Curriculum Vitae
AMANDA ALZENA SULLIVAN, Ph.D.
www.amandaalzenasullivan.com
Email: aasullivan86@gmail.com

EDUCATION

2016	Ph.D., Tufts University

2016   Ph.D., Tufts University
          Department: Child Study & Human Development
          Dissertation: *Breaking the STEM Stereotype: Investigating the Use of Robotics to Change Young Children's Gender Stereotypes About Technology & Engineering*

2012   M.A., Tufts University
          Department: Child Study & Human Development

2009   B.A., Bennington College
          Major: Psychology & Drama
          Thesis: *Putting Your Best Facebook Forward: Self Presentation and Identity Formation on Social Networking Websites*

PROFESSIONAL EXPERIENCE

2022-Present   **National Girls Collaborative Project (NGCP)**
                  Senior Program Developer
                  Support NGCP's ongoing STEM and equity projects, both internally and with external partners. This support includes outreach and partnership efforts for the Million Girls Moonshot, development of national webinar programming, curriculum development, as well as designing and facilitating presentations and workshops for multiple partners.

2011-Present   **Educational Technology Consultant**
                  Independent Consultant
                  Independent consultant working with a variety of schools and businesses on technology curriculum development and implementation including: PBS Kids, The DevTech Research Group, WGBH Boston, Kreativa Technologies, Bishop Elementary School, Arlington, MA; the Rashi School, Dedham, MA; and Belmont Day School, Belmont, MA.

2017-2022   **ChildCare Education Institute**
                  Contracted Course Writer
                  Develop course content for professional development courses on an ongoing basis. Most recently developed content for four new courses: 1) *Robotics in Early Childhood Education,* 2) *Coding in Early Childhood Education*, 3) *Engineering in Early Childhood Education,* 4) *Makerspaces & Maker Experiences for Young Children,* and 5) *Unplugged Computer Science Education in the Early Years.*

2018-2020	**Joulez, Inc.**
	Director of Identity & Educational Research

Developed, implemented, and oversaw research on the impact of Joulez products on pre-adolescent girls' STEM attitudes, identity, and knowledge. Conducted research as part of a National Science Foundation Small Business Innovation Research grant (NSF IIP-1746640).

2015-2018	**KinderLab Robotics**
	Curriculum & Trainings Consultant

Developed and provided professional development training sessions for customers. Coordinated with international and local attendees from education, industry, and creative fields. Worked on the development of curriculum and other educational teaching materials for children and teachers.

2014-2018	**The Amandas Consulting, LLC**
	Co-Founder/ Consultant

Co-founded a consulting partnership that offered a range of educational technology services for parents, teachers, and researchers.

TEACHING EXPERIENCE

University Level

2021- Present	**College of Doctoral Studies, University of Phoenix**
	Associate Faculty, Doctor of Education program

- Instructional Leadership (online)
- Educational Technology Research (online)

2019-2021	**Dept. of Child Study & Human Development, Tufts University**
	Lecturer, Early Childhood Technology Graduate Certificate Program

- Technological Tools for Playful Learning (online)

2016-2019	**Dept. of Child Study & Human Development, Tufts University**
	Associate Director, Early Childhood Technology Graduate Certificate Program

Worked to propose, launch, and oversee this blended-learning certificate program housed in the department of Child Study & Human Development. Duties included hiring and supervising lecturers and teaching assistants, developing course content, teaching courses, overseeing marketing, and overseeing all administrative aspects of the program. Courses developed & taught included:

- Technological Tools for Playful Learning (online)
- Designing Educational and Technological Environments for Children (online)
- Directed Research/Independent Study (online/ in-person)
- Early Childhood Technology Residency (in-person)

2016-2020	**Graduate Level Advising**

- *Dissertation Committee Member (2019-2020):* Holly Sims, Ed.D., Rossier Department of Education, University of Southern California.
- *Academic Advisor (2016– 2019):* Over 40 graduate students in the Early Childhood Technology graduate certificate program at Tufts University.

2016	**Department of Child Study & Human Development, Tufts University**
	Instructor

- Technology & Engineering Module, a required part of the Advanced Curriculum II course for second year MAT students. (in-person)

2014-2015	**Tufts Experimental College**
	Part-Time Faculty

- Human Development in the Digital Age (in-person)
- Kids and Computers: Exploring Educational Technology, Apps, and Games (in-person)

K-12 Teaching

2015-2017	**Center for Engineering Education Outreach**
	Early Childhood Workshops Instructor (grades K-2)

2015-2017	**Lexington Community Education**
	Saturday STEM Series Teacher (grades K-2)

2016	**Brooks Elementary School**
	Fun with Engineering and Robots Afterschool Teacher (K-3)

2010-2016	**Early Childhood Robotics Teacher, various schools**
	Grades PK-2nd Robotics Instructor at various public and private schools in the greater Boston area, in affiliation with the DevTech Research Group at Tufts University

2010-2016	**DevTech Summer Programs**
	Summer Programs Teacher for a variety of technology classes including robotics, programming, and film making for grades ranging PK-3rd grade

2009-2010	**Ezra Academy**
	Elementary School Drama Teacher

2008-2009	**Bennington College Early Childhood Center**
	Preschool Classroom Aide

2008	**Dallas Children's Theater**
	Education & Production Winter Intern

RESEARCH

2021-Present	**Breaking Stereotypes through Culturally Relevant Story Telling**
	Advisory Board Member
	Advisory Board Member for NSF-funded research grant "Breaking Stereotypes through Culturally Relevant Story Telling" (NSF # 2115579).

2018-2020	**VEX Robotics Program: Gender Differences in Attitudes, Engagement and Performance**
	Research Consultant (2019-2020), Postdoctoral Researcher (2018-2019), P.I. Prof. Marina Umaschi Bers, Tufts University, DevTech Research Group

Coordinated a 3-year research study funded by the REC Foundation on gender differences in middle & high school student and mentor experiences with the VEX robotics program. Conducted data collection, analysis, and submitted publications. Supervised undergraduate interns and research assistants.

2010-2019   **The DevTech Research Group at Tufts University**
Postdoctoral Researcher (2016-2019), Graduate Research Assistant (2010-2016)
Provided general research, data collection, and analysis support across a range of research projects. Assisted in the hiring, supervision, and mentorship of undergraduate & graduate students.

2016-2017   **Making the Invisible Tangible**
Postdoctoral Researcher
P.I. Prof. Orit Shaer, Wellesley College, Wellesley HCI Lab
Co P.I. Prof. Marina Umaschi Bers, Tufts University, DevTech Research Group
Worked with a team of researchers and designers on creating reality based interfaces, tangible technologies, and educational videos to enhance children's understanding of bioengineering. (NSF Grant No. IIS-1149530)

2015-2016   **Billund Builds Music**
Research Team Member
P.I. Dr. Merredith Portsmore, Tufts University, Center for Engineering Education Outreach
Visited Denmark to collect qualitative data on children's play and learning as part of a city-wide unit on designing and building musical instruments.

2012-2016   **Ready for Robotics Project**
Project Coordinator & Graduate Research Assistant
P.I. Prof. Marina Umaschi Bers, Tufts University, DevTech Research Group
Worked with design team, teachers, and researchers on creating a robotics kit for young children ages 4-7. Participated in all aspects of research, analysis, and data collection across the United States and in Singapore. (NSF DRL-1118897)

2010-2012   **TangibleK Project**
Graduate Research Assistant
P.I.s Prof. Marina Umaschi Bers and Prof. Robert Jacobs, Tufts University
Assisted with data collection from teachers and children, data entry, and data analysis as part of this National Science Foundation funded project on robotics education in early childhood. (NSF DRL-0735657)

ACADEMIC AND PROFESSIONAL SERVICE

2021-Present **Education Sciences Journal**
Guest Editor

2016-Present **Peer-Reviewer**
Invited Peer Reviewer
Peer reviewer for academic journals including:
- *Education Sciences*
- *Informatics*
- *Information*
- *Journal of Research in Early Childhood Education*

2020 **Covid-19 Educational Outreach**
Creator of Online Resources
Worked with organizations such as Tufts University and the International Society for Technology in Education (ISTE) to provide webinar resources for parents and educators working with young children during school closures and quarantine.

2017 **International Conference on Computational Thinking Education**
International Program Committee Member
Invited committee member and reviewer of papers.

2013-2015 **Eliot-Pearson Mentorship Program**
Planning Committee Member (2013-2014), Mentor (2014-2015)
Provided mentorship to students considering child development majors.

VOLUNTEER SERVICE

2021 **BRITE**
Role Model
Served as a STEM role model for young women ages 12-16 in the 2021 BRITE program.

2014-2017 **Housing Families Inc.**
Childcare Volunteer
Provided childcare and enrichment activities to children impacted by homelessness as needed to mixed ages ranging from infants through adolescents. Provided free robotics and technology summer camp sessions.

2012 **Robotics Service-Learning Trip**
Coordinator and Supervisor
Worked with a professor to organize, recruit, train, and lead a STEM education service-learning trip for 30 undergraduate and graduate students from Tufts to teach robotics at PS-185 (now the Discovery & Design Magnet School) in Harlem, NYC.

2010 **Wediko Children's Services**
Americorps Summer Service Member
Served as a counselor in a short-term residential treatment setting for children ages 9-19

with social, emotional, and/or behavioral challenges. Assisted with group therapy sessions, administering behavioral checklists, and daily routines. Also served as the Drama activity instructor.

GRANTS

2017   **Postdoctoral Research Travel Grant**
Postdoctoral P.I.
Recipient of Research Travel Grant, Postdoctoral Research Poster Competition- 1st Prize
Awarded by Tufts University

2014   **Graduate Student Research Grant**
Student P.I.
Recipient of Research Grant, Graduate Student Competition Award Winner
Awarded by Tufts University

AWARDS

2018   **Tufts Teaching with Technology Award: Finalist & Honorable Mention**
Awarded by Tufts Technology Services Educational Technology Services Group

2015   **Housing Families Certificate of Appreciation for Volunteer Service**
Awarded by Housing Families, Inc.

2014   **Outstanding Contribution to Undergraduate Studies 2014**
Awarded by Tufts University's Graduate Student Council

2014   **Graduate Student Research Competition Award Winner**
Research Grant Awarded by Tufts University; served as Student P.I.

2012   **Outstanding Contribution to Undergraduate Studies 2012**
Awarded by Tufts University's Graduate Student Council

2012   **Eliot-Pearson Research-Practice Integration Award**
Awarded by Tufts University's Eliot-Pearson Department of Child Development

2010   **Segel Education Award for service in the AmeriCorps New Hampshire Based Residential Summer and School Program**
Awarded by Americorps

PUBLICATIONS

Books:

Sullivan, A. (2019). *Breaking the STEM Stereotype: Reaching Girls in Early Childhood*. Rowman & Littlefield.

Bers, M.U. & **Sullivan, A.** (2018). *ScratchJr Coding Cards*. No Starch Press.

Invited Book Chapters:

Sullivan, A. (2021). Supporting girls' computational thinking skillsets: Why early exposure is critical to success. In *Teaching Computational Thinking and Coding to Young* Children (pp. 216-235). IGI Global.

Strawhacker, A. & **Sullivan, A.** (2021). Computational expression: How performance arts support computational thinking in young children. In *Teaching Computational Thinking and Coding to Young Children* (pp. 134-156). IGI Global.

Sullivan, A. & Strawhacker, A. (2021). Screen-free STEAM: Low cost and hands-on approaches to teaching coding & engineering to young children. In Garvis, S. & Cohrssen, C. (Eds.) *Embedding STEAM in early childhood education and care*.

Elkin, M., **Sullivan, A**., & Bers, M. U. (2018). Books, butterflies, and 'bots: Integrating engineering and robotics into early childhood curricula. *Early Engineering Learning* (pp. 225-248). Springer, Singapore.

Sullivan, A., Strawhacker, A., & Bers, M.U. (2017). Dancing, drawing, and dramatic robots: Integrating robotics and the arts to teach foundational STEAM concepts to young children. In Khine, M.S. (Eds.) *Robotics in STEM Education: Redesigning the Learning Experience. Springer Publishing*.

Sullivan, A. & Bers, M.U. (2017). Computational thinking and young children: Understanding the potential of tangible and graphical interfaces. In Ozcinar, H., Wong, G., & Ozturk, T. (Eds.) *Teaching Computational Thinking in Primary Education*. IGI Global

Refereed Journal Articles:

Bers, M.U. & **Sullivan, A.** (2019). Computer science education in early childhood: The case of ScratchJr. *Journal of Information Technology Education: Innovations in Practice.*

Sullivan, A. & Bers, M.U. (2019). VEX Robotics Competitions: Gender differences in student attitudes and experiences. *Journal of Information Technology Education: Research, 18*, 97-112.

Sullivan, A. & Bers, M.U. (2018). Investigating the use of robotics to increase girls' interest in engineering during early elementary school. *International Journal of Technology and Design Education.* Online First.

Sullivan, A & Bers, M.U. (2018). The impact of teacher gender on girls' performance on programming tasks in early elementary school. *Journal of Information Technology Education: Innovations in Practice, 17*, 153-162.

Bers, M. U., Verish, C., **Sullivan, A.,** & Shaer, O. (2018). Enhancing Children's Interest and Knowledge in Bioengineering through an Interactive Videogame. *Journal of Information Technology Education: Innovations in Practice, 17*, 055-081.

Sullivan, A., & Bers, M.U. (2017). Dancing robots: Integrating art, music, and robotics in Singapore's early childhood centers. *International Journal of Technology and Design Education.* Online First.

Pugnali, A., **Sullivan, A**., & Bers, M.U. (2017) The Impact of User Interface on Young Children's Computational Thinking. *Journal of Information Technology Education:Innovations in Practice*, *16*, 172-193.

Sullivan, A. & Bers, M.U. (2016). Girls, Boys, and Bots: Gender Differences in Young Children's Performance on Robotics and Programming Tasks. *Journal of Information Technology Education: Innovations in Practice, 15*, 145-165.

Elkin, M., **Sullivan, A.**, & Bers, M.U. (2016). Programming with the KIBO Robotics Kit in Preschool Classrooms. *Computers in the Schools, 33*(3), 169-186.

Sullivan, A., & Bers, M.U. (2015). Robotics in the early childhood classroom: Learning outcomes from an eight-week robotics curriculum in pre-kindergarten through second grade. *International Journal of Technology and Design Education.* Online First.

Elkin, M., **Sullivan, A.,** & Bers, M. U. (2014). Implementing a robotics curriculum in an early childhood Montessori classroom. *Journal of Information Technology Education: Innovations in Practice, 13,* 153-169.

Kazakoff, E., **Sullivan, A.**, & Bers, M.U. (2013). The effect of a classroom-based intensive robotics and programming workshop on sequencing ability in early childhood. *Early Childhood Education Journal*, *41*(4), 245-255.

Bers, M.U., Seddighin, S., & **Sullivan, A.** (2013). Ready for robotics: Bringing together the T and E of STEM in early childhood teacher education. *Journal of Technology and Teacher Education*, *21*(3), 355-377.

Sullivan, A., & Bers, M. U. (2013). Gender differences in kindergarteners' robotics and programming achievement. *International Journal of Technology and Design Education*, *23*(3), 691-702.

Sullivan, A., Kazakoff, E.R., & Bers, M.U. (2013). The wheels on the bot go round and round: Robotics curriculum in pre-kindergarten. *Journal of Information Technology Education: Innovations in Practice,* 12, 203-219.

Publications in Conference Proceedings:

Loparev, A., **Sullivan, A**., Verish, C., Westendorf, L., Davis, J., Flemings, M., Bers, M.U., & Shaer, O. (2017). BacToMars: A Collaborative Educational Video Game for Teaching Biological Engineering. *In Proceedings of Foundations of Digital Interactive Games (FDG) 2017*. Extended abstract, poster.

Sullivan, A., Bers, M.U., Mihm, C. (2017). Imagining, Playing, & Coding with KIBO: Using KIBO Robotics to Foster Computational Thinking in Young Children. *In the proceedings of the International Conference on Computational Thinking Education, 2017.* Wanchai, Hong Kong.

Loparev, A., **Sullivan, A.,** Verish, C., Westendorf, L., Davis, J., Flemings, M., Bers, M.U., & Shaer, O. (2017). BacToMars: Creative Engagement with Bio-Design for Children. *In the proceedings of the ACM Conference on Interaction Design and Children (IDC) 2017*. Stanford, CA, USA

Strawhacker, A., **Sullivan, A.,** & Portsmore, M. (2016). Billund builds music: An engineering education initiative in danish kindergartens. *Published in the Proceedings of the Integrated STEM Education Conference*. Princeton, NJ, USA.

Sullivan, A., Elkin, M., & Bers, M. U. (2015). KIBO Robot Demo: Engaging young children in

programming and engineering. *Published in Proceedings of the 14th International Conference on Interaction Design and Children (IDC '15).* ACM, Boston, MA, USA.

Strawhacker, A., **Sullivan, A.,** & Bers, M.U. (2013). TUI, GUI, HUI: Is a bimodal interface truly worth the sum of its parts? *Published in the Proceedings of the 12th International Conference on Interaction Design and Children.* June 24-27, 2013. New York, NY, USA.

PRESENTATIONS

Sullivan, A. (2021). Addressing STEM Stereotypes & Biases: Facilitating Challenging Conversations with Youth. Panel presentation hosted by the National Girls Collaborative Project.

Sullivan, A. (2021). Inspiring STEM Learning for Young Girls: Technology, Curriculum, and Teaching Strategies. Workshop presented at iTeach 808: Empowering Hawaii's Teachers in Technology Conference.

Sullivan, A. (2021). Playful Robotics & Coding for Young Children: Screen-Free Technology and Games for Children in PK-2nd Grade. Workshop presented at iTeach 808: Empowering Hawaii's Teachers in Technology Conference.

Sullivan, A. (2021). Digital Stories, Games, and Collages: Using ScratchJr with Young Children. Workshop presented at iTeach 808: Empowering Hawaii's Teachers in Technology Conference.

Sullivan, A. (2020). Gender equity in online STEM learning. Presentation hosted by the National Girls Collaborative Project.

Sullivan, A. (2020). STEAM learning at home: How to break stereotypes and inspire young children. International Society for Technology Education (ISTE) Early Learning Network Webinar. Viewable at: https://bit.ly/2K3NUna

Sullivan, A. & Collazo, K. (2019). Inspiring STEM learning for young girls: Tips from research and the classroom. Edwebinar presentation. Viewable at: https://home.edweb.net/webinar/code20190429/

Sullivan, A. (2017). Dancing robots: Using the KIBO robot to teach foundational engineering and programming content. Early Childhood STEM Conference, Pasadena, CA.

Sullivan, A. (2017). KIBO robotics in early childhood. International Society for Technology Education (ISTE) Conference, Early Learning Network Playground, San Antonio, TX.

Sullivan, A. (2015). Integrating robotics into early childhood education. Opening session speaker at the Mississippi Head Start Association Conference, Jackson, MS.

Sullivan, A. & Stacey, D. (2014). Social media boot camp for parents. Workshop presented at the Boston International Kids Film Festival, Somerville, MA.

Sullivan, A. & Strawhacker A. (2014). Young children as programmers and engineers: A hands- on approach. Department of Early Education and Care Spring STEM Conference for

Early Educators, Sturbridge, MA.

Sullivan, A. & Strawhacker, A. (2014). STEM in early childhood: An interactive workshop.
Workshop presented at the Early Childhood Investigations Conference, Eastern Connecticut State University, CT.

Bers, M.U., Strawhacker, A., & **Sullivan, A.** (2013). The missing T & E in early childhood STEM: Young children as programmers and engineers. Talk presented at the NSF-Smithsonian STEM Smart Conference, Washington, DC.

Strawhacker, A., **Sullivan, A.,** & Bers, M.U. (2013). TUI, GUI, HUI: Is a bimodal interface truly worth the sum of its parts? Poster presented at the 12th International Conference on Interaction Design and Children, New York, NY.

Sullivan, A. (2012). Robotics in early childhood education. Presentation at the Tufts Educational Daycare Center, Medford, MA.

SKILLS AND CERTIFICATIONS

Certifications
• American Red Cross Adult/Child/Infant CPR/First Aid/AED Certification
• 20 Hours Certification in BRIDGES Mediation Program

Technical Skills
• **General:** Office Suite, Windows and Mac OS, Google Workplace (formerly Google Suite), various social media platforms, Windows Live Movie Maker, iMovie, SPSS Statistics, Wix.
• **Children's technologies:** LEGO® WeDo, CHERP, Scratch, ScratchJr, KIBO Robotics, Beebot, Dash, Dot, Codeapillar, Kinderbot.
• **Learning Management Systems:** Canvas, Blackboard Ultra, Trunk.