Siyan Zhao

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Education

Third Year Ph.D., Human-Computer Interaction *Aug. 2015 - Present*
Carnegie Mellon University, School of Computer Science
Advisor: Jason Hong, Robert Kraut

B.S. in Cognitive Science & Human-Computer Interaction *May 2014*
Carnegie Mellon University, GPA: 3.72 / 4.00

Publications

PEER-REVIEWED PAPERS

J. McDonald, S. Zhao, J. Liu, M. L. Rivera. (2018) *"MaxiFab: Applied Fabrication to Advance Period Technologies", in Proceedings of the 2018 ACM Conference Companion Publication on Designing Interactive Systems (DIS '18 Companion).*

S.Zhao, A.Israr, F. Lau, F. Abnousi. (2018) *"Coding Tactile Symbols for Phonemic Communication", in ACM Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI'18).*

Z. Chen, W. Hu, J. Wang, S. Zhao, B. Amos, G. Wu, K. Ha, K. Elgazzar, P. Pillai, R. Klatzky, D. Siewiorek, M. Satyanarayanan. (2017) "*An Empirical Study of Latency in an Emerging Class of Edge Computing Applications for Wearable Cognitive Assistance*", in IEEE Symposium on Edge Computing (SEC'17).

S.Zhao, A. Israr, M. Fenner, R. L. Klatzky. (2017) "*Intermanual Apparent Tactile Motion and its Extension to 3D Interactions*", in IEEE Transactions on Haptics.

S. Zhao, J. Lehman, A. Israr, & R. Klatzky. (2015) "*Using Haptic Inputs to Enrich Story Listening for Young Children*", in Proceedings of the 14th International Conference on Interaction Design and Children (IDC '15), pp. 239 - 242.

S. Zhao, A. Israr, R. Klatzky. (2015) "*Intermanual apparent tactile motion on handheld tablets*", in World Haptics Conference (WHC '15), IEEE , pp. 241 - 247.

A. Israr, S. Zhao, and O. Schneider. (2015) "*Exploring Embedded Haptics for Social Networking and Interactions*", in Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '15).

O. Schneider, S. Zhao, & A. Israr. (2014) "*FeelCraft: User-Crafted Tactile Content*", in Proceedings of 1st Asia Haptics, Tsukuba, Japan.

A. Israr, S. Zhao, K. Schwalje, R. Klatzky, & J. Lehman. (2014) "*Feel effects: enriching storytelling with haptic feedback*", in ACM Transactions on Applied Perception (TAP), 11(3). **(Best Paper Award)**

DEMONSTRATIONS / WORKSHOPS

S. Zhao, Z. Schwemler, A. Fritz, A. Israr (2016) "*Stereo Haptics: Designing Haptic Interactions Using Audio Tools*", workshop at the ACM International Conference on Tangible, Embedded and Embodied Interaction (TEI '16), Eindhoven, Netherlands.

A. Israr, S. Zhao, K. McIntosh, J. Kang, Z. Schwemler, E. Brockmeyer, M. Baskinger, M. Mahler (2015) "*Po2: Augmented Haptics for Interactive Gameplay*", demonstrated at SIGGRAPH 2015 Emerging Technology, LA

S. Zhao, O. Schneider, R. Klatzky, J. Lehman, & A. Israr. (2014) "*FeelCraft: Crafting Tactile Experiences for Media using a Feel Effect Library*", demonstrated at UIST 2014, Honolulu, Hawaii.

Patent

A Israr, R Klatzky, S Zhao, JF Lehman, O Schneider. "*Customized Haptic Effects*", US Patent 20,160,085,303,2016, issued Mar. 24 2016.

Invited Presentations

Stereo Haptics in Augmented and Virtual Reality *Jan. 2017*
Hacking the Holodeck, MIT, Cambridge, MA

Stereo Haptics: Designing Haptic Interactions Using Audio Tools *Feb. 2016*
Communication & Multimedia Design, Avans Hogeschool, Breda, Netherlands

Selected Press Coverage

CNBC. Facebook researchers built a device that turns sounds into vibrations on your skin. *Apr. 2018*

MIT Technology Review. Getting e-mail on your skin is actually a thing now, thanks to Facebook. *Apr. 2018*

Professional Experience

ProUnlimited @ Facebook *May. 2017 - Aug. 2017*
Consultant Researcher
Lead and conducted a sequence of psychophysics studies on human perception of haptic stimuli. Established a set of haptic vocabularies through user testing.

Disney Research, The Walt Disney Company *Aug. 2015 - Dec. 2015*
Consultant
Constructed a toolkit, Stereo Haptics, for media designers to easily design and prototype haptic experience.

Disney Research, The Walt Disney Company *Aug. 2014 - Jul. 2015*
Research Associate
With classical Psychophysics methods, the project goal was to explore and extend applications of haptics in areas

of entertainment and education. Lead user research studies on haptic technology to understand how people perceive haptics signals.

University of Pittsburgh Medical Center, HCI CAPSTONE *Jan. 2014 - May 2014*
User Research Lead
4-month project with Dr. Cynthia Gries, a pulmonologist, to build a high-fidelity prototype of a decision aid for patients with emphysema. Lead and conducted user research, e.g., interviews, observations, and think-aloud sessions, with patients and stockholders to uncover their needs.

Disney Research, The Walt Disney Company *May 2013 - Dec. 2013*
Lab Associate
Designed and conducted human subject research to understand how people interpret haptics using semantics and its application in assisting children in story listening.

Teaching Experience

05-413/813 Human Factors *Fall 2017*
Teaching Assistant, Carnegie Mellon University

05-431/631 Programming User Interfaces *Fall 2016*
Teaching Assistant, Carnegie Mellon University

85-440 Studies in Chinese Literature & Culture *Fall 2011*
Writing Assistant, Carnegie Mellon University

Awards and Honors

Best Paper Award ACM Symposium on Applied Perception 2014
Psi Chi, International Honor Society in Psychology
The Phi Beta Kappa Honor Society
Carnegie Mellon Senior Leadership Recognition Award *2014*

Service

Reviewer
World Haptics Conference 18, UIST 17, World Haptics Conference 17, CHI 15-17, IJHCS 16, Augmented Human 16, HAPTICS 16, World Haptics Conference 15

Skills

Programming Languages Python, E-Prime, HTML/CSS/JavaScript
Adobe Illustrator, InDesign, Photoshop, Premiere Pro, After Effect

References

Roberta L. Klatzky *Charles J. Queenan Jr. Professor of Psychology at Carnegie Mellon University*
klatzky@andrew.cmu.edu

Daniel P. Siewiorek *Buhl University Professor of Electrical and Computer Engineering and Computer Science at Carnegie Mellon University*
dps@cs.cmu.edu