Address: School of Universal Computing Construction and Engineering Education (SUCCEED), Florida International University Phone: (305) 348-4705 • E-mail: ssecules@fiu.edu

Education

Education			
Ph.D.	Curriculum and Instruction	2017	University of Maryland
Di	issertation: Beyond Diversity as Usual: Exp in Engineering Education. Co-C	_	11
M.S.	Architectural Sciences - Acoustics	2008	Rensselaer Polytechnic Institute
Th	nesis: Quantifying the Degradation of Auton	natic Speech Rec	cognition in Reverberant Environments
B.E.	Engineering	2007	Thayer School of Engineering
Co	ourse concentration: Signal Processing		at Dartmouth College
B.A.	Engineering Sciences	2007	Dartmouth College
Ph	ii Beta Kappa, Magna Cum Laude		
	- Experi	ience -	
_	•		
Faculty App	pointments		
Edu	stant Professor, School of Computing Conscation (SUCCEED), College of Engineering versity	_	
	ting Assistant Professor, School of Enginee ngineering, Purdue University	ring Education,	College 08/2018 – 07/2019
	 Assistant Research Scientist, Engineering Education Transformation Institute (EETI), University of Georgia 		ontion 08/2017 – 07/2018
Research A	ppointments		
• Grad	duate Research Assistant, University of Mar	ryland	01/2013 - 07/2017
• Grad	• Graduate Research Assistant, Rensselaer Polytechnic Institute.		08/2007 - 06/2008
Professiona	al Engineering Experience		
• Seni	or Consultant. Mei Wu Acoustics. Redwood	l City, CA.	01/2011 - 06/2013
corp	ustical consulting, project management, pro orate, R&D building design. Projects includy ymount University auditorium. Ongoing em	de Seagate manu	facturing facility and Loyola
• Grad	duate Engineering Consultant. Arup. Londo	on, UK.	09/2008 - 12/2010
Com	nputer modeling and design for speech recog	gnition, planning	noise measurements, and project

management. Projects include London Aquatic Centre for 2012 Olympics, Mauritius Central Bank.

• Engineering Intern. Resource Systems Group. White River Junction, VT.

06/2007 - 08/2007

Grant Advisory Board Positions

 Adivsory board for NSF Research in Formation of Engineering grant: "Inclusion, exclusion, and socialization in engineering programs - Investigating key affective socio-psychological mechanisms in professional formation". 	07/2019 - present
• External evaluation team for NSF Broadening Participation in Engineering grant: "Documenting Experiences and Resources Supporting the Community College Transfer, Persistence, and Graduation of Black Engineering Students".	10/2018 - present
• Evaluative team for NSF CORE grant: "Unveiling white and male privilege in physics teaching and learning".	10/2018 - present

- Publications -

Peer-Reviewed Journal Publications

- Secules, S., Sochacka, N., Huff, J., Walther, J. (2021). The social construction of professional shame for undergraduate engineering students. https://doi.org/10.1002/jee.20419
- Masta, S., & **Secules, S.** (2021). When critical ethnography leaves the field and enters the engineering classroom: A scoping review. *Studies in Engineering Education*. Special issue on Theories and Methods in Engineering Education. 2(1). http://doi.org/10.21061/see.26
- Secules, S., & Mejia, J. (2021). Contextualizing the past to guide the future: situating three critical theoretical frameworks for educational culture. *Studies in Engineering Education*. Special issue on Theories and Methods in Engineering Education. 1(2), 156–171. http://doi.org/10.21061/see.51
- Secules, S., McCall, C., Mejia, J., Masters, A., Beebe, C., Sanchez-Pena, M., & Svyantek, M. (2021). Positionality practices and dimensions of impact on equity research: A collaborative inquiry and call to the community. *Journal of Engineering Education*. 110(1), 1-25. https://doi.org/10.1002/jee.20377
- Berhane, B., **Secules, S.**, Onuma, F. (2020). Learning while Black: Identity formation and social experiences for six undergraduate engineering transfer students. *Journal of Women and Minorities in Science and Engineering*. 26(2): 93-124. 10.1615/JWomenMinorScienEng.2020024994
- Secules, S., Lawson, W., (2019). Description and mixed methods evaluation of a novel hardware-based introductory programming course. *Advances in Engineering Education*. 7(3): 1-30. https://advances.asee.org/wp-content/uploads/vol07/issue03/Papers/AEE-25-Secules-corrected.pdf
- Secules, S. (2019). Making the familiar strange: An ethnographic scholarship of integration contextualizing engineering educational culture as masculine and competitive. *Engineering Studies*. 11(3): 196-216. https://doi.org/10.1080/19378629.2019.1663200
- Secules, S., Gupta, A., & Elby, A. (2018). Supporting the narrative agency of a marginalized engineering student. *Journal of Engineering Education*. 107(2): 1-33. https://doi.org/10.1002/jee.20201
- Secules, S., Gupta, A., & Elby, A., Turpen, C. (2018). Zooming out from the struggling student: The cultural construction of engineering ability in an undergraduate programming class. *Journal of Engineering Education*. 107(1): 56-86. https://doi.org/10.1002/jee.20191

Selected Peer-Reviewed Conference Publications

- Secules, S., Berhane, B., Long, H., Carringella, A., & Pinto, A. (2021). Understanding Non-Traditional Students in Engineering and Computing (Work in Progress). Paper and presentation in American Society for Engineering Education Annual Conference: Minorities in Engineering Division. Virtual conference.
- Kali, M., Secules, S., McCall., C. (2020). Including Alice: Uncovering the Narrative of One Student's Experience at the Intersection of International Student Status and Mental Health. Paper and presentation in The Collaborative Network for Engineering and Computing Diversity. Virtual conference.
- Secules, S., Masta, S. (2020). Towards a Framework for Equity in Engineering Classrooms. Frontiers in Education Conference. Virtual Conference.
- Secules, S. (2020). How to Be a Graduate Student (Before I Forget): A Collection of Experiential Wisdom. American Society of Engineering Education Annual Conference: Education Research & Methods Division, Virtual conference.
- Dringenberg, E., **Secules, S.,** Kramer, A. (2019). Smartness in Engineering Culture: An Interdisciplinary Dialogue. Paper and presentation in American Society of Engineering Education Annual Conference: Education Research & Methods Division. Tampa Bay, FL.
- Secules, S., Lee, W., Boyd-Sinkler, K., Masters, A. S., Hampton, C., Taylor, A., Grote, D. (2019). Dilemmas in Co-Curricular Support: A Theoretical and Pragmatic Discussion on Current Practice and Future Challenges. Paper and presentation in The Collaborative Network for Engineering and Computing Diversity. Arlington, VA.
- Secules, S., McCall, C. (2019). To Be or Not To Be: A Dialogic Discussion of Two Researchers' Hidden and Transitioning Identities. Paper and presentation in The Collaborative Network for Engineering and Computing Diversity. Arlington, VA.
- Uhlar, J., **Secules, S.** (2018). Butting Heads: Competition and Posturing in Paired Programming Work. Paper in IEEE Frontiers in Education Conference. San Jose, CA.
- Secules, S., Bale, J., Sochacka, N., Walther, J. (2018). Examining a Novel Theory-to-Practice Effort in Engineering Education through Multiple Theoretical Lenses of Systems and Change. Paper in American Society of Engineering Education Annual Conference: Education Research & Methods Division, Salt Lake City, UT.
- Huff, J., Shanachilubwa, K., Secules, S. (2018). Shame Amid Academic Success: An Interpretative Phenomenological Analysis Case Study of a Student's Experience with Emotions in Engineering. Paper in American Society of Engineering Education Annual Conference: Education Research & Methods Division, Salt Lake City, UT.
- Secules, S., Sochacka, N., Walther, J. (2018). New Directions from Theory: Implications for Diversity Support from the Theories of Intersectionality and Liberatory Pedagogy. Paper in The Collaborative Network for Engineering and Computing Diversity: Undergraduate Track, Arlington, VA.
- Secules, S., Turpen, C. (2017). The Construction of Competitive White Masculinity as Engineering Educational Culture. Session chair and paper presenter in The Construction of Whiteness and Dominant Normativities, Council on Anthropology of Education in American Anthropological Association Annual Meeting, Washington, D.C.
- Secules, S. (2017). Putting Diversity in Perspective: A Critical Cultural Historical Context for Representation in Engineering. Paper and presentation at American Society of Engineering Education Annual Conference: Liberal Education / Engineering & Society Division, Columbus, Ohio.

- Berhane, B., Onuma, F., **Secules**, **S.** (2017). Rethinking engineering pathways: An exploration of the diverse K-12 school experiences of six Black engineering undergraduates. Paper in American Society of Engineering Education Annual Conference: Minorities in Engineering Division, Columbus, Ohio.
- Secules, S., Gupta, A., & Elby, A., Turpen, C. (2016). "Turning Away" from the Struggling Student: Revealing Culture in the Construction of Engineering Ability. Paper and presentation at American Educational Research Association Annual Meeting: Cultural Historical Activity Division, Washington DC.
- Secules, S., Gupta, A., & Elby, A. (2016). "Turning Away" from the Struggling Student: The Cultural Construction of Engineering Ability in an Undergraduate Programming Class. Paper and presentation at American Society of Engineering Education Annual Conference: Education Research and Methods Division, New Orleans.
- Secules, S., Gupta, A., & Elby, A. (2015). Theorizing can contribute to marginalized students' agency in engineering persistence. Paper and presentation at American Society of Engineering Education Annual Conference: Women in Engineering Division, Seattle.
- Secules, S., Gupta, A., & Elby, A. (2014). Piecemeal Versus Integrated Design: Framing meets Design Thinking. Paper and presentation at Design Thinking Research Symposium 10, Purdue University.

Book Chapters

- Secules, S., Strong, A. C., & Fletcher, T. (2020). Who Engineering Includes Impacts How Engineers Work: Diversity Challenges and Design Thinking Solutions. In *Implementation Strategies for Improving Diversity in Organizations* (pp. 224-248). IGI Global. (Peer-reviewed).
- Secules, S., Gupta, A., & Elby, A. (2015). Piecemeal Versus Integrated Framing of Design Activities. Chapter 9 in *Analyzing Design Review Conversations*. Adams, R.S. & J. Siddiqui (eds.) West Lafayette, IN: Purdue University Press. (Peer-reviewed, competitive publication).

Invited Talks, Panels, and Posters

- Secules, S. (2021). Engaging Critically with Positionality: Examples from an Ethnography of Undergraduate Engineering Education. Invited talk in Clemson's engineering and science education seminar. Clemson University, Greeneville, SC.
- Secules, S. (2020). Reimagining Educational Problems: The Transformative Potential of Critical Cultural Research for Equity in Engineering Education. Tufts invited IRLI Lecture series and guest visit at Anti-racism Group.
- Secules, S. (2020). How to Be a Graduate Student (Before I Forget). Student Division panel at American Society of Engineering Education Annual Meeting, Virtual Meeting.
- Secules, S. (2019). A Conversation about Marginalization, Equity, and Inclusion (with London, J., Olgilvie, A., Pearson, Y.) EEC Grantees Conference. Colloquium panel, Alexandria, VA.
- Secules, S. (2019). Dilemmas in Co-Curricular Support: A Theoretical and Pragmatic Discussion on Current Practice and Future Challenges. Hi-5 Presentation at Collaborative Network for Engineering and Computing Diversity, Crystal City, VA.
- Secules, S. (2018). Not a Graduate Student, but Not Yet a...: Navigating Transient Positions in Engineering Education. Student Division panel at American Society of Engineering Education Annual Meeting, Salt Lake City, UT.

- Secules, S. (2018). Reimagining Educational Problems: The Transformative Potential of Critical Cultural Research For Equity in Engineering Education. Invited talk in *Physics Education Research Seminar*. Michigan State University, Lansing, MI.
- Secules, S. (2017). Unknown History and Unseen Culture: Questioning What's "Normal" Regarding Diversity in Engineering Education. Invited talk in *Empowering Voices in Engineering Lecture Series*. A. James Clark School of Engineering, University of Maryland, College Park, MD.
- Secules, S. (2017). Masculinity and Competition as Marginalizing Cultural Norms in Engineering. Presentation and panel participation in *Masculinity in the Public Sphere: Family, Education and Communication*. UMD Consortium on Race, Gender, & Ethnicity, College Park, MD.
- Behrouzi, A., Boone, H., McGough, C., Miller, E., Patrick, A., **Secules, S.** Tsugawa-Nieves, M., (2017). Moderator and panelist for *Graduate Student Pathways into Engineering Education*. Student Division panel at American Society of Engineering Education Annual Meeting, Columbus, OH.
- Secules, S. (2016). Discovering and Entangling Representation and Culture in the History of Engineering Education. Poster presentation at *New Scholars Poster Session*, Council on Anthropology of Education, American Anthropological Association annual meeting, Washington, DC.
- Quan, G., **Secules, S.** (2016). Using Student Perspectives to Understand Equity in STEM Education. Invited talk at *Better Astronomy for a New Generation* (BANG!) seminar, University of Maryland, College Park, MD.
- Geddes, K., Habbibah, U. & **Secules, S.**, (2015). Investigating Experience, Community, and Support in an Undergraduate Women's Engineering Living-Learning Program. Presentation at *Anthro*+ conference at the University of Maryland, College Park, MD.

Workshops and Guest Lectures

- Secules, S. (2020). Thinking like an Ethnographer: Advice on education research methods, positionality, and social context. EDPS 6841 Qualitative and Quantitative Methods Course: Florida International University, Miami, FL.
- Secules, S. (2020). Changing Paradigms for Diversity in Undergraduate Engineering Education through Critical Cultural Research. WEPAN Professional Development Webinar. Virtual Delivery. https://www.wepan.org/page/ChangingParadigms
- McCall, C. & Secules, S. (2019). Individuals with Hidden and Transitioning Identities. Workshop at The Leonhard Center for the Enhancement of Engineering Education, Pennsylvania State University, State College, PA. 10.25148/succeed.FIDC008801
- Dickerson, D. & Secules, S. (2019). Exemplifying the Scientific Enterprise through Diversity, Equity, and Inclusion. Workshop at Carnegie Institute of Science, Pasadena, CA. 10.25148/succeed.FIDC008802
- Secules, S. (2017). Complexities and Challenges of Member Checking. Guest presentation in an ethnographic methods course (Carol Brandt, Temple). College of Education, Temple University, Philadelphia, PA.

Page 6

• Secules, S. (2016). Engineering Design of Social Systems. Presented an engineering professional development session for practicing teachers in the STEM Leadership Program. College of Education, University of Maryland, College Park, MD.

Other Publications

- Secules, S. (2021). Why we made a division on equity, culture, and social justice in education. Blog post for American Society for Engineering Education Commission on Diversity Equity and Inclusion. https://diversity.asee.org/deicommittee/2021/07/27/why-we-made-a-division-on-equity-culture-and-social-justice-in-education/
- Secules, S., McCall, C., (2020). Taking a Deeper Look at Diversity Through Inclusion. Blog post for American Society for Engineering Education Commission on Diversity Equity and Inclusion. https://diversity.asee.org/deicommittee/2020/12/11/taking-a-deeper-look-at-diversity-through-inclusion/
- Secules, S. (2020). 'Eat Your Veggies' Research: Why I pursue qualitative research for an audience of quantitative-minded engineering educators. Blog post for Accelerating Systemic Change in STEM Higher Education Network. https://ascnhighered.org/ASCN/posts/240118.html
- Secules, S. (2017). Beyond the Diversity Status Quo. Blog post for Accelerating Systemic Change in STEM Higher Education Network with 2000+ reaches. https://ascnhighered.org/ASCN/posts/191364.html

- Recognition -

Fellowships and Grants

 Audio for Inclusion: Uncovering Marginalized Student Narratives to Provide Insight to Faculty on the Known Unknowns of Inclusion – NSF Award #2114241 	\$471,624	08/2021 - 07/2024
• Florida-IT Graduate Attainment Pathways – NSF Award #2130398	\$1,898,240	07/2021 - 07/2026
• Apprentice Faculty Grant. Education Research & Methods Division. Faculty mentor Dr. Alice Pawley.	\$2,000	04/2018
• Co-PI for two winning internal grant proposals to UGA Office of Inst Approaches to Promote Diversity and Inclusion	titutional Dive	ersity program: New
"Expanding Diversity in STEM through a Recruitment, Preparation, and Outreach Program for African American Community in Atlanta Metro Area."	\$10,000	01/2018 – 06/2019
"Recruitment of local underrepresented groups through local STEM clubs with undergraduate mentors from the UGA chapter of the National Society of Black Engineers (NSBE)."	\$10,000	01/2018 – 06/2019
 Merit Fellowship. Department of Teaching, Learning, Policy, and Leadership, University of Maryland. 	\$2,600	08/2016
 Support Program for Advancing Research and Collaboration (SPARC) grant. UMD College of Education. 	\$1,200	04/2016

Page 7

• Dissertation Seed Grant. Qualitative Research Interest Group, Consortium on Race, Gender, and Ethnicity at UMD.	\$1,000	04/2016
• Flagship Fellowship. University of Maryland.	\$50,000	09/2013 - 06/2017

Honors and Awards

• Star Reviewer Award. Journal of Engineering Education.	2021
• William Elgin Wickenden award for best paper. Journal of Engineering Education.	2019
• Outstanding Doctoral Student award. UMD College of Education.	2016
• Best Diversity Paper. Education Research and Methods Division. American Society for Engineering Education Annual Meeting. Finalist - Best Diversity Paper at conference.	2016
• Best Student Paper Award. Learning Sciences SIG American Educational Research Association Annual Meeting.	2016
• Graduate School Outstanding Graduate Assistant award. UMD Graduate School.	2016
• Honorable mention. International Student Design Competition. Acoustical Society of America.	2008
• Citation for exemplary teaching assistance in Linear Systems. Thayer School of Engineering, Dartmouth College.	2007
• Citation for exemplary coursework in Communication Systems. Thayer School of Engineering, Dartmouth College.	2007
• Tau Beta Pi. Thayer School of Engineering, Dartmouth College	2007
• Phi Beta Kappa. Magna Cum Laude. Dartmouth College	2007
• Presidential Scholars. Dartmouth College.	2005

- Teaching -

Teaching Appointments

• Instructor-of-Record, College of Engineering and Computing, Florida International University 08/2018 – present

Instruction and curriculum development for EGS 1006 Introduction to Engineering, introduction to engineering disciplines and design.

Instruction and course design for EGN 3910 Human-centered Design for Systems in Society, core junior-level course in the Bachelor of Science in Interdisciplinary Engineering.

Instruction and course design for EGS 2053 Foundations of Interdisciplinary Engineering, core course introduction to the Bachelor of Science in Interdisciplinary Engineering.

Instruction and course design for EGS 6008 Foundations of Engineering and Computing Education, core course introduction to the PhD in Engineering and Computing Education.

• *Instructor-of-Record*, *College of Engineering*, *Purdue University*

08/2018 - 05/2019

Instruction and curriculum development for ENE-131: Transforming Ideas to Innovation I and ENE-132: Transforming Ideas to Innovation II. Core project-based course on engineering design, Excel calculations, and Matlab programming for all undergraduate majors.

Page 8

- *Instructor-of-Record, College of Engineering, University of Georgia* 08/2017 12/2017 Instruction and curriculum development for MCHE-2990: Engineers, technology, and the social—exploring relationships in sociotechnical systems. Core discussion-based course for undergraduate mechanical engineers.
- *Instructor-of-Record, College of Education, University of Maryland* 06/2016 07/2016 Curriculum design and instruction for EDCI-688C: Introduction to Engineering for Teachers. Engineering component of STEM professional development master's degree for practicing K-8 teachers.
- Co-taught EDCI-751: Theory and Research on Mathematical and Scientific Thinking and Learning. A graduate course on student learning in STEM, with Dr. Janet Walkoe.

09/2015 - 12/2015

• Instructor, College of Education, University of Maryland

• *Instructor-of-Record*, *School of Engineering*, *University of Maryland* 01/2015 – 05/2015 Taught ENES-100: Introduction to Engineering Design. A project-based course for undergraduate engineering majors.

Graduate Advising

• Maimuna Begum Kali	PhD in Engineering and Computing Education, Florida International University	01/2020 - present
• Bailey Bond	PhD in Engineering and Computing Education, Florida International University	04/2021 - present
• Tiana Solis	PhD in Engineering and Computing Education, Florida International University	Begins 09/2021
• Nivedita Kumar	PhD in Engineering and Computing Education, Florida International University	Begins 09/2021

Graduate Committee Membership

• Indhira Hasbun	PhD in Engineering and Computing Education, Florida International University	10/2020 - present
• Andrew Green	PhD in Education Policy / Higher Education, Florida International University	10/2020 - present
• Md Nurul Anwar Tarek	PhD in Electrical and Computing Engineering, Florida International University	10/2020 - present

Student Research Supervisor

• Anna Carringella	Undergraduate Student Researcher, Florida International University	01/2020 - 12/2020
• Andrea Pinto	Undergraduate Student Researcher, Florida International University	01/2020 - 12/2020
• Paige Brown	Doctoral Student Research Project, Purdue University	09/2018 - 12/2018

Stephen Secules Page 9

• James Bale	Masters Student Research Project, University of Georgia	09/2017 - 06/2018
• John Uhlar	Undergraduate Student Research Project, University of Georgia	09/2017 - 06/2018
• Emilia Tanu	Undergraduate Student Research Project, University of Maryland	01/2015 - 05/2017

- Service -

Editor Roles

01/2021 - present
05/2021 - present
06/2020 - present
01/2020 - present
08/2019 – present
08/2017 – present
06/2017 – 06/2018
08/2017 - 07/2017
06/2016 – 06/2017
03/2017 - 06/2017
09/2015 - 05/2017
06/2015 - 06/2016
06/2016 – 09/2016
08/2014 - 06/2017

Page 10

Diversity Support Activities

• Out-in-STEM 02/2018 – present

Faculty advisor, FIU chapter. Initiated formation of the club.

• ASEE LGBTQ Virtual Community of Practice

02/2018 - present

Participate in interactive virtual community forums related to LGBT inclusion.

• ASEE Safe Zone Ally Training

02/2018 - 05/2018

Participate in interactive virtual webinars related to LGBT inclusion.

• National Society of Black Engineers

10/2017 - 07/2018

Faculty advisor, UGA chapter. Assisted in winning grants supporting NSBE activities. Connected students to faculty and departmental resources.

Society of Hispanic Professional Engineers
 Faculty advisor, UGA chapter.

10/2017 - 07/2018

• LGBT Safe Space Training

10/2017

Certified by UGA LGBT Safe Space training. Adapting safe space training for engineering faculty as an event in Spring semester.

• GRAD-MAP Spring Symposium Faculty Dialogue

04/2017

Facilitated faculty dialogue on mentoring practices between PWIs, HBCUs, CCs, and 4-year institutions as part of UMD Office of Diversity and Inclusion initiative.

• Sindesis Diversity Retreat for Greek Life

11/2016

Facilitated inter-group dialogue with fraternity and sorority members as part of UMD Office of Diversity and Inclusion initiative.

• NSF-sponsored Workshop "Who's Not at the Table"

10/2016

Contributed to conference/workshop to brainstorm a research agenda around groups currently underserved by diversity support in engineering education. Clemson University.

• Inter-group Dialogue with UMD Office of Diversity and Inclusion Completed training course on inter-group dialogue techniques.

05/2016

Reviewing

- Journal of the Learning Sciences
- Engineering Studies
- Journal of Women and Minorities in Science and Engineering
- Journal of Engineering Education
- The Collaborative Network for Engineering and Computing Diversity (CoNECD)
- American Society of Engineering Education, LE/ES Division, Student Division, Education Research and Methods (ERM) Division, ERM Best Paper Committee
- National Science Foundation grant proposal panelist
- American Educational Research Association, Cultural Historical SIG and Division C (Engineering Education subdivision)
- Design Thinking Research Symposium