

Massachusetts Institute of Technology  
School of Architecture and Planning  
Faculty Personnel Record

*Name:* Eric Klopfer  
*Department:* Urban Studies and Planning / Teacher Education Program  
*Affiliations:* Comparative Media Studies, Media Arts and Sciences, Engineering Systems Division

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- 2.

3. Education:

| <i>School</i>                    | <i>Degree</i>   | <i>Date</i> |
|----------------------------------|-----------------|-------------|
| Cornell University               | B.S. (Biology)  | May 1992    |
| University of Wisconsin, Madison | Ph.D. (Zoology) | May 1997    |

4. Title of Ph.D. Dissertation:  
“Ecological and Evolutionary Consequences of Explicit Spatial Structure in Exploiter-Victim Systems”

5. Principal Fields of Interest:

Complex Systems, Computation and Modeling in K-12 Education – Understanding Science through Using and Creating Computer Simulations  
The Education Arcade – Computer Games in the Classroom  
Mobile Learning Technology – Creating and Studying Location-based and Location-free Games  
Online Learning - Applying Principles of Learning Sciences to Learning Online  
Teacher Preparation – Alternative Pathways to Teacher Preparation

8. Non-MIT Experience:

| <i>Employer</i>        | <i>Position</i>        | <i>Beginning</i> | <i>Ending</i> |
|------------------------|------------------------|------------------|---------------|
| Learning Games Network | Board Member           | Sept 2008        | Present       |
| Learning Games Network | President/Co-Founder   | Sept 2008        | March 2014    |
| UMass Amherst          | Postdoc/Lecturer       | June 1998        | June 1999     |
| Amherst Schools        | Technology Coordinator | Sept. 1997       | June 1998     |

9. History of MIT Appointments:

|                                    |           |           |
|------------------------------------|-----------|-----------|
| Professor                          | July 2012 | Present   |
| Associate Professor with Tenure    | July 2006 | June 2012 |
| Associate Professor without Tenure | July 2004 | June 2006 |
| Assistant Professor                | July 1999 | June 2004 |

10. Consulting Record:

|   |      |         |
|---|------|---------|
| Vtech Toys  | 2010 | Present |
| NAEP  | 2010 | Present |
| Radford College   | 2009 | 2012    |
| Penn GSE  | 2009 | 2011    |
| TERC  | 2008 | 2012    |
| Ontar Corporation   | 2008 | 2010    |
| Learning Box  | 2008 | 2009    |
| WGBH Interactive  | 2008 | 2009    |
| Minnesota Public Libraries – Games for Learning                   | 2007 | 2010    |
| NAEP  | 2007 | 2008    |
| SimBiotic Software  | 2006 | Present |
| Harvard-Smithsonian Institute – Environmental Science Simulations | 2006 | 2007    |
| Harvard School of Public Health – Games for Learning Epidemiology | 2005 | 2008    |
| New England Complex Systems Institute – Global Modeling           | 2005 | 2006    |

**11. Department and Institute Committees:**

|   |      |         |
|---|------|---------|
| MITx Global Impact                                      | 2013 | Present |
| MITx Coordinating Committee                             | 2013 | Present |
| MITx Games Task Force                                   | 2013 | 2013    |
| MITx Ad Hoc Committee                                   | 2012 | 2012    |
| Masters in Technology Enabled Education (Chair)         | 2011 | Present |
| DUSP PhD Committee                                      | 2011 | 2012    |
| MIT Subject Evaluation Committee                        | 2010 | Present |
| eMIT – MIT Online Committee                             | 2010 | 2012    |
| Committee on Student Information Policy (CSIP)          | 2009 | Present |
| Online Subject Evaluation Committee                     | 2009 | 2011    |
| HASS Requirement Subcommittee                           | 2009 | 2010    |
| DUSP Research Committee (Chair)                         | 2009 | 2010    |
| Learning Management System (Chair)                      | 2009 | 2010    |
| OCW Revenue Enhancement                                 | 2008 | 2010    |
| DOS Faculty Advisory Committee                          | 2008 | 2010    |
| MIT Subject Evaluation                                  | 2008 | 2010    |
| Open Research and Publication                           | 2008 | 2009    |
| OCW Executive Director Search                           | 2008 | 2008    |
| DUSP UROP Coordinator                                   | 2007 | Present |
| MIT Classroom Committee                                 | 2007 | 2010    |
| Next Generation Student Systems                         | 2007 | 2010    |
| OCW SE Committee  | 2007 | 2009    |
| MIT Council on Educational Technology                   | 2004 | 2009    |
| MIT K-12 Outreach (co-Founder/co-Chair)                 | 2004 | 2012    |
| Open Courseware Faculty Advisory Committee              | 2002 | Present |
| Network of Educators in Science & Technology (co-Chair) | 2002 | Present |
| Subcommittee on Mentoring                               | 2002 | 2003    |
| MIT Committee on the Undergraduate Program              | 2001 | 2004    |
| DUSP Undergraduate Committee                            | 2000 | Present |

**12. Government and Other Outside Committees, Service, etc.:**

|   |      |         |
|---|------|---------|
| IEEE Transactions on Learning Technologies Editorial Board    | 2013 | Present |
| ACM Computers in Entertainment Editorial Board                | 2010 | Present |
| International Conference Learning Sciences, Program Committee | 2014 | 2014    |
| Constructionism, Program Committee                            | 2010 | Present |
| National Assessment of Educational Progress Committee         | 2009 | Present |
| National Academies – Games, Sims, Education                   | 2009 | 2010    |
| International J. on Computer Games Technology, Editor         | 2007 | Present |
| Journal of Science Education and technology, Editorial Board  | 2007 | Present |
| Games Learning and Society, Reviewer                          | 2007 | Present |
| Games Learning and Society, Organizing Committee              | 2007 | 2010    |
| ACM ACE 2008, Review Committee                                | 2007 | 2008    |
| National Academy of Engineering Education Affiliate           | 2007 | 2007    |
| Santa Fe Institute Board                                      | 2006 | 2012    |
| NECSI External Faculty  | 2005 | Present |
| International Journal of Science Education Reviewer           | 2005 | Present |
| Alliance for Complexity Education @ SFI (co-Founder)          | 2005 | 2008    |
| Technology & Learning Games Education Committee               | 2005 | 2007    |
| Australia Conference Review Committee                         | 2005 | 2006    |
| Journal of Computer Assisted Learning Reviewer                | 2004 | 2007    |
| International Power Users Planning & Research Committee       | 2004 | 2006    |
| MITES SEED Program - Advisory Committee                       | 2001 | 2009    |
| Tech Boston – Advisory Committee                              | 2001 | 2006    |
| FLAIRS – Florida Artificial Intelligence Research Society     | 2001 | 2001    |
| Dean's Committee – Boston Higher Education Partnership        | 2000 | 2006    |

**13. Awards Received:**

|   |           |
|---|-----------|
| Finalist, Indie Game Challenge – <a href="#">Woosh/Waker</a> , puzzle-platform  | 2010      |
| Finalist, Independent Games Festival – <a href="#">Backflow</a> , mobile multiplayer puzzle   | 2008      |
| American Institute of Biological Sciences Education Award   | 2008      |
| Top 10 Innovative Projects – The Education Arcade was selected as one of the top 10 innovations in education technology by Technology and Learning Magazine | 2003      |
| Scheller Career Development Chair   | 2001-2007 |
| NSF Postdoctoral Fellowship in SMTE (Science, Math, Engineering and Technology Education)   | 1998-2000 |

#### 14. Current Organization Memberships:

American Education Research Association (AERA)  
 American Institute for Biological Sciences (AIBS) Lifetime member  
 International Society for the Learning Sciences (ISLS)  
 International Society for Technology in Education (ISTE)  
 National Association of Research in Science Teaching (NARST)  
 National Association of Biology Teachers (NABT)  
 National Council for Teachers of Mathematics (NCTM)  
 American Association for the Advancement of Science (AAAS)

#### 17a. Projects:

**Teacher Education Program** – The mission of the MIT Teacher Education Program (TEP) is to develop a cadre of MIT undergraduates that will become the science and math teachers of tomorrow. Current responsibilities include teaching the core courses for the TEP, supervising the practicum work for student teachers, and developing partnerships with K-12 and informal education institutions.

**The Radix Endeavor** – Developing a massively multiplayer online game for STEM (science, technology, engineering, and math) learning. The game provides students with a collaborative, social experience in a systems-based game world where they can explore how the world works and discover important scientific concepts. This inquiry-based game includes back-end data collection and interpretation of the data for a variety of purposes including player feedback, analysis by researchers, and assessment.

**StarLogo, WebLogo and Adventures in Modeling** – Developing StarLogo software and curriculum for use in K-12 and undergraduate education to teaching modeling and simulation of complex systems. Supervise the development of software, develop curriculum and research the effectiveness of modeling and simulation in the classroom. StarLogo TNG provides a graphical programming language with 3D world to introduce students and teachers to programming through simulations and games in the classroom. Working to integrate games, simulations, programming and complex systems into science curriculum. WebLogo is being developed to provide StarLogo via the cloud.

**Augmented Reality and Ubiquitous Games** – Designing simulations using connected and context aware smartphones and tablets. Developing software that engages students in games via mobile devices outside of the normal classroom context, connecting students to their communities and enabling game play as a part of class without using class time. Games explore the use of location aware simulations to engage learners in large scale investigations. Recent work focuses on student and teacher creation of location-based Augmented Reality Games and a new Ubiquitous Game platform that allows for mobile game play that fits the constraints of formal learning environments.

**The Education Arcade**- Co-founded The Education Arcade, a group at MIT that overlaps STEP and Comparative Media Studies focused on the design and research of educational games. Games that we have developed range from physics-based platformers (in conjunction with Gambit) to “curated” games played by thousands of students nationwide (funded by NSF). Ongoing work in this space includes creating new games, working with external partners and devising methods for sustaining and scaling efforts.

**EdTechx** – A series of online courses through edX about games, educational technology and the intersection of these two fields. The courses are designed around a series of interviews and documentary-style video to situate practices in the field and within a community. Each of the courses is designed around a project that serves as a marker of completion, and draw upon principles from CSCL to promote collaboration.

**EducationxPress** – Founding Editor. EducationXPress originates from the growing need to connect diverse communities engaged in the pursuit of advancing teaching and learning through online and hybrid experiences. Our mission is to build a community of content developers, engineers, educators, researchers, and practitioners focused on the continued improvement of digital learning technologies and instructional practices. Through

publication, curation, dissemination, and facilitation of community engagement, EducationXPress seeks to bring together this community in an accessible, high-quality platform.

#### 17b. Software Developed:

Gameblox – An online graphical language for building games in the browser  
The Radix Endeavor – A Massively Multiplayer Online Roleplaying game about math and science.  
WebLogo – Web-based version of a new StarLogo software to be integrated with the Biograph project.  
TaleBlazer – Provides a web-based programming environment for novices to create highly interactive location-based games. Being deployed as part of the CZA collaboration and with CSI.  
Physics Games – As part of a project studying the role of narrative in learning games we helped in the development (along with Gambit) of the games Woosh/Waker and Poikiliea.  
Ubiquitous Games – A mobile web-based platform for creating and deploying games in formal learning environments. First game, called Weatherlings, is a battle game that combines Pokemon style game play with real weather data. Second set of games focuses on high school biology learning.  
Vanished – Infrastructure and games surrounding an alternate reality “curated” game played over six weeks.  
Palmagotchi – Mobile game to teach evolution that built on the theme of virtual pets.  
Augmented Reality Game Editor – Provides students and teachers with a drag and drop method of creating their own handheld based augmented reality games. Editors available for both designers and students.  
POSIT – Public Opinions on Science Using Information Technology – Location based games engaging learners in controversial issues in science and technology.  
StarLogo TNG – An entirely new version of StarLogo aimed at lowering the bar of simulation development in the classroom. Employs a new graphical user interface for designing simulations as well as 3D representations of phenomena to broaden the range of applications.  
Participatory Simulations – Wearable computer based simulations on the evolution of cooperation, genetics, market formation, and predator-prey relationships. Palm based simulations on genetics, cooperation, predatory prey relationships and epidemics.  
Mystery at the Museum – Indoor location aware simulation game platform launched at the Museum of Science.  
Augmented Reality Simulation Platform – Platform in development to allow the creation of location aware computer simulations for handheld computers.  
Outbreak at MIT – Indoor location based simulation designed to train epidemiologists.  
Charles River City – Outdoor location based simulations for middle school students.  
Environmental Detectives – Handheld based computer simulations (in collaboration with the Kurt Squire and Games to Teach Project)  
StarLogo DDA – Online discussion area to support StarLogo users  
StarLogo 2.0 – Recently released a new version of StarLogo software (in collaboration with Mitchel Resnick, MIT Media Lab)

#### 18. Symposia Organized:

|  |      |         |
|--|------|---------|
| Sandbox Summit                                   | 2010 | 2012    |
| MIT Science and Engineering Program for Teachers | 2005 | Present |
| Learning Technologies                            | 2000 |         |

#### 19. Teaching Experience:

| <i>Term</i> | <i>Course</i>   | <i>Enrollment (Approx)</i> |
|-------------|---|----------------------------|
| SP 13       | 11.127 – Computer Games and Simulations for Education and Exploration | 21                         |
| FA 12       | 11.124 – Introduction to Education                                    | 25                         |
| SP 12       | 11.127 – Computer Games and Simulations for Education and Exploration | 21                         |
| FA 11       | 11.124 – Introduction to Education                                    | 25                         |
| SP 11       | 11.125  | 25                         |
| SP 11       | 11.127/CMS 590  | 21                         |
| AY10-11     | Freshman Advisor  | 8                          |
| FA 10       | 11.124  | 25                         |
| SP 10       | 11.125  | 26                         |
| SP 10       | 11.127/CMS 590  | 18                         |
| FA 09       | 11.124  | 22                         |
| FA 09       | Freshman Seminar  | 8                          |
| FA 09       | 11.129/11.131   | 13                         |

|             |   |    |
|-------------|---|----|
| SP 09       | 11.125  | 18 |
| SP 09       | 11.127/CMS.590  | 16 |
| FA 08       | 11.124  | 13 |
| FA 08       | 11.129  | 5  |
| FA 08       | 6.087 – Mobile Application Development                              | 60 |
| SP 08       | 11.125  | 20 |
| SP 08       | 11.27   | 15 |
| FA 07       | 11.124 – Intro to Teaching and Learning                             | 15 |
| FA 07-SP 08 | 11.129 – K-12 Classroom Teaching                                    | 10 |
| FA 06-SP 07 | Sabbatical  |    |
| FA 05       | 11.124 – Intro to Teaching and Learning                             | 21 |
| SP 06       | 11.125 – K-12 Teaching  | 14 |
| SP 06       | 11.127 – Games and Simulations for Education                        | 12 |
| SP 06       | 7.014 – Introductory Biology (Lecturer)                             |    |
| IAP 06      | 11.178 – Wireless Media   | 6  |
| FA05-SP 06  | 11.129/130/131 – K-12 Classroom Teaching                            | 10 |
| FA04-SP 05  | 11.129/130/131 – K-12 Classroom Teaching                            | 13 |
| SP 05       | 11.125 – K-12 Teaching  | 23 |
| SP 05       | 11.127 – Games and Simulations for Education                        | 16 |
| FA 04       | 11.124 – Intro to Teaching and Learning                             | 27 |
| FA03-SP 04  | 11.129/130/131 – K-12 Classroom Teaching                            | 9  |
| FA 03       | 11.124 – Intro to Teaching and Learning                             | 29 |
| FA 03       | FAS – Challenges of the 21 <sup>st</sup> Century School             | 6  |
| SP 04       | 11.125 – K-12 Teaching  | 27 |
| SP 04       | 11.127 – Games and Simulations for Education                        | 16 |
| FA02-SP 03  | 11.942/194/195 – K-12 Classroom Teaching                            | 8  |
| FA 02       | 11.124 – Obsv and Analysis in Classroom Settings                    | 25 |
| FA 02       | FAS – Challenges of the 21 <sup>st</sup> Century School             | 6  |
| SP 03       | 11.127/252 Computer Modeling for Education                          | 12 |
| SP 03       | 11.125 – K-12 Teaching  | 30 |
| FA 01       | 11.124 – Intro to Teaching and Learning                             | 35 |
| SP 02       | 11.125 – Obsv and Analysis in Classroom Settings                    | 20 |
| SP 02       | 11.127/252 – Computer Modeling for Education                        | 15 |
| SP 02       | 1.991 – Service Learning in Environmental Education                 | 10 |
| FA 00       | 11.124 – Intro to Teaching and Learning                             | 18 |
| SP 01       | 11.125 – Obsv and Analysis in Classroom Settings                    | 12 |
| SP 01       | 11.127/252 – Computer Modeling for Education                        | 8  |
| SP 00       | 11.125 – Obsv and Analysis in Classroom Settings                    | 10 |
| FA 99       | 11.124 – Intro to Teaching and Learning                             | 20 |
| SP 99       | UMass Amherst – Instructional Design for the Web                    |    |
| FA 98       | UMass Amherst – Interactive Internet- From the Web to the Classroom |    |

## 20a. Publications:

### Books:

1. Klopfer, E., J. Haas and H. Jenkins (2012). *The More We Know: NBC News, Educational Innovation, and Learning from Failure*. MIT Press, Cambridge, MA.
2. Klopfer, E. (2008). *Augmented Learning – Research and Design of Mobile Educational Games*. MIT Press, Cambridge, MA.
3. Colella, V., E. Klopfer, and M. Resnick. (2001). *Adventures in Modeling: Exploring Complex, Dynamic Systems with StarLogo*. Teachers College Press.

### Book Chapters:

1. Klopfer, E. (2012). Forward/Preface. S. Dijkers, J. Martin and B. Coulter et al. *Mobile Media Learning*. Pittsburgh, PA: ETC Press.
2. Coulter, B., E. Klopfer, J. Sheldon and J. Perry. (2012). Discovering Familiar Places: Learning through Mobile Place-Based Games. C. Steinkuehler, K. Squire and S. Barab (Eds.), *Games, Learning, and Society: Learning and Meaning in the Digital Age* (pp 327-354). New York, NY: Cambridge University Press.

3. Klopfer, E., Osterweil, S. (2011). Are Games All Childs Play? P. Maharg and S. De Freitas. (Eds.), *Learning Through Play* (pp. 153-171). New York, NY: Continuum.
4. Klopfer, E., T. Marsh, Z. Nickole, C. Xuejin, S. Osterweil, J. Haas. (2011). Fun Learning: Balancing Design and Development Dimensions in Serious Games. *Serious Games and Edutainment Applications*. New York, NY: Springer.
5. Klopfer, E., Coulter, R., Perry, J. and Sheldon, J. (2011). Discovering Familiar Places: Learning through Mobile Place-Based Games. S. Barab, K. Squire and C. Steinkuehler (Eds.), *Games, Learning, and Society: Learning and Leading in the Digital Age*. New York, NY: Cambridge University Press.
6. Klopfer, E. and Purushotma, R. (2011). Using Simulations as a Starting Point for Constructing Meaningful Learning Games. In Press for J. Fromme and A. Unger. (Eds.), *Computer Games/Players/Game Cultures: A Handbook on the State and Perspectives of Digital Game Studies*. New York, NY: Springer.
7. Klopfer, E. and Squire, K. (2011). Mobile Games and Learning: Looking Back and Looking Forward. In Press for M. Barnet and J. Vanides. (Eds.), *Re-imagining the Classroom: Mobile Technology and the Vanishing Classroom Walls*. Eugene, OR.
8. Klopfer, E., Jenkins, H., Perry, J., et al (2010). From Serious Games to Serious Gaming. M. Cody, U. Ritterfeld and P. Vorderer (Eds.), *Serious Games: Mechanisms and Effects*. New York, NY: Routledge.
9. Klopfer, E., H. Scheintaub, and M. Scheintaub. (2009). Complexity and Biology – Bringing Quantitative Science to the Life Sciences Classroom. F. Roberts (Eds.), *BioMath in Schools (pp 157-167)*. Providence, RI: Springer.
10. Klopfer, E., Scheintaub, H., Huang, W., Wendel, D. (2009). StarLogo TNG: Making Agent Based Modeling Accessible and Appealing to Novices In Artificial Life Models in Software. A. Adamatzky and M. Komosinski (Eds.), *Artificial Life Models in Software*. (pp 151-182). New York, NY: Springer.
11. Klopfer, E. (2007). Lightly Augmenting Reality. F. Von Borries, Bottger, M. and Walz S. (Eds.), *Space, Time, Play (pp 380-383)*. Berlin, Germany: Birkhauser Verlag AG.
12. Klopfer, E. and A. Begel. (2005). Starlogo: A Programmable Complex Systems Modeling Environment for Students and Teachers. A. Adamatzky and Komosinski, M. (Eds.), *Artificial Life Models in Software*. New York, NY: Springer.
13. Klopfer, E., K. Squire and H. Jenkins (2004). Environmental Detectives: PDAs as a Window into a Virtual Simulated World. Kerres, Michael/ Kalz, Marco/ Stratmann, Jörg/ de Witt, Claudia (Eds.), *Didaktik der Notebook-Universität*. Münster: Waxmann Verlag.

#### Papers in Refereed Journals:

1. Conrad, S., Clark-Midure, J. and E. Klopfer (2014). A Framework for Structuring Learning Assessment in a Massively Multiplayer Online Educational Game: Experiment Centered Design. *International Journal of Game Based Learning*.
2. Klopfer, E and J. Perry. (2014). UbiqBio: Adoptions and Outcomes of Mobile Biology Games in the Ecology of School. *Computers in Schools*.
3. Klopfer, E. and S. Osterweil. (2013). The Boom and Bust and Boom of Educational Games. *Transactions in Edutainment*.
4. Klopfer, E., J. Sheldon, J. Perry and V. Chen. (2012). Ubiquitous Games for Learning (UbiqGames): Weatherlings, A Worked Example. *Journal of Computer Assisted Learning*.
5. Klopfer, E. and R. Purushotma. (2012). Using Simulations as a Starting Point for Constructing Meaningful Learning Games. *Computer Games and New Media Cultures*, 603-617.
6. Haas, J., J. Hammerman, E. Klopfer and Miller, C. (2011). User Behavior in NBC News' Multimedia Educational Site, iCue. In Press for *International Journal of Learning and Media*.
7. Marsh, T., LZ Nickole, E. Klopfer, C. Xuejin, S. Osterweil and J. Haas. (2011). Fun and learning: blending design and development dimensions in serious games through narrative and characters. *Serious Games and Edutainment Applications*, 273-288.
8. Haas, J., JKL Hammerman, E. Klopfer and C. Miller. (2011). User Behavior in NBC News' Multimedia Educational Site, iCue. *International Journal of Learning and Media*.
9. Klopfer, E., H. Scheintaub, W. Huang and D. Wendel. (2010). LEARNING CONNECTIONS-Science-Constructing Learning. *Learning and Leading with Technology*, 37(5), 26.
10. Klopfer, E. and J. Sheldon. (2010). Augmenting Your Own Reality: Student Authoring of Science-Based Augmented Reality Games. *New Directions In Youth Development*, 128, 85-94.
11. Klopfer, E. and D. McFarland. (2010). Network Search: A New Way of Seeing the Education Knowledge Domain. *Teachers College Record*.

12. Klopfer, E., H. Scheintaub, W. Huang, D. Wendel and R. Roque. (2009). The Simulation Cycle - Combining Games, Simulations, Engineering and Science Using StarLogo TNG. *Journal of E-Learning and Digital Media*, 6(1) 71-96.
13. Guryan, J., B. Jacobs, E. Klopfer and J. Groff. (2008) Using Technology to Explore Social Networks and Mechanisms Underlying Peer Effects in Classrooms. *Developmental Psychology*, 44 (2), 355-364.
14. Klopfer, E. and K. Squire. (2008). Environmental Detectives – The Development of an Augmented Reality Platform for Environmental Simulations. *Education Technology Research Development*, 56, 203-228.
15. Rosenbaum, E., E. Klopfer and J. Perry. (2007). On Location Learning: Authentic Applied Science with Networked Augmented Realities. *Journal of Science Education and Technology*, 16 (1), 31-43.
16. Klopfer, E. (2007). Blurring Lines with Mobile Learning Games. *Educational Technology Magazine*, 47 (3), 43-46.
17. Klopfer, E. and K. Squire. (2006). Case Study Analysis of Augmented Reality Simulations on Handheld Computers. *Journal of the Learning Sciences*, 16 (3), 371-413.
18. McFarland, D. and E. Klopfer. (2006). Scholar Practitioner Information Networks for Education (SPINE). *Teacher's College Record*.
19. Yoon, S. & Klopfer, E. (2006). Feedback (F) Fueling Adaptation (A) Network Growth (N) and Self-Organization (S): A Complex Systems Design and Evaluation Approach to Professional Development. *Journal of Science Education and Technology*, 15(5-6), 353-366
20. Klopfer, E., S. Yoon and T. Um. (2005). Young Adventurers- Modeling of Complex Dynamic Systems with Elementary & Middle School Students. *Journal of Computers in Math and Science Teaching*, 24(2), 157-178.
21. Klopfer, E. and S. Yoon. (2005). Using Palm Technology in Participatory Simulations of Complex Systems: A New Take on Ubiquitous and Accessible Mobile Computing. *Journal of Science Education and Technology*, 14(3), 287-295.
22. Meir, E., J. Perry, D. Stal, S. Maruca and E. Klopfer. (2005). How effective are simulated molecular-level experiments for teaching diffusion and osmosis? *Cell Biology Education*, 4, 235-248.
23. Klopfer, E. and S. Yoon. (2005). Developing Games and Simulations for Today and Tomorrow's Tech Savvy Youth. *Tech Trends*, 49(3) 33-41.
24. Klopfer, E. and K. Squire. (2005). Environmental Detectives – The Development of an Augmented Reality Platform for Environmental Simulations. *Educational Technology Research and Development*.
25. Klopfer, E. S. Yoon, and L. Rivas. (2004). Comparative Analysis of Palm and Wearable Computers for Participatory Simulations. *Journal of Computer Assisted Learning*, 20, 347-359.
26. Klopfer, E. and A. Begel. (2003). StarLogo in the Classroom and Under the Hood. *Kybernetes*, 32, 15 -37.
27. Klopfer, E. (2003). Technologies to Support the Creation of Complex Systems Models – Using StarLogo Software with Students. *Biosystems*, 71, 11-123.
28. Jenkins, H., E. Klopfer, K. Squire and P. Tan. (2003). Entering the Education Arcade. *ACM: Computers in Entertainment*, 1, 17-17.
29. Klopfer, E., V. Colella, and M. Resnick. (2002). New Paths on a StarLogo Adventure. *Computers and Graphics*, 26, 615-622.
30. Caton, E., J. Cherrier, E. Farnsworth, S. Franklin, B. Hufnagel, E. Klopfer, J. Russell, and B. Sayler. (1998). New Niches for Life Scientists. *Science*, 282, 1266-1267.
31. Ives, A. and E. Klopfer. (1997). Spatial variation in abundance created by stochastic temporal environmental variation. *Ecology*, 78, 1907-1913.
32. Klopfer, E. and A. Ives. (1997) Aggregation and the coexistence of competing parasitoid species. *Theoretical Population Biology*, 52, 167-178.

Papers in Refereed Conference Proceedings:

1. (Forthcoming) Yoon, S., Koehler, J., Wang, J., Anderson, E. and E. Klopfer. Using an Adaptive Lens to Understand the Quality of Teachers' Classroom Implementation of Computer-Supported Reform Curricula in High School Science. *International Conference on the Learning Sciences*. Boulder, CO
2. (Forthcoming) Holbert, N., Weintrop, D., Wilensky, U., Sengupta, P., Killingsworth, S., Krinks, K., Brady, C., Klopfer, E., Shaprio, B., and R. Russ. Combining Video Games and Constructionist Design to Support Deep Learning in Play. *International Conference on the Learning Sciences*. Boulder, CO
3. (Forthcoming) Norton, D., Osterweil, S., Levin, J., and E. Klopfer. Massiveness in Educational Games. *Games Learning and Society*. Madison, WI.
4. Yoon, S., Klopfer, E. Sheldon, J., Schoenfeld, I., Wendel, D., Wang, J. Scheintaub, H., and D. Reider (2013) Designing to Improve Understanding Through Complex Systems in High School Classrooms: No Simple Matter. *Computer Supportive Collaborative Learning*. Madison, WI

5. Klopfer, E. (2013) Towards a Unified Agenda for the Next Generation of Engagement in Educational Technology. *Ecological Society of America*, Minneapolis, MN.
6. Klopfer, E. (2013). Ubiquitous Biology Games. *American Educational Research Association*. San Francisco.
7. Klopfer, E. (2013). What Students Learn by Constructing Augmented Reality Games. *American Educational Research Association*. San Francisco.
8. Marsh, T., L. Nickole, I. Zhiqiang, E. Klopfer and J. Hass. (2012). Blended In-Game and Off-Game Learning: Assimilating Serious Games in the Classroom and Curriculum. *Serious Games Development and Applications*.
9. Sao-Ee Goh, Susan A. Yoon, Joyce Wang, Zhitong Yang, Eric. (2012). Klopfer Investigating the Relative Difficulty of Complex Systems Ideas in Biology. *International Conference of the Learning Sciences*.
10. Sheldon, J., E. Klopfer, J. Perry, L. Stump and P. Medlock-Walton. (2012). TaleBlazer: Next Generation Location-based Augmented Reality Game Authoring. *Games, Learning and Society Conference*.
11. Marsh, T., C. Xuejin, LZ Nickole, S. Osterweil, E. Klopfer and J. Haas. (2011). Fun and learning: the power of narrative. *Proceedings of the 6th International Conference on Foundations of Digital Games*, 23-29.
12. Klopfer, E., J. Perry and L. Rosenheck. (2011). An Interactive Research Experience with Mobile Biology. *International Conference on Computer-Supported Collaborative Learning*. Hong Kong, China.
13. Klopfer, E., L. Rosenheck and J. Perry. (2011). Beetles, Beasties, and Bunnies: Ubiquitous Games for Biology. *Games, Learning and Society Conference*. Madison, WI.
14. Klopfer, E., J. Haas, T. Marsh, S. Osterweil and J. Ramos. (2011). The Role of Narrative in Reflection and Metacognition in Learning Games. *Games, Learning and Society Conference*. Madison, WI.
15. Klopfer, E. (2011). An Ecologist's Perspective on the Ecology of Learning Games. *Games, Learning and Society Conference*. Madison, WI.
16. Klopfer, E. and J. Haas. (2011). The More We Know: Inside NBC News' iCue and Why It Didn't Work. *Games, Learning and Society*. Madison, WI.
17. Dede, C., P. O'Shea, M. Dunleavy and E. Klopfer. (2010). Augmenting Reality for Learning with Wireless Mobile Devices, Part 2. *Society for Information Technology & Teacher Education International Conference*.
18. Klopfer, E., C. Zhang, J. Perry and J. Sheldon. (2010). GameBuilder: does reduced software complexity allow more time on task? *9th International Conference of the Learning Sciences*.
19. Lomas, D., E. Klopfer, C. Scullin, C. Lamenzo and C. Macklin. (2010) Diversifying Mobiles: Participatory Learnings. *Macarthur Digital Media and Learning*. San Diego, CA.
20. Klopfer, E., V. Chen, J. Ong, J. Perry, L. Rosenheck, J. Sheldon and P. Tzuo. (2010). Weatherlings: A New Approach to Student Learning Using Web-Based Mobile Games. *Foundations of Digital Games Conference*. Monterey, CA.
21. Klopfer, E., T. Caswell, V. Lee, M. Jensen, J. Mathews, J. Sheldon, B. Shelton, J. Perry, K. Squire and M. Wagler. (2010). Mobile Games and Education: Extending the Boundaries. *Games, Learning and Society Conference*. Madison, WI.
22. Klopfer, E., J. Haas, S. Osterweil and H. Scheintaub. (2010) Wake Up!: The Use of a Custom Game as Challenging Action in an Action Reflection Cycle. *Games, Learning and Society Conference*. Madison, WI.
23. Klopfer, E., J. Perry, L. Rosenheck and J. Sheldon. (2010). UbiqGames – Ubiquitous Games for Promoting Science Learning and Understanding. *Games, Learning and Society Conference*. Madison, WI.
24. Klopfer, E., B. Coulter, D. Lawlor, J. Perry, L. Rosenheck and J. Sheldon. (2010). MIT Augmented Reality (MITAR): Multiplayer Game Worlds, User-Generated Content and Flow Visualization. *Games, Learning and Society Conference*. Madison, WI.
25. Klopfer, E. and D. Clark. (2010). Computer Games, Simulations and Education – What Do We Know? What Do We Want to Know. *Games, Learning and Society Conference*. Madison, WI.
26. Klopfer, E., B. Coulter, D. Lawlor, J. Perry, L. Rosenheck and J. Sheldon. (2010). Community Science Investigators: Using Augmented Reality to Build Community Connections. *Games, Learning and Society Conference*. Madison, WI.
27. Klopfer, E. (2010). Mobile Gaming. *Advancing Science. Serving Society*. San Diego, CA.
28. Klopfer, E. (2009). Augmented Reality: Using a Simplified Game Editor to Spark Imaginations. *Games Learning and Society*. Madison, WI.
29. Klopfer, E. (2009). Mobile Games and Education: Current Projects and State of the Practice. *Games Learning and Society*. Madison, WI.
30. Klopfer, E. (2009). Gaming the Future of Science Learning. *Games Learning and Society*. Madison, WI.
31. Klopfer, E. E. Hayes, E. Hayes, Y. Kafai, I. Games, K. Peppler, N. Pinkard and H. Scheintaub. (2008). New Perspectives on Learning Through (Game) Design. *American Educational Research Association*. New York, NY.
32. Klopfer, E., H. Scheintaub. (2008). StarLogo TNG – Making content-centered game and simulation development accessible to students and teachers. *American Educational Research Association*. Chicago, IL.



33. Yoon, S. and E. Klopfer. (2008) Measuring In-Service Middle and High School Teachers Understanding of Complex Systems Through an Analysis of Computational Model Construction. *National Association for Research in Science Teaching*. Baltimore, MD.
34. Klopfer, E. and J. Perry. (2008). AR Gone Wild: Two Approaches to Using Augmented Reality Learning Games in Zoos. *International Conference on the Learning Sciences*. Utrecht, Netherlands.
35. Klopfer, E., H. Scheintaub. (2008). StarLogo TNG – Science in Student-Programmed Simulations. *International Conference on the Learning Sciences*. Utrecht, Netherlands.
36. Klopfer, E., H. Scheintaub. (2008). StarLogo TNG – Making content-centered game and simulation development accessible to students and teachers. *International Conference on the Learning Sciences*. Utrecht, Netherlands.
37. Klopfer, E., Boughner, E. Rosebaum, and L. Rosenheck. (2007). Engaging Students in Science Controversy Through an Augmented Reality Role-Playing Game. *Computer Supported Collaborative Learning*. New Brunswick, NJ.
38. Klopfer, E., A. Begel, C. McCaffrey, and D. Wendel. (2006). 3D Game Design with Programming Blocks in StarLogo TNG. *International Conference for the Learning Science*. Bloomington, IN.
39. Klopfer, E., E. Rosenbaum, and J. Groff. (2006). Assessing Success in Networked Augmented Realities. *Games, Learning and Society*. Madison, WI
40. Yoon, S. & E. Klopfer. (2005). Social network influences in a complex systems design for professional development in educational technology use: Results of a first phase implementation. *Hawaii International Conference on Education*. Honolulu, HI.
41. Yoon, S. & E. Klopfer. (2005). Using palm technology in participatory simulations: A new take on ubiquitous and accessible mobile computing. *American Educational Research Association*. Montreal, PQ.
42. Klopfer, E., J. Perry and K. Squire. (2005) Collaborative Learning through Augmented Reality Role Playing. *Computer Supported Collaborative Learning*. Taipei, Taiwan.
43. Klopfer, E., J. Perry and K. Squire. (2005) Mystery at the Museum – A Collaborative Game for Museum Education. *Computer Supported Collaborative Learning Conference*. Taipei, Taiwan.
44. Yoon, S. and E. Klopfer. (2005) Feedback, Adaptation, Network Capital and Self-Organization (FANS): The Application and Evaluation of a Complex Systems Framework for Professional Development. *American Educational Research Association*. San Francisco, CA.
45. Yoon, S. E. Klopfer, G. Richardson, and J. Taylor. (2004). Insights Into the Complexity of Designing for Professional Development Networks in Educational Technologies: Tensions Between Structure and Agency. *International Conference on the Learning Science*. Santa Monica, CA.
46. Squire, K., E. Klopfer, S. Barab, and C. Dede. (2004). Virtual and Augmented Reality Simulations in Education. *American Education Research Association*. San Diego, CA.
47. Scheintaub, H., E. Klopfer and S. Yoon (2004). Complex Systems Modeling Supports and Extends Secondary School Science Learning. *National Association of Research in Science Teaching*.
48. Klopfer, E. and K. Squire. (2004). Getting Your Socks Wet: Augmented Reality Environmental Science. *International Conference on the Learning Sciences*.
49. Klopfer, E., K. Squire, and H. Jenkins. (2003). Augmented Reality Simulations on PDAs. *American Education Research Association*. Chicago, IL.
50. Klopfer, E., and E. Woodruff. (2003). Platforms for Participatory Simulations - Exploring Systems and Generating Discourse with Wearable and Handheld Computers. *Conference on Computer Supported Collaborative Learning*. Oslo, Norway.
51. Yoon, S., E. Klopfer, E. Woodruff, H. Scheintaub. (2003). Investigating How a Wearable Computer Technology Influences Opinion Dynamics. \ *Society for Chaos Theory*. Boston, MA..
52. Klopfer, E., and E. Woodruff. (2002). The Impact of Distributed and Ubiquitous Computational Devices on the Collaborative Learning Environment. *Computer Supported Collaborative Learning*. Boulder, CO.
53. Woodruff, E., E. Klopfer, G. Andrews, K. Mackinnon, S. Yoon, N. Chandra. (2002). Distributed computational devices for collaborative learning. *Canadian Society for the Study of Education*. Toronto, Canada.
54. Klopfer, E. (2002). Adventures in Modeling: Teaching and Learning about Complex Systems in Ecology. *Biomathematics and Related Computational Problems*.
55. Klopfer, E., K. Squire and H. Jenkins. (2002) Environmental Detectives PDAs as a Window into a Virtual Simulated World. *International Workshop on Wireless and Mobile Technologies in Education*. Vaxjo, Sweden.
56. Klopfer, E., T. Um. (2002). Young Adventurers- Modeling of Complex Dynamic Systems with Elementary & Middle School Students. *International Conference on the Learning Sciences*. Seattle, Washington.
57. Taylor, J., R. Noll, V. Colella, and E. Klopfer. (2001). Creating and Analyzing Models in StarLogo: A Secondary Science Approach. *National Association of Research in Science Teaching*. St. Louis, MO.

58. Klopfer, E. and V. Colella. (1999). Structuring Collaboration in Workshops and Classrooms: The StarLogo Community of Learners. *Computer Supported Collaborative Learning*. Palo Alto, CA.

Other Major Publications:

1. Klopfer, E. (2012). The Ecology of Learning Games Research. *Center for Games and Impact*.
2. Klopfer, E. (2012). Games as Precursors to Formal Learning. *Center for Games and Impact*.
3. Davidson, D. et al. (2012). Games for Impact Best Practices. *Academic Consortium on Impact Games*.  
<http://gamesforimpact.files.wordpress.com/2012/09/gamesforimpact-bestpractices.pdf>
4. Klopfer, E. (2012). A Better Model Field – Ecology as a model for games and learning. *Teacher's College Record*.
5. Klopfer, E., W. Huang, D. Wendel and H. Scheintaub. (2010). Constructing Learning. *Learning and Leading with Technology*. February 2010, 26-28.
6. Klopfer, E., S. Osterweil and K. Salen. (2009). Moving Learning Games Forward. *The Education Arcade*, Massachusetts Institute of Technology.  
[http://education.mit.edu/papers/MovingLearningGamesForward\\_EdArcade.pdf](http://education.mit.edu/papers/MovingLearningGamesForward_EdArcade.pdf)
7. Klopfer, E., S. Osterweil, J. Groff and J. Haas. (2009). Using the Technology of Today in the Classroom Today. *The Education Arcade*, Massachusetts Institute of Technology.
8. Klopfer, E. (2007). Mixing Programming with Science. *Educational Technology Magazine*.
9. Klopfer, E. (2005). Playing to Learn. State of the Art Computer Games go to School. *Access Learning*. July/August.
10. Klopfer, E., K. Squire and P. Tan. (2003). Top 10 Innovations. *Technology and Learning*. 24.
11. Colella, V. and E. Klopfer. (2001). Changing the Nature of Science Teaching and Learning through Modeling. *The Logo Exchange*. 20.
12. Colella, V. and E. Klopfer. (2000). Seeding Change: Bringing Modeling to Science Teachers and their Students. *The Bulletin of The Santa Fe Institute*. 15 (2).
13. Colella, V, E. Klopfer and M. Resnick. (1998). StarLogo Community of Learners. *The Logo Exchange*. 17 (2) 20-22.

Papers Presented at Academic and Professional Conferences:

1. Klopfer, E. and O. Klopfer. (2014) Parenting Through Gaming. *PAX East*. Boston, MA.
2. Haas, J. Klopfer, E. Osterweil, S. Rosenheck L. (2012). Worked Example: Cosmos. *Games Learning and Society*.
3. Klopfer, E. (2011). Augmented Reality Games: Place-based Digital Learning. *International Conference on Computer-Supported Collaborative Learning*. Hong Kong.
4. Fefferman, N, Horwitz, P., Ketelhut, D., Klopfer, E. Stegman, M., Clark, D. (2010) Worlds of Wonder: Can Video Games Teach Science? *American Association for the Advancement of Science Annual Meeting*, San Diego, CA.
5. Klopfer, E. H. Scheintaub and D. Wendel. (2010). The Imagination Toolbox: Designing and Using Science Simulations and Games with StarLogo TNG. *Eurologo/Constructionism*. Paris, France.
6. Klopfer, E. (2010). Game Changers: Games on the Go: Accessing Play and Learning 24/7. *Sandbox Summit*. Cambridge, MA.
7. J. Perry, E. Klopfer, B. Coulter, J. Sheldon. (2008). LIONS: Augmented Reality Game Design by Middle School Students in an After-School Science Club. *Games Learning and Society*. Madison, WI.
8. J. Perry, E. Klopfer, L. Stump. (2008). Zoo Scene Investigators: An Augmented Reality Mystery Game at the Columbus Zoo & Aquarium. *Games Learning and Society*. Madison, WI.
9. E. Klopfer, S. Osterweil, A. Chisholm, D. Roy. (2008). Two Approaches to Language-Learning Games. *Games Learning and Society*. Madison, WI.
10. Steinkeuler, C. Squire, K. Barab, S. Thomas, D. Peppler, K., & Klopfer, E. (2008). Games and Participation: Why Games Matter to Educators. *American Educational Research Association*. New York, NY.
11. Scheintaub, H.& Klopfer, E. (2008). StarLogo TNG – Making Content-Centered Game And Simulation Development Accessible To Students And Teachers. *American Educational Research Association*. New York, NY.
12. Klopfer E. and J. Perry. (2007). Augmenting Learning with Handheld Gaming Technologies. *Games Learning and Society*. Madison, WI.
13. Klopfer, E. (2007). StarLogo TNG: Graphical Programming for 3D Simulation and Game Design. *Games Learning and Society*. Madison, WI.

14. Lee, I., G. Malone and E. Klopfer. (2006). Adventures in Gaming. *National Educational Computing Conference*. San Diego, CA.
15. Klopfer, E., and J. Perry. (2005). Authoring Toolkits for Augmented Reality Simulations. *International Conference on Interaction, Design and Children*. Boulder, CO.
16. Yoon, S. and E. Klopfer. (2004). Using Palm Technology in Participatory Simulations of Complex Systems. *National Association of Research in Science Teaching*. Vancouver, BC.
17. Silverman, B., B. Mikhak, E. Klopfer and S. Scheintaub. (2004). A New Kind of Science Education - Lessons Learned from StarLogo and Perspectives on NKS. *New Kind of Science*. Boston, MA.
18. Klopfer, E. and S. Yoon. (2004). New Technologies to Enhance Learning. *Power Users Summit, United Nations*. New York, NY.
19. Yoon, S., E. Klopfer, E. Woodruff, H. Scheintaub. (2003). Investigating How a Wearable Computer Technology Influences Opinion Dynamics. *Society for Chaos Theory*. Boston, MA.
20. Klopfer, E., and V. Colella. (2001). Adventures in Modeling. *Special Interest Group in Graphics (SIGGRAPH)*. Los Angeles, CA.
21. Klopfer, E. (1999). Constructing Computer Models in the Classroom using StarLogo. *Technology and Education*, Amherst, MA.

#### Invited Lectures and Seminars:

1. University of Pennsylvania - 2014
2. Network of Academic Programs in the Learning Sciences (online) - 2013
3. MIT Club of Hartford – 2013
4. MIT Alumni Club of Southern California– Teaching STEM Subjects Through the Power of Games – 2012
5. World Conference on Mobile and Contextual Learning – Helsinki, 2012
6. Engineers4KidsUSA Santa Fe Institute – [Complexity and the Future of Learning and Education](#) – Santa Fe, August 7, 2012
7. Learnovation Day of the Centro Superior Para la Ensenanza Virtual (CSEV) – [Keynote Presentation](#) – Madrid 2012
8. Games + Learning + Society Conference – Madison, WI, June 2012
9. Mobiles for Learning – Keynote – Windsor, CT, April 23, 2012
10. Politecnico Di Milano – Learning through the design and creation of location-based games – March 27, 2012
11. CoSN International Symposium – Washington, March 5, 2012
12. Cyberlearning Research Summit – [Mobile as a Creative Medium](#) – Washington, January 18, 2012
13. Ecole Polytechnique Federale de Lausanne – [Playing and Making Location Based Learning Games](#) – January 2012
14. UNESCO Mobile Learning Week – Keynote [Presentation: Using and Creating Mobile Games and Media for Learning](#) – Paris, December 16, 2011
15. Games for Learning Science – Keynote Speaker – Madison, WI, June 2011
16. Drexel University – Philadelphia, PA, May 2011
17. Technical Education Research Centers – Learning games = Edutainment: R and D of Games for Learning Math and Science in the Education Arcade – May 2011
18. Think Tank on Educational Innovation and Technology – Gaming and Edutainment Panel – Harvard University, Cambridge, MA, April 2011
19. National Institute of Education, Mobile Learning Games, Singapore, March 2011
20. Dé Onderwijsdagen (The Education Days) Conference, Augmenting Learning – Learning through playing and creating location based games – Amsterdam, Netherlands, November 2010
21. Wireless Ed Tech Conference – Panelist – San Diego, CA, October 2010
22. Adobe Max Conference, Learning Games and Simulations – October 2010
23. Ed Week – October 2010
24. American Educational Research Association Convention – Keynote – Denver, CO, April 2010
25. AAAS Panel – “Worlds of Wonder” Can Video Games Teach Science? – February 2010
26. Institut für Erziehungswissenschaft, Otto von Guericke Universität (OvGU) – Magdeburg, Germany (remote), 2009
27. IT World Summit, Learning Games and Simulations – Barcelona, Spain, October 2009
28. National Union of Teachers, Ubiquitous Games and Augmented Reality, Research and Design of Mobile Games for Learning – Singapore, September 2009
29. National Institute of Education, Ubiquitous Games and Augmented Reality, Research and Design of Mobile Games for Learning – Singapore, September 2009

30. Malmö University – Augmented Learning – Learning Lessons in Mobile Educational Games – Malmö, Sweden, April 2009
31. Haifa University – Haifa, Israel, Spring 2009
32. Learning and the Brain – Massachusetts Institute of Technology, Cambridge, MA, February 2009
33. Association of Mathematics Teachers in New England Conference – November 2008
34. PICNIC Young in Amsterdam – Augmented Learning – September 2008
35. Malmo University – Augmented Learning – September 2008
36. Opportunistic RF Localization for Next Generation Wireless Devices – June 2008
37. MIT Alumni Association of Cape Cod – 2008
38. MIT Alumni Association of Rhode Island – 2008
39. Grey Thumb Artificial Life – 2008
40. Maine Initiative on Science Technology Engineering and Mathematics – January 2008
41. Minneapolis Public Library – November 2007
42. Fifth Technology and Education Congress, The Inter American University of Puerto Rico - Augmenting Reality and Learning with Mobile Games - September 2007
43. EuroLogo – StarLogo TNG - Making game and simulation development accessible to students and teachers - August 2007
44. E Learning Symposium, George Mason University - Mobile Games for Learning - June 2007
45. Santa Fe Institute – International Learning and Complex Systems – September 2006
46. Smithsonian Institute – Handheld Games for Informal Learning – September 2006
47. Columbia University – Scholar Practitioner Information Networks – August 2006
48. New England Complex Systems Institute – Learning Complex Systems – June 2006
49. Beyond Technology – The Next Generation of Games and Simulations for Learning – May 2006
50. Learning Lab Denmark – Augmented Reality Games for Learning – January 2006
51. Korea Education and Research Information Service – Handheld Games for Learning – November 2005
52. Technology and Learning's Tech Forum – Research in Games Education – October 2005
53. Rebuilding Louisiana through Education – Governor's Conference – October 2005
54. Florida Community College – New Technologies in Science and Math Learning – April 2005
55. Technology and Learning's Tech Forum – MIT Games and Education – October 2004
56. Serious Games Summit – Augmented Reality Simulations for Learning – October 2004
57. MIT Alumni Association of New Mexico – Adventures in Modeling May 2004
58. American Association of Colleges of Teacher Education – Video Games and Learning- February 2004
59. University of Alaska, Anchorage – Complex Systems Colloquium – March 2003
60. Massachusetts Association of Science Teachers – StarLogo in Science Education – Worcester, November 2002
61. Computer Supported Collaborative Learning – Computer Games and Simulations in Education – Seattle, October 2002
62. Boston Museum of Science – Participatory Simulations – Boston, Spring 2002
63. ITESO – Workshop on Complex Systems – Guadalajara, Mexico Spring 2002
64. Museum Institute of Teaching Science – Modeling for Museums – Boston, January 2002
65. American Association of Universities – Teacher Preparation, Fall 2001

**20b. Press:**

Edutopia – Feb 19, 2014 – Why Serious Games Are Not Chocolate Covered Broccoli  
 NYTimes.com – September 15, 2013 – Disruptions: Minecraft, an Obsession and an Educational Tool  
 KQED Mind Shift – August 28, 2013 - MIT Unleashes New Game for Math and Science  
 Education Week – May 15, 2013 – Mobile Apps Make Field Trips More Interactive  
 Education Week – April 17, 2013 – Bringing Digital Games to Market, K-12 Schools  
 Boston.com – February 8, 2013 – Educational Games and the Creation of Work Teams That Work  
 WBUR Series: Digital Lives – January 24, 2013 – My Son, The Dragon Slayer: The Risks and Rewards of Growing Up Gaming  
 The Scientist – January 1, 2013 – Games for Science  
 American Society of Mechanical Engineers – September 2012 – Can Video Games Reshape STEM Education?  
 Boston Globe – September 2012 MIT Uses Reality TV, Online Games to Show Science's Appeal  
 PR Newswire – March 2012 – 2012 [Sandbox Summit@MIT Explores the Mobile Revolution and Its Role in Children's Play](#)  
 The Guardian – February 29, 2012 – The pull of online gaming

BostInno – January 24, 2012 – [MIT's Education Arcade, Using Online Gaming To Teach Math & Science](#)  
 Mass High Tech – August 16, 2011 – MIT gets Google gift for new Center for Mobile Learning  
 Vadvert.co.uk – August 8, 2011 – The Next STEP in Science Education  
 MIT News Online – August 3, 2011 – The Science of Teacher Education  
 Boston Globe – July 3, 2011 – I Played the News Today, Oh Boy  
 NSTA WebNews Digest – January 25, 2011 – Engaging Students with Augmented Reality  
 The Voice – November 11, 2010 – Network Search: A New Way of Seeing the Education Knowledge Domain  
 Mass High Tech – September 20, 2010 – [NSF grant aids Boston-area high schools in biology curriculum](#)  
 CNN Online – July 12, 2010 – *Google aims to make app creation easy*  
 Google Labs Online – July 12, 2010 – *App Inventor for Android: On The Shoulders of Giants*  
 Design Mind – May 20, 2010 – Sandbox Summit  
 National Public Radio's All Things Considered – March 29, 2010 – *From Chalk to Bytes*  
 Christian Science Monitor – 2009  
 Boston Globe – 2009 – *Augmented Reality*  
 Boston Globe – October 2009 – How Video Games are Good for the Brain  
 PC World – 2009 – Play Games with Your Resume  
 Wired News – 2007 – Wii + Second Life = New Training Simulator  
 Wired News – 2007 – Mind Reading Games  
 CNN Online – 2007 – Second Life's 2nd Value: Testing Ideas  
 The Escapist – 2006 – *Playing to the Test*  
 National Geographic – 2006 – Mobile Games Superimpose Virtual Fun on the Real World  
 MIT Spectrum – Spring 2005 – *Playing Games*  
 Sydeny Morning Herald 2005 – *Play and Learn*  
 Business Week – 2005 – Education Games Crank Up the Fun  
 US News – 2005 – Teaching With Tech  
 CBS 4 News – April 2005 – Participatory Simulations in the Classroom  
 Wilmington Advocate – 2005 – Piloting New Ways of Learning  
 The Village Voice – 2005 – *Game On!*  
 AP – 2004 – Video Games Teach More than Hand-Eye Coordination  
 Technology Review – 2004 – *The Education Arcade*  
 Technology Review – 2004 – *Look Listen Walk*  
 NY Times – 2004 – To Study History Students Can Rewrite It  
 MIT Tech Talk – November 2003 – Education Arcade zooms in on games in the classroom  
 Boston Globe – July 2003 – Interactive Game Teaches Students Genetics  
 Worcester Telegram and Telegraph – February 23, 2003 – *Students Play Genetics Mating Game*  
 Santa Fe New Mexican – April 15, 2002 – *The New Scientific Method*  
 Tech Talk – April 10, 2002 – School kids get excited by science  
 CCTV – April 1, 2002 – StarLogo at the Agassiz School  
 Tech Talk – July 18, 2001 – Klopfer sparks interest in teaching, learning science and math  
 Boston Globe – July 8, 2001 – Director at MIT Talks About Science  
 Boston Globe – February 18, 2001 – Program Puts Fourth Graders to Test – Class Tries Learning Tool  
 Developed at MIT Lab  
 MIT IS Newsletter

## 21. Record of Research Funding:

*Arthur Vining Davis Foundtion* (2014-2016) **\$180K** - *Using Popular Games for Serious Learning*  
*Bill and Melinda Gates Foundation* (2013-2015) **\$305K**– *Radix Extension*  
*NSF AISL* (2012-2015) **\$800K** – information Community Science Investigators  
*NSF Cyberlearning* (2012-2015) **\$450K**– DIP: Using dynamic formative assessment models to aid learning the experimental process in biology  
*Linde Foundation* (2012-2014) **\$150K** – Simulations Systems and Computational Literacy Community  
*Center for Mobile Learning* **\$2.8M** – Google, Telefonica, Motorola Foundation, Verizon Foundation  
*Bill and Melinda Gates Foundation* (2012-2014) **\$3M** – STEMMO (Radix)  
*Department of Homeland Security* (2011-2013) **\$169.5K** – Computer Programming Tools in Schools  
*Columbus Zoo and Aquarium* – PI (2007-2013) **\$453** – Augmented Reality in Informal Education  
*NSF DRK12* (2010-2014) **\$2.1M** – Biograph  
*Linde Foundation* (2009-2012) **\$65K + \$75K + \$75K** – Simulations Systems and Computational Literacy

*NSF* (2009-2011) **\$247K** – Transactive Narrative: An Inclusive Game-Based Programming Context  
*Gambit* (2009-2011) **\$150K** – The Role of Narrative in Learning Games  
*NIH* (2009-2011) **\$853K** – Ubiquitous Games for Biology  
*NSF ITEST* (2009-2011) **\$518K** – Community Science Investigators  
*NSF ISE* (2009-2011) **\$1.4M** – Mass Extinction: A Curated Game  
*Department of Homeland Security* – STEM Learning (2008) **\$163K** – Games and Simulations for STEM Education  
*NSF ISE* (2008-2010) **\$194K** – Kids Survey Network  
*NSF AYS* – (2008-2009) **\$125K** – LIONS with Missouri Botanical Gardens  
*NSF* – Co-PI (2008-2009) **\$400K (MIT \$50K)** – EvoBeaker II  
*NSF AYS* – Co-PI (2007-2009) – Project GUTS @ SFI  
*Hewlett Foundation* – PI (2007-2008) **\$200K** – Games for Learning  
*Microsoft iCampus* – PI (2006) **\$230K** – Public Opinions of Science and Technology  
*StarSchools* – *Department of Education* – Co-PI (2006-2009) **\$1.5M (MIT \$450K)** – Improving Mathematics and Literacy Learning Through Augmented Reality Simulation Games With Emerging Mobile Technologies  
*StarSchools* – *Department of Education* (2006-2008) **\$15M (MIT \$500K)** through Comparative Media Studies with Maryland Public Television) – Learning Games to Go  
*NBC News* – Co-PI (2006-2008) **\$450K + \$400K + \$400K** – iCue Assessment  
*Intel Foundation* – PI (2005) **\$27.5K** – Augmented Reality Simulations for Learning  
*NSF ITEST* (2005-2008) **\$1.4M (MIT \$90K)** – EcoScienceWorks: Exploring and Modeling Ecosystems Using Information Technology  
*NSF ITEST* – Advisor (2005-2008) – Community for Rural Education, Stewardship and Technology  
*Young Faculty Leaders Forum* – PI (2004-2006) **\$50K** – Enhancing and Assessing Student Understanding of Biological Concepts with Participatory Simulations  
*NSF ITEST* – PI (2003-2006) **\$1M** – New Mexico Adventures in Modeling  
*NSF* – Co-PI (2003-2004) **\$35K** – Osmobeaker  
*Leapster* – PI (2003-2004) **\$35K** – Leapster Assessment  
*NSF Postdoctoral Fellowship* – PI (1998-1999) **\$50K** – Professional Development of Teachers Using Computer Simulations

## 22. Theses Supervised:

Shawn Conrad (MEng 2013)  
 Brad Gaffney (Meng 2013)  
 Jacob Katz Phd Doctoral Thesis in Aero Astro (Proposal Committee)  
 Yuzhi Zheng (UAP 2012)  
 Calvin Lewis (UAP 2012)  
 Emily Seitz (UAP 2012)  
 Seth Booth (UAP 2012)  
 Chris Cheng (MEng 2011) – StarLogo camera controls and enhancements  
 Vijay Umapathy (MEng 2011) – An adaptive user interface for open educational content  
 David Lam (MEng 2011) – Intuitive fully integrated platform for designing interactive objects in Quest Atlantis  
 Joe Laurendi (MEng 2011) – Augmented reality games: improved data layers  
 Owen Lin (MEng 2010) – The Development of Network Enabled Augmented Reality Mobile Applications  
 Yunus Sasmaz (MEng 2010) – Extending the Limits of Weatherlings: A Ubiquitous, Educational, Multiplayer, Web-Based Game for Mobile and desktop platforms  
 Vijay Umapathy (SB 2010)  
 Nicole Bieber (SB 2010)  
 Curtis Liu (SB 2010)  
 Joe Laurendi (SB 2010)  
 Chris Cheng (SB 2010)  
 Angel Irizarry (MEng 2010)  
 Robert Falconi (MEng 2010) – Usability and Game Design: Improving the MITAR Game Editor  
 Aidan Ho (SB 2009)  
 John Zhang (MEng 2009) – GameBuilder, An Outdoor AR Creation Software  
 Chris Wong (MEng 2009) – Kid's Survey Network: Teaching Date Literacy with Multiplayer Online Games  
 Matt Ng (MEng 2009) – UbiqGames: Casual, Educational, Multiplayer Games for Mobile and Desktop Platforms

Yaa-Lirng Tu (MEng 2009) – A Framework for Teaching Biology using StarLogo TNG : From DNA to Evolution

Mike D'Ambrosio (MEng 2008) – Three Dimensional Terrain Editing in StarLogo TNG

Linda Ye (SB 2008)

Eitan Gilnet (MEng 2008) – Audio Games

Tiffany Wang (MEng 2008) – Intuitive Game Design

Dan Roy (MS 2007) – Mobile Massive Multiplayer Games

Ricarose Roque (MEng 2007) – CodeBlocks – Generic Graphical Programming Languages

John Jackman (MEng 2007) – Peer to Peer Networking in StarLogo TNG

Ben Schmeckpeper (MEng 2007) – Editing Augmented Realities

Victor Costan (SB 2007) – Simple Networking Systems for Mobile Games

Melinda Tang (SB 2007) – Improving User Interface in Handheld Games

Thomas Robinson (SB 2007) – Undoing in StarLogo TNG

Mark Burroughs (SB 2007) – Terrain Editing in SpaceLand

Kirupa Chinnathambi (SB 2007) – Creating a Fun, Feature Filled Game Editor

Xia Lu (MEng 2007) – Location Aware Performance Support Systems

Hector Beltran (SB 2006) – Location Aware Wireless Games

Robert Kwok (SB 2006) – Server Based Wireless Games

Katherine Klesch (SB 2006) – Redesigning an Interface for Palmagotchi

Ed Dieterle PhD (Harvard)

Ben Povlich (SB 2006) – Augmented Reality Simulations for Handhelds

Daniel Wendell (MEng 2006) – 3D Terrain in StarLogo TNG

Corey McCaffrey (MEng 2006) – Textual Interfaces to Graphical Programming

Spencer Cross (SB 2005) – Data Integration in Augmented Realities

Mark Boudreau (SB 2005) – Combining Indoor/Outdoor Augmented Realities

Bruce Dibelo (SB 2005) – NPCs in Indoor Augmented Realities

Nicholas Behrens (SB 2005) – Network Protocols for Augmented Realities

Lauren Clement (SB 2005) – User Interface Design in StarLogo

Chester Tse (SB 2005) – 3D Collisions in StarLogo

Jon Hyler (SB 2004) – Indoor Location Based Augmented Realities

Tricia Um (SB 2004) – Simulation Development for Middle Schools Children

Robert Lillianfeld (SB 2003) – Analyzing the TEAL Project as a Tool for Teaching University-Level Electricity and Magnetism

Priscilla Cheung (MEng 2003) – Augmented Reality Simulations

Nick Bozard (SB 2003) – Networks: A Participatory Simulation

Jon Wolfe (SB 2003) – Augmented Reality User Interfaces

Kodjo Hesse (SB 2003) – Tracking Users in Augmented Realities

Douglas Rickett (MEng 2002) – Women's Technology Program

Monique Lo (MCP 2001) – Modeling and Study of Infectious Diseases