ORIT SHAER

106 Central St, Wellesley, MA 02481 | 617-3142829 |
oshaer@wellesley.edu | @oshaer| http://cs.wellesley.edu/~oshaer/

RESEARCH AREAS	Human-Computer Interaction, Tangible and Embodied Interaction, Ubiquitous Computing, Virtual and Augmented Reality, Personal Informatics, Future of Work.

EDUCATION

2004-2008	TUFTS UNIVERSITY, DEPARTMENT OF COMPUTER SCIENCE **PhD in Computer Science** Dissertation: *A Visual Language for Programming Tangible User Interfaces.*
2002-2004	TUFTS UNIVERSITY, DEPARTMENT OF COMPUTER SCIENCE **Master of Science in Computer Science**
1998-2001	THE ACADEMIC COLLEGE OF TEL-AVIV **Bachelor of Arts degree in Computer Science** Dean's Honors List

ACADEMIC POSITIONS

WELLESLEY COLLEGE, DEPARTMENT OF COMPUTER SCIENCE

2021-Present	**Professor of Computer Science**
2015-2021	**Associate Professor of Computer Science**
2015-2019	**Director Media Arts and Sciences program**
2008-2015	**Clare Boothe Luce Assistant Professor of Computer Science**

TUFTS UNIVERSITY, DEPARTMENT OF COMPUTER SCIENCE

2020-Present	**Adjunct Associate Professor**
2003-2008	**Research Assistant, Instructor**
2005-2006	UNIVERSITY COLLEGE LONDON INTERACTION CENTRE **Visiting Research Fellow**

HONORS

2020	Full member, Sigma Xi
2019	ACM Senior Member Award
2016	Class of 1966 Named Chair
2015	Gold Medal, International Genetically Engineered Machine competition (iGEM).
2014	ACM CHI Best Paper Award Honorable Mention
2013	Pinanski Teaching Prize, Wellesley College
2013	Google App Engine Education Award.
2011-2012	Gold Medals, iGEM.
2009	Clare Boothe Luce Professorship in Computer Science.
2007	Outstanding Graduate Contributor to Engineering Education, Tufts University.
2006	Graduate Consortium Award, IEEE Symposium on Visual Languages and Human-Centric Computing.
2005	CHI Doctoral Consortium Award, ACM Conference on Human Factors in Computing Systems.

TEACHING

2021	Human-Computer Interaction in the Age of Automation (CS349H)
2009-Present	Tangible User Interfaces (CS320)
2009-Present	Human-Computer Interaction (CS220)
2012- Present	Data Structures (CS230)
2017-2019	The Socio-Techno Web (CS115)
2009-2016	Computer Programming and Problem Solving (CS111)
2013-2014	Computer Science and the Internet (CS110)

GRANTS

2018-2022 **National Science Foundation, The Future of Work:** The Next Mobile Office: safe and productive work in automated vehicles ($399,958). Role: co-PI

2018-2021 **National Science Foundation,** CHS: Small: Collaborative Research: RUI: UbiqOmics: HCI for augmenting our world with pervasive personal and environmental omic data ($249,781). Role: PI

2016-2020 **National Science Foundation**, CHS: Medium: RUI: Collaborative Research: Making the Invisible Tangible: Reimagining Science Education in Kindergarten through Reality-Based Interfaces ($545,707). Role: PI

2017-2020 **National Science Foundation**, Collaborative Research: IRES: US-German research on human-computer interaction in ubiquitous computing ($37,329). Role: co-PI

2015 - 2018 **National Science Foundation** CISE CRI, A Multi Surface Interactive Visualization Facility ($479,631). Role: PI

2014-2017 **National Science Foundation** IIS, Human-Computer Interaction for Personal Genomics: Understanding, Informing, and Empowering Users ($342,930). Role: PI

2013 **Agilent Technologies** Inc., Evaluating the Benefits of Interactive 3D Stereo Displays for Biological Design. ($41,289). Role: PI

2012-2017 **National Science Foundation CAREER** HCC, Advancing Innovation in Bio-Design through Reality-Based Interaction ($472,217). Role: PI

2012 **Agilent Technologies**, Advancing Innovation in Bio-Design through Tabletop Reality-Based Interaction ($27,237). Role: PI

2012 **National Science Foundation** IIS, Workshop: Doctoral Symposium at the 2012 Interactive Tabletops and Surfaces Conference ($21,987). Role: PI

2010-2013 **National Science Foundation** IIS, Enhancing Genomic Exploration through Reality-Based Interaction ($268,712). Role: PI

PUBLICATIONS
(Wellesley students and alumni are denoted in bold)

BOOKS

Ullmer, <u>O. Shaer</u>, A. Mazalek, C. Hummels, *Weaving Fire into Form: Aspirations for Tangible and Embodied Interaction*, ACM Books, Morgan Claypool (in press).

REFEREED JOURNAL ARTICLES

J.1   Teodorovicz, T., Sadun,R., Kun, A.L., and <u>Shaer, O</u>. Working from Home during COVID-19: Evidence from Time-Use Studies. Harvard Business School Working Paper, No. 21-094, March 2021.

J.2   Seals, A., Olaosebikan, M., **Otiono, J**., <u>Shaer, O</u>., & Nov, O. (2021). Effects of Self-Focused Augmented Reality on Health Perceptions During the COVID-19 Pandemic: A Between-Subject Web-Based Experiment. *Journal of medical Internet research*, 10.2196/26963.

J.3   M.K. Konkel, B. Ullmer<u>, O. Shaer</u>, A. Mazalek, C. Branton. 2020. Toward tangibles and display-rich interfaces for co-located and distributed genomics collaborations, *Pers Ubiquit Compu*t, https://doi.org/10.1007/s00779-020-01376-5.

J.4   Strawhacker, A., **Verish, C**., <u>Shaer, O</u>., & Bers, M. U. (2020). Designing with Genes in Early Childhood: An exploratory user study of the tangible CRISPEE technology. *International Journal of Child Computer Interaction.*

J.5   Strawhacker, A., Verish, C., <u>Shaer, O</u>., & Bers, M. U. (2020). Young Children's Learning of Bioengineering with CRISPEE, a Developmentally Appropriate Tangible User Interface. *Journal of Science Education and Technology*. Advance online publication.

J.6   **J. Otiono**, M. Olaosebikan, <u>O. Shaer</u>, O. Nov, and M. Ball. 2019. Understanding Users Information Needs and Collaborative Sensemaking of Microbiome Data. *Proc. ACM Hum.-Comput. Interact. 3, CSCW*.

J.7   B. G. Tzovaras, M. Angrist, K. Arvai, M. Dulaney, V. Estrada-Galinanes, B. Gunderson,T. Head, D. Lewis, O. Nov, <u>O. Shaer</u>, A. Tzovara, J. Bobe, M. P. Ball, Open Humans: A platform for participant-centered research and personal data exploration, *GigaScience*, 2019.

J.8   Girouard, <u>O. Shaer</u>, E. Solovey, M. Poor, R.J.K Jacob, The Reality of Reality-Based Interaction: Understanding the Impact of a Framework as a Research Tool, *ACM Transactions on Computer-Human Interaction*, 2019.

J.9   T. Muender, S.A. Gulani, **L. Westendorf**, **C. Verish**, R. Malaka, <u>O. Shaer</u>, S. Cooper, *Comparison of Mouse and Multi-Touch for Protein Structure Manipulation in a Citizen Science Game Interface*, Journal of Science Communication, 18 (1), 2019.

J.10   **L. Westendorf**, <u>O. Shaer</u>, **C. Pollalis**, **C. Verish,** O. Nov, M. Ball, Exploring Genetic Data Across Individuals: Desing and Evaluation of a Novel Comparative Report Tool, *Journal of Medical Internet Research, 20(9), e:10297, 2018.*

J.11   A. Strawhacker, A. Sullivan, **C. Verish**, M. Bers, <u>O. Shaer</u>, Enhancing Children's Interest and Knowledge in Bioengineering Through an Interactive Videogame. *Journal of Information Technology Education: IIP*; 17, 2018.

J.12   **L. Westendorf**, <u>O. Shaer</u>, P. Varsanyi, H. van der Meulen, and A.L. Kun, Understanding Collaborative Decision Making Around a Large-Scale Interactive Tabletop, *Proc. ACM Hum.-Comput. Interact*. 1, *CSCW*, Article 110, 2017.

J.13   <u>O. Shaer</u>, O. Nov, **L. Westendorf**, M. Ball, Communicating Personal Genomic Information to Non-Experts: A New Frontier for Human-Computer Interaction*, Journal of Foundations and Trends in HCI,* 11 (1) 1-62, 2017.

J.14   Balestra, O. Shaer, **J. Okerlund**, L. Westendorf, M. Ball, O. Nov, Social Annotation Valence: The Impact on Online Informed Consent Beliefs and Behavior, *Journal of Medical Internet Research*, 18(7):e197, 2016.

J.15   O. Shaer, O. Nov, **J. Okerlund**, M. Balestra, **L. Stowell, L. Ascher, J. Bi, C. Schlenker**, M. Ball, Informing the Design of Direct-to-Consumer Interactive Personal Genomics Reports, *Journal of Medical Internet Research*, doi:10.2196/jmir.4415, 2015.

J.16   O.Shaer, **C. Valdes**, **S. Liu**, **K. Lu**, **K. Chang**, **W. Xu**, T. L. Haddock, S. Bhatia, D. Densmore, R. Kincaid, Designing Reality-Based Interfaces for Experiential Bio-Design, *Personal and Ubiquitous Computing*, November 2013. *

J.17   O. Shaer, **M. Strait**, **C. Valdes**, **H. Wang**, **T. Feng**, **M. Lintz**, **M. Ferreirae**, **C. Grote**, **K. Tempel**, **S. Liu**, The Design, Development, and Deployment of a Tabletop Interface for Collaborative Exploration of Genomic Data, *International Journal of Human-Computer Studies (IJHCS)*, 2012.

J.18   O. Shaer, E. Hornecker, Tangible User Interfaces: Past, Present, and Future Directions, *Foundations and Trends in Human-Computer Interaction*, Vol. 3, Issue 1-2, April 2010.

J.19   O. Shaer, R.J.K Jacob, A Specification Paradigm for the Design and Implementation of Tangible User Interfaces, *ACM Transactions on Computer-Human Interaction (TOCHI)*, Vol. 16, No. 4, November 2009.

J.20   O. Shaer, M.S. Horn, R.J.K. Jacob, Tangible User Interface Laboratory: Teaching Interaction Design in Practice, *AIEDAM Special Issue on Tangible Interaction for Design*, Spring 2009, Vol 23, No. 2.

J.21   O. Shaer, N. Leland , E.H Calvillo, R.J.K. Jacob, The TAC Paradigm: Specifying Tangible User Interfaces, *Personal and Ubiquitous Computing*, vol. 8, no. 5, pp. 359-369, September 2004.

REFEREED LONG CONFERENCE PAPERS

C.1   **Lisa Orii**, **Diana Tosca**, Andrew L. Kun, Orit Shaer, Perceptions of Trucking Automation: Insights from the r/Truckers Community. AutomotiveUI 2021.

C.2   Divyabharathi Nagaraju, Alberta A. Ansah, Nabil Al Nahin Ch, Caitlin Mills, Christian P. Janssen, Orit Shaer, Andrew Kun, How Will Drivers Take Back Control in Automated Vehicles? A Driving Simulator Test of an Interleaving Framework. AutomotiveUI 2021.

C.3   M.K. Konkel, B. Ullmer, O. Shaer, A. Mazalek, Envisioning tangibles- and display-rich interfaces for co-located and distributed genomics collaborations, ACM Symposium on Pervasive Displays, 2019 (Acceptance Rate 43%).

C.4   N. Ramkumar, N. Fereydooni, O. Shaer, A. Kun, Visual Behavior During Engagement with Tangible and Virtual Representations of Archeological Artifacts, ACM Symposium on Pervasive Displays, 2019 (Acceptance Rate 43%).

C.5   **C. Pollalis**, **E. J. Minor**, **L. Westendorf**, **W. Fahnbulleh**, **I. Virgilio**, A. L. Kun, and O. Shaer, Evaluating Learning with Tangible and Virtual Representations of Archaeological Artifacts. Proc. TEI 2018 Tangible, Embedded and Embodied Interation (Acceptance Rate 28%).

C.6   O. Shaer, **L. Westendorf**, N.A. Knouf, and C. Pederson, Understanding Gaming Perceptions and Experiences in a Women's College Community. Proc. CHI 2017 (Acceptance Rate 23%).

C.7   **A. Loparev, L. Westendorf, J. Cho, M. Flemings**, A. Scholze, R. Littrell, O. Shaer. BacPack: Exploring the Role of Tangibles in a Museum Exhibit for Bio-Design. Proc. TEI 2017 Tangible and Embodied Interaction (Acceptance Rate 27%).

C.8   O. Shaer, O. Nov, **J. Okerlund**, M. Balestra, **E. Stowell**, **L. Westendorf**, **C. Pollalis**, **L. Westort**, **J. Davis**, **M. Ball**. GenomiX: A Novel Interaction Tool for Self-Exploration of Personal Genomic Data, Proc. CHI 2016 (Acceptance Rate 23%).

C.9   M. Balestra, O. Shaer, **J. Okerlund**, M. Ball, O. Nov. The Effect of Exposure to Social

Annotation on Online Informed Consent Beliefs and Behavior. Proc. CSCW 2016 (Acceptance Rate 25%).

C.10   **J. Okerlund**, **E. Segreto**, **C. Grote**, **L. Westendorf**, A. Scholze, R. Litrell, <u>O. Shaer</u>. SynFlo: A Tangible Museum Exhibit for Exploring Bio-Design. Proc. TEI 2016 Tangible, Embedded and Embodied Interation (Acceptance Rate 27%).

C.11   **C. Grote, E. Segreto, J. Okerlund**, R. Kincaid, <u>O.Shaer</u>, Eugenie: Multi-Touch and Tangible Interaction for Bio-Design, ACM TEI 2015 (Acceptance Rate 28%).

C.12   E.T. Solovey, **J. Okerlund, C. Hoef, J. Davis**, <u>O. Shaer</u>. Augmenting Spatial Skills with Semi-Immersive Interactive Desktop Displays: Do Immersion Cues Matter? Proc. Augmented Human. 2015 (Acceptance Rate 28%).

C.13   **C. Valdes**, **D. Eastman**, **C. Grote**, S. Thatte, <u>O. Shaer</u>, A. Mazalek, B. Ullmer, M. Konkel, Exploring the Design Space of Gestural Interaction with Active Tokens through User-Defined Gestures. *ACM CHI 2014 Human Factors in Computing Systems Conference*. (Acceptance Rate 23%). **Best Paper Award Honorable Mention** [Awarded to top 5%].*

C.14   <u>O. Shaer</u>, **C. Valdes**, **S. Liu**, **K. Lu**, T. L. Haddock, S. Bhatia, D. Densmore, R. Kincaid, MoClo Planner: Interactive Visualization for Modular Cloning Bio-Design, *IEEE BioVis 2013.* (Acceptance rate 40%).*

C.15   <u>O. Shaer</u>, A. Mazalek, B. Ullmer, M. Konkell, From Big Data to Insights: Opportunities and Challenges for TEI in Genomics, *ACM SIGCHI TEI 2013 Tangible, Embedded and Embodied Interaction.* (Acceptance rate 31%).*

C.16   **C. Valdes**, **M. Ferreirae**, **T. Feng**, **H., Wang**, **K. Tempel**, **S. Liu**, <u>O.Shaer</u>, A Collaborative Environment for Engaging Novices in Scientific Inquiry, *ACM ITS 2012 Interactive Tabletops and Surfaces.* (Acceptance rate 29%).*

C.17   B. Schneider, **M. Strait**, L. Muller, **S. Elfenbein**, <u>O.Shaer</u>, C. Shen, Phylo-Genie: Engaging Students in Collaborative 'Tree-Thinking' through Tabletop Techniques, *ACM CHI 2012 Human Factors in Computing Systems Conference.* (Acceptance rate 23%).

C.18   <u>O. Shaer</u>, **M. Strait**, **C. Valdes**, **T. Feng**, **M. Lintz**, **H. Wang**, Enhancing Genomic Learning through Tabletop Interaction, *ACM CHI 2011 Human Factors in Computing Systems Conference*. (Acceptance rate 26%).

C.19   <u>O. Shaer</u>, J. Olson, **M. Edwards**, **C. Valdes**, Art App-reciation: Fostering Engagement and Reflection in Museums through a Social-Mobile Application, *Museums and the Web 2011*.

C.20   <u>O. Shaer</u>, G. Kol, **M. Strait**, **C. Fan**, **C. Grevet**, **S. Elfenbein**, G-nome Surfer: a Tabletop Interface for Collaborative Exploration of Genomic Data, *ACM CHI 2010 Human Factors in Computing Systems Conference*. (Acceptance rate 22%).

C.21   R.J.K. Jacob, A. Girouard, L.M. Hirshfield, M.S. Horn, <u>O. Shaer</u>, E.T. Solovey, J. Zigelbaum, Reality-Based Interaction: A Framework for Post-WIMP Interfaces, *ACM CHI 2008 Human Factors in Computing Systems*. (Acceptance rate 22%).

INVITED ARTICLES

I.1   <u>O. Shaer</u>, **D. Tosca**, Teaching Tangible Interaction Remotely During COVID-19: Transcending Physical Boundaries, in *IEEE Pervasive Computing*, vol. 20, no. 02, pp. 49-53, 2021.

I.2   A.L. Kun, R. Sadun, <u>O. Shaer</u>, T. Teodorovicz, Where Did the Commute Time Go?. Harvard Business Review, December 2020.

I.3   A.L Kun, A.Girouard, A. Roudaut, <u>O. Shaer</u>, Teaching pervasive computing: a report and a look ahead from a Dagstuhl seminar. IEEE Pervasive Comp., vol. 19 Issue No. 1. 2020.

I.4   A. Girouard, A. Kun, A. Roudout, <u>O. Shaer</u>, Pervasive Computing Education, IEEE Pervasive Computing, vol. 17 Issue No. 04. 2018.

I.5   <u>O. Shaer,</u> E. Peck, Teaching Pervasive Computing in Liberal Arts Colleges, IEEE Pervasive

Computing, vol. 17 Issue No. 03. 2018.

I.6 A. Kun, <u>O. Shaer</u>, A. Schmidt, S. Boll, Ubicomp without Borders: International Experiences in Pervasive Computing IEEE Pervasive Computing, vol. 16 Issue No. 04 - October-December, 2017.

I.7 O.Shaer, What Are You Reading? Interactions, Dec 2015.

I.8 <u>O. Shaer</u>, O. Nov, HCI for Personal Genomics: Understanding, Informing and Empowering Non-Experts, Interactions, September-October 2014.

I.9 <u>O. Shaer</u>, A. Millner, C. Hummles, Trajectories in TEI: Reflecting on the Evolution of Ideas Innovators and Interactions, Interactions, November-December 2012.

I.10 R.J.K. Jacob, A. Girouard, L.M. Hirshfield, M. Horn, <u>O. Shaer</u>, E.T. Solovey, J. Zigelbaum, What Is the Next Generation of Human-Computer Interaction?, Interactions, vol. 14, no. 3, pp. 53-58, May 2007.

REFEREED EXTENDED ABSTRACTS

A.1 **Lisa Orii**, **Diana Tosca**, Andrew L. Kun, <u>Orit Shaer</u> (2021), Perceptions on the Future of Automation in r/Truckers, In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '21).

A.2 C. Schartmüller, P. Wintersberger, A. Riener, A L. Kun, S. Brewster, and <u>O. Shaer</u>. 2020. AutoWork 2020: Second Workshop on the Future of Work and Well-Being in Automated Vehicles. In 12th International Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutomotiveUI '20).

A.3 AL. Kun, <u>O. Shaer</u>, R. Sadun, LN. Boyle, JD. Lee, The future of work and play: From automated vehicles to working from home, In New Future of Work, Microsoft Research, 2020.

A.4 AL. Kun, <u>O. Shaer</u>, R. Sadun, LN. Boyle, JD. Lee, The future of work and wellbeing: A preliminary report from a series of conversations, In New Future of Work, Microsoft Research, 2020.

A.5 C. Schartmüller, S. Sarcar, A. Riener, AL. Kun, <u>O. Shaer</u>, LN. Boyle, and S. Iqbal. 2020. Automated Cars as Living Rooms and Offices: Challenges and Opportunities. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20).

A.6 B. Pfleging, AL. Kun, and <u>O. Shaer</u>. 2020. Future Cars as a Space for Work & Play. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20).

A.7 AL. Kun, <u>O. Shaer</u>, A. Riener, S. Brewster, and C. Schartmüller. 2019. AutoWork 2019: workshop on the future of work and well-being in automated vehicles. In Proceedings of the 11th International Conference on Automotive User Interfaces and Interactive Vehicular Applications: Adjunct Proceedings (AutomotiveUI '19).

A.8 N. Fereydooni, <u>O. Shaer</u>, and AL. Kun. 2019. Switching between augmented reality and a manual-visual task: a preliminary study. In Proceedings of the 11th International Conference on Automotive User Interfaces and Interactive Vehicular Applications: Adjunct Proceedings (AutomotiveUI '19).

A.9 **C. Verish**, A. Strawhacker, M. Bers, <u>O.Shaer</u>, BacToMars: A Collaborative Video Game for Bio Design. Computer-Supported Collaborative Learning (CLCS), 2019.

A.10 **C. Pollalis**, C. Grevet, **L.Westendorf**, **S. Finn**, <u>O. Shaer</u>, and P.T. Metaxas. 2018. Classroom Activity for Critical Analysis of News Propagation Online. In Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18). Association for Computing Machinery, New York, NY, USA, Paper CS05, 1–10.

A.11 **C. Pollalis**, **W. Fahnbulleh**, J. Tynes, <u>O. Shaer</u>, HoloMuse: Enhancing engagement with Archaeological Artifacts through Gesture-Based Interaction with Holograms. TEI '17 Tangible, Embedded and Embodied Interaction.

A.12   **C. Verish**, A. Strawhacker, M. Bers, <u>O. Shaer</u>. CRISPEE: A Tangible Gene Editing Platform for Early Childhood. Proc. TEI 2018 Tangible, Embedded and Embodied Interaction.

A.13   **M. Flemmings**, **S. Kazmi**, **R. Pak**, <u>O. Shaer</u>. Crimson Wave: Shedding Light on Menstrual Health. TEI 2018 Tangible, Embedded and Embodied Interaction.

A.14   H. van der Meulen, A.L. Kun, <u>O. Shaer</u>. 2017. What Are We Missing?: Adding Eye-Tracking to the HoloLens to Improve Gaze Estimation Accuracy. In Proceedings of the 2017 ACM International Conference on Interactive Surfaces and Spaces (ISS '17).

A.15   H. van der Meulen, P. Varsanyi , **L. Westendorf**, A.L. Kun, <u>O. Shaer</u>, Towards understanding collaboration around interactive surfaces: Exploring joint visual attention, Work in Progress, ACM UIST 2016.

A.16   **A. Loparev**, **L. Westendorf**, A. Sullivan, **C. Verish**, **J. Davis**, **M. Flemmings**, M. Bers, <u>O. Shaer</u>, BacToMars: Creative Engagement with Bio-Design for Children. Proc. IDC 2017 Interaction Design and Children.

A.17   **A. Loparev**, **L. Westendorf**, A. Sullivan, **C. Verish**, **J. Davis**, **M. Flemmings**, M. Bers, <u>O. Shaer</u>. BacToMars: A Collaborative Educational Video Game for Teaching Biological Engineering. Proc. FDG 2017 Foundations of Digital Interactive Games.

A.18   A. Girouard, D. McGookin, P. Bennett, <u>O. Shaer</u>, K.A. Siek, M. Lennon, Tangibles for Health, Workshop ACM CHI 2016.

A.19   H. van der Meulen, P. Varsanyi , **L. Westendorf**, A.L. Kun, <u>O. Shaer</u>, Towards understanding collaboration around interactive surfaces: Exploring joint visual attention, Work in Progress, ACM UIST 2016.

A.20   **V. Lin** and <u>O. Shaer</u>, Beyond the Lab: Using Technology Toys to Engage South African Youth in Computational Thinking, Case Study, ACM CHI 2016

A.21   **G. Hu, L. Chen, J. Okerlund**, <u>O. Shaer</u>, Extended Abstract, ACM CHI 2015.

A.22   **G. Chuang, S. Wang, S. Burns**, <u>O. Shaer</u>, EmotiSphere: From Emotion to Music , Work in Progress ACM TEI 2015.

A.23   **C. Grote, E. Segreto, J. Okerlund**, R. Kincaid, <u>O. Shaer</u>, Eugenie: Gestural and Tangible Interaction with Active Tokens for Bio-Design, Extended Abstract, ACM UIST 2014.

A.24   **C. Hoef, J. Davis**, E. Solovey, <u>O. Shaer</u>, An In-Depth Look at the Benefits of Immersion Cues on Spatial 3D Problem Solving, Extended Abstract, ACM Spatial User Interfaces 2014.*

A.25   <u>O. Shaer</u>, O. Nov, Treemap Visualization of Personal Genomic Reports, Work in Progress abstract, Biovis 2014.

A.26   <u>O. Shaer</u>, O. Nov, **A. West**, **D. Eastman**, Understanding Information Practices of Interactive Personal Genomics Users. Extended abstract, *ACM CHI 2014 Human Factors in Computing Systems Conference*.

A.27   **I. Kwok**, **C. Lee**, **J. Okerlund**, **Q. Zhu**, <u>O. Shaer</u>, musicAir: Creating Music Through Movement, Work in Progress abstract, *ACM SIGCHI TEI 2014 Tangible, Embedded and Embodied Interaction*.

A.28   **W. Xu**, **K. Chang**, **N.Francisco**, **C. Valdes**, R. Kincaid, <u>O. Shaer</u>, From Wet Lab Bench to Tangible Virtual Experiment: SynFlo, Extended abstract, *ACM SIGCHI TEI 2013 Tangible, Embedded and Embodied Interaction*.

A.29   **S.Liu**, **K. Lu**, **N. Seifeselassie**, **C. Grote**, **N. Francisco**, **V. Lin**, **L. Ding**, **C. Valdes**, R. Kincaid, <u>O. Shaer</u>, MoClo Planner: Supporting Innovation in Bio-Design through Multitouch Interaction, Demo abstract, *ACM ITS 2012 Interactive Tabletops and Surfaces*.

A.30   **K. Chang**, **W. Xu**, **N.Francisco**, **C. Valdes**, R. Kincaid, <u>O. Shaer</u>, SynFlo: An Interactive Installation Introducing Synthetic Biology Concepts, Demo abstract, *ACM ITS 2012 Interactive Tabletops and Surfaces*.

A.31   O. Shaer, **M. Strait**, **C. Valdes**, **T. Feng**, **M. Lintz**, **H. Wang**, G-nome Surfer: a Tabletop Interface for Collaborative Exploration of Genomic Visualization, *IEEE BioVis 2011*.

A.32   **D. Garrahan**, O. Shaer, **A. Piplica**, K. Gold, Leveraging Gesture and Voice Data to Improve Group Brainstorming. Work In Progress, *ACM CHI 2010 Human Factors in Computing Systems Conference*, Extended abstracts.

A.33   O. Shaer, R.J.K Jacob, M. Green, K. Luyten, User Interface Description Languages for Next Generation User Interfaces, *ACM CHI 2008 Human Factors in Computing Systems Conference*, Workshop abstract.

A.34   A. Bean, S. Siddiqi, A. Chowdhury, B. Whited, O. Shaer, R.J.K Jacob, Marble Track Audio Manipulator (MTAM): A Tangible User Interface for Audio Composition, *TEI 2008 International Conference on Tangible and Embedded Interaction*.

A.35   R.J.K. Jacob, A. Girouard, L.M. Hirshfield, M.S. Horn, O. Shaer, E.T. Solovey, J. Zigelbaum, Reality-Based Interaction: Unifying the New Generation of Interaction Styles, *ACM CHI 2007 Human Factors in Computing Systems Conference*.

A.36   A. Girouard, E.T. Solovey, L. Hirshfield, S. Ecott, O. Shaer, R.J.K. Jacob, Smart Blocks: A Tangible Mathematical Manipulative, *TEI 2007 International Conference on Tangible and Embedded Interaction*.

A.37   O. Shaer and R.J.K. Jacob, A Visual Language for Programming Reality-Based Interaction, *IEEE Symposium on Visual Languages and Human-Centric Computing*, Graduate Student Consortium, 2006.

A.38   O. Shaer, A Framework for Building Reality-Based Interfaces for Wireless-Grid Applications, ACM CHI 2005 *Human Factors in Computing Systems Conference*, Doctoral Consortium.

REFEREED WORKSHOP PAPERS

W.1   M. Olaosebikan, L. Cowen, J. Klein-Seetharaman, J. Yang, N Lewinski and O. Shaer, Towards Collaborative Immersive Analytics for Coral Reef Data, In CHI 2020 Workshop on Immersive Analytics: Envisioning Future Productivity.

W.2   A. Seals, O. Nov, **J. Otiono**, O. Shaer, M. Ball, Investigating Pathogen Trails as a Design Strategy to Combat Invisible Health Dangers in Everyday Environmetns, CHI 2020 Workshop on Speculative Designs for Emergent Personal Data Trails: Sign, Signals, and Signifiers.

W.3   O. Shaer, L. Boyle, R. Sadun, A. Kun, J. Lee, Towards Work in Automated Vehicles. ACM CHI'19 Workshop on Looking into the Future: Weaving the Threads of Vehicle Automation, 2019.

W.4   A. Girouard, R.J.K. Jacob, O. Shaer, E.T. Solovey, M. Poor. Reflecting on the Impact of HCI Frameworks, CHI 2018 workshop on Rethinking Interactions.

W.5   A. Roudaut, A. Girouard, O. Shaer, A. Kun. Identifying Challenges within HCI Education. CHI 2018 workshop on Developing a Community of Practice to Support Global HCI Education.

W.6   O.Shaer, A. Mazalek, **J. Okerlund, C. Grote**, B. Ullmer, Tangible Interaction With Large Data Sets Using Active Tokens, Exploring the Challenges of Making Data Physical Workshop, CHI 2015.

W.7   **J. Okerlund**, M. Balestra, **C. Grote**, O. Shaer, O. Nov, An Environment For Long-Term Engagement with Personal Genomic Data , Beyond Personal Informatics: Designing for Experiences with Data Workshop, CHI 2015.

W.8   A. Mazalek, O. Shaer, B. Ullmer, M. Konkel, Tangible Meets Gestural: Gesture Based Interaction with Active Tokens, *ACM CHI 2014 Workshop on Gesture-based Interaction Design: Communication and Cognition*.

W.9   O. Shaer, **C. Valdes**, **C. Grote**, **W. Xu**, and **T. Feng**, Enhancing Data-Driven Collaboration with Large-Scale Interactive Tabletops, *ACM CHI 2013 Workshop on Blended Interaction*.

W.10	O. Shaer, **C. Valdes**, A Tiered Evaluation Framework for Reality-Based Creativity Support Environments, *ACM CHI 2013 Workshop on Evaluation Methods for Creativity Support Environments*.
W.11	**C. Valdes**, **T. Feng**, O. Shaer, Waiting for Supermom: Opportunities for HCI, *ACM CHI 2013 Workshop on Motherhood and HCI*.
W.12	O. Shaer, M. Umachi Bers, M. Chang, Making the Invisible Tangible: Learning Biological Engineering in Kindergarten, *ACM CHI 2011 Workshop on User Interface Technology and Educational Pedagogy*.
W.13	O. Shaer, Advancing Collaboative Discovery through Reality-Based Interaction, *ACM CHI 2011 Workshop on Embodied User Interfaces*.
W.14	O. Shaer, G-nome Surfer: a Tabletop Interface for Collaborative Exploration of Genomic Data, *ICLS 2010 Workshop on Collaborative Learning with Interactive Surfaces: An Interdisciplinary Agenda*.
W.15	O. Shaer, Exploring Reality-Based Interaction through Whole-Body Movement, *ACM CHI 2009 Workshop on Whole Body Interaction*.
W.16	E.T. Solovey, O. Shaer, A. Girouard, L.M. Hirshfield, M.S. Horn, J. Zigelbaum, R.J.K. Jacob, Programming Reality Within the Reality-Based Interaction Framework, *ACM CHI 2009 Workshop on Organic User Interfaces*.
W.17	M.S. Horn, O. Shaer, A. Girouard, L.M. Hirshfield, E.T. Solovey, J. Zigelbaum, R.J.K. Jacob, Putting Tangible User Interfaces in Context: A Unifying Framework for Next Generation HCI, *ACM CHI 2007 Workshop on Tangible User Interfaces in Context and Theory.*

OTHER

O.1	Kai Kunze, O. Shaer, Jürgen Steimle, Welcome to the TEI'17 Proceedings, Proceedings of the eleventh international conference on Tangible, Embedded, and Embodied Interaction.
O.2	O. Shaer, Beyond 'Pink' Games: Industry and Academia Must Work Together To Engage Women Gamers and Developers, The Huffington Post, March 2016.
O.3	O. Shaer, What Are You Reading?, ACM Interactions, November 2015.
O.4	Cathy Summa, Robbin Chapman, O. Shaer, From Silos to Pathways: Bridging the divide between student support and academic programs to increase STEM Persistence, Panel, AACU 2015 Annual Meeting
O.5	**C. Grevet**, S. Lee, O. Shaer, **M. Strait**, D. Xu, S. Wang, Lessons Learned from the All Female Classroom, and How to Translate into the Coed Environment, *Grace Hopper Celebration of Women in Computing*, panel, November 2011.
O.6	T. Pederson, O. Shaer, R. Wakkary, Welcome to the TEI'10 Proceedings, *Proceedings of the fourth international conference on Tangible, embedded, and embodied interaction*, January 2010.
O.7	O. Shaer, R.J.K. Jacob, M. Green, K. Luyten, Introduction to the special issue on UIDL for next-generation user interfaces, *ACM Transactions on Computer-Human Interaction (TOCHI)*, Vol. 16, No. 4, November 2009.

PROFESSIONAL ACTIVITIES

LEADERSHIP   *CHIWork Symposium on HCI for Work*: General Chair 2020-present.
Dagstuhl Seminar 21232*: Human-Computer Interaction to Support Work and Wellbeing in Mobile Environments*, organizer.
ACM TEI Conference: Program Co-Chair 2020, 2017, 2010; Graduate Student Consortium Co-Chair, 2012; Steering committee member 2017-present.
ACM ISS: Panels Chair 2017; General Chair 2012.
ACM UIST: Doctoral colloquium panelist 2018.
Dagstuhl Seminar 19232: Ubiquitous Computing Education: Why, What, and How, Organizer.

AutoWork Workshop, ACM AutoUI Conference, Co-Organizer 2019, 2020, 2021.
Human-Computer Interactions for the Future of Work and Wellbeing, A series of Online Conversations, founder. 2020-Present.

PROGRAM COMMITTEE	ACM Creativity and Cognition, 2015, 2019; ACM CSCW 2017; ACM EICS 2016, 2013; ACM CHI 2012. ACM ISS 2011. ACM UIST 2010.
EDITOR	IEEE Pervasive special issue on Future of Work, 2021. Editorial Board, ACM Transaction on Computer-Human Interaction (ToCHI), 2021 - Present. Editorial Board, Foundations and Trends in Human–Computer Interaction, 2011 - Present. ACM TOCHI, Special Issue on User Interface Description Languages, 2009.
GRANT REVIEWER	National Science Foundation, Research Council of Canada.
COLLEGE AND DEPARTMENT SERVICE	Computer Science, Reappointments and Promotions (2015-Present)
	Computer Science, Search committee (2015-2020)
	International Study Committee (2020-Present)
	Board of Admission (2009-2010, 2018-2019)
	Faculty Advisory Committee on Science Center Renovation (2016-2019)
	Curriculum and Academic Policy (CCAP) (2015-2018)
	Ruhlman Committee (2013-2019)
	Search committee, Director for Career Education Search Committee (2015-2016)
	Agenda Committee (2011—2012, 2013-2015)
	Pinanski Committee (2013-2014)
	Advisory Committee on Library and Technology (2010-2011)
TALKS	Human Computer Interaction, Khoury College of Computer Science, Northeastern University, October 2020. Human Factors and Ergonomics Society, Interactive Webinar, July 2020. Technology and Social Behavior Seminar, Northwestern University, January 2020. Computer Science Seminar, Brown University, October 2019. University of Twente, The Netherlands, September 2019. NSF Workshop on the Future of Work, Alexandria, VA, April 2019.
	IBM Research, Boston CHI, June 2018. Carleton University, Canada, November 2017.
	ACM Summer School, Lobz Poland, July 2017, **Keynote**.
	University of Oldenburg, Human-Computer Interaction Lab, Germany, July 2017.
	University of Stuttgart, Human-Computer Interaction Lab, Germany, July 2017.
	University of New Hampshire, Interoperability Lab, Ubicomp Lecture Series, March 2017.
	Tufts University, Computer Science Colloquium, March 2016.
	IsraHCI - Israeli Human-Computer Interaction Research Conference, **Keynote**, February 2016.
	Interdisciplinary Center Herzliya, Israel, December 2015.
	Shenkar College of Engineering and Design, Israel, December 2015.
	Stanford University, Transformative Learning Technologies Lab, January 2015.

Boston University, International Workshop on Bio-Design Automation, **Keynote**, June 2014.

Williams College, Clare Boothe Luce Scholars Program, January 2014.

Boston University, Center for Information and Systems Engineering seminar, November 2013.

Harvard University, Liberact Workshop, February 2013.

Holon Institute of Technology, Interaction Lab Seminar, May 2013.

Helsinki Institute of Technology, Big Data Visualization and Interaction Workshop, April 2013.

MIT, Human Automation Laboratory seminar, October 2012.

Olin College of Engineering, Human Factors and Interface Design, October 2012.

Worcester Polytechnic Institute, Computer Science Colloquia series, October 2011.

Wellesley College, Science Faculty Seminar, March 2011.

Tufts University, Developmental Technologies Seminar, Child Development, July 2010.

Olin College of Engineering, Human Factors and Interface Design, October 2009.

Wellesley College, February 2012 (Panelist).

Grace Hopper Celebration of Women in Computing, November 2011 (Panelist).

BostonCHI Labs meeting, Microsoft, April 2011.

MIT Computer Science and Artificial Intelligence Lab, HCI Seminar Series, May 2009.

Northeastern University, Computer Science Department, November 2008.

BostonCHI, Sun Microsystems, June 2008.

Wellesley College, Computer Science Department, February 2008.

MIT Media Lab, Tangible Media Group, February 2008.

ACM CHI'07 Course, Introduction to Human Computer Interaction, April 2007.

University College London Interaction Center, November 2005.

SELECTED MEDIA COVERAGE

Mochi, a New Chatbot Life Coach, Aims to Help Users Maintain Well-being and Productivity During the Pandemic, Wellesley College News:
https://www.wellesley.edu/news/2020/stories/node/183466

New apps to take confusion out of genome and microbiome home tests:
https://www.eurekalert.org/pub_releases/2018-10/ntso-nat100918.php

NSF announces awards to shape the human-technology partnership for the well-being of workers and their productivity: https://www.nsf.gov/news/news_summ.jsp?cntn_id=297116

Collaboration Between the Davis Museum and the HCI Lab Reveals Tools that Can Change the Way We View Art, Wellesley College News: https://www.wellesley.edu/news/2018/stories/node/154536

HoloMuse, a Wellesley-Developed App, Brings the Museum into the Classroom, Wellesley College News: https://www.wellesley.edu/news/2017/stories/node/127321

World's Major Showcase of Human-Computer Interaction Research Opens May 6, ACM Press Release:

https://globenewswire.com/news-release/2017/04/20/962585/0/en/World-s-Major-Showcase-of-Human-Computer-Interaction-Research-Opens-May-6.html

Building with Biology at the Museum of Science in Boston, July 6, 2016 by Caroline Lowenthal, New England Museum of Science: http://www.buildingwithbiology.org/museum-of-science-bwb-2016

NSF Grant Enables Wellesley's HCI Lab to Advance The Use Of Collaborative Interactive Technology for Interdisciplinary Research, Wellesley News: http://www.wellesley.edu/news/2015/december/node/79611

Day in the Lab: Wellesley College HCI Lab, Interactions Magazine: http://interactions.acm.org/archive/view/may-june-2014/whci-lab-wellesley-college

The Human Touch, Wellesley Magazine: http://issuu.com/wellesley/docs/wellesley_fall13_issuu/13

HCI Lab Renovated with Generous Support of Amy Batchelor '88 and Brad Feld, Wellesley College News: http://www.wellesley.edu/news/2013/10/node/39877#sthash.qWAgM6Ze.dpuf

GreenTouch: data capture, curation, and analysis via a multi-touch tabletop interface, Research at Google Blog: https://plus.google.com/+ResearchatGoogle/posts/LfVbcZY1E41