

Ha-Kyung (Hidy) Kong

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Seattle University

Seattle, WA

ASSISTANT PROFESSOR IN COMPUTER SCIENCE

Education

University of Illinois Urbana Champaign

Champaign, IL

PHD IN COMPUTER SCIENCE

Aug 2019

Advisor: Dr. Karrie Karahalios

Calvin College

Grand Rapids, MI

B.S. IN COMPUTER SCIENCE (WITH HONORS DISTINCTION)

May 2013

B.A. IN MUSIC (WITH HONORS DISTINCTION)

Research Interests

My research in Human-Computer Interaction aims to facilitate communication through visualizations. I design, build, and evaluate interactive systems to study people's perceptions and usage of data visualization in various domains including healthcare and the media.

Research and Professional Experience

Research Assistant

Champaign, IL

UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN

Fall 2016 - present

- Held bi-weekly meetings with special education professors and graduate students to develop a Family Behavior Support app (FBSapp) to address challenging behaviors of children
- Iteratively developed the design for FBSapp with a design student and implemented the app in Swift

Research Intern

San Francisco, CA

ADOBE CREATIVE TECHNOLOGIES LAB

Summer 2016, 2017

- Studied presenters' preferences and uses of visual cues that guide the audience's attention to a particular area of a visualization. Developed a visual cue taxonomy and a visual cue webtool (VisualQ).
- Studied frames and slants in visualization titles and how they affect visualization interpretation.

Website Developer

Grand Rapids, MI

CALVIN COLLEGE

Summer 2012 - Spring 2013

- Designed and implemented the parsing of a hymn database website
- Worked with different types of XML files and published books on Amazon and iBook

Publications

Journal articles (peer-reviewed)

Kong, H. K., Lee, J., & Karahalios, K. (2017). "A Comparative Study of Visualizations with Different Granularities of Behavior for Communicating about Autism." *Proc. ACM Hum.-Comput. Interact*, 1(CSCW), 59-1. (27% acceptance rate)

*Both authors contributed equally to this work

Rahman, S., Aliakbarpour, M., **Kong, H. K.**, Blais, E., Karahalios, K., Parameswaran, A., & Rubinfield, R. (2017). "I've seen enough: incrementally improving visualizations to support rapid decision making." *Proceedings of the VLDB Endowment*, 10(11), 1262-1273.

Kong, H. K., Liu, Z., & Karahalios, K. (2017, June). "Internal and external visual cue preferences for visualizations in presentations." In *Computer Graphics Forum* (Vol. 36, No. 3, pp. 515-525). (27% acceptance rate)

Conference proceedings (peer-reviewed)

Jung G., Oh J., Jung Y., Sun J., **Kong, H. K.**, Lee U. "Good Enough!": Flexible Goal Achievement with Margin-based Outcome Evaluation." In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. ACM. (26.3% acceptance rate)

Kim, J. G., **Kong, H. K.**, Hong, H., & Karahalios, K. "Enriched Social Translucence in Medical Crowdfunding." In *Proceedings of the 2020 Conference on Designing Interactive Systems (DIS)*. ACM. (24% acceptance rate)

Kong, H. K. & Karahalios, K. "Addressing Cognitive and Emotional Barriers in Parent-Clinician Communication through Behavioral Visualization Webtools." In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. ACM. (24.3% acceptance rate)

Kong, H. K., Liu, Z., & Karahalios, K. "Trust and Recall of Information across Varying Degrees of Title-Visualization Misalignment." In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (p. 346). ACM. (23.8% acceptance rate)

Kong, H. K., Zhu, W., Liu, Z., & Karahalios, K. "Understanding Visual Cues in Visualizations Accompanied by Audio Narrations." In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (p. 50). ACM. (23.8% acceptance rate)

Kong, H. K., Liu, Z., & Karahalios, K. "Frames and Slants in Titles of Visualizations on Controversial Topics." In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (p. 438). ACM. (25.7% acceptance rate)

Kong, H. K., & Karahalios, K. "Parental Perceptions, Experiences, and Desires of Music Therapy." In *AMIA Annual Symposium Proceedings* (Vol. 2016, p. 1870). American Medical Informatics Association.

Lee, J., **Kong, H. K.**, Lin, S., & Karahalios, K. "Plexlines: Tracking Socio-communicative Behaviors Using Timeline Visualizations." In *AMIA Annual Symposium Proceedings* (Vol. 2016, p. 1890). American Medical Informatics Association.

Kong, H. K., Lee, J., Ding, J., & Karahalios, K. "EnGaze: Designing Behavior Visualizations with and for Behavioral Scientists." In *Proceedings of the 2016 ACM Conference on Designing Interactive Systems (DIS)*, pp. 1185-1196). ACM. (26% acceptance rate)

Kim, J. G., **Kong, H. K.**, Karahalios, K., Fu, W. T., & Hong, H. "The power of collective endorsements: credibility factors in medical crowdfunding campaigns." In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 4538-4549). ACM. (23.4% acceptance rate)

Kong, H. K., Wu, Y. W., Bailey, B., & Karahalios, K. (2015, December). "Culture, Imagined Audience, and Language Choices of Multilingual Chinese and Korean Students on Facebook." In *International Conference on Social Informatics* (pp. 1-16). Springer, Cham.

Selected Research Projects

Enhancing Healthcare Chatbot Experience

Seattle University

ADVISOR

2020 - present

- Integrated Fitbit data on CocoBot, a chatbot for the families of children with chronic health conditions, to track the sleep quality of the caregivers.
- Designed visualizations for showing the self-reported frequency of the symptoms and the effectiveness of the solutions.

Public Health Infographic

Seattle University

ADVISOR

2020 - present

- Conducted a literature review and an online survey on public health infographics.
- Initiated the development of an infographic webtool for public health professionals that is accessible and easy to use.

Slants and Frames in Visualization Titles

UIUC

LEAD STUDENT

2017-2019

- Measured the impact of visualization titles on the recall of information and the perceived bias.
- Studied how people compose titles for visualizations based on the proposed frame and intent.

Visualizing Autism Pre-screening Sessions

UIUC

LEAD STUDENT

2015-2019

- Developed two webtools (Plexlines and EnGaze) for visualizing communicative behaviors during pre-screening sessions.
- Interviewed clinicians and parents on the use of visualization webtools in their communication.

Internal and External Visual Cues

UIUC

LEAD STUDENT

2016-2018

- Developed a webtool for that supports different types of internal and external visual cues.
- Studied the impact of visual cues on comprehension and recall of information when paired with audio narration.

Teaching Experience

Instructor

Seattle, WA

SEATTLE UNIVERSITY

Fall 2019 – present

- CPSC 2430 Data Structures
- CPSC 5230 Visual Analytics
- CPSC 4220/5220 User Experience Design (Starting SQ21)

Teaching Assistant

Champaign, IL

UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN

Fall 2013 – Spring 2016

- INFO103 (≈ 40 students) – Created and graded a machine problem, led weekly lab sections
- CS101 (≈ 700 students) - Led two weekly lab sections of 40 students
- CS467 - Social Visualizations (≈ 90 students) - Reviewed the weekly paper critiques & mentored and evaluated design projects

Tutor

Grand Rapids, MI

CALVIN COLLEGE

Fall 2010 - Spring 2013

- Computer science: 'Intro to Programming' and 'Data Structures and Algorithms'
- Music: 'Music Theory I,' 'Music Theory II,' and 'Music History II'
- Psychology: 'Intro to Psychology' and 'Abnormal Psychology'

Academic Coach

Grand Rapids, MI

CALVIN COLLEGE

Summer 2012 - Spring 2013

- Coached students to manage time efficiently, organize better, and study effectively
- Gave suggestions and advice on how to manage academics with other areas of life

Invited Talks

GEORGIA INSTITUTE OF TECHNOLOGY

- CS 4803 [Personal Health Informatics] - Guiding Communication through Data Visualizations - 02/17/2021

UNIVERSITY OF WASHINGTON

- BIME 533 [Public Health and Informatics] - Public Health Infographics - 02/02/2021

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY

- IE481 [Data Visualization] - Guiding Communication through Data Visualizations - 06/18/2020

SEATTLE UNIVERSITY

- CPSC 5890 [Seminar] - Guiding Communication through Data Visualizations - 05/20/2020

UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN

- CS598KGK [Social Spaces] - Misinformation and Consequences - 9/13/2018
- CS598KGK - Public Displays and Performance - 9/12/2017
- CS467 [Social Visualization] - NLP, Sentiment Analysis, Machine Learning and Pattern Recognition - 03/29/2016
- CS467 - Ethics and Privacy - 11/18/2014
- CS467 - NLP, Sentiment Analysis, Machine Learning and Pattern Recognition - 10/28/2014
- CS467 - Audio-Video Systems - 10/21/2014
- CS105 [Intro Computing]- Recursion - 11/11/2013

Selected Honors & Awards

2018-2019	Marion Morse Wood Fellowship
2017	Grace Hopper Celebration of Women in Computing (GHC) Student Scholarship
Fall 2014	Outstanding Teaching Assistant Award
2013	CCA Computing Award Awarded to the top graduating senior in computer science
2009-2013	Trustee Scholarship Awarded to top 3% of first-year students accepted

Academic and Community Services

Reviewer	CHI 2018-2021, VIS 2018, 2020 & 2021, CGA 2020, C&C 2019, AMIA 2017 & 2019, JAMIA 2018
Panelist	NSF Proposal Review Panel 2021
Mentor	Girls who Code, San Francisco, U.S.A., Summer 2016
Student Volunteer	2018 ACM CSCW, Jersey City, U.S.A., Nov 2018
Program Committee	COMPSAC 2019
University Committee	Office of Sponsored Projects Advisory Committee, CS Professionalism and DEI Committee, Boeing Diversity Committee