JANE MARGOLIS, Ed.D., Emerita Senior Researcher University of California, Los Angeles

Overview

I am a Senior Researcher in the UCLA School of Education and Information Studies. My work focuses on computer science (CS) education as a window into how segregation and inequality are produced and reproduced. In 2016, I received the Obama White House Champion of Change award for this work. I am the lead author of two award-winning books: *Unlocking the Clubhouse: Women in Computing* (MIT Press, 2002) and *Stuck in the Shallow End: Education Race, and Computing* (MIT Press, 2008, 2017), both which investigate issues of equity and underrepresentation of females and Students of Color in CS education. In 2022, I co-authored (along with Dr. Jean Ryoo) a graphic novel for youth, *Power On!* (MIT Press, 2022), based on previous and current research and written to facilitate learning in K-12 classrooms around some of the most critically important issues involving the role of technology today.

Education

| University of California at Berkeley | Social Science Field Major | BA | 1969 |
|--------------------------------------|----------------------------|------|--------|
| Harvard University Extension | Psychology | MA | 1985 |
| Harvard Graduate School of Education | Education | Ed.D | . 1990 |

Academic Professional Experience

| UCLA GSEIS/SEIS | Senior Researcher | 1999-2024 |
|--------------------------------------|---------------------------|-----------|
| Carnegie Mellon | Visiting Research Scholar | 1995-1999 |
| University of Pittsburgh | Adjunct Assist. Professor | 1995-1998 |
| Harvard University Extension | Lecturer | 1991-1993 |
| Harvard Graduate School of Education | Instructor | 1991-1992 |

Honors and Recognition

• 2018 UCLA Optimist Award

https://optimism.ucla.edu/profiles/jane-margolis/

• 2016 Obama White House Champion of Change Award

https://obamawhitehouse.archives.gov/blog/2016/02/01/helping-america-code-day-computer-science-champions-change

- •2008. Prose Award, Association of American Publishers (Education category) for *Stuck in the Shallow End: Education, Race, and Computing* (MIT Press, 2008)
- 2005. Computer Research Association Habermann Award --- In recognition of outstanding contributions to the advancement of underrepresented groups in computing research.
- •2003. University Professional and Continuing Education Frandson Award for Literature. For Unlocking the Clubhouse: Women Computing: Women in Computing (MIT Press, 2002)

Principal Investigator on Significant Grants and Awards

From 2000-24, I have been the PI or co-PI on NSF grants that have supported our team's work. *denotes PI status.

National Science Foundation Awards

- *2001-5. Out of the Loop: Why are So Few Underrepresented Minority High School Students Learning Computer Science.
- *2002-6. Constructing the Computer Science Pipeline: How High School Structures and Norms Narrow Access to Computer Science for Underrepresented Minority Students.
- *2006-7. Into the Loop: Increasing the Participation of African-American, Latino/a, and Female Students in Computer Science.
- *2006-9. A Computer Science Day with Dr. Tapia, Spelbots, and CENS: Creating Excitement about Computer science and Recognition that Someone Like Me Can be a Computer Scientist.
- *2007-12. Into the Loop: A University-K-12 Alliance for Computer Science Education for African-American, Latino/a and Female students in the Second Largest School District in the Country. Years 6-10.
- *2010. Into the Loop Alliance Extension: A University K-112 Alliance to Increase and Enhance the Computer Science Learning Opportunities for African-American, Latino/a and Female Students in the Second Largest School District in the Country.
- *2009-12. Teachers are Key: Partnering With and Supporting Quality CS Teachers Within the Second Largest School District in the Country.
- 2010-18. MOBILIZE: Mobilizing for Innovative Computer Science Teaching and Learning. (Partnership with Drs. Debra Estrin, Robert Gould, UCLA Samueli School of Engineering)
- *2010-13. Into the Loop: A university-K-12 Alliance for Computer Science Education for African-American, Latino/a and Female students in the Second Largest School District in the Country.
- 2015-19. Collaborative Research: ET-ECS: Electronic Textiles for Exploring Computer Science with High School Students and Teachers to Promote Computational Thinking and Participation for All (partnership Dr. Yasmin Kafai, University of Pennsylvania).
- *2017-22. Collaborative Grant: Researching Equity, Access, & Learning in CS Education (REAL-CS): Scaling and Sustainability in High School Computer Science (Partnership Dr. Joanna Goode, University of Oregon).
- *2018-22. SCALE-CA: Supporting Computing Access, Leadership and Equity in California (co-PI Julie Flapan)

Gates Foundation Award

• *2018-2023. Discovering What Drives Interest and Engagement of Underrepresented Students in CS: Learning from the Students Themselves. (Dr. Jean Ryoo co-PI).

Books Published

- Margolis, J. and Fisher, A. (2002). *Unlocking the Clubhouse: Women in Computing*. Cambridge, MA: MIT Press.
- Margolis, J. et. al (2017, 2008). Updated Edition. *Stuck in the Shallow End: Education, Race, and Computing*. Cambridge, MA: MIT Press.

Books Published (cont.)

• Ryoo, J. and Margolis, J. (2022). Power On! Cambridge, MA: MIT Press.

Book Chapters

- Joanna Goode, Rachel Estrella, and Jane Margolis (2006). Lost in Translation in Women and Information Technology: *Research on Underrepresentation*. Editors: Cahoon, J. and Aspray, W. (MIT Press, 2006)
- Margolis, J., Goode, J., and Flapan, J. (Dec. 2016). "A Critical Crossroads for Computer Science for All: "Identifying Talent" or Building Talent," and What Difference does it Make?" In Rankin, Y. and Thomas, J. (eds). *Moving Students of Color from Consumers of Technology to Producers of Technology*. IGI Global Publishers. P. 1-21.
- Goode, J., Flapan, J., & Margolis, J. (2018). Computer Science for All: A School Reform Framework for Broadening Participation in Computing. In W. G. Tierney, Z. B. Corwin, & A. Ochsner (Eds.), *Diversifying Digital Learning: Online Literacy and Educational Opportunity* (pp. 45-65). Baltimore, MD: Johns Hopkins University Press.

Select Article Publications

- Ryoo, J.J., Morris, A., & Margolis, J. (2021). "What happens to the Raspado man in a cash-free society?": Teaching and Learning Socially Responsible Computing. ACM Transactions on Computing Education, 21(4). Special Issue on Justice-Centered Computing Education, DOI: 10.1145/3453653.
- Ryoo, J., Tanksley, T., Estrada, C., and Margolis, J. (2020). Take space, make space: How students use computer science to disrupt and resist marginalization in schools. *Computer Science Education*. DOI: 10.1080/08993408.2020.1805284
- Margolis, J., Ryoo, J., & Goode, J. (2017). Seeing myself through someone else's eyes: The value of in-classroom coaching for computer science teaching and learning. *Transactions on Computing Education*, 17(2), 1-18.
- •Margolis, J. and Goode, J. (2016). Ten Lessons for CS for All. In *ACM Inroads* magazine, Special Issue on Broadening Participation in Computing. Dec. 2016, Vol. 7, No. 4.
- Ryoo,J., Goode, J., & Margolis, J. (2016): It takes a village: supporting inquiry- and equity-oriented computer science pedagogy through a professional learning community, *Computer Science Education*, DOI: 10.1080/08993408.2015.1130952
- Margolis, Goode, Binning (2015). Exploring Computer Science: Active Learning for Broadening Participation in Computing. In the Expanding the Pipeline section of *Computing Research Association-Women (CRA-W) journal*, October 2015.
- •Margolis, Goode, Chapman (2015). An Equity Lens for Scaling: A Critical Juncture for Exploring Computer Science. *ACM Inroads*. Sept. 2015, Vol. 6, No. 3. Pp. 58-66.
- Margolis, J., Goode, J., Ryoo, J. (2014). Democratizing Computer Science Knowledge. In *Educational Leadership, STEM For All Issue*. December 2014/January 2015 | Volume 72 | Number 4. p. 48-53.
- •Goode, J., Margolis, J., & Chapman, G. (2014). Curriculum is not enough: The educational theory and research foundation of the exploring computer science professional development model. In Proceedings of the 45th ACM Technical Symposium on Computer Science Education (pp. 493-498).

Select Article Publications (Cont.)

- Margolis, J., Goode, J., Chapman, G., Ryoo, J. (2014). That Classroom "Magic: *Communications of the ACM Journal*. P. 31-33.
- •Margolis, J., Goode, J., Ryoo, J., Lee, C. and Sandoval, Cueponcaxochitl M.,(2013). Democratizing Computer Science Knowledge: Transforming the Face of Computer Science Knowledge Through Public Education. In *Learning, Media, Technology*. Vol. 38, Issue 2.
- •Margolis, J., Ryoo, J., Sandoval, Cueponcaxochitl d. m., Lee, C., Goode, J., and Chapman, G. (2012). Beyond Access: Broadening Participation in High School Computer Science. *ACM Inroads* (Dec. 2012)
- •Goode, J., Chapman, G., and Margolis, J. (2012). Beyond Curriculum: The Exploring Computer Science Program. *ACM Inroads*. 3(2), 47-53.
- •Goode, J. and Margolis, J. (2011). Exploring computer science: A case study of school reform. *Transactions on Computing Education*. 11 (2).
- •Margolis, J., Goode, J., and Bernier, D. (2011). The need for computer science. *Educational Leadership*. 68(5), 68-72.

Select Media Coverage

- Ryoo and Margolis (2023). "Why we wrote *Power On*!" Civics of Tech Blog (Jan. 8. 2023) https://www.civicsoftechnology.org/blog
- Ryoo and Margolis (2022). Why CS Education Can No Longer Pretend to be Neutral. https://clalliance.org/blog/power-on-why-cs-education-can-no-longer-pretend-to-be-neutral/
- "Power On" by Bill Ibell. 2022. Ed. Harvard Ed magazine.

https://www.gse.harvard.edu/news/ed/22/06/power

• McDonald, J. (2022). UCLA Center X Researchers Publish Graphic Novel, Power On! *UCLA SEIS News*. (April 19, 2022)

https://seis.ucla.edu/news/ucla-center-x-researchers-publish-graphic-novel-power

- "Centering Youth Voices: *Power On!* Case Study by Gates Foundation "Equitable Futures" https://www.equitablefutures.org/voices/case-study-power-on/
- History Channel---"Coding Used to be a Womens' Job" (original 2017, updated 2021). My work from Unlocking the Clubhouse (MIT Press, 2002) is cited.

http://www.history.com/news/coding-used-to-be-a-womans-job-so-it-was-paid-less-and-undervalued

- "The Secret History of Women in Coding" *NY Times*, Feb. 13, 2019. https://www.nytimes.com/2019/02/13/magazine/women-coding-computer-programming.html
- Thompson, C. (2019). *Coders: The Making of a New Tribe and the Remaking of the World* (Penguin Press, 2019) —Margolis's work is featured in chapter "The Eniac Girls Vanish."
- Chang, E. 2019. *Brotopia: Breaking Up the Boy's Club of Silicon Valley* (Portfolio, 2019). Margolis' work featured in chapter "From Nerd to Bro: How Tech Bypassed Women."
- NPR (Aug. 10, 2017). All Tech Considered. "Colleges have Increased Women Computer Science Majors: What can Google Learn?

http://www.npr.org/sections/alltechconsidered/2017/08/10/542638758/colleges-have-increased-women-computer-science-majors-what-can-google-learn

Select Media Coverage(cont.)

- Devlin and Hern. (August 2017). Why are there so few women in tech? The truth behind the google memo. *The Guardian*—August 8, 2017.
- "https://www.theguardian.com/lifeandstyle/2017/aug/08/why-are-there-so-few-women-in-tech-the-truth-behind-the-google-memo
- Flapan, J. and Margolis, J. (2017). Stop Scapegoating and Start Educating. *Education Week*, Jan. 24, 2017.
- White House blog. "Computer Science for All." Jan. 30, 2016. https://obamawhitehouse.archives.gov/blog/2016/01/30/computer-science-all
- Scientific American. Special Issue on Education. August 2016. "The Coding Revolution." https://www.nature.com/scientificamerican/journal/v315/n2/pdf/scientificamerican0816-42.pdf
- Singer, N. (2016) Apple Offers Free App to Teach Children Coding (iPads Sold Separately)"--NY Times. Sept. 12, 2016. https://www.nytimes.com/2016/09/13/technology/apple-coding-app-swift-playgrounds.html. Margolis is quoted about potential disparities associated with school adoption of Ipads.
- NPR. Science Friday (2014). Is Coding the Language of the Digital Age? Feb. 1, 2014 (interview with Jane Margolis and Hadi Partovi of code.org)
- https://www.sciencefriday.com/segments/is-coding-the-language-of-the-digital-age/
- •History Channel---"Coding Used to be a Women's Job" (original 2017, updated 2021). My work in Unlocking the Clubhouse is cited.
- http://www.history.com/news/coding-used-to-be-a-womans-job-so-it-was-paid-less-and-undervalued
- Margolis, J. and Suarez-Orozco, M. (2014) Handing Out IPads to Students is not Enough. Op Ed in *LA Times*. Jan 19, 2014
- Margolis, J. and Kafai, Y. (October 14. 2014). Why the "coding for all" movement is more than a boutique reform. Op Ed in *The Washington Post*, Valerie Strauss column.
- https://www.washingtonpost.com/news/answer-sheet/wp/2014/10/17/why-the-coding-for-all-movement-is-more-than-a-boutique-reform/
- Harmon, Joannie. (2013). She makes computer science an equal opportunity subject. UCLA Newsroom. https://newsroom.ucla.edu/stories/she-makes-computer-science-an-242527
- Margolis, J. The Computer World Could Use More IT Girls. (May 21, 2003). Op Ed in *LA Times*. https://www.latimes.com/archives/la-xpm-2003-may-21-oe-margolis-story.html
- Time Magazine. (July 16, 2012). Techland: Can we Fix Computer Science Education in America? Exploring Computer Science program is discussed.

https://techland.time.com/2012/07/16/can-we-fix-computer-science-education-in-america/2/

2022-4 Presentations and Keynotes

The list below is selected to show the different types of organizations I have spoken with in 2022-4 about Stuck in the Shallow End and our book Power On!

2022-4 Presentations and Keynotes (cont.

- 2022-25 Seasons of CS Teacher/Administrator Professional Development—Keynote on *Stuck in the Shallow End and Power On!*, 2022-25
- LAUSD Culturally Proficiency Conference at Museum of Tolerance—Keynote on Power On; Feb. 12, 2023
- New York City Department of Education CS for All conference for teachers (August 2022
- Kapor Center webinar on *Power On!* with and for youth (August 2022)
- Bob Moses We the People Mathematics Literacy for All Conference Keynote; July 28, 2022
- CODE VA Full Steam Ahead Middle School Conference, Closing Presentation, July 30, 2022
- Presentation with Allison Scott (Kapor Center) at the Connected Learning Summit; July 19,
 2021
- Constellations Summit Keynote June 21, 2022 Invited presentation, #CS4LAUSD Conference for Los Angeles Unified School District teachers June 4, 2022.
- CSTA Equity Fellows Convening Closing Keynote—Spring 2022
- RESPECT Conference; May 24, 2022 (with CSTA Equity Fellows)
- National Science Foundation CISE PI Plenary, May 25, 2022 (with CSTA Equity Fellows).
- Kapor Center Webinar and Panel on Racial Literacy and Justice in CS Education (2022)--Margolis, J., Muhammad, G., Sealey-Ruiz, Y., White, S. Hadad, R.
- Computer Science Equity Network Webinar. San Bernardino County Superintendent of Schools March 31, 2022
- "Creating the Conditions for Equitable K-12 CS" administrator event, University of California, Berkeley California Computer Science Project March 14, 2022
- ACM Webinar; February 17, 2022 (with CSTA Equity Fellows
- SCALE Summer of CS professional development week for educators, counselors, and administrators---June 2021, June 2022, Winter 2023

Collaborations and Partnerships

- UCLA GSEIS Center X (including STEM+3, Introduction to Data Science)
- Computer Science Teachers Association/ CSTA Equity Fellowshttps://www.csteachers.org/page/csta-equity-fellowship
- Kapor Center: Leveling the Playing Field in Tech. Oakland, California https://www.kaporcenter.org
- LAUSD Instructional Technology Initiative

https://achieve.lausd.net/site/default.aspx?PageID=13483 https://achieve.lausd.net/Page/16783

Collaborations and Partnerships (cont.)

- SCALE-CA: Supporting Computer Science Access, Leadership, and Equity in California: 17 California school districts committed to equity in CS and to making systemic change using a three-pronged strategy at the classroom, county/district, and the capitol to build leadership capacity to broaden participation in CS education among girls, students of color, and low-income students. https://centerx.gseis.ucla.edu/computer-science-equity-project/scale-ca/
- CS for CA: A coalition organization formed in 2012, CSforCA has worked to ensure equitable access to high-quality computer science teaching and learning opportunities across California. Co-Directors: Julie Flapan and Allison Scott. https://csforca.org
- CSForAll: A national initiative to empower all K-12 students to learn computer science, to learn the computational thinking skills to be creators, not just users, of technology. https://www.csforall.org/about/
- NYC Department of Education, Christy Crawford, Senior Director of Partnerships and Culturally Responsive Education,

CSForAllhttps://sites.google.com/schools.nyc.gov/cs4allnyc/about/

- Mississippi State University, Shelly Hollis, Director of Cyber Education https://www.educ.msstate.edu/research/sponsored-projects/shelly-hollis/
- Constellations Center for Equity in Computing, Georgia Tech.
- University of Oregon, Dr. Joanna Goode https://education.uoregon.edu/directory/faculty/all/goodej
- University of Pennsylvania, Dr. Yasmin Kafai
- UCLA Samueli School of Engineering, Dr. Debra Estrin (CS and CENS); Dr. Robert Gould (Statistics)
- Expanding Computing Education Pathways (ECEP): Broadening Participation in Computing State by State. https://ecepalliance.org
- Drs. Andrew Williams and Yolanda Rankin, Spelbots, Spelman College

Contact Information: Margolis@ucla.edu