yu, R.<sup>G\*</sup> (2015). Developing the Postsecondary Student Engagement Survey (PosSES) to measure undergraduate engineering students' out of class involvement. Poster presented to *Virginia Tech Graduate Student Association Research Symposium*, March 25, 2015.
20. Makhmalbaf, M. O.<sup>G\*</sup> & **Simmons, D. R.** (2015). Curricular and non-curricular factors impacting development of leadership competencies in undergraduate civil engineering and construction students. Poster presented to *Virginia Tech Graduate Student Association Research Symposium*, March 25, 2015.
21. Spingola, E.<sup>G\*</sup>, & **Simmons, D. R.** (2015). Work in progress: Understanding constructs in engineering culture associated with climate. Poster presented to *Virginia Tech Graduate Student Association Research Symposium*, March 25, 2015.
22. Young, G.<sup>16G\*</sup>, **Simmons D. R.**, & Adams, S. G. (April 2014). Unbundling the impact of engineering student involvement experiences on the development of professional competencies. *College of Architecture and Urban Studies (CAUS) Research Symposium*. Blacksburg, VA.
23. Young, G.<sup>G\*</sup>, **Simmons D. R.**, Adams, S. G. (March 2014). Co-curricular involvement translates into essential skills for future engineers. *Academic and Research Leadership Network Symposia at the Annual Meeting of the National Society of Black Engineers (NSBE40)*. Nashville, TN.
24. Young, G.<sup>G\*</sup>, **Simmons D. R.**, Adams, S. G. (July 2013). *Impact of non-curricular activities on African American engineers' development of engineer of 2020 traits*, Virginia Tech, Summer Undergraduate Research Symposium. Blacksburg, VA.

#### Invited Keynote, Speaker, Lectures or Panelist:

1. Keynote Speaker, Clemson University's LEAD Forward Lunch. *Women Authentically Leading*. April 12, 2019. Clemson, SC.
2. Keynote Speaker, North Carolina State University's We Are Women in Engineering Workshop. *Meet the Once Apprehensive Girl Who Became a Resilient, Joyful, Accomplished Civil Engineer*. February 28, 2019. Raleigh, NC.
3. Keynote Speaker, North Carolina A&T College of Engineering Dean's Distinguished Speaker's Series. *Professional Preparation: Rethinking Engineering Learning Environments in Response to Massive Industry Disruptions*. March 12, 2018. Greensboro, NC.
4. Invited Speaker, University of Florida Engineering School of Sustainable

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<sup>16G</sup> Graduate Student

- Infrastructure & Environment. February 22, 2018. *Young Adventurers to Socially Responsible Civil Engineers: Disrupting Mindsets through Study Abroad*. Gainesville, FL.
5. Invited Panelist, National Society of Black Engineers 2017 Region II Fall Leadership Conference. November 11, 2017. *Construction Logistics*. Greensboro, NC.
  6. Invited Speaker, Purdue University Department of Civil Engineering. December 4, 2017. *Rewards and Challenges of Investigating the Nature and Development of Expertise in the Construction Industry*. West Lafayette, IN.
  7. Invited Speaker, National Society of Black Engineers National Leadership Conference. June 10, 2017. *Differentiating capital letter "L" from lower case "l" when examining competencies associated with leadership*. Virginia Tech, Blacksburg, VA.
  8. Invited Speaker, National Society of Black Engineers. April 12, 2017. *Leveraging Your Involvement in NSBE*. Virginia Tech, Blacksburg, VA.
  9. Invited Engineering Education Research Speaker, *Interdisciplinary Research: Methods and Theories to Investigate Construction Workforce Challenges*. March 9, 2017. University of Colorado-Boulder, Boulder, CO.
  10. Invited Construction Engineering & Management Seminar Speaker, *Investigating the Nature and Development of Expertise in Construction Engineering*. March 10, 2017. University of Colorado-Boulder, Boulder, CO.
  11. Invited Panelist, MAOP Office's Graduate School Preparation Retreat for the institutions in its LSAMP alliance, October 2016. *Preparing for Graduate: Becoming a Competitive Candidate*. Virginia Tech, Blacksburg, VA.
  12. Invited Lecturer, Rosemary Blieszner's Citizen Scholar Engagement Seminar, October 2016, 2017. Development of Broader Impact in Grant Proposals. Virginia Tech, Blacksburg, VA.
  13. Invited Lecturer, Josh Iorio's CNST 5944 Research Topics Course, September 2016, 2017. Research Supporting the Development of a Diverse, Prepared Workforce. Virginia Tech, Blacksburg, VA.
  14. Invited Workshop Presenter, January 2016. Future Faculty Program. *First Year Success: How to Have a Successful First Year as a Tenured Track Faculty Member*. Virginia Tech, Blacksburg, VA.
  15. Invited Participant, 2016 GEO Opportunities for Leadership in Diversity (GOLD) workshop (The Geosciences Directorate (GEO) of NSF sponsored this Ideas Lab focused on cultivating a new generation of 'champions for change' who can help make progress in increasing diversity in the geosciences.) March 20-24, 2016. Annapolis, MD.

16. Invited Lecturer, NSF CAREER Project Overview and Writing Strategies (March 3, 2016). Developing Your Funded Research Program course. Virginia Tech, Blacksburg, VA.
17. Invited Lecturer, Preparing for the Professoriate, ESED 8880 (September 9, 2015). *Your Career Choices After Earning a PhD: Advice From The Joyful Professor*. Clemson University. Clemson, SC.
18. Keynote Speaker, August 19, 2015. *You Are Spires of Virginia Tech*. Welcome Back Luncheon for Graduate Students. Virginia Tech, Blacksburg, VA.
19. Keynote Speaker, April 27, 2015. *Unleashing Your Power Through Disciplined Leadership*. Call Me Doctor Distinguished Speaker's Series. Clemson University. Clemson, SC.
20. Invited Lecturer, Preparing for the Professoriate (April 1, 2015). *Your Career Choices After Earning a PhD & Your First 100 Days*. Clemson University. Clemson, SC.
21. Invited Lecturer, Preparing for the Professoriate (November 20, 2014). *First Year Success: How to Have a Successful First Year as a Tenured Track Faculty Member*. Clemson University. Clemson, SC.
22. Invited Lecturer, Research Methods (November 5, 2014). *Introduction to Grounded Theory in 30 Minutes or Less!* Virginia Tech, Blacksburg, VA.
23. Invited Lecturer, Construction Research Topics Course. (September 17, 2014). *Research Supporting the Development of a Diverse, Prepared Workforce*. Virginia Tech, Blacksburg, VA.
24. Keynote Speaker, April 2014, "Becoming A Game Changer: Significant Steps from Student Researcher to Career" presented at culminating program for NSF Emerging Frontiers in Research and Innovation (EFRI)- Research Experience and Mentoring (REM) program to train undergraduate researchers at Clemson University and UNC-Charlotte. Clemson, SC.
25. Invited Lecturer, April 2014, "Is Graduate School for Me?" presented to Programs for Engineering Enrichment and Retention at Clemson University. Clemson, SC.
26. Invited Lecturer, Department of Engineering & Science Education at Clemson University. Seminar speaker: *Developing Effective Engineering Fictive Kin. Administrators, Faculty, and Staff: You Have A Role*. Clemson, SC, April 2014.
27. Invited Lecturer, Department of Engineering Education at Virginia Tech. Seminar speaker: *Building Tomorrow's Talent in Engineering: Constructing a Grounded Theory*. Blacksburg, VA, December 7, 2012.
28. Invited Speaker, July 2012, "Career Paths" presented to Interfaces and Surfaces and Advanced Membranes REU at Clemson University funded by the National Science

Foundation. Clemson, SC.

29. Invited Speaker, October 2011, Broader Impacts Workshop presented to Global Women Scholars Network in Sustainability. Jackson Hole, WY.
30. Invited Speaker, October 2011, “Building Tomorrow’s Talent in Science and Engineering” presented at UNC-Charlotte. Charlotte, NC.
31. Invited Speaker, April 2011, Strategies to broaden participation in STEM. Communicating Science: Tools and Solutions, La Selva Biological Station in Costa Rica. Recruiting & Retaining Underrepresented Minorities in Ecology. Puerto Viejo de Sarapiquí, Costa Rica.
32. Invited Lecturer, January 2009. Experiences with PEER: Perspectives from my undergraduate years. Best Practices in Black Student Achievement VIII, Clemson, SC.
33. Invited Speaker, October 2008, Department of Energy Office of Environmental Management HBCU Technology Day at Spelman, Atlanta, GA.

### **International teaching activities**

- Scholar in resident, July 28 – August 8, 2018, Royal Melbourne Institute of Technology. Guest lecturer for two project management courses.

### **Video presentations:**

1. Jacobs, D.<sup>U</sup>, **Simmons D. R.**, [Simmons Research Lab] (Jan, 2020). Leading to a successful future [Danielle's Presentation\_V1.mp4]. Retrieved from <https://youtu.be/pG99FImbAAg>.

### ***Funding***

#### Funded

1. NSF CAREER Award entitled: “CAREER: Investigating Co-Curricular Participation of Students Underrepresented in Engineering.” EEC#1351156 \$451,768. July 1, 2014–June 30, 2019.
2. Virginia Tech’s Institute for Society, Culture and Environment “Preparing STEM Workers: Investigating Leadership Conceptions and Misconceptions,” **Simmons (co-PI, 50% or \$4,345.50)** and N Clegorne (co-PI, 50% or \$4,345.50). Funding period 5/9/14-9/30/14. Total Funding: \$8,695.00.
3. NSF Award entitled: “Preparing a 21st Century STEM Workforce: Defining & Measuring Leadership in Engineering.” EEC Proposal #1463802. **Simmons (PI, 50% or \$222,091.50)** and N Clegorne (co-PI, 50% or \$222,091.50). Funding period 1/1/16-12/31/19. Total Funding: \$444,183.00.
4. NSF Award entitled “Collaborative Research: An Instrument and Adoption Framework for Student Cognitive and Social Engagement with a Course” DGE Program Evaluation/PRIME. Award # 1544171. **Simmons (PI, 40.4%** or \$321,857) total funding \$796,872 among co-PIs: Dong Zhao, Shane Brown and Olusola

Adesope. Funding period 1/1/16-12/31/19.

5. The Institute for Society, Culture and Environment (ISCE) 2017 Scholars Program. entitled “Measuring Quality in Civil Engineering Education”. \$30,000. Shyam Ranganathan (PI) and Simmons (co-PI, 50% or \$15,000).
6. Institute for Critical Technology and Applied Science (ICTAS) Research Experiences for Undergraduates (REU) Grants aligned with Human Safety, Health, and Wellness aligned with Intelligent Infrastructure for Human Centered Communities DA entitled “ICTAS REU Resilience in Construction Students Research”. \$100,000. Co-PIs: Brian Kleiner, MLSoC, Michelle Turner, MLSoC/RMIT.
7. Pathways Minor Award: Global STEAM Pathways Minor. **Simmons (co-PI, 50% or \$17,500)** and David Knight (co-PI, 50% or \$17,500). Funding period: 7/1/16-6/30/17.
8. NSF Award GEO Opportunities for Leadership in Diversity (GOLD): Hearts of GOLD. NSF INCLUDES Program, ICER Award #1645430. **Simmons (co-PI, 4% or \$14,829)** total funding \$ \$399,877 among investigators – PIs: P. Grady Dixon; Co-PIs: Kathleen Quardokus Fisher, LaToya Myles and Eric Kaufman. Funding period 1/1/17-12/31/18.
9. NSF Award entitled Professional Identity Development in Civil Engineering Students with Disabilities; Award Number: EEC Award #1733636. **Simmons (co-PI, 26.22% or \$104,970)**; Award Amount: \$400,388.00 among investigators – Lisa McNair, PI and co-PIs: Marie Paretti and Ashley Shew. Funding period: 9/1/17-5/30/20.
10. Virginia Tech Student Engineer’s Council. Awarded \$6000 to support student scholarships for winter session course: CEE 3014: Construction Management (Abroad).
11. Center for Construction Research and Training small study award entitled Development of workforce sustainability model for construction (CPWR small study no. 17-8-PS; agreement number U60 OH009762 CFDA #93.262 from the National Institute for Occupational Safety and Health). **Simmons** (10% or \$2900); Award Amount: \$29,947. Funding period: November 1, 2017 – October 31, 2018.
12. Using Case Studies to Build Transdisciplinary Research Skills at the Undergraduate Level, Institute for Critical Technology and Applied Science (ICTAS) Research Experiences for Undergraduates (REU), USD 10,000 (Current: 09/28/2017 - 06/15/2018) Principal Investigator: Paige, Freddy, co-PIs: Denise R. Simmons and Walter Lee.
13. As the Savannah River Environmental Sciences Field Station (SRESFS) director and PI, I was responsible for writing programmatic-focused grants to support operations, my summer salary and travel. From 2007-2012, I was awarded \$2,287,793.00 (not including non-federal cash matching support and in-kind services) in external grants to primarily support student scholarships and faculty teaching stipends for courses at the SRESFS. Those awards are listed below.

- a) Department of Energy/Environmental Management in cooperation with the US Forestry Service (\$981,000, multi-year award: 2008–2011; \$120,000 in 2012)
- b) Wal-Mart Foundation State Giving Program (\$150,000, 2009)
- c) USDA/Natural Resources Conservation Service, South Carolina Program (\$125,000 in 2009 #69-4639-9-9022; \$74,999 in 2010; \$74,999 in 2011, #69-4639-11-0016; \$74,999 in 2012)
- d) USDA Capacity Building Grant (Preparing for Readiness in the Environmental Professions, \$150,000 in 2010). U. S. Department of Agriculture National Institute of Food and Agriculture (NIFA) Award Number 2010-38821-21509
- e) Department of Energy/Environmental Management (\$536,796, multi-year award: 2010–2012). DOE Award # DE-EM0000594

Under Negotiation for Funding

1. None

Pending Review

1. National Science Foundation Research Experiences for Undergraduates. Collaborative Research: REU SITE: Establishing New Generations of scholars to Amplify and Grow Engineering Education (ENGagED); PIs: Brooke Coley and Denise R. Simmons, submitted August 2019. Amount requested: \$400,000.
2. EHR CORE Research. Collaborative Research: Investigating Black Engineering Students' Agency: Amplifying Students' Power to engIneer Robust futurEs (ASPIRE). Submitted October 1, 2020. PIs: Denise R. Simmons, Lisa Lattuca (University of Michigan), Brooke Coley (Arizona State University). Amount requested: \$1.15M – UF; total \$2.5M.
3. RFE: “Together we learn”: Exploring asset-based and inclusive teaching practices of faculty in post-secondary distance (hybrid and online) engineering courses for student engagement. PI: Idalis Villanueva, co-PI: Denise R. Simmons, submitted December 2020. Equal share of amount requested \$350,000.

Under Development and Planned

1. NRT or AGEP
2. FW:HTF
3. NSF CBET proposal 2035173: Collaborative Research: Modeling Construction Organizations' Resilience in Response to Societal and Economic Impacts. Submitted May 2020. (Approx \$380,000 to UF and \$120,000 to Colorado State University and Oregon State University) – **revise and resubmit**

**TEACHING & ADVISING:**

*University of Florida*

CGN 4905: Construction Project Management  
 CCE 4015: Civil Engineering Estimating  
 CCE 6037: Civil Engineering Operations I

## ***Virginia Tech***

CEE 3014: Construction Management

CNST 5984: Communicating Research to the Public

CEE 4014: Estimating, Production and Cost Engineering

CNST 5984: STEM Workforce Development: Structure, Policies and Initiatives

CNST 5984: Building People for Work in Construction

## ***Academic advising, SC State***

From fall 2004 to spring 2008, I was employed as a fulltime, tenure track, teaching faculty at South Carolina State University, where I advised at least 22 students each semester

## ***Classroom instruction***

### Classes Taught at SC State University:

ET 250: Technical Communications

ET 255: Engineering Economics

CET 412: Construction Codes & Contracts

CET 415: Fluid Mechanics

CET 459: Senior Project Proposal

CET 460: Senior Project

ENV 490: Principles of Pollution Control TRP

530: Urban Transportation Planning

TRP 640: Transportation & Land Use

### Instructional Innovations at South Carolina State University:

- Incorporated formal project management concepts into ET 250, CET 459 & 460 and TRP 640 courses as a way to foster leadership, management and communication skills, ingenuity, efficiency and cost savings.
- Developed and implemented several rubrics into ET 250 course so that students were aware of the purpose of the assignments that they were being asked to complete and as a way to provide specific feedback to each student.
- Used industry professionals, many of which were alumni of the institution, in the senior project course (CET 460) as advisors to the students throughout the course as a way to incorporate another perspective.
- Introduced diagnostic tests in ET 255 and CET 415 to measure student math readiness and address early any deficiencies in preparation. I met with students determined to be at risk in their skills to discuss the results of the diagnostic test, encouraged them, informed them of on campus help available and referred them to the student success center.

## ***Online and adjunct instruction***

UNIVERSITY OF PHOENIX Online Learning & Columbia Campus

Faculty Practitioner January 2003 – 2008 (Adult Learners)

- Instruct junior and senior level project management and operations courses.

MIDLANDS TECHNICAL COLLEGE Columbia, SC

Adjunct Professor January 2002 – May 2002 (Traditional-age Students)

- Instruct senior level environmental engineering course. Course covers a study of the

sources, treatment, regulations, collection and distribution of water and wastewater; water and sewer pipe hydraulics; water and groundwater quality; estimation of runoff; and load design of buried pipes.

VOORHEES COLLEGE MANAGEMENT INSTITUTE Denmark, SC

Adjunct Professor Fall 1997 – Spring 1999 (Adult Learners)

- Facilitate courses in degree program for adult students pursuing a bachelor of arts degree in Organizational Behavior.
- Courses include: Group & Organizational Behavior, Career and Life Assessment, and Business Ethics.

### ***Teaching Professional Development***

1. 2020, National Effective Teaching Institute (NETI-3) for Online Instruction June 2020
2. 2019, The First Year Faculty Teaching Academy (FYFTA), University of Florida
3. Participated in the 2016 Pathways Summer Institute to learn how to:
  - designed new and redesigned existing courses and planned Pathways minor to fit the Pathways curriculum and
  - worked in a community-of-practice dedicated to meeting the Pathways Principles of Inclusivity, Integration, and Relevance.
4. 2009 Clemson University Office of Teaching Effectiveness and Innovation (OTEI) Training:
  - Workshop: Academic Writing: The Process of Crafting Scholarly Prose
  - Workshop: Contract Grading: Melding Learning with Assessment
  - Workshop: Learning Styles: Multiple Models, Multiple Teaching Methods
  - Workshop: Maximizing Student Learning and Participation in Discussions
  - Workshop: Writing Objective Test Items That Assess Thinking Skills
5. October 2007 ABET Workshops: *Faculty Workshop on Assessing Program Outcomes & ABET Annual Meeting* Incline Village, NV.
6. October 2006 Southeastern Alliance for Grad. Education and the Professoriate (SEAGEP) Conference, Clemson, SC.
7. October 2005 – 2011, Institute on Teaching and Mentoring (various cities).

### **SERVICE:**

#### Professional Service

*American Society of Civil Engineering (ASCE)*

1. Journal of Civil Engineering Education (formerly: Journal of Professional Issues in Engineering Education and Practice, an ASCE Journal)
  - a. Associate Editor, 2017 – Present

- b. *Special Collection Lead Co-editor; Special Collection on Diversity and Inclusion [Fall 2016 – Spring 2018]*
  - c. *Reviewer, 2015 – Present*
- 2. Journal of Construction Engineering and Management  
*Reviewer, 2015 – Present*
- 3. Construction Research Congress  
*Session Moderator & Reviewer, 2012 – 2018*
- 4. Members of Society Advancing an Inclusive Culture (MOSAIC)  
*Reviewer of ASCE’s first Diversity, Equity, and Inclusion Best Practices Guide (BPG), 2020*

*American Society for Engineering Education (ASEE)*

- 1. Journal of Engineering Education  
*Associate Editor, 2020 – Present*  
*Reviewer, 2014 – Present*
- 2. ASEE Annual Conference & Exposition  
*Session Moderator & Reviewer, 2009 - 2018*
- 3. Educational Research and Methods Division (ERM)
  - a. *Judge for the Frontiers in Education 2020 Virtual Conference New Faculty Fellows program*
  - b. *Mentor for Apprentice Faculty Grant awardee, Dr. Leroy Long, III, 2019 – Present.*
  - c. *Frontiers in Education Session Moderator & Reviewer, 2009 – 2014*
- 4. Plagiarism Ad Hoc Committee  
*Chair, 2020*
- 5. ASEE President’s Task Force Steering Committee  
*Member, Re-envisioning the Curriculum for the 21st Century: Pathways to Engineering, 2020 – Present*

*International Society of Service Innovation Professionals (ISSIP)*

- 1. Applied Human Factors and Ergonomics The Human-Side of Service Engineering (AHFE HSSE)
  - a. *Member, Scientific Advisory Board, 2019 – Present*
  - b. *Session chair for AHFE HSSE international conference to be held in July 25-29, 2021 at the Sheraton Times Square, Manhattan, New York, USA.*
  - c. *Research lead for workforce development topics, 2020 – Present*

*Funding Agencies*

- 1. Proposal Reviewer, National Science Foundation Programs
  - a. Research & Evaluation on Education in Science and Engineering (REESE)

- b. Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)
  - c. Faculty Early Career Development (CAREER)
  - d. Engineering Education Research in the Formation of Engineers (RFE)
  - e. NSF Research Traineeship (NRT), Phase II
2. Program Peer Reviewer
    - a. Department of Energy: Building Technologies Office

*Service Related to NSF-funded Projects*

1. Mentor, NSF AGEP Project *Strengthening Training and Resources for Inclusion in Data Engineering and Sciences (STRIDES)*
2. Lead Mentor for NSF CAREER Network, 2019 – Present. Matched to mentor 3 assistant professors: 2 African American and 1 Asian.
3. Invited participant, NSF-funded EAGER project (1837808/1837805) to generate community consensus on what information and advice early career engineering researchers could use as well as what makes successful Engineering Education and Centers CAREER proposals. Minneapolis, MN. March 14-15, 2019.
4. External evaluator, Principal Investigators Drs. Allison Godwin (Purdue University) and Adam Kirn (University of Nevada, Reno). NSF Research in Engineering Education (REE). Project titled “Bridging the Gap: Building Supports for Diversity through Engineering Teams.” 2016-Present.
5. Advisory board member, Dr. Lisa Benson, Clemson University, Clemson, SC, Department of Engineering and Science Education (ESED). SPRITE proposal (Student Perceptions of Researcher Identity and Transformative Epistemologies) funded by NSF REE program, 2017-Present.
6. Advisory board member, Principal Investigator Dr. Anand Gramopadhye, Clemson University. NSF Grant titled Statewide Consortium: Supporting Underrepresented Populations in Precalculus by Organizational Redesign toward Engineering Diversity (SC:SUPPORTED). 2017-Present.
7. Subject matter expert & invited author of journal manuscript, engineering pathways research. Dr. Mary Besterfield-Sacre, NSF grant titled Innovation Through Propagation: Determining an Engineering Education Research Agenda, award # 1451263. University of Pittsburgh, Pittsburgh, PA, 2015-2017.

*Textbook Reviewer*

1. Book Reviewer, Environmental Engineering: Fundamentals, Sustainability, Design, 1st edition, by Mihelcic et al, Wiley Publishing, June 2009.

*Industry Service*

1. Invited researcher, Future Women in Kiewit, Kiewit Corporation, February 19-21, 2020.

2. American Society for Engineering Education Designated International Specialist on Best practices in conducting education research; Technical Research; Diversity, inclusion, and equity; Retention; and Industry practices and desired skills, 2020 – Present.

#### Miscellaneous

1. Reviewer: Journal of Engineering Education, International Journal of Engineering Education, European Journal for Engineering Education,
2. Workshop Planner & Moderator, 2015 Horman Sustainability Symposium, workshop entitled: *Unique & Emerging Methods to Investigate Sustainability Topics*, April 19, 2015.

### **University of Florida**

#### College Service

1. Session Presenter, Women in Engineering Luncheon (STEPUP Online Women in Engineering Virtual Luncheon), August 2019-Present
2. Panelist, Black or African American Graduate Studies Webinar for Black or African American prospective Masters and Ph.D. students, October 2020
3. Guest lecturer, Epsilon Lambda Chi Engineering Leadership Circle, September 2020
4. Guest lecturer (Preparing to Lead as a Gator Engineer), Freshman Engineering Leadership Group (FLEG) Meeting, April 6, 2020
5. Member, UN Women's Day Planning Committee, Fall 2019 – Spring 2020

#### Department Service

6. Diversity, Equity, and Inclusion Committee Member, 2020 – Present
7. University of Florida Transportation Institute Advisor Board Member, 2019 – Present
8. Develop graduate program partnership: University of Parma, Italy, 2019 – Present
9. Faculty search committee, Fall 2019 – Spring 2020
10. Graduate recruitment: Simmons, D. R.,\* Tran, K, & Chau, A.D. How to Apply for Doctoral Study in the USA (emphasizing the University Florida): Preparations and recommendations for Vietnamese applicants. Ho Chi Minh, Da Nang and Ha Noi, Vietnam, Fall 2019
11. Junior Preview: developed activities and schedule for construction engineering, Fall 2019
12. Guest lecture (Your Amazing Career in Construction Engineering), CGN 2002: Introduction to Civil Engineering, September 26, 2019

### **Service, Previous Institutions**

#### **Virginia Tech**

#### University Service

1. Mentored several African-American students from across Virginia Tech
2. Future Faculty Program Advisory Committee Member

3. Participated in Women's Preview Weekend Faculty Dinner, Spring 2018
4. Co-chaired, Human Centered Issues in Construction Community of Practice Committee, MLSoC (2017-18)
5. Co-organizer, Women and Underrepresented Minorities (URMs) Faculty Panel Session at ASCE Construction Research Congress, Spring 2018
6. Member, The Collaborative Network for Engineering and Computing Diversity (CoNECD) Conference Plenary Speakers Committee, Spring 2018
7. Member, Department of Civil & Environmental Engineering VCEMP Faculty Search Committee [Fall 2016 – Spring 2017]
8. Participated in HBCU Day at VT sponsored by College of Engineering, Fall 2016
9. Member, College of Engineering Dean Search Committee [Spring – Fall 2016]
10. Member, Destination Area Committee on Smart, Human-Centered Infrastructure [Spring 2016]
11. Member, Workforce Challenges Community of Practice Committee [Fall 2015 – Fall 2016]
12. Outreach events related to Student Transition Engineering Program (STEP) [up to 8 activities in the summer only]
13. Virginia Tech's College of Engineering, CAREER panels (College-level, 2013-2015)
14. Led group of students composed mostly of civil engineering undergraduates to Panama for the Engineers Without Borders and ASCE conference [October 2014 – one time event].
15. Served on one Faculty Search Committees for a total of two positions in the Department of Civil and Environmental Engineering at Virginia Tech, 2014/2015 [one time event].
16. Virginia Tech's Learning Objects Repository Initiative (University-level – one time event)
17. College of Architecture and Urban Studies 2014 Research Symposium, Moderator (College-level – one time event)
18. Virginia Tech Student Experience Task Force (University-level, active 2013-14)
19. Virginia Tech's Human Centered Design Interdisciplinary Graduate Education Program [active 2013-15]
20. Virginia Tech's Smart Infrastructure Laboratory (VT-SIL, active 2013-14)
21. Panel Discussant, Multicultural Academic Opportunities Program (MAOP) & Black Graduate Student Organization (BGSO) [up to 4 activities each year]
22. Mentor, Inaugural group of under-represented scholars supported through the College of Engineering, the New Horizons Scholars.
23. Founding Member, Virginia Tech Leadership Education Collaborative (University-level)
24. Co-Advisor, Building Women in Construction, VT student organization
25. Member & Faculty Lead, Engagement & Outreach Committee, MLSoC Industry Board

### **Clemson University**

26. Clemson University NSF Science Master's Program Advisory Committee (Department-level), 2009-2012.

### **South Carolina State University**

27. SC State (University-level) and UTC Scholarship Selection Committee, 2010-2011.
28. SC State SACS 2010 Physical Resources Committee, Co-Chair (University-level), 2009-2010.
29. SC State ABET Continuous Improvement Committee (College-level), 2004-2008.

30. SC State Convocation Committee (University-level), 2007-2008.
31. Clemson-SCSU Civil Engineering Joint Program (Department-level), 2006-2007.
32. SC State Professional Land Surveying – New Program Development Committee (Department-level), 2006-2007.
33. SC State Energy & Environment Program – New Program Development Committee (College-level), 2005-2006.
34. SC State Faculty Research Recognition Committee (University-level), 2004.

## **OTHER:**

### ***Engineering Outreach***

The Savannah River Environmental Sciences Field Station (SRESFS) is managed by South Carolina State University and is aimed at recruiting and retaining underrepresented groups in environmental science and engineering and in natural resources--related fields of study. The SRESFS, a consortium of 29 colleges and universities, two federal agencies and one private corporation, is the first and only field station in the country devoted entirely to providing career, research and educational experiences in environmental science, natural resources and engineering to underrepresented groups in STEM majors.

As the SRESFS director and chairperson of the advisory board (2007-2012), I was responsible for leading and collaborating with the 35 member advisory board; developing program controls and procedures; hiring, training and managing of full time and temporary staff, and adjunct faculty; developing and achieving annual objectives; recruiting and selecting students to participate in funded programs; tracking of former participants; procuring of all goods and services; communicating with all internal and external stakeholders; preparing and distributing all reports; and assessment of all funded programs. SCSU recognized my achievements as director of SRESFS by awarding me the Dean's Award for Outstanding Service (2009) and the She-Ro Award (2010), a university level recognition.

### ***Partnership on state and national K-12 engineering efforts***

In 2005, I directed the thirteenth annual Summer Transportation Institute (STI) that is aimed at work force development by increasing both the number and diversity of students pursuing transportation-related fields of study and careers. STI started at South Carolina State University and is now a national program with nearly 50 host sites across the United States. South Carolina State sponsored a 4-week residential program for sixteen rising 10th and 11th graders. Each week focused on a different mode of transportation and included presenters, activities, field trips and projects related to the mode. Besides highlighting careers, each week also focused on issues such as safety, use of technology, discussion of innovations, and forecasting of employment needs.

In 2011, I worked with a team of researchers to write a national high school STEM research and outreach proposal entitled "CYPRESS: Combining Youth, Passion, and Resources for Environmental Science Studies". The proposal was funded. I supported the project by providing input on curriculum, assessment, performance measures, employee selection, report development and program management.

## ***Professional Development***

1. 2020, Foundations of Social Justice for Engineers seminar
2. 2016, Minority Faculty Development Symposium: 21<sup>st</sup> Century Mindsets & Strategies for Career Advancement. UC Berkeley, Berkeley, CA, September 21-24, 2016.
3. 2016, 2015 Research Talk. Topics in collecting, writing and analyzing qualitative research. Chapel Hill, NC. Also supports on-going mentorship by Dr. Kathy Charmaz.
4. 2014 Proposal Development Institute, sponsored by Virginia Tech.
5. 2014 International Faculty Development Program, Ecuador & Chile, Sponsored by Virginia Tech. Travel to Ecuador and Chile to establish research collaborations.
6. 2014 ADVANCE (WOC) Career Coaching Program, Sponsored by Purdue University.
7. 2014 New Media Seminar, Sponsored by Virginia Tech.
8. 2014 Construction Engineering Conference and Workshop 2014: Setting an Industry-Academic Collaborative Research Agenda, Seattle, Washington, March 27-29, 2014, Sponsored by Catholic University, University of Washington and NSF.
9. 2012 Graduate Engineering Education Consortium for Students (GEECS) Symposium Fellow GEECS is an annual event, where accepted participants attend a research-based symposium and the National Science Foundation (NSF) Engineering Education Awardees Conference. The multi-day event provides an opportunity for graduate students in the field of engineering education research to share current work-in-progress, get feedback on work, and collaborate with other graduate students. Benefits of partnering with the NSF Engineering Education Awardees Conference for GEECS include the opportunity to learn about and network within the field of engineering education with experts.
10. 2010 Virginia Tech Future Faculty Development Program Participant  
The Virginia Tech Future Faculty Development Program is an exciting and rewarding two-day event for a small group of doctoral students and post-doctoral scholars interested in pursuing academic careers. The program brings together doctoral candidates and post-doctoral scholars to Virginia Tech for an all-expense paid workshop. As part of the experience, participants are hosted by a Virginia Tech department to tour research facilities, meet with current faculty to gain a greater awareness of research and teaching opportunities, and discuss their career prospects and academic work. The program is part of comprehensive strategic faculty recruitment at Virginia Tech.
11. March 2009 NSF Workshop *Creating Engineering Education Opportunities: Why & How?* Arlington, VA.
12. October 2008 Frontiers in Education Conference Saratoga Springs, NY.
13. October 2007 ABET Workshops: *Faculty Workshop on Assessing Program Outcomes & ABET Annual Meeting* Incline Village, NV.
14. March 2006 NSF Workshop *Advancement and Retention of Underrepresented and Minority Engineering Educators*, Arlington, VA.

***Professional registrations:*** Registered Professional Engineer (PE) (TN #106991), Project

Management Professional (PMP) (383095), Leadership in Energy & Environmental Design Accredited Professional (LEED-AP)

### ***Membership in professional & honor societies***

- ASCE Construction Institute Construction Research Council Committee (CI-CRCC)
- Engineering Project Organization Society (EPOS)
- International Society of Service Innovation Professionals (ISSIP)
- American Society of Civil Engineers (ASCE)
- American Society for Engineering Education (ASEE)
- American Association of Blacks in Energy (AABE)
- National Society of Black Engineers (NSBE)
- Project Management Institute (PMI)
- Chi Epsilon, Civil Engineering Honor Society

### ***Fellowships & Awards***

1. 2019, May, Author of Advances from AEE section in PRISM magazine by invitation from editor of Advances in Engineering Education (AEE).
2. 2019 Inducted into the Thomas Green Clemson Academy of Engineers and Scientist, College of Engineering, Computing and Applied Sciences at Clemson University.
3. 2019 Distinguished Alumni, Glen Department of Civil Engineering at Clemson University.
4. 2018 Australasian Engineering Education Conference Best Paper Award for Groen-McCall, C., McNair, L. D., Paretti, M. C., Shew, A. H., & Simmons, D. R. (2018). Experiencing disability: A preliminary analysis of professional identity development in U.S. undergraduate civil engineering students.
5. 2018 Journal of Construction Engineering and Management Editor's Choice recognition for Simmons, D. R., Iorio, J., Taylor, J. E. and Li, D. (2018). Work Values Across Generations Among Construction Professionals in the United States.
6. 2018 Best Paper Award in the International Division at ASEE for Knight, D.B., Matusovich, H.M., Artiles, M.S., Davis, K., Kinoshita, T., Bairaktarova, D., Hodges, K., Knott, T., Lee, W.C., McGlothlin Lester, M., McNair, E., Reid, K., & Simmons, D.R. (2018, June). *Sustaining a study abroad program at scale: What motivates faculty members to engage in such programs?*
7. 2018 Myers Lawson School of Construction Diversity Award
8. 2018 Journal of Professional Issues in Engineering Education and Practice Editor's Choice recognition for Simmons, D. R., Ye, Y.\*, Ohland, M. & Garahan, K.\* (2018). Understanding Students' Incentives for and Barriers to Out-of-Class Participation: A Profile of Civil Engineering Student Engagement. The editor selects one manuscript in each issue for this distinction to highlight unique and transformative research.

9. 2017 Journal of Management in Engineering. Editor's Choice recognition for Simmons, D. R., Clegorne, N. & Woods-Wells, T.\*. (2017). Leadership Paradigms to Develop Professionals in the Construction Industry: A Critical Review Informed Research Agenda. DOI: [http://dx.doi.org/10.1061/\(ASCE\)ME.1943-5479.0000518](http://dx.doi.org/10.1061/(ASCE)ME.1943-5479.0000518). The editor selects one manuscript in each issue for this distinction to highlight unique and transformative research.
10. 2017 Institute for Society, Culture and Environment ISCE Faculty Scholar.
11. 2016 Recipient of Virginia Tech's National Distinction Award for Research [The President, Provost, and Vice President for Finance have established a national distinction program to provide the opportunity for senior leaders to recognize their top performers, faculty who excel in their fields.]
12. 2016 Outstanding New Assistant Professor, VT College of Engineering Dean's Award – in recognition of extraordinary record of research and service.
13. 2016 Black Graduate Student Organization's Lisa Tabor Award for Community Service.
14. Engineering Sustainability 2015 Travel Award.
15. 2015 National Society of Black Engineers Travel Award.
16. 2014 Faculty Fellow, Frontiers in Education.
17. 2014 Younger Leaders Fellow for the Civil Engineering Division of ASEE.
18. 2011 NSF Study Abroad Fellowship to study the energy industry in Santiago, Chile.
19. 2010 SC State She-Ro award in recognition for leadership of the SRESFS.
20. 2009 Dean's Award for Outstanding Service, SC State University.
21. 2009 Award Recognizing Dedicated Service to NSF/HBCU-UP/RISC Summer Research Internship Program.
22. 2008-2011 South East Alliance for Graduate Education and the Professoriate (SEAGEP) Fellow.
23. 2007 Sloan Foundation Research Fellow.

### ***Current Postdoctoral Associates***

1. Ahn Duc Chan, 2019 – current
2. Madeline Polmear, 2019 – current

### ***Current Graduate Students***

#### Committee Chair/Co-Chair

1. Hwangbo Bae, PhD Civil & Coastal Engineering, University of Florida, expected graduation December 2022 (chair).
2. Elizabeth Volpe, PhD Civil & Coastal Engineering, University of Florida, expected

graduation May 2025 (chair).

Committee Member

1. None active.

### ***Completed Postdoctoral Associates***

1. Cassandra Groen McCall, 2017 – 2019. Currently Assistant Professor, Department of Engineering Education, Utah State University.

### ***Completed Graduate Students***

Chair or Co-chair, PhD and MS (thesis and P&R)

PhD

1. Lindy Cranwell, PhD Planning, Governance and Globalization, School of Public and International Affairs, CAUS, Virginia Tech, graduated December 2020 (committee co-chair). Dissertation titled “University Comprehensive Internationalization (CI): Faculty Meaning-Making, Motivations, and Perceptions for Engaging Globally.” Currently Director, International and Graduate Education, Department of Civil and Environmental Engineering at Virginia Tech.
2. MiguelAndres Guerra, PhD Civil Engineering, COE, Virginia Tech, graduated August 2019 (committee co-chair). Dissertation titled “Prototyping as a User-Centered and Risk Reduction Approach During the Planning, Design, and Construction of More Sustainable Transit and Urban Infrastructure Systems”. Currently Professor of Civil Engineering, University of San Francisco at Quito, Ecuador.
3. Hwangbo Bae, MS (thesis) Civil Engineering, COE, Virginia Tech, graduated August 2019 (committee chair). Thesis titled “Quarry Worker’s Safety Recognition, Interpretation, and Prevention Skills”. Currently PhD at University of Florida.
4. Cassandra Groen, PhD Engineering Education, Virginia Tech, graduated May 2017 (committee co-chair). Dissertation titled “Advancing from Outsider to Insider (in Civil Engineering): A Grounded Theory of Professional Identity Negotiation”. Currently: Assistant Professor, Department of Engineering Education, Utah State University.
5. Amy Hermundstad Nave, PhD Engineering Education, Virginia Tech, graduated December 2018 (committee co-chair). Dissertation titled “All in a Day’s Work: Women Engineering Students’ Professional Development in a Living-Learning Community”. Currently: Faculty Developer in the Trefny Innovative Instruction Center at the Colorado School of Mines, Golden, CO.

## MS, Project and Report

6. Miranda Tuell, MS (P&R) Civil Engineering, COE, Virginia Tech, graduated May 2016 (committee co-chair). Report titled “The Relationship between Project Performance and the Frequency of Communication between Virginia Department of Transportation and Contractor Construction Managers”. Currently: Project Engineer, Virginia Department of Transportation.
7. Tyler Beach, MS (P&R) Civil Engineering, COE, Virginia Tech, graduated December 2016 (committee chair). Report titled “Work Value Characteristics of Construction Professionals”. Currently: a Civil Engineer / Cost Estimator at the Bureau of Reclamation at the Technical Service Center (TSC) in Denver, Colorado.

## Chair, Coursework Only

8. Saniya Kulkarni, MS. Civil Engineering, Virginia Tech, graduated 2018.
9. Pranav Kulkarni, MS. Civil Engineering, Virginia Tech, graduated 2018.
10. Flora, Matthew, MS. Civil Engineering, Virginia Tech, graduated 2018.
11. Dhruv Desai, MS. Civil Engineering, Virginia Tech, with research project, graduated 2017.
12. Nikunj Solanki, MS. Civil Engineering, Virginia Tech, with research project, graduated 2017. Currently: Project Engineer with Webcor Builders, California, USA.
13. Yamini Mahendran, MS. Civil Engineering, Virginia Tech, graduated 2017.

## Committee Member – PhD and MS (thesis, P&R and coursework only)

### PhD

1. Rebecca Komarek, PhD Civil Systems, University of Colorado-Boulder, graduated May 2020. Dissertation titled “Exploration and Assessment of Leadership Development in Engineering Students”.
2. Yangming Shi, PhD Civil & Coastal Engineering, University of Florida, graduated August 2020. Dissertation titled “A Working Memory Investigation of Emerging Visualization Technologies on Construction Task Performance”
3. Julio Alberto Roa, PhD in Civil Engineering, Virginia Tech, graduated December 2018. Dissertation titled “Development of Aircraft Wake Vortex Dynamic Separations Using Computer Simulation and Modeling”. Currently: Assistant Professor in the Department of Civil and Geomatics Engineering at California State University, Fresno, CA.
4. Kenneth Sands, PhD in Building Construction, Virginia Tech, graduated December 2014.

Dissertation titled “Ethics Education and Its Relationship to Undergraduate Construction Students’ Professional Ethical Sensitivity”. Currently: Assistant Professor, Florida Gulf Coast University.

#### MS, Thesis

5. Sarah Jonson, MS (thesis) School of Public and International Affairs, graduated December 2016. Thesis titled “Occupational segregation in Namibia: Women’s experience doing “men’s” work in the construction and manufacturing industries”. Currently: Program Coordinator, Africa at International Youth Foundation, Washington, District Of Columbia.

#### MS, Project and Report

6. Rory Alfree, MS P&R Civil Engineering, COE, Virginia Tech, graduated December 2013. Report titled “A Comprehensive Review of Five Courses of Virginia Tech’s Construction Engineering Management Program”. Currently: Project Engineer, Scott Long Construction, Inc.

#### MS, Coursework Only

7. J. Tyler Crouse, MS in Civil Engineering, graduated 2017.
8. Andrew Davis, MS in Civil Engineering, graduated 2017.
9. Aswin Sangameswaran Muthukumarasam, MS in Civil Engineering, graduated 2017.
10. Rachelle Johnson, MS in Building Construction, graduated 2016.

#### Directed Hourly Research

1. Marissa Lang, PhD in Sociology, graduated 2019 (with publications).
2. Alison Bowers, PhD in Education, graduated 2019 (with publication).
3. Katie Garahan, PhD in English, graduated 2019 (with publications).
4. Corey Miles, PhD in Sociology, graduated 2019.
5. Micah Roediger, PhD in Psychology, graduated 2018.
6. Mary Seeman, PhD in Building Construction, graduated 2018.
7. Jennifer Turner, PhD in Sociology, graduated 2018.
8. Chris Davidson PhD in Education, graduated 2017.
9. Yi Liu, PhD in Statistics, graduated 2017.
10. Jaeo Han, MS in Statistics, graduated 2017 (with publications).
11. Jeremy Brenner, MS in Building Construction, graduated 2017 (with publications).
12. Glenda Young, PhD in Engineering Education, graduated 2017 (with publication).
13. Brian Novoselich, PhD in Engineering Education, graduated 2016.
14. Chosang Tendhar, PhD in Education, graduated 2015 (with publication).
15. Yincheng Ye, PhD in Education, graduated 2015 (with publications).
16. Rongrong Yu, PhD in Education, graduated 2015 (with publications).
17. Elizabeth Spingola, PhD in Engineering Education, graduation date unknown (with publication).

18. Fang Fang, PhD in Sociology, graduation date unknown.
19. Mary Norris, PhD in Education, graduation date is unknown.
20. Mohammad O. Makhmalbaf, PhD student Civil Engineering, left without degree (with publication).

### ***Undergraduate Researchers –***

1. Alex Liou, Statistics and Computer Science (expected to graduate May 2021)
2. Ivan Zundel, Statistics and Computer Science (expected to graduate May 2022)
3. Juan Suhr, Statistics and Computer Science (expected to graduate May 2022)
4. Joey Lu, Statistics and Computer Science (expected to graduate May 2021)
5. Blaise Bowman, Statistics and Computer Science (expected to graduate Dec 2020)
6. Boyette Sarah, Physics (expected to graduate December 2020)
7. Jarling Liu, Sociology (expected to graduate May 2021)
8. Derek Pfeffer, Aerospace Engineering (expected to graduate May 2023)
9. Brian Paulsen, Engineering (expected to graduate May 2023)
10. Garrett Young, Electrical Engineering and Music (expected to graduate May 2023)
11. Danielle Jacobs, Civil Engineering (graduated 2019)
12. Allie Jo Vogrig, Construction Engineering and Management (graduated 2018).
13. Alberto Duran, Construction Engineering & Management (with publication, graduated 2017).
14. Caitie Holliday, Building Construction (with publication, graduated 2017).
15. Caroline Beuth, Construction Engineering & Management (with publication, graduated 2017).
16. Mayank Periwal, Construction Engineering & Management (with publication, graduated 2017).
17. Nhi Ly, Psychology (with publication, graduated 2017).
18. Amy Vogrig, Computer Science (graduated 2016).
19. James T. Martin, Construction Engineering & Management (with publication, graduated 2016).
20. Abby Jetmundsen, Computer Science (graduated 2016).
21. Jeremy Brenner, Building Construction (graduated 2016).

### ***Mentoring women and men of color***

Since joining the Virginia Tech faculty in 2012, I have served as a mentor for a number of young women and men of color in the College of Engineering and across the Virginia Tech campus. I was the initial advisor and subsequent mentor to Dr. Glenda Young; mentor to Dr. Kelly J. Cross; mentor to graduate students (MS degree seeking) Kara and Kandace Kea; mentor to agriculture leadership doctoral student Tinesha Woods-Wells; mentor to former MS student in food science and current doctoral student in sociology, Jariah Strozier; and mentor to building construction undergraduate students Cayla Anderson and Jade McNair.

In addition to my mentorship of women and men on campus, I mentor several junior faculty off campus. I serve as a mentor to Dr. Leroy Long, III, Assistant Professor of Engineering Fundamentals at Embry-Riddle Aeronautical University; Benjamin Ahn, Assistant Professor of Aeronautical Engineering at Iowa State University; Dr. Janie Moore, Assistant Professor of Biological and Agricultural Engineering at Texas A&M University; Dr. Nicole Pitterson, Assistant Professor of Engineering Education at Virginia Tech; Dr. Nicole Barclay, Teaching Assistant Professor in the Engineering Technology and Construction Management programs at UNC Charlotte; Dr. Cherie Edwards postdoctoral associate at Virginia Tech; Drs. Walter Lee and Freddy Paige both of Virginia Tech and Ayrton Bryan EHS Manager at Anheuser-Busch.

I also advance women and men of color through my scholarship most notably my publication entitled, *The Color of Climate: Ecology, Environment, Climate Change, and Women of Color—Exploring Environmental Leadership from the Perspective of Women of Color in Science*. Additionally, my NSF Career Grant seeks to transform engineering education by advancing fundamental knowledge of co-curricular activities that influence underrepresented students' persistence and support their learning in college and entry into the workforce.

***Mentored the following undergraduate students while under the supervision of Dr. Julie P. Martin***

1. Walter Lee, (2009-2010). B.S. Industrial Engineering, Clemson University, 2010  
Ph.D. in Engineering Education at Virginia Tech, May 2015). Starting August 2015, assistant professor in Engineering Education Department at Virginia Tech.
2. Brianne' Fleming (2009-2010) B.S. Industrial Engineering, Clemson University, 2010  
Currently pursuing Masters in Industrial Engineering at Old Dominion University.
3. Jenny Smith (2009-2010) B.S. Chemical Engineering, Clemson University, 2010  
Currently employed in industry.