

Research Interests

Human Computer Interaction (HCI): Information Exploration, Visual Information-Seeking, Distributed Group Collaboration
Information Visualization (InfoVis): Visual Perception, Distance Cartograms, Visual Analytics

Education

University of Washington Ph.D. Candidate at Dept. of Human Centered Design & Engineering (HCDE) Advisor: Dr. Cecilia Aragon (UW HCDE) Dissertation Committee: Dr. Cecilia Aragon (UW HCDE, chair), Dr. Sarah Battersby (Tableau Research), Dr. Jessica Hullman (UW iSchool), Dr. Mark Zachry (UW HCDE), and Dr. Jevin West (UW iSchool)	2012– 2018 (expected), USA
Yonsei University MS of Computer Science Advisor: Dr. In-Kwon Lee (CS)	2005–2007, Korea
Ajou University (Top 0.7% in College scholastic ability test) BS of Digital Media	1999–2005, Korea
Dae-il Foreign Language High School Dept. of English	1995-1998, Korea

Publications

Refereed Conference Proceedings and Journal Articles

- [16] **To Distort or Not to Distort: Distance Cartograms in the Wild**
Sungsoo (Ray) Hong, Minjoon Yoo, Bonnie Chinh, Amy Han, Sarah Battersby, & Juho Kim. 2018. In *Proceedings of the ACM conference on Human Factors in Computing Systems (CHI2018)*. Paper No. 628. (25.8% accepted)
- [15] **Collaborative Dynamic Queries: Supporting Distributed Small Group Decision-making**
Sungsoo (Ray) Hong, Minhyang (Mia) Suh, Nathalie Henry Riche, Jooyoung Lee, Juho Kim, & Mark Zachry. 2018. In *Proceedings of the ACM conference on Human Factors in Computing Systems (CHI2018)*. Paper No. 66. (25.8% accepted)
- [14] **Coco's Videos: An Empirical Investigation of Video-Player Design Feature and Children's Media Use**
Alexis Hiniker, Sharon Heung, Sungsoo (Ray) Hong, & Julie Kientz. 2018. In *Proceedings of the ACM conference on Human Factors in Computing Systems (CHI2018, Honorable Mention)* Paper No. 254. (25.8% accepted)
- [13] **Toward the Operationalization of Visual Metaphor**
Alexis Hiniker, Sungsoo (Ray) Hong (co-lead authored), Yea-Seul Kim, Nan-chen Chen, Jevin West, & Cecilia Aragon. 2017. *Journal of the Association for Information Science and Technology* 68, 10: 2338 – 2349.
- [12] **Designing Interactive Distance Cartogram to Support Urban Travelers**
Sungsoo (Ray) Hong, Rafal Kocielnik, Sarah Battersby, Min-Joon Yoo, Juho Kim, & Cecilia Aragon. 2017. In *Proceedings of IEEE Pacific Visualization Symposium (PacificVis2017)*. 81-90. (29.3% accepted)
- [11] **SparQs: Visual Analytics for Sparking Creativity in Social Media Exploration**
Nan-Chen Chen, Michael Brooks, Rafal Kocielnik, Sungsoo (Ray) Hong, Jeff Smith, Sanny Lin, Zening Qu, & Cecilia Aragon. 2017. In Meiselwitz G. (eds) *Social Computing and Social Media. Applications and Analytics*. Lecture Notes in Computer Science, vol. 10283. Springer.

- [10] **Lariat: A Visual Analytics Tool for Social Media Researchers**
Nan-Chen Chen, Michael Brooks, Rafal Kocielnik, **Sungsoo (Ray) Hong**, Jeff Smith, Sanny Lin, Zening Qu, & Cecilia Aragon. 2017. In *Proceedings of Hawaii Intl. Conference on System Sciences (HICSS)*.
- [9] **MyTime: Designing and Evaluating an Intervention for Smartphone Non-Use**
Alexis Hiniker, **Sungsoo (Ray) Hong**, Kohno Tadayoshi, & Julie Kientz. 2016. In *Proceedings of the ACM conference on Human Factors in Computing Systems (CHI2016)*. 4746-4757. (23% accepted)
- [8] **Hidden symbols: How informal symbolism in digital interfaces disrupts usability for preschoolers**
Alexis Hiniker, Kielely Sobel, **Sungsoo (Ray) Hong**, Hyewon Suh, India Irish, & Julie Kientz. 2016. *International Journal of Human-Computer Studies* 90: 53-67.
- [7] **VIZMO Game Browser: Accessing Video Games by Visual Style and Mood**
Jin Ha Lee, **Sungsoo (Ray) Hong**, Hyerim Cho, & Yea-Seul Kim. In *Proceedings of the ACM conference on Human Factors in Computing Systems (CHI2015)*. 149-152. (18% accepted)
- [6] **Touchscreen Prompts for Preschoolers: Designing Developmentally Appropriate Techniques for Teaching Young Children to Perform Gestures**
Alexis Hiniker, Kielely Sobel, **Sungsoo (Ray) Hong**, Hyewon Suh, India Irish, & Julie Kientz. 2015. In *Proceedings of the ACM Conference on Interaction Design & Children (IDC2015)*. 109-118. (23% accepted)
- [5] **Designing Tools to Support Advanced Users in Social Media Interaction**
Hyunggu Jung, **Sungsoo (Ray) Hong**, Perry Maes, & Mark Zachry. 2015. In *Proceedings of the International Conference on ACM Design of Communication*.
- [4] **Traffigram: Distortion for Clarification via Isochronal Cartography**
Sungsoo (Ray) Hong, Yea-Seul Kim, Jong-Chul Yoon, & Cecilia Aragon. In *Proceedings of the ACM conference on Human Factors in Computing Systems (CHI2014)*. 908-916. (22.8% accepted)
- [3] **Collaborative Visual Analysis of Sentiment in Twitter Events**
Michael Brooks, John Robinson, Megan Torkidson, **Sungsoo (Ray) Hong**, & Cecilia Aragon. 2014. In *Proceedings of Cooperative Design, Visualization & Engineering*. 1-8.
- [2] **Point and Control: Control Multi-device with Single Remote Control**
Sungsoo (Ray) Hong & Juil Eom. 2009. In Jacko J.A. (eds) *Human-Computer Interaction. Ambient, Ubiquitous and Intelligent Interaction*. Lecture Notes in Computer Science, vol. 5612. Springer.
- [1] **Interactive System for Efficient Video Cartooning**
Sungsoo (Ray) Hong, Jong-Chul Yoon, In-Kwon Lee, & Siwoo Byun. Mirage 2007

Patents (Granted)

- [9] **Visual Representation of Distance Cartograms**
Sungsoo (Ray) Hong, Cecilia Aragon, Min-Joon Yoo.
US9773321B2 (USA)
- [8] **Methods and Systems for Providing Geotemporal Graphs**
Cecilia Aragon, **Sungsoo (Ray) Hong**, Benjamin Samples, & Jong-Chul Yoon.
US9341486B2 (USA)
- [7] **Apparatus and Content Playback Method Thereof**
Sungsoo (Ray) Hong, Chang-Hwan Hwang, & Sahng-hee Bahn.
KR101816168B1 (Korea), CN103930852B (China)
- [6] **User Terminal Device and Method for Controlling a Renderer Thereof**
Sungsoo (Ray) Hong, Sahng-hee Bahn, Chang-Hwan Hwang, Jong-chan Park, Ju-yun Sung, & Keum-Koo Lee.
CN103874977B (China)
- [5] **Method and Apparatus for Communication Connection Service**
Sahnghee Bahn, **Sungsoo (Ray) Hong**, & Changhwan Hwang.
US9241246B2 (USA)

- [4] **Integrated Operation Method for Social Network Service Function and System Supporting the Same**
Sungsoo (Ray) Hong, Sahng Hee Bahn, & Chang-hwan Hwang.
US9734538B2 (USA)
- [3] **Wireless Communication Method and Apparatus**
Sungsoo (Ray) Hong, Chang-Seog Ko, Pil-seung Yang, Chang-hwan Hwang.
US9526124B2 (USA)
- [2] **Method of Storing Status Information about Content Reproducing Device, and Method and Apparatus for Allowing Content to be Automatically Reproduced Using the Status Information**
Hyo-in Ahn, Chang-Seog Ko, & Sungsoo (Ray) Hong.
US8346055B2 (USA), KR101528859B1 (Korea)
- [1] **Universal Remote Controller and Remote Control Method Thereof**
Sungsoo Ray Hong, Chang-Seog Ko, & Hyo-in Ahn.
US9230426B2 (USA), KR101601109B1 (Korea)

Non-archival Publications

- [2] **Distortion for Clarification via Geotemporal Cartogram**
Sungsoo (Ray) Hong, Jong-Chul Yoon & Cecilia Aragon. Conference on Korea Computer Graphics Society 2013
- [1] **Intuitive User Interface for Inter-device Multimedia Sharing, Watching, and Controlling on N-Screen Environment**
Sungsoo (Ray) Hong, Mun Jo Kim, Chang Hwan Hwang, & Sang Hee Ban
Conference on Human Computer Interaction Korea (KHCI) 2012

Teaching

Instructor / Co-Instructor

Data Science Visualization & Visual Analytics Lab, Instructor (UWHCDE 598: 2016, UW DATA501: 2017)
 Information Visualization, Co-instructor (UW HCDE511: 2016, UW HCDE411: 2017)
 Data Science for UX Designer (DS4UX), Co-Instructor (UW HCDE 598: 2016)
 Computational Techniques for HCDE, Co-Instructor (UW HCDE 530 2015, 2016)

Teaching Assistant

User-Centered Design, TA (UW HCDE518: 2013, 2014)
 Visual Media in HCDE, TA (UW HCDE508: 2015)
 Usability Testing, TA (UW HCDE517: 2014)

Research Advising & Mentoring

Tae Soo Kim (KAIST, 2017 – present), Amy Han (Swarthmore, 2017 - present), Irina Smoke (UW HCDE, master student, 2017 – present), Sang-Wha Sien (UW HCDE, master student, 2017 – present), Janet Ng, (UW HCDE, master student, 2017 – present), Jooyoung Lee (KAIST, 2017), June Punkssem (UW HCDE, master, 2017)

Work Experience

KAIST

Visiting Scholar (invited by Dr. Juho Kim @ KIXLAB)	Winter of 2017, Korea
Visiting Scholar (invited by Dr. Juho Kim @ KIXLAB)	Summer of 2017, Korea

University of Washington

Research Assistant: Distance Cartogram Project (PI: Dr. Cecilia Aragon)	Summer of 2014, 2015, 2016, USA
Research Assistant: Eigen Factor Project (PI: Dr. Jevin West)	Summer of 2013, USA

Samsung Electronics (Digital Media & Communication Research Center)

UX Designer / Researcher (D4)	2009 – 2012, Korea
UI Engineer (E3)	2007 – 2009, Korea

Awards & Scholarships

SIGCHI Honorable Mention Award 2018: Among top 5% of all submissions	2018
Seoul National University GISLBS center Collaborator Grant awardee (KRW 1200,000)	2018
NSF I-Corp grant awardee	2017
GSFEI UW Graduate Student Travel fund recipient	2017
UW Commercialization GAP fund awardee (USD 50,000)	2014
HCDE Ph.D. scholarship recipient	2012
Korean Institute of Information Science and Engineering Special prize awardee	2010
Ajou Digital Media scholarship recipient (The scholarship covered full tuitions for 4 academic years)	1999 - 2003

Talks and Services

Talks

[14] Conference presentation: To Distort or Not to Distort: Distance Cartograms in the wild ACM SIGCHI 2018 Conference	04/26/2018
[13] Conference presentation: Collaborative Dynamic Queries: Supporting Distributed Small Group Decision-making ACM SIGCHI 2018 Conference	04/24/2018
[12] Invited talk: Leveraging Human Visual Capabilities to Improve Information Seeking & Decision-Making Process KAIST, School of Computing, HCI@KAIST seminar	01/03/2018
[11] Invited talk: Leveraging Human Visual Capabilities to Support Spatial Information Seeking and Decision University of Washington, CoMotion	10/30/2017
[10] Invited talk: Designing User Interfaces for Supporting Spatial Visual Information Seeking Process Seoul National University, Department of Communication, HCI+D lab	07/18/2017
[9] Invited talk: Designing User Interfaces for Supporting Spatial Visual Information Seeking Process Seoul National University, GIS/LBS research center	07/07/2017
[8] Invited talk: Designing Visual Interfaces and Interactions to Support Spatial Decision-Making Hanyang University, Department of Computer Science, Scalable Computing System lab	04/28/2017
[7] Invited talk: Designing Visual Interfaces and Interactions to Support Spatial Decision-Making Ajou University, Department of Digital Media	04/27/2017
[6] Invited talk: Designing Distance Cartogram and Collaborative Dynamic-Queries Seoul National University, Department of Computer Science, HCI Lab	04/25/2017
[5] Invited talk: Designing Distance Cartogram and Collaborative Dynamic-Queries Korea Research Institute for Human Settlements	04/24/2017
[4] Conference presentation: Designing Interactive Distance Cartogram to Support Urban Travelers IEEE PacificVis 2017	04/19/2017
[3] Conference presentation: VIZMO Game Browser: Accessing Video Games by Visual Style and Mood ACM SIGCHI 2017	04/20/2015
[2] Invited talk: Information and Visualization: How visual aids comprehension of information Korean IT Experts Society in Seattle	11/20/2014
[1] Conference presentation: Traffigram: Distortion for Clarification via Isochronal Cartography ACM SIGCHI 2014	28/04/2014

Services

Reviewer of ACM SIGCHI (2015 – 2017), ACM UIST (2015 – 2017), ACM IUI (2015), IEEE InfoVis (2014 – 2015, 2017), IEEE VAST (2014), and IEEE PacificVis (2017)

Student Volunteer of ACM SIGCHI (2015, 2017), and ACM SIGDOC (2012)

Extracurricular

Loves

Trail hiking, long distance running, computer games, paintings, graphic designs, programming random things, Japanese animations, and beer.