

MARINA UMASCHI BERS

Professor
Eliot-Pearson Department of Child Study and Human Development
Department of Computer Sciences
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Research Interests

Investigating the impact of innovative learning technologies for fostering positive youth development.
Designing, studying and implementing programming languages and robotic systems for early childhood education and their associated curricular and teaching materials, assessment instruments and professional development strategies

Education

Massachusetts Institute of Technology- Media Laboratory (Cambridge, MA 1995-2001)

Ph.D. in Media Arts and Sciences

M.S. in Media Arts and Sciences

Boston University- School of Education (Boston, MA 1994-1995)

M.Ed. in Educational Technology

University of Buenos Aires- School of Social Communication (Argentina, 1989-1993)

B.A. in Communication Sciences

TEA School of Journalism (Argentina 1990-1992)

Journalist

Hebrew University of Jerusalem (Israel, 1988-1989)

Special program

Languages

Spanish (mother tongue), English, French, Hebrew

Research Experience

Tufts University (Medford, MA)

Professor, Eliot-Pearson Department of Child Development (2013-present)

Director of the MA program, (2011-present)

Head of the DevTech research group (2001-present)

Fellow at the Center for Educational Engineering Outreach (2015-present)

Associate Professor, Eliot-Pearson Department of Child Development (9/2001-2012)

Adjunct Associate Professor, Department of Computer Science (6/2005-present)

Children's Hospital Boston (Boston, MA)

Associate Scientific Staff, Department of Psychiatry (6/2005-7/2011)

MIT Media Laboratory (Cambridge, MA)

Research Assistant, Epistemology & Learning Group (9/1997-5/2001)

Research Assistant, Gesture & Narrative Language Group (9.1995-8/1997)

MERL Mitsubishi Electric Research Lab (Cambridge, Summer 1997)

Research internship

Interval Research Corporation (Palo Alto, Summer 1996)

Research fellowship

Teaching Experience

Tufts University

Professor, Eliot-Pearson Department of Child Development (2013-present)

Associate Professor, Eliot-Pearson Department of Child Development, (9/2001-present)

Adjunct Associate Professor, Department of Computer Sciences

Adjunct Associate Professor, Tisch College of Public Service

MIT Media Laboratory

Teaching assistant, Prof. Mitchel Resnick & Sherry Turkle (9/1997-5/2000)

Instructor, IAP program (1/1996-1/1998)

Buenos Aires University. Communication Sciences Department

Teaching assistant, Prof. Alejandro Piscitelli & Anibal Ford (3/1992-8/1994)

La Plata National University. School of Journalism

Lecturer (Spring 1993)

Systemic Psychology Graduate Institute

Instructor (Spring 1993)

Anthropology National Graduate Institute

Lecturer (Fall, 1993)

Work Experience

KinderLab Robotics, Inc (2013-present)

Co-founder and chief Scientist

Instructional Materials Center. School of Education. Boston University (8/1994-8/1995)

Helped faculty, students and teachers to design educational applications and develop computer skills.

Uno Mismo monthly magazine. Buenos Aires. Argentina (1/1992-6/1994)

Junior Editor focused on technology, culture and society.

Free-lance journalist specialized on science, technology and society (1/1990- 12/1998).

Published articles in magazines (PC Users, Virus Report) and newspapers (Clarín, Pagina 12)

Ciba-Geigy Laboratory . Buenos Aires, Argentina (1/1991-7/1991)

Fellowship at the press department

Santillana Publisher, Buenos Aires, Argentina (3/1990-10/1990)

Design and content production of social sciences elementary school textbooks.

National Radio Splendid Buenos Aires, Argentina (3/1989-10/1989)

Creation of scripts (based on biographies) to broadcast as educational soap operas.

Fellowships and Honors

2016 Outstanding Faculty Contribution to Graduate Student Studies, Tufts University

2015 Women To Watch in Technology Award, Boston Business Journal

Presidential Early Career Award for Scientists and Engineers (PECASE), White House, Office of Science and Technology (July 2006)

Premio Sadosky. Cámara de Empresas de Software y Servicios Informáticos (CESSI) Argentina. Mención especial. (July 2006)

Bernstein Award for junior faculty, Tufts University (2005-2007)

Schuster Faculty Development Program Award, Tufts University (December 2005)

Jan Hawinks Award for Early Career Contributions to Humanistic Research and Scholarship in Learning Technologies, American Educational Research Association (AERA) April 2005

Young Faculty Leaders Forum Fellowship, Harvard University (2002-2006)

Tisch College Faculty Fellowship, Tufts University (2004-2006)

Awarded Grants

Lego Foundation *Maker Spaces* (PI Chris Rogers; Co-Pi Marina Bers, Brian Gravel; Ethan Donnelly)
Awarded \$200,000 (2015-2017)

Code-to-Learn/Scratch Foundation *ScratchJr: developing educational materials*, Awarded \$180,000 (2013-2016)

PBS *Developing a ScratchJr app for PBS*. Awarded \$30,000 (2015)

NSF DRK-12 *ScratchJr: Computer programming in early childhood education as a pathway to academic readiness and success* (PI Marina Bers, co-PI Mitchel Resnick) DRL-1118664 Awarded \$812,790 (2011-2014)

NSF REU *ScratchJr: Computer programming in early childhood education as a pathway to academic readiness and success* (PI Marina Bers,) Awarded \$16,000 (2012)

NSF Supplement *Ready for Robotics: The missing T and E of STEM in early childhood education*
Awarded: \$82,000

NSF REU *Ready for Robotics: The missing T and E of STEM in early childhood education* (PI Marina Bers)
Awarded \$ 43,000. (2012)

NSF DRK-12 *Ready for Robotics: The missing T and E of STEM in early childhood education* (PI Marina Bers)
Awarded \$ 416,282. NSF DRL-1118897 (2011-2014)

NCIIA *Changing the Classroom: Building Student-led Learning* (PI Chris Rogers) (Co-PI, Ethan Danahy, Rainer Frost, Dan Hannon, Rob White, Paul Lehrman, Marina Bers, Sam Liggero and John Hodgman)
Awarded: \$36,000 (2012)

NSF REU *Tangible programming in kindergarten*. Undergraduates Research Experiences (PI Marina Bers) Awarded \$32,775

NSF REU *Virtual communities of learning*. Undergraduates Research Experiences (PI Marina Bers) Awarded \$18,000

NSF “*Tangible Programming in Early Childhood: Revisiting Developmental Assumptions through New Technologies*”
(PI Marina Bers; co-PI Robert Jacob) (2008-2011) NSF DRL-0735657. Awarded: \$445,110.

Deborah Munroe Noonan Memorial Fund. “*A virtual community for Pediatric Transplant Patients*” (PI) (2008-2009)
Awarded \$75,000

NSF “*CUSP: Computing Undergraduate Scholars Program* (PI) (2006-2008) NSF IIS-0447166 Awarded \$32,238

CICU Cardiac Clinical Research and Education Fund. Children’s Hospital, Boston (PI) (7/2007-1/2008) Awarded \$10,000

NSF “*Telling the Story - Learning Math, Science and Engineering Through Animation*” PI Chris Rogers, co-PI Marina Bers, (Tufts), co-PI A Finkelstein, co-PI M Klawe & coPI Rusinkeiwicz (Princeton) (2005-2008) Awarded \$319,186. NSF IIS-0511979

NSF Career Award “Communities of learning and care: Multi-user environments that promote positive youth development” (PI) (2005-2009) Awarded \$476,066 NSF IIS-0447166

Tisch College Faculty Fellowship. Tufts University. “*New technologies and civic engagement*” (PI) (2004-2006) Awarded \$30,000

Academic Technology. Tufts University. A Partnership in Technology Faculty Grant Program. “*Virtual Communities of Learning and Practice: A Constructionist Authoring Toolkit*” (PI) Awarded \$ 30,000 plus equipment (2002-2003)

Tisch College. Education for Active Citizenship Grant. Tufts University “*A virtual participatory community: technology and civics education*”(PI) (2002) Awarded \$ 3,500

NSF “*Multi-threaded Instruction: Forming Multi-disciplinary Research Groups to Improve Undergraduate Education* (Co-PI; PI Chris Rogers). (2002-2005) Awarded \$ 372,972

NSF “Tufts’ Pre-College Engineering for Teachers (PCET) Project (consultant) (PI Martha Cyr, Co-PI Christine Cunningham) (2002-2007) Awarded \$1,728,412

Microsoft Research *Virtual Worlds Research.* (PI) (1998-1999) Awarded \$ 30,000 plus equipment, trips and stipend

Professional Service

Co-chair of the international conference Interaction Design for Children (IDC 2015) organized by ACM.

Common Sense Media Advisory Board (2013-present)

Advisory board for NSF’s CADRE-DRK-12 center (2014-2015)

Board member of STEM-C NSF proposals (2014-present)

Associate Editor, Journal of the Learning Sciences (2013-2011)

Member of the Board of Center of Design Innovation, University of North Carolina.

Member of the editorial board of the Journal of the Learning Sciences, the on-line Experience Journal, the Journal of Advances on Human Computer Interaction, the Journal of Applied Developmental Science.

Reviewer for proposals for NSF, the Icelandic Research Society and the Israeli National Science Foundation

Reviewer of papers for the Journal of Educational Computing Research, AERA and ICLS conference, Multimedia on Story Representation, Mechanism and Context (ACM), Developmental Psychology Journal, Early Education and Development Journal, International Workshop on Groupware ‘07, Cyberpsychology & Behavior, CHI

Reviewer of book proposals for MIT Press, Merrill Prentice Hall, Oxford University Press

Published Books and Special issues

Bers M. & Resnick, M (2015) *The Official Scratch Jr Book: Help your Kids Learn to Code*, No Starch Press, CA

Bers, M. (2012) *Designing Digital Experiences for Positive Youth Development: From playpen to playground*. Oxford University Press

Bers, M.U. (Winter 2010). *New Directions for Youth Development*. Special Issue: New Media and Technology: Youth as Content Creators, Issue 128.

Bers, M (2008) *Blocks to Robots: Learning with Technology in the Early Childhood Classroom*. Teachers College Press, NY, NY.

Patents

EDUCATIONAL ROBOTIC SYSTEMS AND METHODS, US Provisional Patent Application 61/807,085 filed 4/1/2013.

Referred Papers in Academic Journals

Portelance, D.J., Strawhacker, A., & Bers, M.U. (2015). Constructing the ScratchJr programming language in the early childhood classroom. *International Journal of Technology and Design Education*, pp. 1-16.

Strawhacker, A. L., & Bers, M. U. (2015). "I want my robot to look for food": Comparing children's programming comprehension using tangible, graphical, and hybrid user interfaces. *International Journal of Technology and Design Education*, 25(3). pp. 293-319.

Sullivan, A., & Bers, M.U. (2015). Robotics in the early childhood classroom: Learning outcomes from an 8-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.R. & Bers, M.U. (2014). Put your robot in, Put your robot out: Sequencing through programming robots in early childhood. *Journal of Educational Computing Research*, 50(4).

Strawhacker, A. L., & Bers, M. U. (2014). "I want my robot to look for food": Comparing children's programming comprehension using tangible, graphical, and hybrid user interfaces. *International Journal of Technology and Design Education*. Advance online publication. doi: 10.1007/s10798-014-9287-7

Bers, M.U., Flannery, L.P., Kazakoff, E.R., & Sullivan, A. (2014) Computational thinking and tinkering: Exploration of an early childhood robotics curriculum, *Computers & Education*, 72, 145-157.

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., 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.

Flannery, L.P. and Bers, M.U. (2013). Let's Dance the "Robot Hokey-Pokey!": Children's programming approaches and achievement throughout early cognitive development. *Journal of Research on Technology in Education*, 46(1), 81-101.

Bers, M.U., Matas, J. & Libman, N. (2013). Livnot U'Lehibanot, To Build and To Be Built: Making Robots in Kindergarten to Explore Jewish Identity. *Diaspora, Indigenous, and Minority Education: Studies of Migration, Integration, Equity, and Cultural Survival*, 7(3), 164-179.

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.

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. doi:10.1007/s10643-012-0554-5.

Lee, K., Sullivan, A., Bers, M.U. (2013). Collaboration by design: Using robotics to foster social interaction in Kindergarten. *Computers in the Schools*, 30(3), 271-281.

Sullivan, A., & Bers, M. U. (2012). Gender differences in kindergarteners' robotics and programming achievement. *International Journal of Technology and Design Education*. DOI: 10.1007/s10798-012-9210-z. [Online First](#).

- Kazakoff, E., Sullivan, A., & Bers, M. (2012). The Effect of a classroom-based intensive robotics and programming workshop on sequencing ability in early childhood. *Early Childhood Education Journal*. DOI: 10.1007/s10643-012-0554-5. Online First.
- Bers, M. (2012). Parents and children: Engaging in positive technological development through robotics. *Early Childhood Development and Care, special issue on Ecological Perspectives on Children's ICT Experiences*
- Kazakoff, E., & Bers, M. (2012). [Programming in a robotics context in the kindergarten classroom: The impact on sequencing skills](#). *Journal of Educational Multimedia and Hypermedia*, 21(4), 371-391.
- Lee, K; Sullivan, A; Bers, M (in press). Collaboration by design: Using robotics to foster social interaction in Kindergarten. *Computers in Schools*, Taylor and Francis
- Horn, M.S., Crouser, R.J., & Bers, M.U. (2011). Tangible interaction and learning: The case for a hybrid approach. [*Special Issue on Tangibles and Children*] *Personal and Ubiquitous Computing*, 16(4), 379-389. doi: 10.1007/s00779-011-0404-2
- Cantrell, K., Fischer, A., Bouzaher, A., & Bers, M. (2010). E-mentorship in virtual communities for youth transplant recipients. *Journal of Pediatric Oncology Nursing*, 27(6), 344-355.
- Bers, M., Beals, L., Chau, C., Satoh, K., Blume, B., DeMaso, D., & Gonzalez-Heydrich, J. (2010). Use of a virtual community as a psychosocial support system in pediatric transplantation. *Pediatric Transplantation*, 14, 261-267.
- Bers, M & Chau, C. (2010). The virtual campus of the future: stimulating and simulating civic actions in a virtual world. *Journal of Computing in Higher Education*, 22(1), 1-23.
- Horn, M.S., Crouser, R.J., & Bers, M.U. (2011) Tangible Interaction and Learning: The Case for a Hybrid Approach. *Personal and Ubiquitous Computing* (special issue on Tangibles and Children).
- Cantrell, K., & Bers, M. (2010). Zora Camp4All: A virtual community to augment the hopefulness of pediatric camping. *Child Life Focus*, 28(3), 1-7.
- Bers, M. (2010). Let the Games Begin: Civic Playing on High-Tech Consoles. *Review of General Psychology*, 14(2), 147–153.
- Beals, L., & Bers, M.U. (2010). Evaluating participation in an international bilingual virtual world educational intervention for youth. *Journal of Virtual Worlds Research*, 2(5).
- Bers, M.U. (2010). Beyond computer literacy: Supporting youth's positive development through technology. *New Directions for Youth Development*, 128, 13 - 23.
- Bers, M.U. (2010). The TangibleK Robotics Program: Applied Computational Thinking for Young Children. *Early Childhood Research and Practice*, 12(2).
- Bers, M. U. (2009). New Media for New Organs: A Virtual Community for Pediatric Post-Transplant Patients. *Convergence: The Journal of Research into New Media Technologies*. 15(4), 462-469.
- Beals, L. & Bers, M.U. (2009). A developmental lens for designing virtual worlds for children and youth. *The International Journal of Learning and Media*, 1(1), 51-65
- Bers, M (accepted for publication) Parents and children: Engaging in positive technological development through robotics. *Early Childhood Development and Care*. Article accepted for upcoming special issue on Ecological Perspectives on Children's ICT Experiences, edited by Cynthia Carter Ching and X. Christine Wang. Publication expected 2009.
- Bers, M. U. (2008). "Civic identities, online technologies: from designing civic curriculum to supporting civic experiences." *Civic Life Online: Learning how digital media can engage youth*. Bennett, W. L. (Ed.). The John D. and Catherine T. MacArthur Foundations Series on Digital Media and Learning. Cambridge, MA: The MIT Press. 139-160.
- Bers, M (2007) Project InterActions: A multigenerational robotic learning environment. *Journal of Science and Technology Education*. Volume 16, Number 6 / December, 2007 Springer. 537-552

Bers, M., & Chau, C. (2006). "Fostering civic engagement by building a virtual city". *Journal of Computer-Mediated Communication*, 11(3). article 4.

Bers, M (2006) "The role of new technologies to foster positive youth development" *Applied Developmental Science*. Lawrence Erlbaum Associates, Mahwah, NJ, Volume 10, Number 4, 2006

Beals, L. & Bers, M. (2006). "Robotic Technologies: When Parents Put Their Learning Ahead of their Child's". *Journal of Interactive Learning Research*. 17 (4), pp. 341-366. Chesapeake, VA: AACE.

Bers, M. Portsmore, M (2005) "Teaching Partnerships: Early Childhood and Engineering Students Teaching Math and Science Through Robotics", *Journal of Science Education and Technology*, Volume 14, Issue 1, Mar 2005, Pages 59 - 73.

Bers, M, New, B. & Boudreau, L (2004) "Teaching and learning when no one is expert: Children and parents explore technology" *Journal of Early Childhood Research and Practice*. Vol 6, N 2

Bers, M, Gonzalez-Heydrich, G., DeMaso, D. (2003) "Use of a Computer-Based Application in a Pediatric Hemodialysis Unit: A Pilot Study". *Journal of the American Academy of Child and Adolescent Psychiatry*. 42:4, April 2003

Bers, M (2003) "Kaleidostories: Teachers and Students Creating a Cross Cultural Virtual Community through Narrative." *Convergence: The Journal of Research into New Media Technologies*. 9(2), pp. 54-8). Bedfordshire:UK.

Bers, M, Ponte I, Juelich, K, Viera, A & Schenker, J (2002) "Teachers as Designers: Integrating Robotics into Early Childhood Education" *Information Technology in Childhood Education*. Annual AACE: pp 123-145

Bers, M, Gonzalez-Heydrich, G., DeMaso, D. (2002) "Future of Technology to Augment Patient Support in Hospitals". *Studies in health, technology and informatics* . 80:231-44.

Bers, M. (2001) "Identity Construction Environments: developing personal and moral values through the design of a virtual city". *Journal of the Learning Sciences*, 10 (4) pp 365-415. NJ: Lawrence Erlbaum Associates, Inc.

Bers, M & Cassell, J. (1999) "Interactive Storytelling Systems for children: using technology to explore language and identity." *Journal of Interactive Learning Research*, volume 9 (2), pp. 603-609.

Referred Papers in Conference Proceedings

Strawhacker, A., Portelance, D., Lee, M., & Bers, M.U. (2015). [Designing Tools for Developing Minds: The role of child development in educational technology](#). In Proceedings of the 14th International Conference on Interaction Design and Children (IDC '15). ACM, Boston, MA, USA.

Sullivan, A., Elkin, M., & Bers, M. U. (2015). [KIBO Robot Demo: Engaging young children in programming and engineering](#). In Proceedings of the 14th International Conference on Interaction Design and Children (IDC '15). ACM, Boston, MA, USA.

Portelance, D.J., & Bers, M.U. (2015). [Code and Tell: Assessing young children's learning of computational thinking using peer video interviews with ScratchJr](#). In Proceedings of the 14th International Conference on Interaction Design and Children (IDC '15). ACM, Boston, MA, USA.

Strawhacker, A., Lee, M., Caine, C., & Bers, M.U. (2015). [ScratchJr Demo: A coding language for Kindergarten](#). In Proceedings of the 14th International Conference on Interaction Design and Children (IDC '15). ACM, Boston, MA, USA.

Hilliard, L., Buckingham, M., Geldhof, G. J., Bers, M. B., & Lerner, R. (2015). [Educational Game Play and Ethical Decision-Making: A Mixed-Method Experimental Study](#). Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

Kazakoff, E.R., & Bers, M.U. (2014, April). Does learning to code correlate with self-regulation skills in kindergarten classrooms? Poster presented at the American Educational Research Association Annual Meeting, 3 - 7 April 2014, Philadelphia, Pennsylvania.

Flannery, L.P., Kazakoff, E.R., Bontá, P., Silverman, B., Bers, M.U., and Resnick, M. (2013). [Designing ScratchJr: Support for early childhood learning through computer programming](#). In Proceedings of the 12th International Conference on Interaction Design and Children (IDC '13). ACM, New York, NY, USA, 1-10. DOI=10.1145/2485760.2485785

- Strawhacker, A. Sullivan, A. & Bers, M.U. (2013). TUI, GUI, HUI: Is a bimodal interface truly worth the sum of its parts?. In Proceedings of the 12th International Conference on Interaction Design and Children (IDC '13). ACM, New York, NY, USA, 309-312.
- Shaer, O. Bers, M. Chang, M. Chang, (2011) Making the Invisible Tangible: Learning Biological Engineering in Kindergarten. ACM CHI 2011 Workshop on User Interface Technology and Educational Pedagogy, ACM: CHI 2011.
- Cantrell, K., & Bers, M. (2011). Psycho-educational technologies for children with cancer. *Proceedings at the National Conference on Cancer Nursing Reserach*, 12-13 February 2011, California: Los Angeles.
- Kazakoff, E.R., & Bers, M.U. (2010). Computer programming in kindergarten: The role of sequencing. (Large File) *Proceedings of the ICERI 2010 International Conference of Education, Research and Innovation*, 15-17 November 2010, Spain: Madrid. (Paper and Virtual Presentation)
- Cantrell, K. & Bers, M. (2010) Virtual communities to augment psychosocial care. *Proceedings of the Association of Virtual Worlds Conference*, 10 November 2010, Massachusetts: Boston.
- Cantrell, K. & Bers, M. (2010) Zora Camp4All: Virtual community for youth with cancer. *Proceedings from the Internationa Society of Pediatric Oncology- Pediatric Psycho-Oncology Pre-meeting*. 21-23 October 2010, Massachusetts: Boston. (Poster and Presentation)
- Horn, M., Bers, M., & Jacob, R. (2009). Tangible programming in education: A research approach. CHI'09, April 2009, Boston
- Bers, M., Chau, C., Satoh, K., & Beals, L. (2007). *Virtual Communities of Care: Online Peer Networks with Post-Organ Transplant Youth*. Proceedings of the 2007 Computer Supported Collaborative Learning Conference Proceedings, New Brunswick, NJ.
- Chau, C., & Bers, M. (2006). Positive Technological Development: A systems approach to understanding youth development when using educational technologies. In Proceedings of the International Conference of the Learning Sciences. (Eds. S. Barab, K. Hay, & D. Hickey). LEA Publishing, 902-903.
- Chau, C., Mathur, A., & Bers, M. (2006). Active Citizenship through Technology: Collaboration, connection, and civic participation. In Proceedings of the International Conference of the Learning Sciences.(Eds. S. Barab, K. Hay, & D. Hickey). LEA Publishing, 904-905.
- Kahn, J & Bers, M (2005) "An Examination of Early Elementary Student's Approach to Engineering" Proceedings of the 2005 *American Society for Engineering Education Annual Conference and Exposition*, American Society for Engineering Education.
- Staszowski & Bers, M (2005) "The Effects of Peer Interactions on the Development of Technological Fluency in an Early-Childhood, Robotic Learning Environment" Proceedings of the 2005 *American Society for Engineering Education Annual Conference and Exposition*, American Society for Engineering Education.
- Bers, M, Gonzalez-Heydrich,G., DeMaso, D. (2001) "Identity Construction Environments: Supporting a Virtual Therapeutic Community of Pediatric Patients undergoing Dialysis". In *Proceedings of ComputerHuman Interaction (CHI'01) ACM*, pp 380-387
- Bers, M. (1999) "Zora: a Graphical Multi-user Environment to Share Stories about the Self." In *Proceedings of Computer Support for Collaborative Learning (CSCL'99)*, pp. 33-40.
- Bers, M. & Best, M. (1999)"Rural Connected Communities: A Project in Online Collaborative Journalism" In *Proceedings of Computer Support for Collaborative Learning (CSCL'99)*, pp. 41-46.
- Bers, M. (1999) "Narrative Construction Kits: Who am I? Who are you? What are we?" In *Proceedings of Narrative Intelligence Fall Symposium, AAAI'99*, pp. 44-51.
- Bers, M. &Urrea C. (1999) "Con-science: Parents and Children Exploring Robotics and Values". In *Proceedings of EUROLOGO'99*, Sofia, Bulgaria, pp. 356-366.

Bers, M. (1999) "A constructionist approach to values through on-line narrative tools" In *Proceedings of International Conference for the Learning Sciences* (ICLS'98), AACE, pp 49-55.

Bers, M.; Ackermann, E.; Cassell, J.; Donegan, B.; Gonzalez-Heydrich, J.; DeMaso, D.; Strohecker, C.; Lualdi, S.; Bromley, D.; Karlin, J. (1998) "Interactive Storytelling Environments: Coping with Cardiac Illness at Boston's Children's Hospital" In *Proceedings of Computer-Human Interaction (CHI'98)* ACM, pp. 603-609.

Gonzalez-Heydrich J, Bromley D, Strohecker C, Marks J, DeMaso DR, Ackermann E, Gibson S, Shen C, Umaschi M. (1998) "Experience journals: Using computers to share personal stories about illness and medical intervention." *MedInfo '98*, 9th World Congress on Medical Informatics. IOS Press. 1998, pp. 1323-1327.

Umaschi, M. & Cassell, J. (1997) "Storytelling Systems: Constructing the Innerface of the Interface." In *Proceedings of Cognitive Technologies '97*, IEEE, pp.98-108.

Umaschi, M. (1997) "Soft Toys with Computer Hearts: Building Personal Storytelling Environments" In *Proceedings of Computer-Human Interaction (CHI'97)* ACM, pp. 20-21.

D. Roy, M. Hlavac, M. Umaschi, T. Jebara, J. Cassell, and A. Pentland.(1997) "Toco the toucan: A synthetic character guided by perception, emotion, and story". In *Visual Proceedings of Siggraph*, page 66, 1997.

Glos, J & Umaschi, M. (1997) "Once Upon an Object: Computationally augmented Toys for Storytelling" In *Proceedings of International Conference on Computational Intelligence and Multimedia Applications (ICCIMA'97)*, pp. 245-249.

Umaschi, M. (1996) "SAGE Storytellers: Learning about Identity, Language and Technology". In *Proceedings of International Conference for the Learning Sciences (ICLS'96)*, AACE, pp.526-531.

Umaschi, M. (1996) "Rabbi: exploring the inner world through stories. " In *Proceedings of American Association of Artificial Intelligence (AAAI '96)*, Volume II, MIT Press, pp. 1413.

Book chapters

Bers, M. U. (2014). Tangible kindergarten: Learning how to program robots in early childhood. In Sneider, C. I. (Ed.), *The Go-To Guide for Engineering Curricula PreK-5: Choosing and using the best instructional materials for your students* (pp. 133-145). Thousand Oaks, CA: Corwin.

Flannery, L. P., & Bers, M. U. (2014). The methodological tortoise and the technological hare: A discussion of methods for conducting research on new technologies and young children. In O. Saracho (Ed.), *Handbook of Research Methods in Early Childhood Education, Volume 2* (pp. 193-222). Charlotte, NC: Information Age Publishing.

Bers, M. U., & Ettinger, A. B. (2012). Programming Robots in Kindergarten to Express Identity: An Ethnographic Analysis. In B. Barker, G. Nugent, N. Grandgenett, & V. Adamchuk (Eds.), *Robots in K-12 Education: A New Technology for Learning* (pp. 168-184). doi:10.4018/978-1-4666-0182-6.ch008

Bers, M., Doyle-Lynch, A., & Chau, C. (2012). Positive technological development: The multifaceted nature of youth technology use toward improving self and society. In Ching, C. C. & Foley, B. J. (Eds.) *Constructing the Self in a Digital World* (pp. 110-136). New York: Cambridge University Press.

Bers, M. & Kazakoff, E. (2012). Chapter 26. Developmental technologies: Technology and human development. In Lerner, R.M., Easterbrooks, M.A., Mistry, J., & Weiner, I.B. (Eds.) *Handbook of Psychology, Developmental Psychology*.

Bers, M. & Kazakoff, E. R. (2012). Techno-Tykes: Digital technologies and young children. In O.N. Saracho & B. Spodek (Eds.) *Handbook of Research on the Education of Young Children*.

Bers, M. U. & Cantrell, K (2012). Virtual worlds for children with medical conditions: Experiences for promoting positive youth development. In Å. Smedberg (Ed.), *E-health communities and online self-help groups: Applications and usage* (1-23). Hershey, PA: Medical Information Science Reference.

Bers, M., Beals, L., Chau, C., Satoh, K., and Khan, N. (2010). Virtual worlds for young people in a program context: Lessons from four case studies. *New Science of Learning: Cognition, Computers, and Collaboration in Education*. (Eds. M. Khine and I. Saleh). pp. 357-383. Springer Publishing Company.

Bers., M. (2010). When robots tell a story about culture...and children tell a story about learning. In N. Yelland, (Ed.) *Contemporary Perspective on Early Childhood Education*. pp. 227-247. Maidenhead, UK: Open University Press.

Bers, M. & Horn, M. (2010). Tangible programming in early childhood: Revisiting developmental assumptions through new technologies. In I. R. Berson & M. J. Berson (Eds), *High-tech tots: Childhood in a digital world*. pp. 49-70. Greenwich, CT: Information Age Publishing.

Bers, M (2008). A palace in time: Supporting children's spiritual development through new technologies. In *Youth, Development & Spirituality: From Theory to Research* . (Eds) Richard Lerner, Robert Roeser, & Erin Phelps. Templeton Foundation Press: West Conshohocken, Pennsylvania.339-358.

Bers, M. (2008). Engineers and storytellers: Using robotic manipulatives to develop technological fluency in early childhood. In O. Saracho and B. Spodek (Eds), / *Contemporary Perspectives on Science and Technology in Early Childhood Education* (pp. 105-125). Charlotte, NC: Information Age Publishing.

Bers, M (2007). Constructionism. In Rebecca S. New and Moncrieff Cochran (Eds.), *Early Childhood Education: An International Encyclopedia*. Vol. 1, pp. 149-152. Westport, Connecticut: Praeger.

Bers, M & Chau, C (2007) "Technology and Early Childhood Education" In Rebecca S. New and Moncrieff Cochran (Eds.), *Early Childhood Education: An International Encyclopedia*. Vol. 3, pp. 798-801 Westport, Connecticut: Praeger.

Bers, M. (2003) "We Are What We Tell: Designing Narrative Environments for Children " In *Narrative Intelligence*. Edited by P.Sengers & M. Mateas. Amsterdam: John Benjamins.

Bers, M & Cassell, J. (2000) "Children as Designers of Interactive Storytellers:"Let Me Tell You a Story about Myself..." In *Human Cognition and Social Agent Technology* . Edited by K. Dautenhahn. Amsterdam: John Benjamins, pp. 61-83

Bers, M. & Urrea, C (2000) "Technological Prayers: Parents and Children Working with Robotics and Values" In *Robots for Kids: Exploring New Technologies for Learning Experiences*. Edited by A. Druin & J. Hendler. NY: Morgan Kaufman, pp. 194-217.

Refereed Conference Presentations

Hilliard, L., Buckingham, M., Geldhof, G. J., Bers, M. B., & Lerner, R. (2015, March). *Educational Game Play and Ethical Decision-Making: A Mixed-Method Experimental Study*. Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

Kazakoff, E.R., & Bers, M.U. (2014, April). Does learning to code correlate with self-regulation skills in kindergarten classrooms? American Educational Research Association Annual Meeting, 3 - 7 April 2014, Philadelphia, Pennsylvania.

Kazakoff, E.R., & Bers, M.U. (2013). Designing New Technologies for Early Childhood: Results From the Initial Pilot Studies of ScratchJr. *Poster presented at SRCD Society for Research in Child Development, 18- 20 April 2013, Seattle, Washington.*

Flannery, L. & Bers, M. U. (2012). Piaget and Programming Robots: Cognitive Developmental Level as a Predictor of Programming Achievement. Paper presented at EETC, 14 - 16 March 2012, Salt Lake City, Utah.

Osterweil, S., Bers, M., & Stidwill, P. (2012.). *Quandary: Building Capacity in Ethical Decision Making*. Poster presentation at Meaningful Play, East Lansing, MI.

Kazakoff, E.R., & Bers, M.U. (2011). The Impact of Computer Programming on Sequencing Ability in Early Childhood. *Paper to be presented at American Educational Research Association Conference(AERA)*, 8 - 12 April, 2011, Louisiana: New Orleans.

- Kazakoff, E.R., & Bers, M.U. (2011). Kindergarten Robotics: Understanding and Programming Robots in Early Childhood. *Poster to be presented at SRCD Society for Research in Child Development*, 31 March - 2 April, 2011, Canada: Montreal.
- Kazakoff, E.R., & Flannery, L. (2011). Kindergarten Robotics Workshop to be conducted at the *Digital Media and Learning Conference*, 2 - 5 March 2011, California: Los Angeles.
- Satoh, K, Blume, E, DeMaso, DR, Gonzalez-Heydrich, J & Bers, M (2008). *A Virtual Community for Post-Transplant Pediatric Patients*. Abstract of the International Society for Heart and Lung Transplantation 28th Annual Meeting and Scientific Sessions; Boston, Massachusetts; 2008 April 9-12.
- Satoh, K., & Bers, M. (2008, April). *Virtual community for Pediatric Post solid-organ transplant patients*. Poster session presented at the 2008 National Conference on Child Health Psychology, Miami Beach, Florida.
- Bers, M & LeeKennan, D (2007) "Ready for Robotics: a project-based approach to teach young children and their teachers about technology by making and programming interactive robots." *NAEYC Annual meeting*. Chicago, November 7-10, 2007
- Irish-Hauser, Goldberg, Wilde, Bers, Ioannone, & Economos (2007) Using Technology and Online Collaboration to Enhance Training of After School Program Leaders in Nutrition and Physical Activity. International Conference on Urban Health. Oct 31-Nov 2, 2007. Baltimore, MD.
- Bers (2007) "An intergenerational community of practice: Engaging in positive technological development through robotics" AERA Annual Meeting, April 9-13. Chicago
- Bers (2007) "Technobiographies: Researching Life Stories with Technology" Discussant for session at AERA Annual Meeting, April 9-13. Chicago
- Bers (2007) "Developmental Technologies: Positive Uses of Technology for Youth Learning and Development". Chair of symposium presenting papers from students in my DevTech research group. SRCD-Biennial meeting- Boston 2007
- Satoh, K., McVey, M., Grogan, D. & Bers, M (2006). Zora: Implementing Virtual Communities of Learning and care (VCLC). Presentation at the New Media Consortium's, Regional Conference at San Antonio TX.
- Bers, M (2006) "Developmental Technologies vs. Educational Technologies: Designing and studying learning experiences in complex contexts". *American Educational Research Association (AERA) Annual Meeting SF April 2006*
- Chau, C., & Bers, M (2006) "Exploring the Relationships Between Educational Technology and Youth Development: A Case Study of Lego Summer Camp". *American Educational Research Association (AERA) Annual Meeting SF April 2006*.
- Bers, M (2006) "Early Childhood Robotics for Learning". Innovative symposium presented at the *International Conference of the Learning Sciences (ICLS'06)*, *7th International Conference of the Learning Sciences (ICLS '06)*, Bloomington, IN
- Chau, C., Mathur, A., & Bers, M. (2006). "Active Citizenship through Technology: Collaboration, connection, and civic participation". *7th International Conference of the Learning Sciences (ICLS '06)*, Bloomington, IN.
- Chau, C., & Bers, M. (2006) "Positive Technological Development: A systems approach to understanding youth development when using educational technologies". *7th International Conference of the Learning Sciences (ICLS '06)*, Bloomington, IN
- Chau, C., & Bers, M. (2005). Positive technological development: A research methodology for exploring relationships between youth development and educational technologies. Symposium presentation at the *2005 Annual American Psychological Association Convention (APA)*, Washington DC.
- Bers, M (2005) "Networked technologies to foster positive youth development. Symposium Organized and chaired at the *American Psychological Association (APA) Annual Convention'05*. Washington, DC
- Bers, M (2005) "Identity Construction Environments: the Zora Virtual Community" Presentation at the American Psychological Association (APA) Annual Convention'05. June 21, 2005. Washington, DC.
- Bers, M (2004), "Parents, Children and Technology: Making Robots, Exploring Cultural Heritage and

Learning Together” *American Educational Research Association (AERA) Annual Meeting LA, April 2004*

Bers, M (2003) “The use of virtual environments to develop a sense of self and personal values” *American Educational Research Association (AERA) Annual Meeting Chicago, April 2003*

Bers, M., Gonzalez-Heydrich, G., DeMaso, D., Corsini, E. & Harmon, W. (2000) "Zora: A Pilot Virtual Community in the Pediatric Dialysis Unit." *American Society for Pediatrics., Boston, MA*

Invited Presentations

Bers, M (2014, April) “Building the STEM Workforce Begins Early: A Focus on STEM Learning Ages 3-8” at the 2014 AERA Annual Meeting. Presidential Session.

Bers, M (2014) NSF distinguished lecture “Playgrounds not playgrounds: Learning with technology”, Washington, DC

Bers, M (May 2014) "Young Children as Programmers and Engineers: A Hands-On Approach" (workshop presentation, Department of Early Education and Care Spring STEM Conference for Early Educators, MA, May 22, 2014)

Bers, M (May 2014) keynote: "Young Children as Programmers and Engineers: A Hands-On Approach" (The Early Childhood Investigations Conference, Eastern Connecticut State University, CT, May 9, 2014).

Bers, M "Coding 101: A hands-on introduction to ScratchJr" (presentation, Sandbox Summit, Cambridge, MA, March 24-25, 2014).

Bers, M "The Missing T & E in Early Childhood STEM: Young Children as Programmers and Engineers" (presentation, NSF-Smithsonian STEM Smart Conference, Washington, DC, Dec 3, 2013).

Bers, M. U. (2014, November 6). [Marina Bers: Young programmers: Think playgrounds, not playpens](http://www.tedxjackson.com/). TEDx Retrieved from <http://www.tedxjackson.com/>

Strawhacker, A. L., & Bers, M. U. (2014). ScratchJr: Computer Programming in Early Childhood Education as a Pathway to Academic Readiness and Success. *Poster presented at DR K-12 PI Meeting, 5 August 2014, Washington, D.C.*

Bers, M (2008) “De robots a mundos virtuales: nuevas tecnologías en la educacion”. Seminario de Actualizacion. Fundacion Educ.ar. Ministerio de Educacion. April 14th , Argentina.

Bers, M (2008) “De robots a mundos virtuales: nuevas tecnologías para el aprendizaje”. Seminario Permanente de Metodologia de la Investigacion. Universidad de San Andres, April 26th, 2008 an Isidro, Provincia de Buenos Aires, Argentina,

Bers, M (2008) Nuevas tecnologías para el aprendizaje. Carrera de Ciencias de la Comunicacion. Universidad de Buenos Aires, April 1 st, 2008, Capital Federal, Argentina

Bers, M (2007) Positive Technological Development in Complex Learning Settings. Georgia Tech. College of Computing. January 8, 2007

Bers, M (2007) “Post-Transplant pediatric patients: virtual communities of learning and care” Medical Informatics Seminar. Boston University. Boston University Medical Campus (BUMC), January 25, 2007

Bers, M (2007) “Virtual Communities of Learning and Care” NYU Steinhardt School of Education, April 16, 2007.

Bers, M (2007) “Virtual Communities of Learning and Care: Post-transplant pediatric patients @ Children's Hospital Boston”. Center for Communication Disorders. Children’s Hospital Waltham. Waltham, MA. March 15 2007.

Bers (2007) “Active Citizenship through Technology: a pre-orientation for incoming freshman” Educating the Ne(x)t generation conference. Experimental College. Tufts University. February, 2, 2007

Bers, M (2007) "From virtual worlds to robots: Engaging children in positive uses of technology" *Festschrift for David Elkind*. Eliot Pearson Department of Child Development. Tufts University. May 9, 2007

Bers (2007) Positive Technological Development in Complex Learning Settings. Georgia Tech. College of Computing.

January 8, 2007

Bers, M (2006) "Virtual communities of learning and care: technologies to promote positive youth development", *APA Science Leadership Conference (SciLC)*, Washington, DC

Bers, M (2006) "A Pediatric Post-transplant Virtual Community" *E-Media and Behavior Change, New England Research Institute*, Watertown, MA.

Bers, M (2006) *Tecnologías y Educación: desafíos y oportunidades*. Keynote speaker (via video conference in the Conference in "Internet como espacio educativo" organized by Educ.Ar, Educational Technologies division of the *Argentine Ministry of Education. Jornadas de capacitación docente educ.ar - Instituto Marín*

Bers, M (2006) "The design of developmental technologies" *Technologies for Lifelong Kindergarten, MIT Media Laboratory*.

Bers, M (2005). *Virtual Communities for Learning and Care..* Research seminar. Dept. of Psychiatry. *Children's Hospital*. Boston, MA

Bers, M (2005) "Technologies to foster Positive Youth Development". *IDEAS Institute. MIT Media Laboratory*.

Bers, M (2005) "Virtual Environments: Strategies for Reducing Suffering in Traumatic Medical Treatment" *Future of Health Symposium*, September 26-27 2005, Massachusetts Institute of Technology

Bers, M (2004) "Fostering civic engagement by building a virtual city". Faculty forum on civic engagement. *Tufts University*

Bers, M (2003) "Learning by Designing and Inhabiting Virtual Cities." Academic Technology's seminar *Tufts University*

Bers, M (2003) "Project InterActions: parents and children learning robotics". Young Faculty Leaders Forum. *Harvard University*.

Bers, M (2002) "Educational Technologies: Designs and Challenges". Young Faculty Leaders Forum *Harvard University*.

Bers, M (2002) "A virtual community in a pediatric dialysis unit". *Massachusetts Psychological Association*

Bers, M (2002) "Computational Environments for Exploring Identity". Technology and self seminars, *MIT's Initiative on Technology and Self*.

Bers, M (2001) "Using technology to create virtual support groups" *Cyberpsychology Colloquium. Harvard University*.

Bers, M (2000) "Identity Construction Environments: Technological Tools for Self-Exploration". Invited talk at *Baystate Medical Center Children's Hospital*.

Bers, M (2000) "Developing computer tools to support communities of pediatric patients and families" *Health Care Technology Summit, MIT*.

Bers, M (1999) "*Social Dimensions of the Use of Interactive Technologies by Young People*". Invited to NSF workshop organized by Center for Advanced Technology in Education, *University of Oregon*.

Bers, M (1999) "*Children, Creativity and New Technologies: Implications for the Future*". Guest speaker at conference organized by the Institute for Media Technology, *Jonkoping University, Sweden*.

Bers, M (1998) "*Jornadas Internacionales de Informatica Educativa*" guest speaker at teacher conference organized by the National Educational Technologies Institute, Bs. As., Argentina.

Bers, M (1998) "A constructionist perspective on values: a response to postmodern fragmented identity" Presentation at symposium "*Identity, formation, dignity: The impacts of Artificial Intelligence upon Jewish and Christian Understandings of Personhood*" organized by The Boston Theological Institute, MIT Artificial Intelligence Lab and Center for Faith and Science Exchange.

Invited Published Papers

Bers, M. (2007). Positive technological development: Working with computers, children, and the Internet *MassPsych*, 51/(1), 5-7, 18-19

Bers, M. U. (2008). *Virtual Worlds as Digital Playgrounds*. *EDUCAUSE Review*, 43(5), 80-81