Xiangmin Fan

Ph.D., Associate Professor
HCI Lab, Institute of Software, Chinese Academy of Sciences (ISCAS)
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EMPLOYMENT

Associate Professor   Jul. 2017- Present

- HCI Lab, Institute of Software, Chinese Academy of Sciences (Major Appointment)
- University of Chinese Academy of Sciences (Adjunct Appointment)
- **Supported by CAS 100 Talents Program (中国科学院"百人计划")**

Research Intern   Summer 2016 & Summer 2015

- Bosch Research (Pittsburgh), USA
- Mentors: Dr. Lisa Yu and Dr. Ji Eun Kim

Graduate Student Researcher and Instructor   Aug. 2011-May 2017

- Department of Computer Science, University of Pittsburgh, USA
- Advisor: Dr. Jingtao Wang

EDUCATION

Ph.D., Computer Science   Aug. 2011-May 2017

- University of Pittsburgh, USA
- Dissertation Topic: Scalable Teaching and Learning via Intelligent User Interfaces
- Committee: Dr. Jingtao Wang (Chair), Dr. Diane Litman, Dr. Milos Hauscrecht, Dr. Muhsin Menekse

Exchange Undergraduate Student, Computer Science   Sep. 2010-Dec. 2010

- Nanyang Technological University, Singapore

B.S., Computer Science   Sep. 2007-Jun. 2011

- Shandong University, China

RESEARCH INTERESTS

Human-Computer Interaction, Intelligent User Interfaces, Mobile Interfaces, Interactive Machine Learning, and their applications in Education and Healthcare.

PUBLICATIONS

Jin Huang, Feng Tian, **Xiangmin Fan**, Xiaolong (Luke) Zhang, and Shumin Zhai. **Understanding the Uncertainty in 1D Unidirectional Moving Target Selection.** In *Proceedings of the 36th Annual ACM Conference on Human Factors in Computing Systems (CHI 2018).*

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 the 35th Annual ACM Conference on Human Factors in Computing Systems (CHI 2017).*

Xiangmin Fan, Wencan Luo, Muhsin Menekse, Diane Litman and 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)*.

Ji Eun Kim, **Xiangmin Fan**, and Daniel Mosse. **Empowering End Users for Social Internet of Things.** In *Proceedings of 2017 IEEE Second International Conference on Internet-of-Things Design and Implementation (IoTDI 2017)*.

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).*

Xiangmin Fan, Wencan Luo, Muhsin Menekse, Diane Litman and Jingtao Wang. **CourseMIRROR: Enhancing Large Classroom Instructor-Student Interactions via Mobile Interfaces and Natural Language Processing.** In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA 2015).*

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)*.

Xiangmin Fan, Youming Liu, Nan Cao, Jason Hong, and Jingtao Wang. **MindMiner: Quantifying Entity Similarity via Interactive Distance Metric Learning.** In *Proceedings of 20th ACM Conference on Intelligent User Interfaces Companion (IUI Companion 2015).*

Wencan Luo, **Xiangmin Fan**, Muhsin Menekse, Jingtao Wang, and Diane Litman. **Enhancing Instructor-Student and Student-Student Interactions with Mobile Interfaces and Summarization.** In *Proceedings of the 2015 Conference of the North American Chapter of the Association for Computational Linguistics – Human Language Technologies (NAACL 2015).*

SELECTED TALKS & PRESENTATIONS

Toward Next Generation Mobile Learning. Keynote, The 2017 Workshop on Human-Machine Interaction between Korea and China, Tianjin, China.   *Dec. 26th, 2017*

Mastery Learning of Second Language Through Asynchronous Modeling of Native Speakers in a Collaborative Mobile Game. Oral Presentation, The 35th Annual ACM Conference on Human Factors in Computing Systems (CHI 2017), Denver, USA.   *Apr. 25th, 2017*

Scalable Teaching and Learning via Intelligent User Interfaces. Invited Talk, HCI Group @Lenovo Research, Beijing, China.   *Dec. 23rd, 2016*

Scalable Teaching and Learning via Intelligent User Interfaces. Invited Talk, School of Computer Science and Technology, Shandong University, Jinan, China.   *Dec. 20th, 2016*

Scalable Teaching and Learning via Intelligent User Interfaces. Invited Talk, Pervasive Interaction Lab@ Tsinghua University, Beijing, China.   *Dec. 19th, 2016*

Scalable Teaching and Learning via Intelligent User Interfaces. Guest Lecture for CS2610: Research Topics in Human Computer Interaction, Department of Computer Science, University of Pittsburgh, Pittsburgh, USA.   *Nov. 15th, 2016*

Mastery Second Language Learning through Asynchronous Modeling of Native Speakers in a Collaborative Mobile Game. CS Day Poster Presentation (**Winner of CS Day Poster Competition**), Department of Computer Science, University of Pittsburgh, Pittsburgh, USA.   *Mar. 18th, 2016*

Intelligent User Interfaces for Scalable Teaching and Learning. Guest Lecture for CS2610: Research Topics in Human Computer Interaction, Department of Computer Science, University of Pittsburgh, Pittsburgh, USA.   *Nov. 11th, 2015*

Socialite: End-User Programming in the Social Internet of Things. Internship Talk, Bosch Research and Technology Center, Pittsburgh, USA.   *Aug. 17th, 2015*

CourseMIRROR: Enhancing Large Classroom Instructor-Student Interaction via Mobile Interfaces and Natural Language Processing. Invited Exhibition and Demonstration, 16th IEEE International Conference on Mobile Data Management (MDM 2015), Pittsburgh, USA.   *Jun. 16th, 2015*

CourseMIRROR: Enhancing Large Classroom Instructor-Student Interaction via Mobile Interfaces and Natural Language Processing. Poster Presentation, The 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI 2015), Seoul, Korea.   *Apr. 21st, 2015*

MindMiner: Quantifying Entity Similarity via Interactive Distance Metric Learning. Demonstration, The 20th ACM Conference on Intelligent User Interfaces Companion (IUI 2015), Atlanta, USA.   *Mar. 30th, 2015*

BayesHeart: A Probabilistic Approach for Robust, Low-Latency Heart Rate Monitoring on Camera Phones. Oral Presentation, The 20th ACM Conference on Intelligent User Interface (IUI 2015), Atlanta, USA.   *Apr. 1st, 2015*

CourseMIRROR: Enhancing Large Classroom Instructor-Student Interaction via Mobile Interfaces and Natural Language Processing. CS Day Lightning Talk (**Winner of CS Day Graduate Student Research Competition**), Department of Computer Science, University of Pittsburgh, Pittsburgh, USA.   *Mar. 27th, 2015*

Next Generation Mobile Language Learning – Tutoring Systems and Infrastructure Support. Invited Exhibition and Demonstration, The Inaugural Meeting and Symposium of the Global Learning Council (2014), Carnegie Mellon University, Pittsburgh, USA.   *Sep. 4th, 2014*

Designing Engaging Camera Based Mobile Games for Implicit Heart Rate Monitoring. Poster Presentation, The 32nd Annual ACM Conference on Human Factors in Computing Systems (CHI 2014), Toronto, Canada.   *Apr. 28th, 2014*

MindMiner: A Mixed-Initiative Interface for Interactive Distance Metric Learning. CS Day Lightning Talk (**Winner of CS Day Graduate Student Research Competition**), Department of Computer Science, University of Pittsburgh, Pittsburgh, USA.   *Mar. 21st, 2014*

TEACHING

Instructor, Designing, Prototyping and Evaluating Human-Machine Interfaces, University of Chinese Academy of Sciences

- Graduate Level Course   *Spring 2018*

Instructor, Designing Intelligent User Interfaces, University of Chinese Academy of Sciences

- Graduate Level Course   *Fall 2017*

Instructor, Introduction to Human-Computer Interaction, University of Chinese Academy of Sciences

- Upper Level Undergraduate Course   *Fall 2017*

Teaching Assistant, Research Topics in HCI (CS2610), University of Pittsburgh

- Instructor: Dr. Jingtao Wang   *Fall 2016*

Teaching Assistant, Introduction to System Software (CS449), University of Pittsburgh

- Instructor: Dr. Wonsun Ahn   *Fall 2016*

Teaching Assistant, Interface Design Methodology (CS1635), University of Pittsburgh

- Instructor: Dr. Jingtao Wang   *Spring 2014*

Recitation Instructor, Introduction to System Software (CS449), University of Pittsburgh
- Instructor: Dr. Jonathan Misurda   *Spring 2014*

Teaching Assistant, Structure of Programming Languages (CS1621), University of Pittsburgh
- Instructor: Dr. Youtao Zhang   *Fall 2013*

Recitation Instructor, Data Structures (CS445), University of Pittsburgh
- Instructor: Dr. John Ramirez   *Spring 2013*

Recitation Instructor, Intermediate Programming Using Java (CS401), University of Pittsburgh
- Instructor: Dr. John Aronis   *Fall 2012*

Recitation Instructor, Data Structures (CS445), University of Pittsburgh
- Instructor: Dr. George Novacky   *Summer 2012*

Teaching Assistant, Introduction to Simulations (CS1538), University of Pittsburgh
- Instructor: Dr. Rebecca Hwa   *Fall 2011*

Teaching Assistant, Structure of Programming Languages (CS1621), University of Pittsburgh
- Instructor: Dr. Youtao Zhang   *Fall 2011*

SOFTWARE RELEASES

CourseMIRROR: A Mobile System to Promote and Scale Reflection Prompts in Large Classes
- Free for Classroom Usage, Deployed in 10 Classes (400+ Students)
- iOS & Android Versions Available: http://www.coursemirror.com

BayesHeart: A Robust, Low-Latency Heart Rate Monitoring Algorithm on Camera Phones
- Source Code & Dataset Available: http://mips.lrdc.pitt.edu/bayesheart/

Busgazer: A Realtime Transit App for Pittsburghers
- Serve 20k+ Local Users
- iOS & Android Versions Available: http://www.busgazer.com

CrowdGrammar: Leveraging Crowd Workers for Proofreading Tasks
- http://www.crowdgrammar.com

HONORS & AWARDS

- CAS 100 Talents Program, Chinese Academy of Sciences, 2017
- Winner of Bezirk Hackathon, Bosch Research and Technology Center (Pittsburgh), 2016
- Winner of CS Day Poster Competition, Department of Computer Science, University of Pittsburgh, 2016
- Winner of CS Day Research Competition, Department of Computer Science, University of Pittsburgh, 2015
- Student Travel Grants, 16th IEEE International Conference on Mobile Data Management, 2015
- Winner of CS Day Research Competition, Department of Computer Science, University of Pittsburgh, 2014
- Graduate Student Fellowship, University of Pittsburgh, 2012
- Honorable Mentions, Mathematical Contest in Modeling (MCM/ICM 2010), USA, 2010

- CVIC SE Scholarship, CVIC Software Engineering Co., Ltd., 2010
- Scholarship of Scientific Research Innovation, Shandong University, 2010
- Honorable Mentions, National Undergraduate Mathematical Contest in Modeling, China, 2009
- Weichai Power Scholarship, Weichai Power Co., Ltd., 2009
- 1st Grade Award of the Students' Scholarship, Shandong University, 2008

PROFESSIONAL ACTIVITIES

- Co-Organizer: Workshop on Deep Learning Visualization @ ICML 2017
- Co-Chair: Chinese CHI 2017-2018 (Poster and Demo)
- Program Committee: Chinese CHI 2018, IUI 2018 (Demo)
- Reviewer: CHI 2015-2018, DIS 2018, IUI 2017-2018, ICMI 2015, TiiS 2017-2018
- Student Volunteer: CHI 2014-2016
- Coordinator: Weekly HCI Group Seminar, University of Pittsburgh, 2014-2015

REFERENCES

- Dr. Jingtao Wang, Assistant Professor, University of Pittsburgh, jingtaow@cs.pitt.edu
- Dr. Diane Litman, Professor, University of Pittsburgh, litman@cs.pitt.edu
- Dr. Muhsin Menekse, Assistant Professor, Purdue University, menekse@purdue.edu
- Dr. Ji Eun Kim, Principle Research Scientist, Bosch Research, JiEun.Kim@us.bosch.com
- Dr. Lisa Yu, Research Scientist, Bosch Research, Lisa.Yu@us.bosch.com