

DEPARTMENT OF  
ENGINEERING EDUCATION

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OUR FACULTY'S  
"GREATEST HITS"

*PUBLICATIONS TO READ AND KNOW*

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# Dr. Benjamin Ahn

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## Investigating Problem-Solving Processes of Students, Faculty, and Practicing Engineers in Civil Engineering

*Akinci-Ceylan, Secil, et al. "Investigating Problem-Solving Processes of Students, Faculty, and Practicing Engineers in Civil Engineering." Journal of Civil Engineering Education 148.1 (2022): 04021014.*

## Exploring Engineering Managers' Perspectives on the Actions of Engineering Managers and Newly Hired Engineers During the New Engineers' Socialization Period

*Dong, Yun, Benjamin Ahn, and Uriah J. Tobey. "Exploring engineering managers' perspectives on the actions of engineering managers and newly hired engineers during the new engineers' socialization period." Engineering Management Journal 34.3 (2022): 343-356.*

## Student Interactions with Online Videos in a Large Hybrid Mechanics of Materials Course

*Ahn, Benjamin, and Devayan D. Bir. "Student Interactions with Online Videos in a Large Hybrid Mechanics of Materials Course." Advances in Engineering Education 6.3 (2018): n3.*

## Knowledge, Skills, and Attributes of Graduate Student and Postdoctoral Mentors in Undergraduate Research Settings

*Ahn, Benjamin, and Monica F. Cox. "Knowledge, skills, and attributes of graduate student and postdoctoral mentors in undergraduate research settings." Journal of Engineering Education 105.4 (2016): 605-629.*

# Dr. Monica F. Cox

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## Demystifying the Engineering PhD

*Cox, M.F. (2019). Demystifying the Engineering PhD. Academic Press.*

# Dr. Ann Christy

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## Thermodynamics for Citizenship: Entrepreneurial Engineering Through Project- Based Learning

*Christy, A.D., Wilson, T.G., Meehl, O.J. (2019). [Thermodynamics for Citizenship: Entrepreneurial engineering through project-based learning](#). Proceedings of the 2019 ASEE Annual Conference, Tampa, FL. American Society for Engineering Education. Paper ID#27281. 9 p*

## The University's Role in Professional Development for Computer Aided Engineering

*Nutwell, E.C., Christy, A.D. (2019). [The University's Role in Professional Development for Computer Aided Engineering](#). Proceedings of the 2019 ASEE Annual Conference, Tampa, FL. American Society for Engineering Education. Paper ID#25491.*

## The Use of Student Portfolios in Engineering Instruction

*Christy, A.D., Lima, M. (1998). [The use of student portfolios in engineering instruction](#). *Journal of Engineering Education* 87(2), 143-148.*

# Dr. David Delaine

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## An Investigation of Inter-Stakeholder Dynamics Supportive of STEM, Community-Based Learning

*Delaine, D.A., Cardoso, J.R., Walther, J. (2019). [An Investigation of Inter- Stakeholder Dynamics Supportive of STEM, Community-Based Learning](#). *International Journal of Engineering Education*, 35(4), 1094-1109.*

## A Pilot Study of the Development of Empathy within a Service-learning Trip from a Qualitative Perspective Global Diversity and Inclusion in Engineering Education: Developing Platforms toward Global Alignment

*Delaine, D.A., Williams, D.N., Sigamoney, R., Tull, R.G. (2016). [Global Diversity and Inclusion in Engineering Education: Developing Platforms toward Global Alignment](#). *International Journal of Engineering Pedagogy* 6(1), 56-71.*

## To What Extent Does Gender and Ethnicity Impact Engineering Students' Career Outcomes? An Exploratory Analysis Comparing Biomedical to Three Other Undergraduate Engineering Majors

*Ortiz-Rosario, A., Shermadou, A., Delaine, D.A., Nocera, T.M. (2019). [To What Extent Does Gender and Ethnicity Impact Engineering Students' Career Outcomes? An Exploratory Analysis Comparing Biomedical to Three Other Undergraduate Engineering Majors](#). *ASEE Paper*.*

## Air Traffic Control (ATC) Technical Training Collaboration for the Advancement of Global Harmonization

*Martin, A., Strzempkowski, B., Young, S., Fontecchio, A.K., Delaine, D.A. (2020). [Air traffic control \(ATC\) Technical Training Collaboration for the Advancement of Global Harmonization](#). *Journal of Air Transport Management* 89*

# Dr. Emily Dringenberg

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## Smartness in Engineering Education: Student Beliefs and Experiences

**Dringenberg, E., Kramer, A. Betz, A.R.** (2022). [Smartness in engineering education: student beliefs and experiences](https://doi.org/10.1002/jee.20463). *Journal of Engineering Education*, 111(3), 575-594. <https://doi.org/10.1002/jee.20463>

## Student and Faculty Beliefs About Diverse Approaches to Engineering Design Decisions

**Dringenberg, E., Guanes, G., Leonard, A.\*** (2021). [Student and faculty beliefs about diverse approaches to engineering design decisions](http://doi.org/10.21061/see.70). *Studies in Engineering Education*, 2(2), 78-95. <http://doi.org/10.21061/see.70>

## Empathic Approaches in Engineering Capstone Design: Student Beliefs and Reported Behaviour

**Guanes, G.\*, Wang, J.\*, Delaine, D., Dringenberg, E.** (2021). [Empathic approaches in engineering capstone design: Student beliefs and reported behaviour](https://doi.org/10.1080/03043797.2021.1927989). *European Journal of Engineering Education*. 47(3), 429-445. <https://doi.org/10.1080/03043797.2021.1927989>

# Dr. Rachel Kajfez

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## A Grounded Theory Model of the Dynamics of Undergraduate Engineering Students' Researcher Identity and Epistemic Thinking

Faber, C. J., **Kajfez, R. L.**, Lee, D. M., Benson, L. C., Kennedy, M. S., & Creamer, E. G. (2021). [A grounded theory model of the dynamics of undergraduate engineering students' researcher identity and epistemic thinking](#). *Journal of Research in Science Teaching*, 59(4), 529–560. doi: <https://doi.org/10.1002/tea.21736>

## A Mixed Method Approach to Understanding Researcher Identity

**Kajfez, R. L.**, Lee, D., Ehlert, K., Faber, C., Benson, L., & Kennedy, M. (2021). [A mixed method approach to understanding researcher identity](#). *Studies in Engineering Education*, 2(1), 1–15. doi: <http://doi.org/10.21061/see.24>

## Qualitative coding: An approach to Assess Inter-Rater Reliability

McAlister, A. M., Lee, D. M., Ehlert, K. M., **Kajfez, R. L.**, Faber, C. J., & Kennedy, M. S. (2017). [Qualitative coding: An approach to assess inter-rater reliability](#). Paper presented at the 124th American Society for Engineering Education Annual Conference & Exposition, Columbus, OH. <https://peer.asee.org/28777>

## Competence, Autonomy, and Relatedness as Motivators of Graduate Teaching Assistants

**Kajfez, R.L.** & Matusovich, H.M. (2017). [Competence, autonomy, and relatedness as motivators of graduate teaching assistants](#). *Journal of Engineering Education*, 106(2), 245-272. doi:10.1002/jee.20167

# Dr. Julie P. Martin

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## How Engineering Instructors Supported Students During Emergency Remote Instruction: A case Comparison

Douglas, K. A., Johnston, A. C, **Martin, J. P.**, Short, T., & Soto-Pérez, R. A. (2022). [How engineering instructors supported students during emergency remote instruction: A case comparison](https://onlinelibrary.wiley.com/doi/10.1002/cae.22495). *Computer Applications in Engineering Education*, 30(3), 934–955. <https://onlinelibrary.wiley.com/doi/10.1002/cae.22495>

## Critical Research Methods in STEM Higher Education: A State-of-the-Art Review

Patrick, A., **Martin, J. P.**, & Borrego, M. (2022). [Critical research methods in STEM higher education: A state-of-the-art review](https://doi.org/10.1615/JWomenMinorScienEng.2022036570) [Special issue]. *Journal of Women and Minorities in Science and Engineering*, 28(3), 1–26. <https://doi.org/10.1615/JWomenMinorScienEng.2022036570>

## Centering the Marginalized Student's Voice Through Autoethnography: Implications for Engineering Education Research

**Martin, J. P.**, and Garza, C. (2020). *Centering the Marginalized Student's Voice Through Autoethnography: Implications for Engineering Education Research*. *Studies in Engineering Education*, 1(1).

## Time for a Culture Change—Moving Academia from Destructive to Constructive Feedback

**Martin, J.P.** (2020) [Time for a Culture Change—Moving Academia from Destructive to Constructive Feedback](https://doi.org/10.1615/JWomenMinorScienEng.2020036570), editorial in *Journal of Women & Minorities in Science & Engineering*, 26(1).

# Dr. Monique Ross

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## Exploring the pathways: Using transition theory to understand the strategies undergraduate computing students leverage as transfer students

*Batten, J. S., Strong, A. C., Ross, M. S. Billionniere E., Herlle, M. V., (2022). Exploring the pathways: Using transition theory to understand the strategies undergraduate computing students leverage as transfer students. The Annual American Society for Engineering Education (ASEE) conference, June, 2022.*

*\*\*Best Student Presentation Award Winner – Jasmine Batten (Ph.D. student)\*\**

## Traversing the landscapes of computer science: A case study of Black women's journey in graduate school to become computer scientists

*Ross, M., Farhangi, S., Patel, D., Waisome, J., Garcia, A. (2022). Traversing the landscapes of computer science: A case study of Black women's journey in graduate school to become computer scientists. Journal of Women and Minorities in Science and Engineering. 28(5): 69-107. DOI: 10.1615/JWomenMinorScienEng.2022033906*

## Resilient Engineering Identity Development Critical to Prolonged Engagement of Black Women in Engineering

*Ross, M., Huff, J., Godwin, A. (2021). Resilient Engineering Identity Development Critical to Prolonged Engagement of Black Women in Engineering. Journal of Engineering Education. 110(1), pp. 92-113. <http://dx.doi.org/10.1002/jee.20374> 21 pages, single-spaced*

*\*\*American Educational Research Association (AERA) (2022) Division I Outstanding Research Publications Award\*\**

## Methodology Matters: Employing Phenomenography to Investigate Experiences in Computing Fields and the Application of Theoretical Frameworks

*Lunn, S., Ross, M. (2021). Methodology Matters: Employing Phenomenography to*



*Investigate Experiences in Computing Fields and the Application of Theoretical Frameworks. Submitted to the Frontiers in Education (FIE), IEEE.*

*\*\*2021 Benjamin J Dasher Conference Best Paper Award (Lunn - Ph.D. Student)*

## **The intersection of being Black and being a woman: Examining the effect of social computing relationships on computer science career choice**

**Ross, M., Hazari, Z., Sonnert, G., Sadler, P.** (2020). *The intersection of being Black and being a woman: Examining the effect of social computing relationships on computer science career choice.* *ACM Transactions on Computing Education*, 20(2), 1-15 <https://doi.org/10.1145/3377426>