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YONGSUNG KIM

Research Interests

My research advances the design of intelligent systems that transform how people and their communities advance their individual and collective goals. Specifically, my research designs *flexible coordination systems* that do not enforce rigid ways of working and collaborating but that instead surface ways to advance goals of interest as opportunities arise.

My research broadly spans and draws from the fields of Human-Computer Interaction, Artificial Intelligence, and Social & Crowd Computing.

Appointments

Carnegie Mellon University, Pittsburgh, PA
09/2020–present. Postdoctoral Fellow, Human-Computer Interaction Institute
Advisor: Dr. Niki Kittur

Bell Labs, Cambridge, UK
06/2018–08/2018. Data Science Research Intern, Social Dynamics Group

Microsoft Research, Redmond, WA
06/2017–08/2017. Research Intern, Information and Data Sciences Group

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea
06/2013–08/2013. Research Intern, Interactive Computing Lab

Education

Northwestern University, Evanston, IL
2014–2020. PhD in Technology and Social Behavior
Thesis: *Designing Flexible Coordination Systems to Advance and Balance Individual and Collective Goals in Physical Crowdsourcing*
Committee: Haoqi Zhang (Chair), Darren Gergle, Aaron Shaw, Eric Horvitz

Swiss Federal Institute of Technology in Lausanne (EPFL), Lausanne, Switzerland
2010–2013. Master of Science in Computer Science

Tsinghua University, Beijing, China
2005–2009. Bachelor of Engineering in Computer Science

Publications

Peer-Reviewed Conference Papers

2020. **Yongsung Kim**, Luca Aiello, Daniele Quercia. PepMusic: Motivational Qualities of Songs for Daily Activities. *EPJ Data Science*.

2019. Kapil Garg, **Yongsung Kim**, Darren Gergle, Haoqi Zhang. 4X: A Hybrid Approach for Scaffolding Data Collection and Interest in Low-Effort Participatory Sensing. *Proceedings of the 22nd ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '19)*. ACM, Austin, Texas.

2019. **Yongsung Kim**, Adam Fourney, Ece Kamar. Studying Preferences and Concerns About Information Disclosure in Email Notifications. *Proceedings of World Wide Web Conference (WWW '19)*. ACM, San Francisco, California.

2018. **Yongsung Kim**, Darren Gergle, Haoqi Zhang. Hit-or-Wait: Coordinating Opportunistic Low-effort Contributions to Achieve Global Outcomes in On-the-go Crowdsourcing. *Proceedings of ACM Conference on Human Factors in Computing Systems (CHI '18)*. ACM, Montreal, Canada.

2017. **Yongsung Kim**, Aaron Shaw, Haoqi Zhang, and Elizabeth Gerber. Understanding Trust amid Delays in Crowdfunding. *Proceedings of the 20th ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '17).* ACM, Portland, Oregon.

2016. **Yongsung Kim**, Emily Harburg, Shana Azria, Aaron Shaw, Elizabeth Gerber, Darren Gergle, and Haoqi Zhang. Studying the Effects of Task Notification Policies on Participation and Outcomes in On-the-go Crowdsourcing. *Fourth AAAI Conference on Human Computation and Crowdsourcing (HCOMP '16).* AAAI, Austin, Texas.

2016. Katherin Lin, Henry Spindell, Scott Cambo, **Yongsung Kim**, and Haoqi Zhang. Habitsourcing: Sensing the Environment through Immersive, Habit-Building Experiences. *Proceedings of the 29th Annual ACM Symposium on User Interface Software & Technology (UIST '16).* ACM, Tokyo, Japan.

2014. Sangkeun Park, **Yongsung Kim**, Uichin Lee, Mark Ackerman. Understanding localness of knowledge sharing: a study of Naver KiN 'here'. *Proceedings of the 16th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '14).* ACM, Toronto, Canada.

Extended Abstracts, Workshop Papers, and Works-in-Progress

2015. **Yongsung Kim**, Emily Harburg, Shana Azria, Elizabeth Gerber, Darren Gerlge, and Haoqi Zhang Enabling Physical Crowdsourcing On-the-go with Context-Sensitive Notifications. *Third AAAI Conference on Human Computation and Crowdsourcing (HCOMP '15).* AAAI, San Diego, LA.

2015. **Yongsung Kim**. Libero: On-the-go Crowdsourcing for Package Delivery. *Proceedings of ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '15).* ACM, New York, NY, USA. *1st place, Student Research Competition*.

2015. Emily Harburg, **Yongsung Kim**, Elizabeth Gerber, Haoqi Zhang. CrowdFound: A Mobile Crowdsourcing System to Find Lost Items On-the-Go. *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '15).* ACM, New York, NY, USA.

2013. **Yongsung Kim**, Julien Eberle, Erol Un, Riikka Haninnen, Karl Aberer. Mobile Observatory: an Exploratory Study of Mobile Air Quality Monitoring Application. *Workshop on Human Interfaces for Civic and Urban Engagement (HiCUE) in Ubicomp 2013.* ACM, Zurich, Switzerland.

2013. Erol Un, Julien Eberle, **Yongsung Kim**, Karl Aberer. A Model-based Back-end for Air Quality Data Management. *Workshop on Pervasive Urban Crowdsensing Architecture and Applications (PUCCA) in Ubicomp 2013.* ACM, Zurich, Switzerland.

2013. **Yongsung Kim**, Daishi Kato, Kazuo Kunieda, Keiji Yamada. Preliminary User Study for Gratitude and Reciprocity in a Q&A System. *Proceedings of the 2013 conference on Computer supported cooperative work companion (CSCW '13).* ACM, San Antonio, TX, USA.

Research Experience

Delta Lab, Northwestern University

09/2014–08/2020. Research Assistant. Advisor: Dr. Haoqi Zhang

Design, build, and empirically evaluate intelligent systems that opportunistically recruit members in a community to make small, convenient contributions to flexibly and efficiently achieve collective goals through their existing routines.

Social Dynamics Group, Bell Labs

06/2018–08/2018. Data Science Research Intern. Mentors: Dr. Luca Aiello, Dr. Daniele Quercia

Characterized and categorized common daily activities with music features, and developed a music recommender system for motivating daily activities.

Information and Data Sciences Group, Microsoft Research
06/2017–08/2017. Research Intern. Mentors: Dr. Adam Fourney, Dr. Ece Kamar
Studied preferences and concerns about accidental information disclosure in notifications.

Interactive Computing Lab, Korea Advanced Institute of Science and Technology (KAIST)
06/2013–08/2013. Research Intern. Advisor: Dr. Uichin Lee
Analyzed location-based Q&A dataset to understand the topical and typological patterns related to the geographic characteristics, geographic locality of user activities. Conducted a survey to understand motivations of local knowledge sharing.

Teaching and Mentoring

Teaching
Design, Technology, and Research (COMP_SCI 315, 497). Instructor. Winter and Spring 2020.
Design, Technology, and Research (COMP_SCI 315, 497). SIG Mentor. Fall 2014– Spring 2020.
Socal and Crowd Computing (EECS 395/495). Teaching Assistant. Fall 2015.

Undergraduate Research Advising
Abizar Bagasrawala. 09/2019–06/2020. Advise research on Relational development in On-the-go crowdsourcing.

Maggie Lou, Sam Nazer, and Cooper Barth. 03/2018–06/2020. Advise research on Last mile problem in On-the-go crowdsourcing.

Olivia Barnett, Priya Shah, and Eli Cohen. 09/2017–06/2018. Advised research on Dynamic Habitsourcing.

Alaina Kafkes. 09/2016–03/2017. Advised research on Scaffolding Habitsourcing: Interactions and Methods.

Sasha Weiss. 03/2016–12/2017. Advised research on Context-aware Microreminder.

Kapil Garg. 01/2016–06/2017. Advised research on 4X: Scaffolding Low-Effort Sensing.
Work led to paper "4X: A Hybrid Approach for Scaffolding Data Collection and Interest in Low-Effort Participatory Sensing" at CSCW'19.

Katherine Lin and Henry Spindell. 03/2015–05/2016. Advised research on Habitsourcing: Build personal habits with immersive experiences that collect environmental data.
Work led to paper "Habitsourcing: Sensing the Environment through Immersive, Habit-Building Experiences" at UIST'16.

Shana Azria. 12/2014–03/2016. Advised research on On-the-go crowdsourcing for package delivery.
Work led to paper "Studying the Effects of Task Notification Policies on Participation and Outcomes in On-the-go Crowdsourcing" at HCOMP'16.

Aaron Loh. 09/2015–12/2015. Advised research on Low-effort crowdsourcing.

Awards

Segal Design Cluster Fellowship, 2015
1st Place, Student Research Competition at CHI 2015

Service

Reviewer
CHI 2018, 2020, 2021. CSCW 2018, 2019, 2020. Ubicomp 2019, 2020. UIST 2019. WWW 2017.

References

Dr. Haoqi Zhang - Associate Professor of Computer Science at Northwestern University
Dr. Darren Gergle - Professor of Communication Studies at Northwestern University
Dr. Adam Fourney - Principal Researcher at Microsoft Research
Dr. Aaron Shaw - Associate Professor of Communication Studies at Northwestern University