

# ABBREVIATED CURRICULUM VITA

## CYNTHIA J. FINELLI (she/her)

### Academic appointments

<b>University of Michigan</b> (2003-present)	Electrical & Computer Engineering: Assoc Prof (09/15-08/19); Professor (09/19-present) Education (courtesy appointment): Assoc Prof (09/16-08/19); Professor (09/19-present) Engineering Education Research: Program Director & Graduate Chair (09/16-present) CRLT in Engineering: Founding Director (05/03-08/15)
<b>Kettering University</b> (1992-2003)	Electrical & Computer Engineering: Assist Prof (09/92-06/96); Assoc Prof (07/96-07/03) Center for Excellence in Teaching and Learning, Founding Director (04/00-07/03)

### Education

- Ph.D., Electrical Engineering: Systems. University of Michigan, May 1993
- M.S.E., Electrical Engineering: Systems. University of Michigan, Aug 1989
- B.S.E., Electrical Engineering. University of Michigan, Aug 1988

### Selected awards and honors

- 2021** *Fellow*, Institute of Electrical and Electronics Engineers  
*EECS Department Outstanding Achievement Award*, University of Michigan  
*North Campus Deans' MLK Spirit Award*, University of Michigan
- 2019** *Creativity, Innovation, and Daring Incentive Award*, University of Michigan College of Engineering
- 2017** *Senior Member*, Institute of Electrical and Electronics Engineers
- 2016** *Frontiers of Engineering Education member*, National Academy of Engineering.  
*Engineering Education Research "Pioneer"* ([depts.washington.edu/celtweb/pioneers-wp/?p=719](https://depts.washington.edu/celtweb/pioneers-wp/?p=719))  
*Helen Plants Best Special Session Award*, IEEE/ASEE Frontiers in Education Conference
- 2015** *Best Paper Award*, ASEE Educational Research and Methods Division
- 2014** *Ronald J. Schmitz Award for Meritorious Service*, IEEE/ASEE Frontiers in Education Conference
- 2013** *Fellow*, American Society of Engineering Education  
*Maryellen Weimer Scholarly Work in Teaching and Learning Award*, Magna Publications  
*Fellow*, National Effective Teaching Institute
- 2010** *Distinguished Service Award*, ASEE Educational Research and Methods Division  
*Best Paper Award*, ASEE Professional Interest Council V
- 2009** *Premier Award for Engineering Education Courseware*
- 2003** *Best Paper Award*, ASEE Educational Research and Methods Division
- 1997** *Outstanding Teacher of the Year*, Kettering University Alumni Association

### Selected research publications (from 237 total journal, book, and conference publications)

Postdoctoral fellows double underlined, graduate students underlined, \*undergraduate indicated by asterisk

1. Andrews, M., Prince, M., Finelli, C. J., Graham, M., Borrego, M., & Husman, J. (2021). Explanation and facilitation strategies reduce student resistance to active learning. *College Teaching*, published online 10/08/21.
2. Brennan-Wydra, E., Henderson, T., Johnson, A. W., Millunchick, J. M., & Finelli, C. J. (2021). The role of college knowledge and proactive behavior on participation in co-curricular activities. *Journal of Engineering Education*, 110(1), 114-142.
3. Crockett, C., Finelli, C. J., DeMonbrun, M., Nguyen, K., Tharayil, S., Shekhar, P., & Rosenberg R. (2021). Common characteristics of high-quality papers studying student response to active learning. *International Journal of Engineering Education*, 37(2), 420-432.

4. Johnson, A. W., Su, M. P.\*, Blackburn, M. W.\*, & **Finelli, C. J.** (2021). Instructor use of a flexible classroom to facilitate active learning in undergraduate engineering courses. *European Journal of Engineering Education*, 46(4), 618-635.
5. Nguyen, K. A., Borrego, M., **Finelli, C. J.**, DeMonbrun, M., Crockett, C., Tharayil, S., & Rosenberg, R. (2021). Instructor strategies for implementing active learning: A systematic literature review. *International Journal of STEM Education*, 8(1), 9.
6. Andrews, M. E., Graham, M., Prince, M. J., Borrego, M., **Finelli, C. J.**, & Husman, J. (2020). Student resistance to active learning: Do instructors (mostly) get it wrong? *Australasian Journal of Engineering Education*, 25(2), 142-153.
7. Brennan-Wydra, E., Millunchick, J. M., Henderson, T., Johnson, A. W., & **Finelli, C. J.** (2020 Jul/Aug). Investigating the adaptation of socialization processes scales in engineering education context. *International Journal of Engineering Education*, 36(4), 1383-1395.
8. **Finelli, C. J.**, & Borrego, M. J. (2020). Evidence-based strategies to reduce student resistance to active learning. In J. J. Mintzes & E. M. Walter (Eds.), *Active learning in college science: The case for evidence-based practice*. pp. 943-952. Cham, Switzerland: Springer Nature.
9. Shekhar, P., Borrego, M., DeMonbrun, M., **Finelli, C. J.**, Crockett, C., & Nguyen, K. (2020, Jul/Aug). Negative student responses to active learning in STEM classrooms: A systematic review of underlying reasons. *Journal of College Science Teaching*, 49(6), 45-54.
10. DeMonbrun, R. M., Cañas, J. C., & **Finelli, C. J.** (2019). Influencing changes in teaching: Addressing motivations and barriers to the adoption of evidence-based teaching practices in engineering. *Journal of Excellence in College Teaching*, 30(1), 101-125.
11. **Finelli, C. J.**, & Borrego, M. (2019). Adoption of research-based instructional strategies in engineering and computer science. In S. Laursen (Ed.), *Levers for change: An assessment of progress on changing STEM instruction*. pp. 69-79. Washington, DC: American Association for the Advancement of Science.
12. **Finelli, C. J.**, & Froyd, J. E. (2019, Spring). Improving student learning in undergraduate engineering education by improving teaching and assessment. *Advances of Engineering Education*, 1-30.
13. Johnson, A.W., Blackburn, M. W.\*, Su, M. P.\*, & **Finelli, C. J.** (2019). How a flexible classroom affords active learning in electrical engineering. *IEEE Transactions on Education*, 62(2), 91-98.
14. Shekhar, P., Prince, M. J., **Finelli, C. J.**, DeMonbrun, R. M., & Waters, C. K. (2019). Integrating quantitative and qualitative research methods to examine student resistance to active learning. *European Journal of Engineering Education*, 44(1), 6-18.
15. DeMonbrun, R. M., Kerst, J.\*, Pfershy, H.\*, & **Finelli, C. J.** (2018). The long-term impact of a faculty development program on student evaluations of teaching. *International Journal of Engineering Education*, 34(4), 1325-1334.
16. **Finelli, C. J.**, Nguyen, K. A., DeMonbrun, R. M., Borrego, M., Prince, M. J., Husman, J., Henderson, C., & Waters, C. K. (2018). Reducing student resistance to active learning: Strategies for instructors. *Journal of College Science Teaching*, 47(5), 80-91.
17. Tharayil, S. A., Borrego, M., Prince, M., Nguyen, K. A., **Finelli, C. J.**, & Waters, C. K. (2018). Strategies to mitigate student resistance to active learning. *International Journal of STEM Education*, 5(7), 1-16.
18. DeMonbrun, R. M., **Finelli, C. J.**, Prince, M. J., Borrego, M., Shekhar, P., Henderson, C., & Waters, C. K. (2017, Apr). Creating an instrument to measure student response to instructional practices. *Journal of Engineering Education*, 106(2), 273-298.
19. Nguyen, K. A., Husman, J., Borrego, M., Shekhar, P., Prince, M. J., DeMonbrun, R. M., **Finelli, C. J.**, Henderson, C., & Waters, C. K. (2017, Jan/Feb). Students' expectations, types of instruction, and instructor strategies predicting student response to active learning. *International Journal of Engineering Education*, 33(1A), 2-18.

### **Recent invited presentations** (from 61 total invitations)

- 2021** *Active learning in the STEM classroom: Overcoming barriers and planning for action.* Texas A&M  
*Enhancing remote teaching in engineering-Lessons learned from Fall 2020.* University of Michigan
- 2020** *Review unto others as you would have others review unto you.* 48<sup>th</sup> Frontiers in Education Conference

*In pursuit of active learning: Challenges, insights, and opportunities (invited keynote address).*  
International Conference on Active Learning in Engineering Education, Pattaya, Thailand  
*Student resistance to active learning: Insights and opportunities.* KTH Royal Institute of Technology,  
Stockholm, Sweden

- 2019** *Active learning for busy skeptics and true believers.* University of Texas at Austin, TX  
*Making space for the Scholarship of Teaching and Learning in your portfolio of scholarship.* UM  
*Overcoming student resistance to active learning.* Florida International University, Miami, FL
- 2018** *Meet the engineering education pioneers.* 48th Frontiers in Education Conference, San Jose, CA  
*Reviewers, reviewers, reviewers!* 2018 Annual SEFI Conference, Copenhagen, Denmark  
*Achieving broader impacts through your journal publications.* 2018 ASEE Annual Conference

### **Selected grant funding** (from 30 awards, including 16 NSF grants, with Finelli share exceeding \$3 million)

1. *Academic success of STEM college students with Attention Deficit Hyperactivity Disorder and the role of classroom teaching practices.* National Science Foundation, total and Finelli's share: \$300,000. 05/21-04/24
2. *Learning to be watchdogs—Advancing engineers' ability to recognize, strategize about, and act on public welfare issues.* National Science Foundation, total \$350,000, Finelli's share \$168,398. 05/21-04/24
3. *Reducing student resistance to active learning: Applying research results to faculty development.* National Science Foundation, total: \$1,863,365, Finelli's share: \$676,104. 10/18-09/22
4. *Introduction and assessment of i-Newton for the engaged learning of engineering dynamics.* National Science Foundation, total: \$299,992, Finelli's share: \$149,996. 09/15/16-08/20
5. *Impact of flexible classroom spaces on faculty pedagogy and student behavior.* National Science Foundation, total and Finelli's share: \$300,000. 06/17-05/20
6. *Research Initiation: Understanding the relationships between participation in co-curricular activities, student characteristics, and the professional formation of engineers.* National Science Foundation, total: \$150,000, Finelli's share: \$63,248. 09/16-08/19

### **Selected service**

#### **Editorial, reviewer, and consultant roles**

- *Journal of Engineering Education.* Advisory Board Member, 07/01/20-06/30/23; Guest editor, 01/01/21-12/31/21; Deputy Editor, 07/01/17-06/30/20.
- *IEEE Transactions on Education.* Associate Editor, 07/01/14-06/30/20.
- *National Science Foundation.* Reviewer, 2002-present.
- *European Journal of Engineering Education.* Reviewer, 2020-present.
- *International Journal of Engineering Education.* Reviewer, 2005-present.

#### **National/international committees and task forces**

- Scholarly Publications Committee, American Society of Engineering Education. Co-Chair, Jul 2021-Jun 2023.
- Task Force on Faculty Teaching Excellence, American Society of Engineering Education. May 2020-Jul 2021.

#### **Select institute and college committees and task forces**

- Graduate Admissions GRE Policy Committee, College of Engineering. Feb 2021-May 2021.
- Search Committee, Engineering Education Research Faculty, College of Engineering. Chair, Sep 2020-Aug 2021; Sep 2015-Oct 2017.
- Faculty Race and Equity Training Steering Committee, College of Engineering. Sep 2020-May 2021.
- Honors and Awards Committee, College of Engineering. Sep 2019-Aug 2021.
- Rackham Research Agenda-Faculty Advisory Committee, University of Michigan. Jan 2019-Dec 2020.
- Dean's Advisory Committee for Female Faculty (DACFF), College of Engineering. Member, Sep 2018-Aug 2020; Co-Chair, Sep 2020-Aug 2021.

- Promotion/Tenure Committee
  - Ginger Shultz, Chemistry, LSA. Jan 2021-Dec 2021.
- Reappointment Committee
  - Joi Mondisa, College of Engineering. Sep 2018-Aug 2019.
  - Ginger Shultz, Chemistry, LSA. Jan 2018-Aug 2019.
- ADVANCE Launch Committee
  - Lu Wang (convener), College of Engineering. Sep 2020-May 2021.
  - Barbara Ericson, School of Information. Sep 2018-May 2019.
  - Joi Mondisa. College of Engineering. Sep 2016-May 2018.

#### Select ECE Department committees

- Lecturer's Major Review Committee, ECE Division. 2021.
- Executive Committee, ECE Division. Sep 2018-Aug 2020.
- ECE Education Research Technical Area Group, ECE Division. Director, Dec 2016-Aug 2021.
- ECE Integrated Lab Development (2xx/3xx) committee. Sep 2018-May 2019.
- Committee for an Inclusive Department, ECE Division. Sep 2016-Aug 2020.
- Undergraduate Academics Committee, ECE Division. Sep 2015-Aug 2018.

#### Courses taught at University of Michigan

- EECS 215. *Introduction to Electric Circuits* (3 credits). Winter 2016, Fall 2016, Winter 2017, Fall 2017, Fall 2019 (2 sections)
- EECS 216: *Introduction to Signals & Systems* (3 credits). Winter 2018
- EER 598: *Engineering Education Research Seminar* (1 credit). Fall 2019
- EER 601: *Foundations of Engineering Education Research* (3 credits). Fall 2018, Winter 2020
- ENGR 580. *Teaching Engineering* (3 credits, co-taught with S. Montgomery). Fall 2020, Fall 2015, Fall 2014

#### Advising for students and postdoctoral fellows

- **Dissertation chair/co-chair (5 total):** Marlor, L. (expected graduation 05/23); Carroll, L. (expected graduation 12/22); Crockett, C. (expected graduation 05/22); Vitali, R. (graduation 08/19); DeMonbrun, M. (graduation 11/18)
- **Dissertation committees (8 total):** Draughon, G. (expected graduation 12/22); Kelly, J. (expected graduation 12/21); Beverly, S. (graduation 08/21); Henderson, T. (graduation 06/20); Soledad, M. (graduation 05/19); Fowler, R. (graduation 05/14); Sutkus, J. (graduation 06/08); Veenstra, C. (graduation 12/07)
- **Research fellows (8 total):** Van den Bogaard, M. (07/21-present); Reeping, D. (11/20-08/21, started as Assistant Prof, U Cincinnati); Swenson, J. (08/18-08/19, started as Assistant Prof, U Buffalo); Johnson, A. (06/16-08/19, started as Instructor, U Colorado-Boulder); Hirshfield, L. (10/14-09/16, started as Lecturer, UMich); Vernon, J. (09/14-06/15); Rasoulifar, G. (02/14-12/14); Daly, S. (01/09-08/10 (started as Assistant Professor, UMich)
- **Masters students and other graduate students (13 total):** Sakri, S. (09/19-12/19); Hernandez, J. (05/19-12/19); Brennan-Wydra, E. (12/17-08/19); Bork, S. (09/17-08/18); Cañas, J. (05/15-09/16); Holsapple, M. (05/08-05/12); Burt, B. (07/10-12/12); Bielby, R. (03/10-05/12); Ra, E. (09/10-12/11); Eagle, E. (04/11-09/11); Walczak, K. (05/09-12/10); Passow, H. (05/03-06/05); Mayhew, M. (06/03-08/04)
- **Undergraduate students (8 total):** Wiwel, C. (09/17-08/18); Blackburn, M. (06/17-03/19); Su, M. (05/17-08/17); Kerst, J. (06/16-12/16); Pfershy, H. (06/16-12/16); Sawyer, C. (06/14-08/14); Al-Khafaji, A. (09/11-05/12); Neubauer, M. (09/11-05/12)