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http://mips.lrdc.pitt.edu (Lab Homepage)

Research Interests

Human Computer Interaction, Mobile Interfaces, Intelligent User Interfaces, Education/Learning Technology, Machine Learning and its Applications in User Interfaces.

Education

May 2010 **Ph.D. Computer Science**
University of California at Berkeley
Advisor: Professor John Canny
Dissertation: *Perceptual and Context Aware Interfaces for Mobile Devices*

June 1999 **M.S. Computer Engineering**
Xi'an Jiaotong University, China
Advisor: Professor Nanning Zheng
Dissertation: *Character Detection and Recognition in Complex Scene*

June 1996 **B.S. Electrical and Computer Engineering**
Xi'an Jiaotong University, China

Employment

Aug 2010 - present **Assistant Professor**
Department of Computer Science
Learning Research and Development Center
Intelligent Systems Program (adjunct appointment)
University of Pittsburgh, Pittsburgh, PA

Summer 2015 & Summer 2014 **Visiting Faculty Member**
Android Group
Google Inc, Mountain View, CA

Summer 2009 & Summer 2008 **Research Intern**

Next Generation Pervasive Services Group
IBM T.J. Watson Research Center, Hawthorne, NY

Aug 2003 -Aug 2010 **Graduate Student Researcher and Instructor**
Computer Science Division
University of California at Berkeley, Berkeley, CA

Aug 2002 –May 2003 **UC Berkeley Regents' Fellowship Recipient**
Computer Science Division
University of California at Berkeley, Berkeley, CA

Mar 2001 -Aug 2002 **Staff Research Member and Team Lead**
HCI and Pen Computing Group
IBM China Research Lab, Beijing, China

Jul 1999 –Mar 2001 **Research Member**
HCI and Pen Computing Group
IBM China Research Lab, Beijing, China

Research Grants and Awards

[G.1] Microsoft Azure for Research Award, 2017.
[G.2] Google Faculty Research Award, 2016.
[G.3] Byte Dance Telecommunications Ltd, PI, Unrestricted Gift, 2016.
[G.4] Lenovo Research, Donation of Moto 360 2nd generation Smartwatches, 2016.
[G.5] NVIDIA Academic Grant, PI, **Using Deep Learning to Improve Mobile MOOC Learning**, 09/2015 – 08/2016.
[G.6] LRDC RDF Grant, University of Pittsburgh, PI, "**Attentive, Bidirectional Mobile MOOC Learning via Implicit Physiological Signal Tracking**", 06/2015 - 05/2017.
[G.7] Intel Research Gift, PI, "**Wearable Computing for Out-of-Classroom Learning**".
[G.8] Google Visiting Faculty Grant, PI, "**Smart Interaction Techniques on Mobile Devices**", 05/2014 – 08/2015.
[G.9] LRDC RDF Grant, University of Pittsburgh, co-PI, (PI: Muhsin Menekse, Other co-PIs: Diane Litman), "**Improving Undergraduate STEM Education by Integrating Natural Language Processing with a Mobile Application**", 07/2014 – 06/2016.
[G.10] Center for Advanced Study of Language (CASL) Grant, University of Maryland, co-PI, (PI: Walter Schneider, other co-PIs: Natasha Tokowicz), "**Brain Fitness Training for Foreign Language Learning – Phase II**", 01/2012-12/2013.
[G.11] ACIE Innovation in Education Award 2011, University of Pittsburgh, PI, "**Software as a Service for Mobile Computing**", 05/2011 – 04/2012.
[G.12] LRDC RDF Grant, University of Pittsburgh, PI, (co-PIs: Walter Schneider, John Levine), "**Theoretical and Architectural Support for Mobile Group Learning**", 07/2011 – 06/2013.
[G.13] LRDC RDF Grant, University of Pittsburgh, co-PI, (PI: Kevin Ashley, Other co-PIs: Diane Litman, Chris Schunn), "**Keeping Instructors Well-Informed in Computer-Supported Peer Review**", 07/2011 – 06/2013.
[G.14] Google, Google TV Education Funds, PI, "**Student Engagement Analytics: Real-Time Visualization to Improve In-Classroom Instructions**".
[G.15] Center for Advanced Study of Language (CASL) Grant, University of Maryland, co-PI, (PI:

Walter Schneider, other co-PIs: Natasha Tokowicz, Jason Chein, Randy Engle), "**Brain Fitness Training for Foreign Language Learning**", 01/2011-12/2011.

Teaching

University of Pittsburgh

Spring 2017
Spring 2016
Spring 2014
Spring 2013
Spring 2012

Designing, Prototyping and Evaluating Mobile Applications (CS1635, Computer Science)
Website: http://mips.lrdc.pitt.edu/cs1635-spring17
Upper level undergraduate course, 3 credits

Fall 2016
Fall 2015
Fall 2014
Fall 2012
Spring 2011

Research Topics in Human-Computer Interaction (CS2610, Computer Science)
Website: http://mips.lrdc.pitt.edu/cs2610-fall2016
Graduate level class, 3 credits

Fall 2013
Fall 2011

Advanced Topics in Human-Computer Interaction(CS3570, Computer Science)
Website: http://mips.lrdc.pitt.edu/cs3570-fall13
Graduate level class, 3 credits

Advising

Ph.D. Students

Spring 2016 - present — Wei Guo, CS, University of Pittsburgh, "*Understanding and Improving Reading on Mobile and Wearable Devices*", passed comp exam in March 2017.

Fall 2014 - present — Phuong Pham, CS, University of Pittsburgh, "*Improving and Scaling Mobile Learning via Emotion and Cognitive-State Aware Interfaces*", Ph.D. proposal defended in October 2016, Ph.D. defense expected in summer 2017.

Fall 2012 – Spring 2017 — Xiangmin Fan, CS, University of Pittsburgh, "*Scalable Teaching and Learning via Intelligent User Interfaces*". Ph.D. proposal defended in November 2015, Ph.D. dissertation defended on January 18, 2017.

Fall 2011 – Fall 2016 — Xiang Xiao, CS, University of Pittsburgh, "*Improving Mobile MOOC Learning via Implicit Physiological Signal Tracking*". Ph.D. dissertation defended on September 26, 2016.

Summer 2011 – Summer 2015 — Emilio Zegarra, CS, "*Engaging and Scaffolding Student Learning via MicroProbe*", Ph.D. Dissertation defended in August 2015, Currently at IBM Pittsburgh **(co-Advisor with Prof. S.K. Chang)**

Master's Students

Spring 2016 — Jesse Davis, CS, University of Pittsburgh, "*Inferring and Visualizing Attendance Information in Mobile MOOC Learning*".

Spring 2016 — Priyanka Walke, CS, University of Pittsburgh, "*Visualizing and Interpreting Students' Emotional and Cognitive States in Mobile MOOC Learning*".

Spring 2012 – Spring 2013 — Youming Liu, CS, University of Pittsburgh, "*Interactive Interfaces for Peer-Review Understanding*", currently at Google Mountain View.

Spring 2013 — Yao Li, , University of Pittsburgh, "*Mobile Intelligent Tutoring System via Real-time Heart Rate*

Monitoring", currently at Compunetix.

Fall 2011 – Spring 2014 Lanfei Shi, ISP, University of Pittsburgh, "*Group Based Motivation Mechanisms on Mobile Devices*", currently Ph.D. student at University of Maryland College Park.

Fall 2012 – Fall 2013 Teng Han, ISP, University of Pittsburgh, "*Real-Time Heart Rate Monitoring via LensGesture Enabled Mobile Games*", currently Ph.D. student at University of Manitoba.

Ph.D. Comprehensive Exam Committee Members (also students in the next section)

Chris Thomas, University of Pittsburgh, passed in April 2017
Wei Guo, University of Pittsburgh, passed in March 2017
Ka Wai (Duncan) Yung, University of Pittsburgh, passed in October 2015
Yechen Qiao, University of Pittsburgh, passed in October 2015
CharmGil Hon, University of Pittsburgh, passed in November 2013
Adrian Maries, University of Pittsburgh, passed in February 2011

Ph.D. Dissertation Committee Members

Wencan Luo, University of Pittsburgh, dissertation defended in April 2017
Zitao Liu, University of Pittsburgh, dissertation defended in June, 2016
Erh-Hsuan Wang, University of Pittsburgh, dissertation defended in June 2016
Eric Heim, University of Pittsburgh, dissertation defended in November 2015
Ji Eun Kim, University of Pittsburgh, dissertation defended in November 2015
Emilio Zegarra, University of Pittsburgh (co-Advisor), dissertation defended in August 2015
Chirayu Wongchokprasitti, University of Pittsburgh, dissertation defended in April 2015
Michael Lipschultz, University of Pittsburgh, dissertation defended in December 2014
Wenting Xiong, University of Pittsburgh, dissertation defended in August 2014
Abedul Haque, University of Pittsburgh, dissertation defended in April 2014
Yingze Wang, University of Pittsburgh, dissertation defended in March 2014
Quang Nguyen, University of Pittsburgh, dissertation defended in March 2014
Lin Li, University of Pittsburgh, dissertation defended in June 2013

Undergraduate Students (Research Advising)

Fall 2015 – October 2016 Zac Yu, University of Pittsburgh, Instructor side visualizations for CourseMIRROR.

Spring 2012 – Spring 2014 Andrew Head, University of Pittsburgh, "*ToneWars: Connecting Language Learners and Native Speakers in Collaborative Mobile Games*" & "*A Mobile End-User Programming Environment for Psychology Researchers*" & (Recipient of the Summer Undergraduate Research Award in School of Art & Sciences in 2013, Recipient of a CS Day 2014 Poster Competition Award, Recipient of NDSEG Graduate Student Fellowship, Honorable Mention for NSF Graduate Student Fellowship 2014), currently Ph.D. student at the University of California, Berkeley.

Fall 2012 Vincent Tran, University of Pittsburgh, "*An Intelligent Writing Tutoring System on Mobile Devices*", currently at Amazon.com.

Fall 2012 Yuxin Liu, University of Pittsburgh, "*Heart-Beat Rate (HBR) Monitoring on iPhone*", currently at Amazon.com.

Fall 2010 – Spring 2013 Jesse Thomason, University of Pittsburgh, "*Embodied Exploration of Large Scale Multi-dimensional Data on Mobile Devices*" & "*Group Based Brain Fitness Training on Mobile*

Devices" (Recipient of a CS Day 2011 Poster Competition Award and a Brackenridge Fellowship in 2011, Honorable Mention for CRA 2013 Outstanding Undergraduate Researcher), currently Ph.D. student at University of Texas Austin.

Publications

Total Refereed Publications	41
Citations	998
h-index	14

Note: Citation counts were generated using Google Scholar (http://scholar.google.com) in November 2016. Acceptance rates are included when available.

Journal Papers (Peer-reviewed)

[J.1] Yitao Duan, Jingtao Wang, Matthew Kam, and John Canny. **Privacy Preserving Link Analysis on Dynamic Weighted Graph**, In *Computational and Mathematical Organization Theory*, Volume 11, Issue 2, pp 141-159, July 2005.

Conference Papers (Peer-reviewed, with oral presentations)

[C.1] Xiangmin Fan, Wencan Luo, and Jingtao Wang, **Mastery Learning of Second Language through Asynchronous Modeling of Native Speakers in a Collaborative Mobile Game**, In *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2017), Denver, CO, May 6 – 11, 2017. (Acceptance rate = 25%)

[C.2] Xiang Xiao, and Jingtao Wang, **Understanding and Detecting Divided Attention in Mobile MOOC Learning**, Note in *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2017), Denver, CO, May 6 – 11, 2017. (Acceptance rate = 25%)

[C.3] Phuong Pham, and Jingtao Wang, **Understanding Emotional Responses to Mobile Video Advertisements via Physiological Signal Sensing and Facial Expression Analysis**, In *Limassol, Cyprus, March 13 – 16, 2017*. (Acceptance rate = 20%)

[C.4] Xiangmin Fan, Wencan Luo, Muhsin Menekse, Diane Litman, Jingtao Wang, **Scaling Reflection Prompts in Large Classrooms via Mobile Interfaces and Natural Language Processing**, In *Proceedings of 22nd ACM Conference on Intelligent User Interfaces (IUI 2017)*, Limassol, Cyprus, March 13 – 16, 2017. (Acceptance rate = 20%)

[C.5] Phuong Pham, and Jingtao Wang, **Adaptive Review for Mobile MOOC Learning via Implicit Physiological Signal Sensing**. In Proceedings of *ACM International Conference on Multimodal Interaction (ICMI 2016)*, 8 pages, Tokyo, Japan, November 12 – 16, 2016. (Acceptance rate: oral = 20%) ***Best Student Paper Award (top 0.5%)***

[C.6] Xiang Xiao, and Jingtao Wang, **Context and Cognitive-State Triggered Intervensions for Mobile MOOC Learning**. In Proceedings of *ACM International Conference on Multimodal Interaction (ICMI 2016)*, 8 pages, Tokyo, Japan, November 12 – 16, 2016. (Acceptance rate: oral = 20%)

[C.7] Xiang Xiao, and Jingtao Wang, **Towards Attentive, Bi-directional MOOC Learning on Mobile Devices**. In Proceedings of *ACM International Conference on Multimodal Interaction (ICMI*

2015), pp 163-170, Seattle, WA, Nov 9 - 13, 2015. (Acceptance rate: oral = 19%) ***Best Paper Nomination (top 3%)***

[C.8] Xiangmin Fan, Youming Liu, Nan Cao, Jason Hong, and Jingtao Wang, **MindMiner: A Mixed-Initiative Interface for Interactive Distance Metric Learning**, In *Proceedings of the 15th IFIP International Conference on Human-Computer Interaction* (INTERACT 2015), pp 611-628, Bamberg, Germany, September 14 - 18, 2015. (Acceptance rate = 29.6%)

[C.9] Phuong Pham,and Jingtao Wang, **AttentiveLearner: Improving Mobile MOOC Learning via Implicit Heart Rate Tracking**, In *Proceedings of 17th International Conference on Artificial Intelligence in Education* (AIED 2015), pp 367-376, Madrid, Spain, June 22 - 26, 2015. (Acceptance rate = 28%)

[C.10] Teng Han, Xiang Xiao, Lanfei Shi, John Canny, and Jingtao Wang, **Balancing Accuracy and Fun: Designing Engaging Camera Based Mobile Games for Implicit Heart Rate Monitoring**, In *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2015), pp 847-856, Seoul, Korea, April 18 - 23, 2015. (Acceptance rate = 23%)

[C.11] Xiangmin Fan, and Jingtao Wang, **BayesHeart: A Probabilistic Approach for Robust, Low-Latency Heart Rate Monitoring on Camera Phones**, In *Proceedings of 20th ACM Conference on Intelligent User Interfaces (IUI 2015)*, pp 405-416, Atalanta, GA, March 29 - April 1, 2015. (Acceptance rate = 23%)

[C.12] Andrew Head, Yi Xu, and Jingtao Wang, **ToneWars: Connecting Language Learners and Native Speakers through Collaborative Mobile Games**, In *Proceedings of 12th International Conference on Intelligent Tutoring Systems* (ITS 2014), pp 368-377, Honolulu, Hawaii, June 6 - 9, 2014. (Acceptance rate = 17.5%)

[C.13] Xiang Xiao, Teng Han, and Jingtao Wang, **LensGesture: Augmenting Mobile Interactions with Back-of-device Finger Gestures**. In *Proceedings of ACM International Conference on Multimodal Interaction* (ICMI 2013), pp 287-294, Sydney, Australia, Dec 9 - 13, 2013. (Acceptance rate: oral = 20%)

[C.14] Wenting Xiong, Diane Litman, Jingtao Wang, and Christian Schunn, **An Interactive Analytic Tool for Peer Review Exploration**, In *Proceedings of Innovative Use of NLP for Building Educational Applications* (NAACL-HLT BEA 2012), pp 174-179, Montreal, Canada, June 07, 2012.

[C.15] Jingtao Wang, Shumin Zhai, and John Canny, **SHRIMP - Solving Collision and Out of Vocabulary Problems in Mobile Predictive Input with Motion Gesture**, In *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2010), pp 15-24, Atlanta, Georgia, April 10 -15, 2010. (Acceptance rate = 22%) ***CHI Best Paper Honorable Mention (top 2%)***

[C.16] Feng Tian, Fei Lv, Jingtao Wang, Hongan Wang, Wencan Luo, Matthew Kam, Vidya Setlur, Guozhong Dai, and John Canny, **Let's Play Chinese Characters - Mobile Learning Approaches via Culturally Inspired Group Games**, In *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2010), pp 1603-1612, Atlanta, Georgia, April 10 - 15, 2010. (Acceptance rate = 22%)

[C.17] Jingtao Wang, Shumin Zhai, and John Canny. **Camera Phone Based Motion Sensing : Interaction Techniques, Applications and Performance Study**, In *Proceedings of ACM Symposium on User Interface Software and Technology* (UIST 2006), pp 101-110, Montreux, Switzerland, October 15 -18, 2006. (Acceptance rate = 23%)

[C.18] Jingtao Wang, and John Canny, **TinyMotion: Camera Phone Based Interaction Methods**, In *alt.chi of ACM Conference on Human Factors in Computing Systems* (CHI 2006), pp 339 - 344,

Montreal, Canada, April 24-27, 2006. (Acceptance rate = 23%)

[C.19] Yitao Duan, Jingtao Wang, Matthew Kam, and John Canny, **A Secure Online Algorithm for Link Analysis on Weighted Graph**, In *Proceedings of SIAM International Conference on Data Mining*, pp 71-81, Newport Beach, California, April 21-23, 2005. (Acceptante rate = 18%)

[C.20] Matthew Kam, Jingtao Wang, Alastair Iles, Eric Tse, Jane Chiu, Daniel Glaser, Orna Tarshish, and John Canny, **Livenotes: A System for Cooperative and Augmented Note-Taking in Lectures**. In *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2005), pp 531-540, Portland, Oregon, USA, April 5-7, 2005. (Acceptance rate = 25%)

[C.21] Jingtao Wang, and John Canny, **FingerSense - Augmenting Expressiveness of Physical Button by Fingertip Identification**, *Short Paper,* In *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2004), pp 1267-1270, Vienna, Austria, April 24-29, 2004. (Acceptance rate = 16%)

[C.22] Jingtao Wang, and Jennifer Mankoff, **Theoretical and Architectural Support for Input Device Adaptation**, In *Proceedings of ACM Conference on Universal Usability* (CUU 2003), pp 85 - 92, Vancouver, B.C., November 10-11, 2003. (Acceptance rate = 28%)

[C.23] Jingtao Wang, Zhepeng Wang, Hui Su, Atsushi Kumaki, and Arimasa Naitoh. **Handwriting on the Move : Using PDA as the Pen Input Device for Laptop Computers**, In *Proceedings of International Conference on Pervasive Computing* 2002, 8 pages, Zurich, Switzerland, August 26-28, 2002.

[C.24] Jingtao Wang, Shumin Zhai, and Hui Su, **Chinese Input with Keyboard and Eye Tracking - An Anatomical Study**, in *Proceedings of ACM Conference on Human Factors in Computing Systems* (CHI 2001), pp 349-356, Seattle, Washington, March 31 - April 5, 2001. (Acceptance rate = 20%)

Posters and Demos (Peer-Reviewed)

[PD.1] Phuong Pham, Jingtao Wang, **AttentiveLearner^2: a Multimodal Approach for Improving MOOC Learning on Mobile Devices**, Poster of 18th International Conference on Artificial Intelligence in Education (AIED 2017), Wuhan, China, June 28 - July 2, 2017.

[PD.2] Xiang Xiao, Jingtao Wang, **Dynamics of Affective States during Mobile MOOC Learning**, Poster of 18th International Conference on Artificial Intelligence in Education (AIED 2017), Wuhan, China, June 28 - July 2, 2017.

[PD.3] Wei Guo, and Jingtao Wang, **SmartRSVP: Facilitating Attentive Speed Reading on Small Screen Wearable Devices**, Late-Breaking Work *of ACM Conference on Human Factors in Computing Systems* (CHI 2017), Denver, CO, May 6 – 11, 2017. (Acceptance rate = 38%)

[PD.4] Phuong Pham, and Jingtao Wang, **AttentiveVideo: Quantifying Emotional Responses to Mobile Video Advertisements**, Demo Paper of *ACM International Conference on Multimodal Interaction* (ICMI 2016), Tokyo, Japan, November 12 – 16, 2016.

[PD.5] Xiang Xiao, Phuong Pham, and Jingtao Wang, **AttentiveLearner: Adaptive Mobile MOOC Learning via Implicit Cognitive States Inference**, Demo Paper of *ACM International Conference on Multimodal Interaction* (ICMI 2015), pp 373-374, Seattle, WA, Nov 9 - 13, 2015. (Acceptance rate = 41%)

[PD.6] Wencan Luo, Xiangmin Fan, Muhsin Menekse, Jingtao Wang, and Diane Litman, **Enhancing Instructor-Student and Student-Student Interactions with Mobile Interfaces and Summarization**, Demo Paper of *Conference of the North American Chapter of the Association*

for Computational Linguistics: Human Language Technologies (NAACL HLT 2015), pp 16-20, Denver, Colorado, May 31 - June 5, 2015.

[PD.7] Xiangmin Fan, Wencan Luo, Muhsin Menekse, Diane Litman, Jingtao Wang, **CourseMIRROR: Enhancing Large Classroom Instructor-Student Interactions via Mobile Interfaces and Natural Language Processing**, Works-In-Progress of *ACM Conference on Human Factors in Computing Systems* (CHI 2015), pp 1473-1478, Seoul, Korea, April 18 - 23, 2015. (Acceptance rate = 25%)

[PD.8] Xiangmin Fan, Youming Liu, Nan Cao, Jason Hong, and Jingtao Wang, **MindMiner: Quantifying Entity Similarity via Interactive Distance Metric Learning**, Demo Paper, 20th ACM *Conference on Intelligent User Interfaces* (IUI 2015), pp 93-96, Atalanta, GA, March 29 - April 1, 2015. (Acceptance rate = 44%)

[PD.9] Teng Han, Lanfei Shi, Xiang Xiao, John Canny, and Jingtao Wang, **Designing Engaging Camera Based Mobile Games for Implicit Heart Rate Monitoring**, In Work-In-Progress of *ACM Conference on Human Factors in Computing Systems* (CHI 2014), pp 1675-1680, Toronto, Canada, April 26 – May 1, 2014. (Acceptance rate = 31%)

[PD.10] Jesse Thomason, and Jingtao Wang, **Exploring Multi-dimensional Data on Mobile Devices with Single Hand Motion and Orientation Gestures**, Demo, *ACM International Conference on Human-Computer Interaction with Mobile Devices and Services* (MobileHCI 2012), pp 173-176, San Francisco, CA, September 21 – 24, 2012. (Acceptance rate = 25%)

[PD.11] Dave Krebs, Alexander Conrad, Jingtao Wang, **Combining Visual Block Programming and Graph Manipulation for Clinical Alert Rule Building**, In Work-In-Progress of *ACM Conference on Human Factors in Computing Systems* (CHI 2012), pp 2453-2458, Austin, TX, May 5 -10, 2012. (Acceptance rate = 30%)

[PD.12] Dave Krebs, Alexander Conrad, Milos Hauskrecht and, Jingtao Wang, **MARBLS : A Visual Environment for Building Clinical Alert Rules**, Poster, *ACM symposium on User Interface Software and Technology* (UIST 2011), pp 67-68, Santa Barbra, CA, October 16 -19, 2011. (Acceptance rate = 26%)

[PD.13] Jesse Thomason, Jingtao Wang, **Embodied Exploration of Large Scale Multi-dimensional Data on Mobile Devices**, In *National Conference on Undergraduate Research* (NCUR) 2011, Ithaca, NY, March 21 – April 2, 2011.

[PD.14] Jingtao Wang, Danny Soroker, and Chandra Narayanaswami, **Event Maps: A Collaborative Calendaring System for Navigating Large-Scale Events**, In *Work-In-Progress of ACM Conference on Human Factors in Computing Systems* (CHI 2010), pp 3691-3696, Atlanta, Georgia, April 10 -15, 2010. (Acceptance rate = 26%)

[PD.15] Jingtao Wang, Shumin Zhai, and John Canny, **Camera Phone Based Motion Sensing**, Demo, *ACM symposium on User Interface Software and Technology* (UIST 2006), Montreux, Switzerland, October 15 -18, 2006. (Acceptance rate = 23%)

[PD.16] Jingtao Wang, and John Canny, **End-User Place Annotation on Mobile Devices : A Comparative Study**, In *Work-In-Progress of ACM Conference on Human Factors in Computing Systems* (CHI 2006), pp 493-1498, Montreal, Canada, April 24-27, 2006. (Acceptance rate = 23%)

Technical Reports

[TR.1] Jingtao Wang, **Perceptual and Context aware Interfaces on Mobile Devices**, Ph.D. Dissertation, Technical Report (UCB/EECS-2010-64), 133 pages, EECS Department, University

of California at Berkeley.

[TR.2] Jingtao Wang, Danny Soroker, Chandra Narayanaswami, **Event Maps : A Collaborative Calendaring System for Navigating Large-Scale Events**, Technical Report (#RC24971), 12 pages, IBM T.J. Watson Research Center, 10/19/2009.

Patents

[P.1] Jingtao Wang, and Shumin Zhai, **Heart Rate Detection with Multi-Use Capacitive Touch Sensors**, filed in 2015, U.S. Patent No. US14921134.

[P.2] Dan Coffman, Jonathan Munson, Chandra Narayanaswami, Danny Soroker, and Jingtao Wang, **Tool and Method for Annotating an Event Map, and Searching and Collaborating Using the Annotated Event Map**, filed in 2008, U.S. Patent No. US8433998, Issued on April 30, 2013.

[P.3] Dan Coffman, Jonathan Munson, Chandra Narayanaswami, Danny Soroker, and Jingtao Wang. **Tool and Method for Mapping and Viewing an Event**, filed in Aug 2008, U.S. Patent No 8375292, Issued on April 28, 2013.

[P.4] Per-Ola Kristensson, Jingtao Wang, and Shumin Zhai, **System and Method for Recognizing Word Patterns in a Very Large Vocabulary Based on a Virtual Keyboard Layout**, filed in March 2004, U.S. Patent Pending No. 20050190973.

[P.5] Jingtao Wang, Hui Su, Arimasa Naitoh, and Atsushi Kumaki. **System and Methods for Collaborative Handwriting Input**, filed in 2001, U.S. Patent Pending No. 20050147301.

[P.6] Qianying Wang, and Jingtao Wang, **Loading advertisements in a Web page and displaying a Web page**, filed in 2000, U.S. Patent Pending No. 20020175935.

[P.7] Jingtao Wang, Shumin Zhai, and Hui Su, **System and Method for Accelerating Chinese Text Input**, filed in 2000, U.S. Patent No. 7013258, Issued on Mar 14 2006.

[P.8] Jingtao Wang, Donald Tang, Hui Su, and Qianying Wang, **System and Method for Network Based Input Platform**, filed in 1999, U.S. Patent No. 7290029, Issued on Oct 30 2007.

Software Artifacts

CourseMIRROR CourseMIRROR explores the usage of Natural Language Processing (NLP), visualization, and mobile interactions to improve large classroom STEM education. Mobile apps for iOS and Android available for free at http://www.coursemirror.com See [C.4][PD.6] [PD.7] Deployed in 8 college and graduate level courses with 330 students as of August 2016.

AttentiveLearner AttentiveLearner improves Mobile MOOC learning via implicit physiological signal tracking. Mobile apps for Android available for free at http://www.attentivelearner.com See [C.2][C.3][C.5][C.6][C.7][C.9][PD.1][PD.2][PD.4][PD.5] Conducted 9 rounds of studies involving 220 learners as of April 2017.

LivePulseGames LivePulse Games are camera based serious mobile games for collecting users' heart rate reliability and engagingly in an longitudinal setting. Source code released under BSD license at http://mips.lrdc.pitt.edu/livepulsegames See [C.10] [PD.9] (9,000+ downloads).

BayesHeart BayesHeart is a probabilistic algorithm for extract heart rate and distinct phases of each cardiac cycle from noisy and intermittent ROI signals. Source code and dataset released under BSD license at http://mips.lrdc.pitt.edu/bayesheart See [C.11] (3,000+ downloads).

ToneWars ToneWars is a collaborative mobile game for second language (L2) learning. ToneWars provides

a learning experience that combines mastery learning, micro learning, and group-based interaction between L2 learners and native speakers. Homepage at http://mips.lrdc.pitt.edu/tonewars See [C.1][C.12] Two rounds of studies involving 32 learners to date.

e-Chimera — e-Chimera is a visual end-user programming environment for domain researchers to design, prototype and deploy interactive, structured experiments on mobile devices. Homepage: http://mips.lrdc.pitt.edu/e-chimera/ Used to built a Hindi Language Tutor for a 108-learner, longitudinal study in Bangalore, India in summer 2014.

LensGesture — LensGesture is a pure software approach for augmenting mobile interactions with back-of-device finger gestures. Source code released under BSD license at http://mips.lrdc.pitt.edu/lensgesture See [C.13] (18,000+ downloads)

Event Maps — Event Maps is a rich internet application intended to help people browse, organize and collaborate on large, multi-track conference events. Event Maps has been adopted by IEEE SCC 2009, Lotusphere 2010, ACM CHI 2010 and IEEE ICIA 2010 to host their official conference schedules. See [TR.2], [PD.14], [P.2], [P.3]. http://www.chi2010.org/attending/program.html

TinyMotion & SHRIMP — TinyMotion is a pure software approach that detects the movements of cell phones in real-time by analyzing image sequences captured by the built-in camera. SHRIMP (Small Handheld Rapid Input with Motion and Prediction) is a system and method that supports effective text input on camera phones equipped with a standard 12-key keypad powered by TinyMotion. TinyMotion & SHRIMP are open source project released under the BSD license. See [C.15], [C.17], [C.18], [PD.13], [TR.1] http://tinymotion.org (53,000+ downloads)

LiveNotes — LiveNotes a note-taking application designed to support cooperative note-taking/sharing in a large classroom environment. The latest version is implemented for Tablet PC by using the TabletPC SDK and the .NET framework. LiveNotes is open source software released under the BSD license. See [C.20] http://sourceforge.net/projects/livenotes/

Honors and Awards

2017 Publication [C.2] selected by ACM CHI 2017 for Official Press Release.

2017 Microsoft Azure for Research Award

2016 ACM ICMI 2016 Best Student Paper Award

2016 ACM UIST 2016 Excellent Reviewer

2016 Google Faculty Research Award

2015 ACM ICMI 2015 Best Paper Nomination

2014 Google Visiting Faculty Member Scholarship

2013 Hewlett International Award, University of Pittsburgh

2011 Provost's Advisory Council on Instructional Excellence (ACIE): Innovation in Education Award, University of Pittsburgh

2010 CHI 2010 Best Paper Honorable Mention

2003 UC Berkeley Regents' Fellowship

2001 IBM Research Annual Excellent Performance

2001 IBM CRL Leadership Communications Award

2001 IBM Research Invention Achievement First Plateau Award

2001 IBM Long Term Performance Plan (Stock Option) Award

2000 IBM Research Annual Excellent Performance

2000	IBM Long Term Performance Plan (Stock Option) Award
1999	IBM Research Invention Achievement First Patent Application Award
1997	Excellent Teaching Assistant Award, Xi'an Jiaotong University
1996	First Class Aristek Fellowship, Xi'an Jiaotong University
1996	National System Analyst Certificate on Computer Software by the State Council of China
1995	National Senior Software Engineer Certificate by the State Council of China
1993	1st Place Winner, the 5th "Cait Cup" XJTU Computer Programming Contest
1993	3rd Prize in XJTU Campus Physics Context
1993	1st Prize in XJTU Campus Advanced Mathematics Contest
1992, 1994, 1995	First Class Fellowship for Excellent Students, Xi'an Jiaotong University
1993	Second Class Fellowship for Excellent Students, Xi'an Jiaotong University

Professional Activities

Reviewer	ACM Human Factors in Computing Systems (*CHI*), 2004 – 2016 ACM User Interface Software and Technology (*UIST*), 2004 – 2005, 2007 – 2016 ACM Transactions on Computer Human Interaction (*ToCHI*), 2003, 2006, 2007, 2009 – 2015 ACM Transactions on Knowledge Discovery from Data (*TKDD*), 2014 ACM Transactions on Interactive Intelligent Systems (*TiiS*), 2013 ACM International Conference on Intelligent User Interface (*IUI*), 2010, 2012, 2013 International Journal of Human-Computer Studies (*IJHCS*), 2011 - 2015 International Conference on Ubiquitous Computing (*Ubicomp*), 2009, 2013 – 2016 IEEE Transactions on Learning Technologies (*TLT*), 2015
Program Committee	Demos and Posters co-Chair of ACM Conference on Intelligent User Interfaces (*IUI*) 2017 Associate Chair of ACM Human Factors in Computing Systems (*CHI*) 2017 Associate Chair of ACM Human Factors in Computing Systems (*CHI*) 2016 IEEE International Conference on Computer and Information Technology (*CIT*) 2014 IEEE International Conference on Mobile Data Management (*MDM*) 2014 (publicity co-chair) Interfaces and Human Computer Interaction (*IHCI*) Conference 2013 China Symposium on Human Computer Interaction 2013 Asian Pacific Conference on Human-Computer Interaction (*APCHI*) 2012, 2013
Committee Member	Graduate Admission and Financial Aid (GAFA) committee, CS, University of Pittsburgh 2010 – 2014 Graduate Evaluation, Assignment & Training (GREAT) committee, CS, University of Pittsburgh 2014 - present International Chinese Association of Human Computer Interaction (*ICAHCI*), 2012 – present
Member	Association for Computing Machinery (*ACM*) since 2000 ACM Special Interest Group of Computer Human Interaction (*SIGCHI*) since 2000