Brian K. Smith
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http://about.me/brian.k.smith

Research Interests

Design of computational learning environments; computer science education; human computer interaction; design sciences; informal/everyday learning

Education

Northwestern University, Ph.D., Learning Sciences, 1998
University of California at Los Angeles, B.S., Computer Science & Engineering, 1991

Honors & Awards

Apple Distinguished Educator, Apple Computer Inc., 2004
Jan Hawkins Award for Early Career Contributions to Humanistic Research and Scholarship in Learning Technologies, American Educational Research Association, 2004
Featured as one of Ten Individuals Redefining Information Technology in *Higher Issues in Black Education*, February 2002
National Science Foundation Faculty Early Career Development (CAREER) Award, 2000
LG Electronics Career Development Chair (MIT), 1998-2001
IEEE Commendation for Reviewing, 1997
Patricia Roberts Harris Fellowship (U.S. Dept. of Education) Recipient, 1993
Ford Foundation Fellowship Recipient, 1991
National Science Foundation Graduate Fellowship, Honorable Mention, 1991
TRW Chairman's Award for Innovation, 1990
ARCO Scholarship, Student Recognition, 1988
ARCO Scholarship, Most Improved GPA, 1987

Professional Experience

Drexel University (7/18 – present) Philadelphia, PA
Professor of Information Sciences + Senior Associate Dean of Academic Affairs, College of Computing & Informatics. Joint appointment with the School of Education.

National Science Foundation (9/17 – 9/18) Alexandria, VA
Program director in Division of Research on Learning under Intergovernmental Personnel Act (IPA). Responsible for proposals submitted to: Innovative Technology Experiences for Students & Teachers (ITEST), Advancing Informal STEM Learning (AISL), Discovery Research preK-12 (DRK-12), Cyberlearning and Work at the Human Technology Frontier, and CS For All: Research-Practice Partnerships.

Drexel University (9/13 – present) Philadelphia, PA
Professor of Learning Technologies, School of Education. Courtesy appointment with the Department of Computer Science, College of Computing and Informatics.

Rhode Island School of Design (1/10 – 8/13) Providence, RI
Dean of Continuing Education. Responsible for non-credit course offerings for 4500 children, teenagers, and adult students per year, managing a staff of 21 individuals, and generating ~$5M in revenues. Also co-developed RISD's *STEM to STEAM* initiative, the inclusion of art and design thinking into STEM education.

The Pennsylvania State University (9/02 – 12/09) University Park, PA
Associate professor of Information Sciences and Technology. Courtesy appointments with the College of Education and Department of Computer Science and Engineering.

Massachusetts Institute of Technology (2/02 – 9/02) Cambridge, MA
Associate professor of Media Arts and Sciences, MIT Media Laboratory.

Professional Experience, cont'd

Massachusetts Institute of Technology (9/97 – 2/02) Cambridge, MA
Assistant professor of Media Arts and Sciences, MIT Media Laboratory.

Northwestern University (9/92 - 9/97) Evanston, IL
Graduate research assistant. Prototyping of several systems for music education + development, deployment, and evaluation of an interactive video system for biology education.

Inference Corporation (Summer 92) El Segundo, CA
Consulting for Compaq Computer Corporation requiring the reengineering of a large case-based reasoning system and knowledge-based, multimedia applications development.

Interactive Systems Corporation (Summer 91) Calabasas, CA
Software engineering position in color science and software development for the Kodak Color Management System and Photo Compact Disc.

Nevis Technologies/Siemens Nixdorf (Summer 91) Culver City, CA
Test engineer developing automated, distributed software testing systems.

UCLA Department of Radiology (2/91 - 6/91) Sylmar, CA
Research involving computer vision segmentation and 3D registration of CT and MRI scans of brain tissue.

RAND Corporation (10/90 - 4/91) Santa Monica, CA
Knowledge acquisition and expert systems development for military logistics applications.

TRW (Summer 90) Redondo Beach, CA
Design and development of *Marple*, a real-time, autonomous, fault diagnosis system for satellites.

TRW (Summer 89) Redondo Beach, CA
Design and development of the *Command Constraint Checker*, an expert system for verification of satellite command sequences connected with the Compton Gamma Ray Observatory.

NCR Corporation (Summer 88) Rancho Bernardo, CA
Summer intern doing network systems programming for NCR mainframes.

Exxon Company, USA (Summer 87) Thousand Oaks, CA
Summer intern responsible for IBM mainframe/workstation system administration and development of geological visualization programs.

Academic Experience

Courses Taught at Drexel University:
Critical Issues in Education (Spring 2016, 2017)
Computer Applications in Teaching (Winter 2016)
Multimedia in Instructional Design (Winter 2016)
New Media Literacies (Spring, Fall 2015)
Learning with Social Media and Mobiles (Spring, Fall 2014)
Researching and Evaluating Technologies (Spring, Fall 2014-5)
Designing Multimedia Applications for Learning (Winter 2014)
Developing Virtual Communities for Staff Development (Winter 2014-5, Summer 2015)
Social Foundations in STEM Education (Fall 2013, Winter 2017)

Academic Experience, cont'd

Courses Taught at The Pennsylvania State University:
Interdisciplinary Digital Studio Seminar (Fall 2009, co-instructor w/School of Visual Arts)
Human Computer Interaction Theories and Frameworks (Fall 2009)
Instructional Systems Design Studio (Spring 2008)
Introduction to Information Sciences and Technology (Spring 2008)
Learning and Games (Spring 2007)
Organization and Design of Information Systems: User and System Principles (2004-10)
Theoretical Foundations of Instructional Systems (Fall 2004, 2006)
Instructional Systems Research Apprenticeships (2003-8)
Pervasive and Ubiquitous Computing (Fall 2004)
Survey of Research in Instructional Systems (2003, 2005)
Special Topics in Existing Technology (Spring 2003)
New Media and the Web (Fall 2002, 2003)

Courses Taught at MIT:
Narrating the Urban Environment (Fall 2001)
Preparation for the Master's Thesis (Fall 1999, 2000)
Media and Computation (Fall 1999, 2000)
Tools for Thought (Spring 1998, 2000)
no representation without explanation (Spring 1999)
designing interaction (Fall 1998)

K-12 Teaching:
Ecology and Evolution (grades 9-12), Northwestern University, Maine East High School, Evanston Township High School, 1996-7
Lego/Logo (grades 5-6), Northwestern University, 1996

Administrative:
Director, IST Solutions Institute (2007-8)
Coordinator, IST Medical Informatics Speaker Series (2005)
Coordinator, Media Lab Colloquium Series (1998-9)
Co-coordinator, Institute for the Learning Sciences Speaker Series (1994-5)
Co-editor, *Computer Studies Postgraduate Handbook* (University of Leeds, 1992)

Committees:
National Science Foundation
Member, EHR Employee Engagement Coordination Group (2018-)
Member, Program Director Search Committee, Division of Research on Learning (2017-8)
Representative, Combined Federal Campaign, Division of Research on Learning (2017)

Drexel University
Member, University Emeritus Committee (2017-9)
Member, University Faculty Career Development Award Committee (2017)
Co-Chair, Critical Conversations in Urban Education Committee (2016-8)
Co-Chair, Drexel Online Emerging Technologies Committee (2016-8)
Reviewer, STAR Scholars Summer Showcase (2016)
Reviewer, Graduate College Student Excellence Awards (2016)
Reviewer, ExCITE Center Faculty Fellows Program (2016)
Chair, School of Education Program Manager Search Committee (2016)
Member, University Tenure and Promotion Committee (2016-7)
Member, Educational Improvement & Transformation M.S. Advisory Committee (2016)
Member, Special Education Clinical Faculty Search (2016)
Member, Strategic Planning Task Force [Education Laboratory] (2016)
Program Director, Learning Technologies, Creativity + Innovation (2015-7)
Member, Ed.D. Advisory Committee (2015-)
Alternate Parliamentarian (2015-7)

Academic Experience, cont'd
Chair, Expedited Tenure & Promotion Review Committee (2015)
Member, Learning, Culture, and Technology Undergraduate Major Committee (2015)
Outside Member, College of Media Arts & Design Tenure Committee (2015)
Member, Assessment/Quantitative Methods Faculty Search (2015)
Chair, School of Education Ph.D. Research Methods Course Review (2015)
Core Faculty Member, ExCITe Center (2014-)
Member, Senate Nominations Committee (2014-)
Member, School of Education Tenure & Promotion Committees (x3, 2014)
Member, Critical Conversations in Urban Education Colloquia Committee (2014-6)
Co-Chair, Math Forum Strategic Planning Group (2014)
Member, School of Education Faculty Steering Committee (2014-16)
Member, University Sabbatical Committee (2014-15)
Member, University Strategic Plan Implementation Task Force, Global Impact (2014-)
Member, School of Education Online Ed.D. Faculty Search (2013)

Rhode Island School of Design
Member, President's Extended Cabinet (2012-13)
Member, RISD Research Initiatives Committee (2011-13)
Member, Facilities Master Planning Committee (2011-13)
Member, Information Technology Steering Committee (2011-13)
Member, Digital+Media Faculty Search Committee (2011-12)
Member, Dean of Architecture+Design Search Committee (2012)
Member, Provost Search Committee (2012)
Member, Local/Global Strategic Planning Committee (2010)
Member, Provost's Council (2010-13)

The Pennsylvania State University
Honors student advisor, Schreyer's Honors College (2009-10)
Chair, IST Academic Integrity Committee (2009-10)
Member IST Diversity Taskforce (2009)
Member, IST Graduate Recruiting Committee (2009-10)
IST Ombudsman (2009-10)
Member, IST Faculty Advisory Committee (2008-10)
Co-chair, Learning Sciences Faculty Search Committee, College of Education (2007-8)
Member, Penn State Educational Gaming Commons Steering Committee (2007-10)
Member, IST Dean's Administrative Committee (2007-8)
Member, e-Education Council (2007-8)
Member, Penn State Online Coordinating Council (2007-8)
Member, IST Distinguished Lecture Series Committee (2006-10)
Member, IST eLearning Strategies Committee (2006)
Member, IST Core Values Committee (2006)
Member, IST Dean Search Committee (2006)
Member, IST Undergraduate Advisory Committee (2005-6)
Member, IST Classroom Software Committee (2005-8)
Member, Learning Sciences Faculty Search Committee, College of Education (2005-6)
Member, IST/Solutions Institute Instructional Designer Search Committee (2006)
Chair, IST Medical Informatics Faculty Search Committee (2004-5)
Research investigator, Apple Computer Digital Campus Initiative (2003-8)
Co-investigator, IST Medical Informatics Consortium (2003-5)
Faculty mentor, PSU Minority Undergraduate Research Experience (2003)
Member, IST Web Presence Committee (2002-3)

Massachusetts Institute of Technology
MIT Teacher Education Program Advisory Board (1999-2002)
MIT Freshman Advising (1999-2002)
Media Arts and Sciences Departmental Committee on Graduate Studies (1999-2002)

Academic Experience, cont'd
Media Arts and Sciences Alternative Freshman Year Committee (1997-8)
Media Arts and Sciences Undergraduate Program Committee (1997-8)

Professional Activities

Technical Program Committees:
Member, Advisory Committee, International Conference on the Learning Sciences (2017-8)
Member, Program Committee, AAAI National Conference (2018)
Program Chair, Computer Supported Collaborative Learning Conference (2017)
Reviewer, ACM Computer Supported Collaborative Work (2016)
Member, Program Committee, AAAI Doctoral Consortium (2014, 2016, 2017)
Senior Reviewer, International Conference of the Learning Sciences (2013)
Member, ACM SIGCHI Student Game Competition (2013)
Mentor, MacArthur Foundation Digital Media & Learning Fellows (2012)
Member, International Conference on Innovations in Information Technology (2012)
Member, Steering Committee, Centers for Ocean Sciences Education Excellence, National Science Foundation (2010)
Member, Committee on Learning Science in Informal Environments, National Research Council (2006-8)
Co-Chair, AERA Jan Hawkins Award Committee (2005-7)
Co-Chair, AERA Technology Research Section, Division C (2004-5)
Member, IEEE Workshop on Technology for Education in Developing Countries (2003-4)
Member, International Association for Development of the Information Society (IADIS) International Conference on e-Society (2003-4)
Member, International Conference on the Learning Sciences (2002, 2009)
Member, ACM Universal Usability Conference (2000)
Member, ACM Intelligent User Interface Conference (1999)
Co-chair, Special Interest Group on AERA Advanced Technologies for Learning (1998-9).
Member, ACM SIGCHI Nominating Committee (1998-9)
Co-Chair, ACM Multimedia 98 Workshop on Multimedia & Educational Practice (1998)
Co-Chair, IJCAI-95 Workshop on Artificial Intelligence and Music (1995)

Technical Advisory Boards:
Information and Learning Sciences (2018-)
Journal of Continuing Education and Professional Development (2014-)
Educational Technology and Society Journal (1997-2009)

Technical Societies:
American Educational Research Association
American Association for the Advancement of Science
Association for Computing Machinery
International Society for the Learning Sciences

Peer Reviewing:
ACM Conference on Human Factors in Computing Systems, ACM GROUP Conference, ACM Journal of Educational Resources in Computing, ACM Transactions on Computer-Human Interaction, ACM/AIGA Designing for User Experiences Conference, American Association of Artificial Intelligence Conference, American Education Research Association Conference, American Educational Research Journal, Educational Researcher, Communications of the ACM, Educational Technology and Society Journal, Journal of the Learning Sciences, Journal of Science Education and Technology, IEEE International Conference on Advanced Learning Technologies, IEEE Computer, IEEE Multimedia, IEEE Transactions on Learning Technologies, Information Resources Management Association Conference, Innovations in Education and Teaching International, Interacting with Computers Journal, International Conference on Computers in Education, International Conference on Information Systems,

Professional Activities, cont'd
International Conference on Innovations in Information Technology, International Conference on the Learning Sciences,
International Conference on Computer Supported Collaborative Learning, ISRN Education, Patient Education and Counseling, Personal and Ubiquitous Computing, Urban Education, MIT Press, Teachers College Press, U.S. Department of Education, National Science Foundation, National Endowment for the Arts

Funding

2019-2024: CyberCorps Mentoring and Scholarship Program (CMSP), National Science Foundation, $3,999,962. Principal Investigators: B.K. Smith, T. Heverin, W. Mongan, A. Allen-Handy, & M. Rogers.

2019-2022: Collaborative Research: Open Player and Community Modeling as a Learning Tool, National Science Foundation, $264,000. Principal Investigators: J. Zhu & B.K. Smith.

2017-18: Skyscraper Games: Regional Contest, Intel Corporation, $158,473. Principal Investigators: F. Lee & B.K. Smith.

2016-7: Learning Innovation, Ember at Spring Point, $949,995. Principal Investigators: Y. Kim, B.K. Smith, & K. Lindstrom.

2015-2016: World's Largest Video Game Contest, Intel Corporation, $100,000. Principal Investigators: F. Lee, A. Gass, B.K. Smith.

2015-2018: Learning Parallel Programming through an Adaptive Game, National Science Foundation, $549,770. Principal Investigators: S. Ontañón, B.K. Smith, J. Zhu, & B. Char.

2013-2014: Exploring Scholarly Discourse in MOOC Discussion Forums, The Pennsylvania State University Center for Online Innovation in Learning, $30,383. Principal Investigators: B.J. Jansen, B. Pursel, P. Sharma, B.K. Smith, C. Brooks, and S. Lonn.

2010-2011: Workshop: Bridging STEM to STEAM: Developing New Frameworks for Art/Science Pedagogy, National Science Foundation, $49,978. Principal Investigators: C. Rose and B.K. Smith.

2009-2010: Learning Sciences Collaborative Consortium, The Pennsylvania State University Social Science Research Institute, $5,000. Principal Investigators: R. Duschl, L. Liben, D. Smith, C. Zembal-Saul, B.K. Smith, and P.K. Murphy.

2008-2012: MRI: Acquisition of a Scalable Instrument for Discovery through Computing, National Science Foundation, $1,855,501. Principal Investigators: P. Raghavan, P. Hudson, M. Kandemir, B.K. Smith, and L.-Q. Chen.

2008-2009: Interactive Web-Based Diabetes Self-Management Tool, Penn State Clinical and Transitional Science Award Initiative, $53,046. Principal Investigators: R. Gabbay, H. Stuckey, B.K. Smith, S.S. Sundar, and D. Mauger.

2007-2008: Developing Communities of Practice for Sales and Service Representatives, Subaru of America, $73,869. Principal Investigators: B.K. Smith and S. Land.

2007-2008: Technology Coordination and Integration, Young Scholars of Central Pennsylvania Charter School, $30,974. Principal Investigators: S. Land and B.K. Smith.

Funding, cont'd

2006-2007: Automatic vs. Manual Capture of Health-Related Experiences, Microsoft Research, Equipment donations, $12,578. Principal Investigators: B.K. Smith and J. Frost.

2006: IST Medical Informatics Research Initiative, Personal donation from Raymond and Diana Tronzo, $100,000. Principal Investigators: J. Thomas and B.K. Smith.

2005-2008: Fantasy Sports Games as Cultures for Informal Learning, National Science Foundation, $751,120. Principal Investigators: B.K. Smith and P. Sharma.

2000-2006: Faculty Early Career Development (CAREER) Award, National Science Foundation, $499,404.

2000-2002: Information: Organized Research Consortium, MIT Media Laboratory, $4,501,120. Principal Investigators: B.K. Smith, J. Maeda, and W. Bender.

1999-2000: News in the Future Research Consortium, MIT Media Laboratory, $2,135,835. Principal Investigators: W. Bender, J. Maeda, and B.K. Smith.

1997-1999: Unrestricted research grant, Eastman Kodak Company, $15,000.

Refereed Journal Publications

Smith, B.K. (2014). Bodystorming mobile learning experiences. *TechTrends*, *58*(1): 71-76.

Baytak, A., Land, S.M., and Smith, B.K. (2011). Children as educational game designers: An exploratory study. *Turkish Online Journal of Educational Technology*, *10*(4): 84-92.

Land, S.M., Smith, B.K., Park, S., Beabout, B., and Kim, K. (2009). Supporting school-home connections through photojournaling: Capturing everyday experiences of nutrition concepts. *TechTrends*, *53*(6): 61-65.

Land, S.M., Draper, D., Ma, Z., Hsieh, H.-W., Smith, B.K., and Jordan, R. (2009). An investigation of knowledge building activities in an online community of practice at Subaru of America. *Performance Improvement Quarterly*, *22*(3): 23-36.

Jansen, B.J., Booth, D., and Smith, B. (2009). Using the taxonomy of cognitive learning to model online searching. *Information Processing and Management*, *45*(6): 643-663.

Purao, S., Baldwin, C., Hevner, A., Storey, V.C. Pries-Heje, J., Smith, B.K., and Zhu. Y. (2008). The sciences of design: Observations on an emerging field. *Communications of the Association for Information Systems*, *23*: Article 29.

Yang, S.P., Smith, B.K., and Graham, G.M. (2008). Healthy video gaming: Oxymoron or possibility? *Innovate: Journal of Online Education, 4*(4).

Smith, B.K., Frost, J., Albayrak, M., and Sudhakar, R. (2007). Integrating glucometers and digital photography as experience capture tools to enhance patient understanding and communication of diabetes self-management practices. *Personal and Ubiquitous Computing*, *11*(4): 273-286.

Smith, B.K., Sharma, P., and Hooper, P. (2006). Decision making in online fantasy sports communities. *International Journal of Interactive Technology and Smart Education*, *4*: 347-360.

Refereed Journal Publications, cont'd

Smith, B.K., Frost, J., Albayrak, M., and Sudhakar, R. (2006). Facilitating narrative medical discussions of type 1 diabetes with computer visualizations and photography. *Patient Education and Counseling*, *64*(1-3): 313-321.

Smith, B.K. (2006). Design and computational flexibility. *Digital Creativity*, *17*(2): 65-72.

Seif El-Nasr, M. and Smith, B.K. (2006). Learning through game modding. *ACM Computers in Entertainment*, *4*(1): Article 3B.

Smith, B.K. and Reiser, B. J. (2005). Explaining behavior using video for observational inquiry and theory articulation. *The Journal of the Learning Sciences*, *14*(3): 315-360.

Blankinship, E., Smith, B., Bender, W., and Holtzman, H. (2004). Closed caption, open source. *British Telecom Technology Journal*, *22*(4): 151-159.

Smith, B.K., Blankinship, E., and Lackner, T. (2000). Annotation and education. *IEEE Multimedia*, *7*(2): 84-89.

Smith, B.K. and Blankinship, E. (2000). Justifying imagery: Multimedia support for learning through explanation. *IBM Systems Journal*, *39*(3&4): 749-767.

Smith, B.K., Endter, I., Driscoll, J., Bender, W., Turpeinen, M. and Quan, D. (2000). Silver Stringer and Junior Journalists: Active information producers. *IBM Systems Journal*, *39*(3&4): 730-748.

Books

Land, S.M. & Smith, B.K. (eds.). (in preparation). *Theoretical foundations of learning environments (Volume 3)*. New York: Routledge.

Smith, B.K., Borge, M., Mercier, E., & Lim, K.Y. (Eds.). (2017). *Making a difference: Prioritizing equity and access in CSCL, 12th international conference on computer supported collaborative learning*. Philadelphia, PA: International Society of the Learning Sciences.

Parts of Books

Donaldson, J.P., Barany, A., & Smith, B.K. (submitted). Situated learning through situating learning as designers. Submitted to *Handbook of research on educational communications and Technology* (5th Edition). New York, NY: Springer.

Alderfer, K., Zhu, J., Freed, E., Smith, B.K., Char, B, & Ontañón. (2019). Parallel. In K. Schrier (ed.), *Learning, education, & games: 100 games to use in the classroom and beyond* (pp. 283-286). ETC Press: Pittsburgh, PA.

Donaldson, J. & Smith, B.K. (2017). Design thinking, designerly ways of knowing, and engaged learning. In J.M. Spector, B.B. Lockee, & M.D. Childress (eds.), *Learning, design, and technology: An international compendium of theory, research, practice, and policy.* Bloomington, IN: AECT.

Smith, B.K. (2017). Health and online learning. In K.A. Peppler (ed.), *The SAGE encyclopedia on out-of-school learning* (pp. 338-341). Los Angeles, CA: SAGE Publications, Inc.

Katz-Buonincontro, J., Genovesi, J., & Smith, B.K. (2017). STEAM-based approaches to out-of-school learning. In K.A. Peppler (ed.), *The SAGE encyclopedia on out-of-school learning* (pp. 747-750). Los Angeles, CA: SAGE Publications, Inc.

Parts of Books, cont'd

Smith, B.K. (2016). Living in the fourth quadrant: Valuing the process of design. In V. Svihla & R. Reeve (eds.), *Untold story: Design as scholarship in the learning sciences* (pp. 51-70). New York, NY: Routledge.

Land, S.M., Smith, B.K., and Zimmerman, H.T. (2013). Mobile technologies as tools for augmenting observations and reflection in everyday informal environments. In J.M. Spector, B.B. Lockee, S.E. Smaldino, and M. Herring (eds.), *Learning, problem solving, and mind tools: Essays in honor of David Jonassen* (pp. 214-228). New York, NY: Routledge.

Smith, B.K., Sharma, P., Lim, K.-Y., Akilli, G.K., Kim, K., Fujimoto, T., and Hooper, P. (2008). Finding meaning in online, very-large scale conversations. In B. J. Jansen, A. Spink, and I. Taksa (eds.), *Handbook of web log analysis* (pp 307-327). Hershey, PA: Idea Group, Inc.

Smith, B.K. (2008). Video, toys, and beyond being there. In T. Erickson and D. McDonald (eds.), *HCI remixed: Reflections on works that have influenced the HCI community* (pp. 141-146). Cambridge, MA: The MIT Press.

Land, S.M., Smith, B.K., Beabout, B., Park, S., and Kim, K. (2007). Supporting young children's reflection on everyday experiences in a project-based learning environment: Using digital images as data. In M. Orey (ed.), *Educational media and technology yearbook* (*Vol. 32*, pp. 20-26). Westport, CT: Libraries Unlimited.

Reiser, B.J., Tabak, I., Sandoval, W.A., Smith, B.K., Steinmuller, F., and Leone, A.J. (2001). BGuILE: Strategic and conceptual scaffolds for scientific inquiry in biology classrooms. In S.M. Carver and D. Klahr, (eds.), *Cognition and instruction: Twenty five years of progress* (pp. 263-305). Hillsdale, NJ: Lawrence Erlbaum Associates.

Smith, B.K., Blankinship, E., Ashford III, A., Baker, M., and Hirzel, T. (2000). Image Maps: Exploring urban history through digital photographs. In T. Ishida and K. Isbister (eds.), *Digital cities: Technologies, experiences, and future perspectives* (pp. 326-337). Berlin: Springer-Verlag.

Smith, B.K. (2000). Artificial intelligence and music education. In E.R. Miranda (ed.), *Readings in music and artificial intelligence* (pp. 222-237). Amsterdam: Harwood Academic Publishers.

Smith, B.K. and Smith, Jr., W.H. (1994). Uncovering cognitive processes in music composition: Educational and computational approaches. In M. Smith, A. Smaill, and G.A. Wiggins (eds.), *Music education: An artificial intelligence approach, Edinburgh 1993*, London: Springer-Verlag.

Non-Refereed Journal Publications

Smith, B.K. (2005). Physical fitness in virtual worlds. *IEEE Computer*, *38*(10): 101-103.

Smith, B.K. (2004). Instructional Systems and Learning Sciences: When universes collide. *Educational Technology*, *44*(3): 20-25.

Smith, B.K. (2002). You prick your finger, we do the rest: Glucose meter evolution. *User Experience: The Magazine of the Usability Professional's Association*, *3*: 31-34.

Smith, B.K. (July, 2001). Visualizing thinking with digital imagery. *IEEE Learning Technology Newsletter*, *3*(3): 64-68.

Refereed Conference Proceedings

Zhu, J., Alderfer, K., Furqan, A., Neblosky, J., Char, B., Smith, B., Villareale, J. & Ontañón, S. (2019). Programming in game space: How to represent parallel programming concepts in an educational game. In S. Deterding, F.Hosmood, J. Pirker, & T. Apperley (eds.), *Proceedings of the 14th International Conference on the Foundations of Digital Games* (Article No. 4). New York, NY: ACM Press.

Kantharaju, P, Alderfer, K., Zhu, J., Char, B., Smith, B.K., and Ontañón, S. (2018). Tracing player knowledge in a parallel programming educational game. In *Proceedings of the 14th AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE'18)*.

Duvall, M., Lee, F.J., & Smith, B. (2018). Skyscraper games: Designing professional development for middle school teachers to promote computational thinking using custom tools. In J. Kay & R. Luckin (eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, 13th International Conference of the Learning Sciences (ICLS) 2018* (Volume 3, pp. 1579-1581). London, United Kingdom. Jun 23-27.

Duvall, M., Lee, F.J., & Smith, B.K. (2018). Professional development for middle school teachers to promote computational thinking for populations underrepresented in STEM fields. In E. Longran & J. Borup (eds.), *Proceedings of the Society for Information Technology & Teacher Education (SITE) International Conference 2018* (pp. 1427-1434). Waynesville, NC: Association for the Advancement of Computing in Education.

Char, B., Alderfer, K. Smith, B.K., Ontañón, S., Neblosky, J., and Zhu, J. (2018). Lessons learned from an interactive educational computer game about concurrent programming. In T. Barnes, D. Garcia, E.K. Hawthorne, & M.A., Pérez-Quiñones (eds.), *Proceedings of the 49th ACM Technical Symposium on Computer Science Education* (p. 1077). New York, NY: ACM Press.

Duvall, M, & Smith, B.K. (2017). Authentic audiences for struggling readers: A case study using Goodreads in a high school classroom. In P. Resta & S. Smith (eds.), *Proceedings of the Society for Information Technology & Teacher Education (SITE) International Conference* (pp. 1324-1332). Waynesville, NC: Association for the Advancement of Computing in Education.

Ontañón, S., Zhu, J., Smith, B.K., Char, B, Freed, E., Furgan, A., Howard, M., Nguyen, A., Patterson, J., & Valls-Vargas, J. (2017). Designing visual metaphors for an educational game for parallel programming. In G. Mark & S. Fussell (eds.), *Proceedings of the CHI 2017 Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 2818-2824). New York, NY: ACM Press.

Zimmerman, H.T., Kanter, D.E., Ellenbogen, K., Lyons, L., Zuiker, S.J., Satwicz, T., Martell, S.T., Brown, M., Hsi, S., Smith, B.K., Phipps, M., Jordan, R., Weible, J., Gamrat, C., Loh, B., and Ma, J. (2010). Technologies and tools to support informal science learning. In *Proceedings of the Ninth International Conference of the Learning Sciences* (Volume 2, pp. 260-266), Chicago, IL, Jun 29-Jul 2.

Sharma, P., Land, S., Smith, B.K., and Jordan, R. (2010). Social network environments as third spaces for merging everyday and formalized practices. In *Proceedings of the Ninth International Conference of the Learning Sciences 2010* (Volume 2, pp. 394-396), Chicago, IL, Jun 29-Jul 2.

Refereed Conference Proceedings, cont'd

Draper, D., Land, S., Smith, B., Ma, Z., Hsieh, H.-W., and Jordan, R. (2008). Knowledge building activities in an online community of practice at Subaru of America: A case study. In M. Simonson (Ed.), *Proceedings of the 2008 Association for Educational Communications and Technology Convention*, Orlando, FL, Nov 4-8.

Baytak, A., Land, S., Smith, B., Park, S., and Jordan, R. (2008). An exploratory study of kids as educational computer game designers. In M. Simonson (Ed.), *Proceedings of the 2008 Association for Educational Communications and Technology Convention*, Orlando, FL, Nov 4-8.

Seif El-Nasr, M., Yucel, I., Zupko, J., Tapia, A., and Smith, B.K. (2007). Middle-to-high school girls as game designers—What are the learning implications? In *Proceedings of the 2nd Annual Microsoft Academic Days Conference on Game Development in Computer Science Education* (pp. 54-58), Orlando, FL, Feb 22-25.

Hsieh, W-L., Smith, B.K., and Stefanou, S. (2006). How problem solving tasks and learner goals affect the use of stories within a case library. In *Proceedings of the 36th Annual Conference of the International Society for Exploring Teaching and Learning* (pp. 138-139), Palm Springs, CA, Oct 19-21.

Land, S., Smith, B., Beabout, B., Kim, K., Park, S., and Hill, D. (2005). Scaffolding reflection in everyday experiences: Using digital images as artifacts. In *Proceedings of the 2005 International Conference of the Association for Educational Communications and Technology*, Orlando, FL, Oct 12-22.

Frost, J., Albayrak, M., and Smith, B.K. (2005). Picture health: Using personal photo diaries to improve diabetes self-management. In *Proceedings of HCI International 2005*, Las Vegas, NV, Jul 22-27.

Albayrak-Karahan, M. and Smith, B.K. (2004). Capturing rehearsals to facilitate reflection. In *Proceedings of the 2004 International Conference of the Association for Educational Communications and Technology*, Chicago, IL.

Hsieh, W-L., Smith, B.K., and Stefanou, S. (2004). It is more about telling interesting stories: Using explicit hints in storytelling to help college students solve ill-structured problems. In *Proceedings of the 2004 International Conference of the Association for Educational Communications and Technology*, Chicago, IL.

Frost, J. and Smith, B.K. (2003). Visualizing health: Imagery in diabetes education. In *Proceedings of the Designing for User Experiences (DUX2003) Conference*, San Francisco, CA, June 5-7, American Institute of Graphic Arts.

Frost, J. and Smith, B.K. (2002). Visualizing health in diabetes education. In *Proceedings of CHI2002 Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 606-607). New York: ACM Press.

Frost, J. and Smith, B.K. (2001). Digital Mirror: Practicing preventive medicine through self-reflection. In *Proceedings of Euro-CSCL 2001*. Maastricht, The Netherlands.

Peretti, J. and Smith, B.K. (2001). Teacher's LAB: The design of the Learning Activities Builder. In *Proceedings of Euro-CSCL 2001*. Maastricht, The Netherlands.

Shankar, T.R., VanKleek, M., Vicente, A., and Smith, B.K. (2000). Fugue: A computer-mediated conversational system that supports turn-negotiation. In *Proceedings of the 33rd Hawaii International Conference on Systems Sciences*. Los Alamitos, CA: IEEE.

Refereed Conference Proceedings, cont'd

Smith, B.K. and Blankinship, E. (1999). Imagery as data: Structures for visual model building. In *Proceedings of Computer Support for Collaborative Learning 99* (pp. 549-557).

Smith, B.K., Blankinship, E., Ashford III, A., Baker, M., and Hirzel, T. (1999). Inquiry with imagery: Historical archive retrieval with digital cameras. In *ACM Multimedia 99 Proceedings* (pp. 405-408). New York: ACM Press.

Smith, B.K. and Reiser, B.J. (1998). National Geographic Unplugged: Designing interactive nature films for classrooms. In *Proceedings of the CHI 98 Conference on Human Factors in Computing Systems* (pp. 424-431), New York: ACM Press.

Smith, B.K. and Reiser, B.J. (1997). What should a wildebeest say: Interactive nature films for high school classrooms. In *Proceedings of ACM Multimedia 97* (pp. 193-201). New York: ACM Press.

Smith, B.K. (1996). Why dissect a frog when you can simulate a lion? In *Proceedings of the Thirteenth National Conference on Artificial Intelligence* (Vol. 2, p. 1372). Menlo Park, CA: AAAI Press.

Tabak, I., Smith, B.K., Sandoval, W.A., and Reiser, B.J. (1996). Combining general and domain-specific strategic support for biological inquiry. In *Proceedings of the Third International Conference on Intelligent Tutoring Systems* (pp. 288-296). New York: Springer-Verlag.

Tabak, I., Sandoval, W., Smith, B.K., Agganis, A., Baumgartner, E., and Reiser, B.J. (1995). Supporting collaborative guided inquiry in a learning environment for biology. In *Proceedings of Computer Supported Collaborative Learning '95* (pp. 322-326). Hillsdale, NJ: Lawrence Erlbaum Associates.

Smith, B.K. (1991). Affect and musical composition from natural environment representations. In *Proceedings of the Eighth Brazilian Conference on Artificial Intelligence*, Brasilia, Brazil.

Fesq, L.M., Stephan, A., and Smith, B.K. (1990). Spacecraft command verification: The AI solution. In *Proceedings of the Goddard Conference on Space Applications of Artificial Intelligence* (pp. 157-163), Washington, DC.

Refereed Conference Presentations

Perry, J. and Smith, B.K. (2017). Examining a sport and recreation management internship program at a historically black university. Paper presentation at the *North American Society for Sport Management Conference*, May 30-June 3, Denver, CO.

Fontecchio, A., Smith, B.K., Fishman-Johnson, E., and Kim, Y. (2015). Making a STEAM-powered interactive musical performance. Workshop presentation at the *International Society for Technology in Education Conference*, June 28-July 1, Philadelphia, PA.

Katz-Buonincontro, J. and Smith, B.K. (2015). Gathering STEAM: The integration of arts-based educational projects into science, technology, engineering, and math curricula. Co-organizer/chair, paper session at *2015 American Educational Research Conference*, April 16-20, Chicago, IL.

Refereed Conference Presentations, cont'd

Smith, B.K. (2014). Redesigning discussion forums for online learning. Paper presented at the *CSCW '14 Workshop on Designing Futures for Peer-to-Peer Learning*, February 15-19, Baltimore, MD.

Yajima, R., McDougall, M., Nadarajan, G., Smith, B.K., and Talasek, T.D. (2013). Benefits beyond beauty: Integration of art into STEM education and research. Panel presentation at the *2013 American Association for the Advancement of Science Annual Meeting*, February 14-18, Boston, MA.

Fantauzzacoffin, J., Berzowska, J., Edmonds, E., Goldberg, K., Harrell, D.F., and Smith, B.K. (2012). The arts, HCI, and innovation discourse. Panel presentation at the *ACM SIGCHI Conference on Human Factors in Computing Systems*, Austin, TX, May 5-10.

Maeda, J., Gist, D., McDougall, M., Blythe, S.G., and Smith, B.K. (2012). Turning STEM to STEAM in modern curriculum. Panel presentation at *SXSWedu*, March 6-8, Austin, TX.

Stuckey, H., Mincemoyer, S., Akilli, G., Smith, B., and Gabbay R. (2010). Development of an interactive web-based diabetes self-management and social networking tool. Paper presented at *American Diabetes Association's 70th Scientific Sessions*, June 25-29, Orlando, FL.

Lewenstein, B.V., Bell, P., Martin, L., Michalchik, V., Smith, B.K., and Ellenbogen, K. (2010). Learning science in informal environments. Panel presentation at the *2010 American Association for the Advancement of Science Annual Meeting*, February 18-22, San Diego, CA.

Gabbay, R., Stuckey, H., Smith, B., Sundar, S. S., and Mincemoyer, S. (2008). Interactive web-based diabetes self-management tool to promote behavioral change through education and social networking: A proposed study. Poster presentation at *The 5th Penn State Diabetes Research Retreat*, April 21, University Park, PA.

Lim, K.Y., Smith, B.K., and Sharma, P. (2008). Knowledge sharing in fantasy sports games. Paper presented at the *American Educational Research Conference*, March 24-28, New York, NY.

Smith, B.K., Sharma, P., Akilli, G.K., Lim, K.Y., Kim, K., Fujimoto, T., and Hooper, P. (2008). Designing fantasy sports games to support statistical reasoning. Paper presented at the *American Educational Research Conference*, March 24-28, New York, NY.

Jansen, B.J., Smith, B.K., and Booth, D. (2007). Viewing online searching as a learning paradigm. Poster presentation at *The 30th Annual International ACM SIGIR Conference*, July 23-27, Amsterdam, The Netherlands.

Jansen, B.J., Smith, B.K., and Booth, D. (2007). Understanding web search via a learning paradigm. Poster presentation at *The 16th International World Wide Web Conference (WWW2007)*, May 8-12, Banff, Alberta, Canada.

Jansen, B.J., Smith, B.K., and Booth, D. (2007). Learning as a paradigm for understanding exploratory search. Paper presentation at *SIGCHI Conference on Human Factors in Computing Systems, Workshop on Exploratory Search Interaction*, April 29, San Jose, CA.

Smith, B.K. (2007). Designing exertion interfaces for health. Paper presentation at *SIGCHI Conference on Human Factors in Computing Systems, Workshop on Exertion Interfaces*, April 29, San Jose, CA.

Refereed Conference Presentations, cont'd

Jansen, B.J., Smith, B.K., and Booth, D. (2007). Understanding web search via a learning paradigm. Poster presentation at *The 16th International World Wide Web Conference (WWW2007)*, May 8-12, Banff, Alberta, Canada.

Land, S., Smith, B.K., Park, S., Beabout, B., Kim, K., and Suh, W. (2007). Capturing everyday experiences for reflection on nutrition concepts: Using digital images as data. Presented at the *American Education Research Association National Conference*, April 9-13, Chicago, IL.

Yang, S.P. and Smith, B.K. (2005). Exergames: A moving video game experience. Paper presented at *The 2005 New Media Consortium Online Conference on Educational Gaming*, December 7-8.

Smith, B.K., Sharma, P., Sudhakar, R., and Hooper, P. (2005). Real learning with fantasy sports. Paper presented at *The 26th Annual Conference of the North American Society for the Sociology of Sport*, October 26-29, Winston-Salem, NC.

Seif El-Nasr, M. and Smith, B.K. (2005). Learning through game modding. Paper presented at *The Games, Learning, and Society Conference*, June 23-24, Madison, WI.

Smith, B.K., Sharma, P., and Sudhakar, R. (2005). Informal learning through fantasy sports. Interactive presentation at *The Games, Learning, and Society Conference*, June 23-24, Madison, WI.

Yang, S. and Smith, B.K. (2005). Sweatin' with Nintendo: Exergaming for health. Interactive presentation at *The Games, Learning, and Society Conference*, June 23-24, Madison, WI.

Smith, B.K. and Yang, S.P. (2005). Reducing diabetic complications with video games. Poster presentation at *The 2nd Penn State Diabetes Research Retreat*, May 6, University Park, PA.

Smith, B.K., Sudhakar, R., Mauser, J., Parker-Klees, L., and Ulbrecht, J. (2005). Assisting patient-physician communication with digital visualizations of glucose/behavioral data. Poster presentation at *The 2nd Penn State Diabetes Research Retreat*, May 6, University Park, PA.

Frost, J. and Smith, B.K. (2003). Visualizing health. Poster presentation at the *Third Annual Diabetes Technology Meeting*. San Francisco, CA.

Frost, J. and Smith, B.K. (2003). Picture of health: Photography use in diabetes self-care. Demo presentation at *The Fifth International Conference on Ubiquitous Computing (UBICOMP 2003)*. Seattle, WA.

Smith, B.K. and Blankinship, E. (1999). Building models with imagery. Demo presentation at *Computer Supported Collaborative Learning 99*.

Smith, B.K., Bers, M.U., Best, M., and Endter, I. (1999). Communities of news. Demo presentation at *Computer Supported Collaborative Learning 99*.

Smith, B.K. (April, 1998). Learner-centered design in the classroom. Presented at the *CHI 98 Workshop on Learner-Centered Design*. Los Angeles, CA.

Smith, B.K. (April, 1998). Time on task: Interface impedance in learning environments. Presented at the CHI 98 Workshop, *Too Much of a Good Thing? Identifying and Resolving Bloat in the User Interface*. Los Angeles, CA.

Refereed Conference Presentations, cont'd

Tabak, I., Sandoval, W., Smith, B.K., Steinmuller, F., and Reiser, B.J. (1998). BGuILE: Facilitating reflection as a vehicle towards local and global understanding. Paper presented at the *American Education Research Conference*, San Diego, CA.

Tabak, I., Smith, B.K., Sandoval, W.A., Agganis, A., and Reiser, B.J. (1996). BGuILE: Supporting inquiry in a learning environment for biology. Paper presented at the *American Education Research Association Conference*, New York, NY.

Smith, B.K., Agganis, A., and Reiser, B.J. (1995). Children and artificial life revisited. In *Working Notes of the IJCAI-95 Workshop on Entertainment and Artificial Intelligence/Artificial Life*, Montreal, Canada.

Smith, B.K. and Reiser, B.J. (1995). Interactive story systems: They're not just for entertainment anymore. In *Working Notes of the AAAI Spring Symposium on Interactive Story Systems: Plot and Character*. Palo Alto, CA.

Smith, B.K. and Reiser, B.J. (1994). You can learn a lot from film scoring. In *Working Notes of the AAAI Workshop on Artificial Intelligence, Artificial Life, and Entertainment*. Seattle, WA.

Smith, Jr., W.H. and Smith, B.K. (1993). Representing expert thought processes in music composition: a comparison of cognitive modeling tactics. In *Proceedings of the Workshop on Music Education: An Artificial Intelligence Perspective*, World Conference on Artificial Intelligence in Education, Edinburgh, Scotland.

Smith, B.K. (1992). MILES: Algorithmic musical composition via textual and visual inputs. Presented at the *Society of Artificial Intelligence and Simulation of Behaviour (AISB) Postgraduate Workshop*, Nottingham, England, January 1992.

Smith, B.K. (1991). Cognitive models of cultural influence in musical composition. Presented at the *1991 University of California Undergraduate Research Conference*, Davis, CA, March 1991.

Invited Talks/Panels

Philadelphia Office of Workforce Development, Invited participant: Working group on automation and education policy. Philadelphia, PA (September 2019).

Philadelphia Museum of Art, Invited keynote: Speculative design. Philadelphia, PA (September 2019).

The Society for College and University Planning, Invited panelist: Mid-atlantic symposium | Informal learning environments: Do they matter? Philadelphia, PA (July 2019).

National Endowment for the Arts, Invited panelist: The arts, entrepreneurship, and innovation. Washington, DC (June 2019).

Schmidt Futures and Chan Zuckerberg Initiative, Invited participant: Learning engineering workshop. Arlington, VA (May 2019).

Boston College, Invited talk: Theory to Practice: How research informs (my) administrative decision making (April 2019).

University of Wisconsin, Madison, Invited talk: Play and designing for engaged learning. Madison, WI (March 2019).

Invited Talks/Panels, cont'd

American Association for Artificial Intelligence, Invited participant: AI for K-12 symposium. Arlington, VA (October 2018).

Nanjing Agricultural University, Invited talk: Computational fluency and STEAM education. Nanjing, China (September 2018).

Nanjing University, Invited talk: Computational fluency and STEAM education. Nanjing, China (September 2018).

Beijing Normal University, Invited talk: Computational fluency and STEAM education. Beijing, China (September 2018).

Lanzhou University, Invited talk: Computational fluency and STEAM education. Lanzhou, China (September 2018).

National Science Foundation, Invited talk: The majors that refused to sing. Alexandria, VA (June 2018).

Philadelphia Museum of Art, Invited keynote: Silos are for grain and missiles: The importance of being interdisciplinary. Philadelphia, PA (July 2017).

National Academies of Sciences, Engineering, and Medicine, Invited participant: Integration of education in the sciences, engineering, and medicine with the arts and humanities at the undergraduate and graduate levels (Session 3). Cambridge, MA (February 2017).

National Science Foundation. Invited talk: Computation + education. Arlington, VA (January 2017).

Westphal College of Media, Art, and Design, Design Research Symposium, Invited panelist: Systems and processes in design research. Philadelphia, PA (October 2016).

National Academies of Sciences, Engineering, and Medicine, Invited participant: Integration of education in the sciences, engineering, and medicine with the arts and humanities at the undergraduate and graduate levels (Session 2). Cambridge, MA (October 2016).

National Academies of Sciences, Engineering, and Medicine, Invited participant: Integration of education in the sciences, engineering, and medicine with the arts and humanities at the undergraduate and graduate levels (Session 1). Washington, DC (July 2016).

Drexel University Expression and Creative Technologies (ExCITe) Center, STEAM Workshop, Invited talk: Major making. Philadelphia, PA (February 2016).

Network for Science, Engineering, Arts, and Design, Invited participant: Steps to an ecology of networked knowledge and innovation. Washington, DC (February 2016).

National Academies of Sciences, Engineering, and Medicine, Invited participant: Integration of education in the arts and humanities with education in sciences, engineering, technology, and medicine. Washington, DC (December 2015).

Crystal Bridges Museum of American Art, Invited participant: Distance learning summit: Art museums & educational innovation. Bentonville, AR (November 2015).

Drexel University, Invited panelist: Multi and interdisciplinary research opportunities and support, 2015 New Faculty Orientation. Philadelphia, PA (September 2015).

Invited Talks/Panels, cont'd

New York Hall of Science, Invited participant: Tracing learning across time and space. Queens, NY (July 2015).

University of Alaska at Fairbanks & Nevada Museum of Art, Invited participant: Perspectives: Examining complex ecological dynamics through arts, humanities, and science integration. Reno, NV (June 2015).

Americans for the Arts, Invited presenter: How can we move from framing to action in STEAM education. Chicago, IL (June 2015).

Drexel University Expression and Creative Technologies (ExCITe) Center, STEAM Workshop, Invited talk: Art. Action. Attitude. Philadelphia, PA (February 2015).

Penn State Center for Online Innovation in Learning (COIL), Invited Fischer series keynote talk: Building innovation and identity with STEAM. University Park, PA (January, 2015).

USA Science & Engineering Festival, Invited panelist: Discover how STEAM is powering innovation of tomorrow. Washington, DC (April 2014).

United States Department of Veteran Affairs, Invited participant: The future of education: Foresight workshop and analysis. Washington, DC (February 2014).

Rhode Island School of Design and The Congressional STEAM Caucus, Invited participant: A workshop to investigate the growing activity in STEAM education and its impact on U.S. innovation and economic potential in the 21st century. Washington, DC (October, 2013).

Barnard Center for Research on Women, Gender Amplified Music Festival, Invited panelist: Women in music production. New York, NY (September 2013).

National Endowment for the Arts, Invited panelist: Networking sciences, engineering, arts, and design. Washington, DC (May 2013).

Drexel University, Invited talk: Playing with data. School of Education, Philadelphia, PA (April 2013).

The Concord Consortium, Invited talk: Playing with data. Concord, MA (March 2013).

University at Buffalo, Invited talk: Playing with data. School of Education, Buffalo, NY (February 2013).

Worcester Polytechnic Institute, Invited talk: Amateurs built the ark, professionals built the Titanic. Department of Social Sciences & Policy Studies, Worcester, MA (February 2013).

Northeastern University, Invited talk: Playing with data. Colleges of Arts, Media, & Design and Computer & Information Sciences, Boston, MA (February 2012).

Greater Providence Chamber of Commerce, Innovation Providence Implementation Council, Invited talk: Creativity at the intersections of science, engineering, arts, and design. Providence, RI (December 2011).

National Science Foundation, Invited participant: Establishing a network for science, engineering, arts, and design (NSEAD). Baltimore, MD (November 2011).

National Science Foundation, Invited participant: Establishing a network for science, engineering, arts, and design (NSEAD). Winston-Salem, NC (October 2011).

Invited Talks/Panels, cont'd

United States House of Representatives, Invited panelist: STEM to STEAM. Washington, DC (June 2011).

National Science Foundation, Invited participant: Establishing a network for art+science+technology research: Infrastructural and intellectual foundations. Troy, NY (March 2011).

National Science Foundation/National Endowment for the Arts, Invited participant: Identifying synergies and fostering collaborations: A joint workshop of the National Science Foundation and the National Endowment for the Arts. Arlington, VA (September, 2010).

National Science Foundation, Invited participant: Articulating a research and development agenda for learning designers. Lansdowne, VA (May 2010).

O'Reilly Media, Invited participant: Foo East. Cambridge, MA (April 2010).

American Association of Physics Teachers, Invited panelist: Science learning in informal settings. Washington, DC (February 2010).

National Science Foundation, Invited participant: Blue sky workshop: Future of STEM curricula and instructional design. Lansdowne, VA (December 2009).

Union Square Ventures, Invited panelist: Hacking education. New York, NY (March 2009).

Simon Fraser University, Invited talk: Digital media and informal learning. School of Interactive Arts and Technology, Burnaby, British Columbia, Canada (October 2007).

Massachusetts Institute of Technology, Invited talk: Experience capture and health maintenance. The Media Laboratory, Cambridge, MA (July 2007).

Northwestern University, Invited talk: Computational supports for understanding and enhancing everyday knowledge use. School of Education and Social Policy, Evanston, IL (February 2007).

University of Illinois at Chicago, Invited talk: Acts into artifacts: Computational supports for experience capture and reflection. Chicago, IL (January 2007).

TERC, Invited talk: Acts into artifacts: Computational supports for experience capture and reflection. Cambridge, MA (October 2006).

The Pennsylvania State University, Invited talk: Live and learn: Supporting everyday cognition with computation. University Park, PA (October 2006).

Center for Children and Technology. Invited talk: Everyday learning with ubiquitous computing. New York (July 2005).

The Pennsylvania State University, ACM Student Chapter. Invited talk: No pain, no game. University Park, PA (April 2005)

American Education Research Association. Jan Hawkins Award invited talk: Where the learning is (or isn't): Capturing, communicating, and critiquing everyday experiences. Montreal, Canada (April 2005).

Fantasy Sports Trade Association. Invited presentation: Real learning with fantasy sports. Las Vegas, NV (September 2004).

Invited Talks/Panels, cont'd

American Education Research Association, *Panel on New Technologies to Study Learning*. Invited talk: Take (learning with) pictures...further. San Diego, CA (April 2004).

The Pennsylvania State University, *Diabetes Research Center Symposium Series.* Invited talk: Digital visualizations of diabetic lifestyles. State College, PA (December 2003).

National Science Foundation and Deutsche Forschungsgemeinschaft*, NSF/DFG Creation of an American-German Research Network in the Field of Technology Supported Education Workshop*. Invited participant (with C. Hoadley and J. Kirby): Bringing online and offline lives together: Computer support for collaboration, learning, and reflection. Tübingen, Germany (November 2003).

Environmental Protection Agency. Invited workshop talk: Innovative Technologies for the Remote Collection of Data for the National Children's Study. Boston, MA (May 2003).

The Pennsylvania State University, College of Education. Invited Talk: The evolution of the glucose meter: Visualizing behavior for reflection. State College, PA (January 2002).

Atex Media Solutions, *Advertising Trends and Technologies Conference*. Keynote Address: Information: Organized. Boston, MA (May 2001).

Stanford University, *Symposium on Using Technology to Close the Achievement Gap*. Invited talk: Critical computation. Palo Alto, CA (April 2001).

Eastman Kodak. Invited talk: Take (learning with) pictures...further. Rochester, New York (April 2001).

The Pennsylvania State University, College of Education. Invited talk: Critical computation. State College, PA (March 2001).

New York University, Center for Advanced Technology, Media Art Or Whatever (MeAOW) Speaker Series. Invited talk: Community imaging. New York (March 2001).

American Association for the Advancement of Science, *2001 Annual Meeting and Exposition*. Invited talk: Experimenting with science television. San Francisco, CA (February 2001).

MIT, *Media in Transition: We Wired the Classroom, Now What?* Invited Keynote: (yet another) digital divide: research vs. practice. Cambridge, MA (February 2001).

Intel Architecture Labs. Invited Talk: What's the point of enjoying programming when it gets harder every year? Hillsboro, OR (January 2001).

Intel Architecture Labs. Invited Talk: Explanation and the digital image. Hillsboro, OR (December 2000).

American Center for Children and Media and The Markle Foundation. Invited Talk: Explanatory television. New York (October 2000).

New Jersey Association of Independent Schools. *Conference 2000 — The Value of a Liberal Arts Education in a Technological Era*. Keynote address: Digital Lenses for Arts and Humanities Learning. Lawrenceville, NJ (October 2000).

Jupiter Communications, *Interactive Knowledge Forum: Internet Commerce for Educational and Cultural Institutions*. Invited Panelist: 21st Century Learning: The Future Of Interactive Knowledge. New York (September 2000).

Invited Talks/Panels, cont'd

GTE Laboratories and The United Negro College Fund, Invited talk: Explaining explanation. Waltham, MA (July 2000).

CBC Television. *Summit 2000: Children, Youth and the Media — Beyond the Millennium Conference*. Invited panelist: Interaction + construction = learning. Toronto, Canada (May 2000).

Bank of Sweden Tercentenary Foundation. *Symposium on Education, Cognition, and Communication Technology*. Keynote address: The 21st century Big Bird plan (or, Digital killed the video star). Stockholm, Sweden (March 2000).

Intel Architecture Labs. *Human-Centered Product Innovation Conference*. Invited talk: Human-centered computing at the Media Laboratory. Portland, Oregon (January 2000).

Dublin City University. *Conference on Building an Intelligent Island: The Challenge of Transformation in the Knowledge Industry*. Invited talk: New technologies and the transformation of learning. Dublin, Ireland (January 2000).

Telmex. *Forum on Digital Culture and its Impact on Tomorrow's Society*. Invited talk: Historical insight though digital imaging. Mexico City (November 1999).

Catholic University. Invited talk: The verbosity of computing. Sao Paulo, Brazil (August, 1999).

Eastman Kodak. *Electronic Shoebox Workshop*. Invited talk: What can you learn with an image? Rochester, NY (May 1999).

American Center for Children and Media. Invited talk: Digital television: Thinking *around* the box. New York, NY (May 1999).

Annual Meeting of the American Educational Research Association. Session chair/Discussant: Creating collaborative learning environments on the web. Montreal, Canada (April 1999).

SRI International. *Center for Innovative Learning Technologies Conference 99*. Invited presentation, Ubiquitous Computing Track: Adventures in imaging. San Jose, CA (April 1999).

Academy of Television Arts and Sciences. Conference: *Through the Eyes of Children*. Invited talk: Just-in-time television. Los Angeles, CA (March 1999).

University of Maryland, College of Library and Information Services. Invited talk: Evolving an architecture for schools. College Park, MD (November 1998).

Harvard University. *Harvard Conference on Internet and Society*. Invited panelist: Building a commons in cyberspace. Cambridge, MA (May 1998).

Harvard University. *Harvard Conference on Internet and Society*. Invited presentation: Online communities or communities online? Cambridge, MA (May 1998).

Supervision of Dissertations

Drexel University

School of Education

Laurie Bobley, Ed.D. chair, degree conferred in 2016

Katelyn Bright Alderfer, Ph.D. co-chair

Supervision of Dissertations, cont'd

Jonan Donaldson, Ph.D. chair, degree conferred in 2019
Matthew Duvall, Ph.D. chair, degree conferred in 2017
Magdalene Moy, Ph.D. chair
Jason Perry, Ed.D. chair, degree conferred in 2017
Elena Wilson, Ed.D. chair, degree conferred in 2017
Anthony Womack, Ed.D. chair, degree conferred in 2017

The Pennsylvania State University
College of Information Sciences and Technology
Joey Lee, Ph.D. co-chair, degree conferred in 2009
Ibrahim Yucel, Ph.D., co-chair, degree conferred in 2011
Joseph Zupko, Ph.D. chair, degree conferred in 2009

College of Education, Instructional Systems Program
Goknur Kaplan Akilli, Ph.D. chair, degree conferred in 2010
Toru Fujimoto, Ph.D. chair, degree conferred in 2010
Sunghyun Park, Ph.D. co-chair, degree conferred in 2007
Wen-Fan Hsieh, D.Ed. chair, degree conferred in 2005

Department of Computer Science and Engineering
Rajneesh Sudhakar, M.S. chair, degree conferred in 2005

Department of Electrical Engineering
Anurag Dalmia, M.S. chair, degree conferred in 2007
Manisha Mishra, M.S. chair, degree conferred in 2007

Massachusetts Institute of Technology
School of Architecture, Program in Media Arts and Sciences
Nell Breyer, S.M. chair, degree conferred in 2002
Timothy Hirzel, S.M. chair, degree conferred in 2002
Jeana Frost, S.M. chair, degree conferred in 2001
Martin Hadis, S.M. chair, degree conferred in 2002
Jonah Peretti, S.M. chair, degree conferred in 2001
Erik Blankinship, S.M. chair, degree conferred in 2000
Tamara Lackner, S.M. chair, degree conferred in 2000
Laurie Hiyakumoto, S.M. chair, degree conferred in 1999

School of Electrical Engineering and Computer Science
Shane Cruz, M.Eng. chair, degree conferred in 2002

Membership on Graduate Degree Committees

Drexel University
College of Computing and Informatics
Adam Johs, Ph.D. committee
Meen Chul Kim, Ph.D. committee

School of Education
Helena Abraham, Ed.D committee, degree conferred in 2017
Amanda Barany, Ph.D. committee
Jessica Cellitti, Ph.D. committee, degree conferred in 2019
Tamara Galoyan, Ph.D. committee, degree conferred in 2019
Lucy Heacock, Ed.D. committee, degree conferred in 2016
Rasheda Likely, Ph.D. committee
Anthony Matranga, Ph.D. committee, degree conferred in 2017
Kimberly Rhone, Ed.D. committee, degree conferred in 2018

Membership on Graduate Degree Committees, cont'd

Hamideh Talafian, Ph.D. committee

College of Engineering, Department of Electrical and Computer Engineering

Ophelia Wells, Ph.D. committee

College of Media, Arts, & Design, Department of Digital Media

Jennifer Villareale, Ph.D. committee

The Pennsylvania State University

College of Information Sciences and Technology

Louise Campbell, M.S. committee, degree conferred in 2009
Cong Chen, Ph.D. committee, degree conferred in 2006
Benjamin Heller, B.S. thesis committee, degree conferred in 2004
Roderick Lee, Ph.D. committee, degree conferred in 2008
Helena Mentis, Ph.D. committee, degree conferred in 2010
Umber Shahim, M.S. committee, degree conferred in 2007
Yin Yang, M.S. committee, degree conferred in 2005

College of Education, Instructional Systems Program

Luis Almeida, Ph.D. committee, degree conferred in 2008
Bradley Ausman, Ph.D. committee, degree conferred in 2007
Ahmet Baytak, Ph.D. committee, degree conferred in 2009
Brett Bixler, Ph.D. Committee, degree conferred in 2007
Darryl Draper, Ph.D. committee, degree conferred in 2010
Ben Harwood, M.S. committee, degree conferred in 2004
Barry Hill, D.Ed. committee, degree conferred in 2005
Kyu-Yon Lim, Ph.D. committee, degree conferred in 2008
Raymond Pastore, Ph.D. committee, degree conferred in 2009

College of Education, Workforce Education Program

Barton Pursel, Ph.D. committee, degree conferred in 2009

College of Education, Curriculum and Instruction Program

Tsung-Yen Chuang, Ph.D. committee, degree conferred in 2006

College of Health and Human Development, Department of Kinesiology

Stephen Yang, Ph.D. committee

College of Arts and Architecture, School of Visual Arts, Art Education Program

Ryan Patton, Ph.D. committee, degree conferred in 2011

Massachusetts Institute of Technology

School of Electrical Engineering and Computer Science

Wesley Chan, M.Eng. committee, degree conferred in 2001

School of Architecture, Program in Media Arts and Sciences

Erik Blankinship, Ph.D. committee, degree conferred in 2005
Hyun-Yeul Lee, S.M. committee, degree conferred in 2002
Jose M. G. Pinto, S.M. committee, degree conferred in 2002
Vanessa Colella, Ph.D. committee, degree conferred in 2001
Aisling Kelleher, S.M. committee, degree conferred in 2001
Kwan Lee, S.M. committee, degree conferred in 2001
Cameron Marlow, S.M. committee, degree conferred in 2001
Randal Pinkett, Ph.D. committee, degree conferred in 2001
Barbara Barry, S.M. committee, degree conferred in 2000

Membership on Graduate Degree Committees, cont'd

David Cavallo, Ph.D. committee, degree conferred in 2000
Nyssim Lefford, S.M. committee, degree conferred in 2000
Fernanda Viegas, S.M. committee, degree conferred in 2000
Kevin Brooks, Ph.D. committee, degree conferred in 1999
Jonathan Dakss, S.M. committee, degree conferred in 1999
Ingeborg Endter, S.M. committee, degree conferred in 1999
Paul Nemirovsky, S.M. committee, degree conferred in 1999
Pengkai Pan, S.M. committee, degree conferred in 1999
Maria Redin, S.M. committee, degree conferred in 1999
Philip Tiongson, S.M. committee, degree conferred in 1998

Consulting

Miami College of Design, Board member (2016)
The Innovation Collaborative, Founding board member (2013-)
Discovery Space Science Center, Member, Content committee (2009)
Media Modifications, LLC, Advisory board member (2007-)
Package of Prevention, Chairman (2006-2011)
The Energy Factory, Technical advisor (2005-6)