

Research Interests

Human Computer Interaction (HCI): Interaction Design, Multi-Criteria Decision Making, Computer-supported Collaborative Work. **Information Visualization (InfoVis):** Distance Cartogram, Data Spatialization, Metaphor.

Education

University of Washington

2012– Present. Seattle, USA

Human Centered Design & Engineering, Ph.D. Candidate

Academic Advisor: Dr. Cecilia Aragon

Dissertation Committee: Dr. Cecilia Aragon (UW HCDE), Dr. Sarah Battersby (Tableau Research), Dr. Jessica Hullman (UW iSchool), Dr. Mark Zachry (UW HCDE), and Dr. Jevin West (UW iSchool)

Yonsei University

2005–2007. Seoul, Korea

Computer Science (Specialized at Computer Graphics), MS

Academic Advisor: Dr. In-Kwon Lee

Ajou University

1999–2005. Seoul, Korea

Digital Media, BS

Dae-il Foreign Language High School

1995–1998. Seoul, Korea

Department of English

Publications

Refereed Conference Proceedings and Journal Articles

[13] Toward the Operationalization of Visual Metaphor

Alexis Hiniker, **Sungsoo (Ray) Hong (Co-lead author)**, YeaSeul Kim, Nan-chen Chen, Jevin West, Cecilia Aragon. *Journal of the Association for Information Science and Technology (JASIST)* (in press)

[12] Designing Interactive Distance Cartogram to Support Urban Travelers

Sungsoo (Ray) Hong, Rafal Kocielnik, Sarah Battersby, Min-Joon Yoo, Juho Kim, & Cecilia Aragon. *IEEE PacificVis2017* (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. *HCI International 2017*

[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. *Hawaii Intl. Conference on System Sciences 2017*

[9] MyTime: Designing and Evaluating an Intervention for Smartphone Non-Use

Alexis Hiniker, **Sungsoo (Ray) Hong**, Kohno Tadayoshi, & Julie Kientz. *ACM SIGCHI 2016* (23.4% 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. *International Journal of Human-Computer Studies* 90 (2016): 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.
ACM SIGCHI 2015. (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.
ACM Interaction Design & Children (IDC) 2015 (23% accepted)
- [5] **Designing Tools to Support Advanced Users in Social Media Interaction**
Hyunggu Jung, **Sungsoo (Ray) Hong**, Perry Maes, & Mark Zachry.
ACM SIG Design of Communication (SIGDOC) 2015
- [4] **Traffigram: Distortion for Clarification via Isochronal Cartography**
Sungsoo (Ray) Hong, Yea-Seul Kim, Jong-Chul Yoon, & Cecilia R. Aragon.
ACM SIGCHI 2014 (22.8% accepted)
- [3] **Collaborative Visual Analysis of Sentiment in Twitter Events**
Michael Brooks, John Robinson, Megan Tolkidson, **Sungsoo (Ray) Hong**, & Cecilia R. Aragon.
Cooperative Design, Visualization & Engineering (CDVE) 2014
- [2] **Point and Control: Control Multi-device with Single Remote Control**
Sungsoo (Ray) Hong & Juil Eom. *HCI International 2009*
- [1] **Interactive System for Efficient Video Cartooning**
Sungsoo (Ray) Hong, Jong-Chul Yoon, In-Kwon Lee, & Siwoo Byun. *Mirage 2007*

Non-archival Publications

- [2] **Distortion for Clarification via Geotemporal Cartogram**
Sungsoo (Ray) Hong, Jong-Chul Yoon & Cecilia R. Aragon.
Conference on Korea Computer Graphics Society (KCGS) 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

U.S. Patents (Granted)

- [9] **Methods and Systems for Providing Geotemporal Graphs**
Sungsoo (Ray) Hong, Cecilia Aragon, Benjamin Samples & Jong-Chul Yoon.
U.S. Patent US20140324327A1
- [8] **Apparatus and content playback method thereof**
Sungsoo (Ray) Hong, Chang-Hwan Hwang, & Sahng-hee Bahn.
U.S. Patent US20130097512A1
- [7] **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
U.S. Patent US20130097533A1
- [6] **Method and Apparatus for Communication Connection Service**
Sahnghee Bahn, **Sungsoo (Ray) Hong**, & Changhwan Hwang.
U.S. Patent US20130086644A1
- [5] **Methods and Apparatus for Registering a Device to Server**
Sahnghee Bahn, **Sungsoo (Ray) Hong**, & Changhwan Hwang.
U.S. Patent US20130086232A1

- [4] **Integrated operation method for social network service function and system supporting the same**
Sungsoo (Ray) Hong, Sahng Hee Bahn, & Chang-hwan Hwang.
 U.S. Patent US20130073626A1
- [3] **Wireless Communication Method and Apparatus**
Sungsoo (Ray) Hong, Chang-Seog Ko, Pil-seung Yang, Chang-hwan Hwang.
 U.S. Patent US20100216399A1
- [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**.
 U.S. Patent US20100124407A1
- [1] **Universal remote controller and remote control method thereof**
Sungsoo Ray Hong, Chang-Seog Ko, & Hyo-in Ahn.
 US Patent US20100013695A1 & US20130147612A1

Work Experience

KAIST

Visiting Scholar (@ KIXLAB, Dr. Juho Kim)

2017 (Summer), Daejeon, Korea

University of Washington

Distance Cartogram Project (PI: Dr. Cecilia Aragon)

2014 (Summer) ~ 2016 (Summer), Seattle, USA

Eigen Factor Project (PI: Dr. Jevin West)

2013 (Summer), Seattle, USA

Samsung Electronics (Digital Media & Communication Research)

Senior UX Researcher

2011 – 2012, Seoul / Suwon, Korea

Senior UX Designer

2009 – 2011, Suwon, Korea

UX Engineer

2007 – 2009, Suwon, Korea

Yonsei University

Non-Photorealistic Rendering Project (PI: In-Kwon Lee)

2005 – 2007, Seoul, Korea

Skills

Interactive Front-end UIs Development

Proficient in developing interactive front-end user interface with:

JavaScript libraries, such as **jQuery**, **MapZen**, **Angular JS**

Proficient in developing data visualization with **MySQL**, **PHP**, and **D3**

Front-end UIs Design

Has *professional level of expertise* in designing graphics / video with:

Adobe Photoshop, **Adobe Illustrator**, and **Adobe After Effects**

Proficient in various types of prototyping tools

Design Requirements Gathering & System Evaluation

Proficient at *HCI research methodologies*, such as:

(a) **survey**, **user-centered design**, and/or **focus-group interview**, for collecting user requirements

(b) **controlled study**, **qualitative interview**, **diary study**, and/or **field deployment** for evaluating systems

Coding Skills

Proficient in **Python**, **Java**, and **C**

Teaching

Lecturer / Co-Lecturer

HCDE 598 **Data Visualization and Exploratory Analytics Lab** – (Lead lecturer)
HCDE 530 **Computational Techniques for HCDE** (Co-lecturer, with Dr. David McDonald)
HCDE 598 **Data Science for UX Designer – DS4UX** (Co-lecturer, with Jonathan Morgan)
INFX 547 **Social Data Mining and Analysis** (Co-lecturer, with John Zimmerman and Avniel Dravid)

Teaching Assistant

HCDE518 **User-Centered Design** (TA, with Jess Holbrook, Dr. Julie Kientz)
HCDE511 **Information Visualization** (TA, with Robin Emerson)
HCDE508 **Visual Media in HCDE** (TA, with Dr. Daniela Rosner)
HCDE517 **Usability Testing** (TA, with Andrew Davidson)

Awards and Honors

Awards

NSF I-Corp Grant awardee (\$2,500)	2017
SIGCHI SV T-Shirt Design Contest winner	2015
UW Commercialization GAP fund awardee (\$50,000)	2014
Korean Institute of Information Science and Engineering (KIISE) Special Prize recipient	2010

Scholarships

GSFEI UW Graduate Student Travel fund recipient	2017
HCDE Ph.D. Scholarship recipient	2012
Digital Media Scholarship recipient (Covered full tuitions for 4 academic years)	1999 - 2003

Talks and Services

Talks

[8] Hanyang University, Department of Computer Science (Invited talk) Designing Visual Interfaces and Interactions to Support Spatial Decision-Making	28th of April, 2017
[7] Ajou University, Department of Digital Media (Invited Talk) Designing Visual Interfaces and Interactions to Support Spatial Decision-Making	27th of April, 2017
[6] Seoul National University HCI Lab (Invited talk) Designing Distance Cartogram and Collaborative Dynamic-Queries	25th of April, 2017
[5] Korea Research Institute for Human Settlements (Invited talk) Designing Distance Cartogram and Collaborative Dynamic-Queries	24th of April, 2017
[4] Conference presentation (PacificVis2017) Designing Interactive Distance Cartogram to Support Urban Travelers	19th of April 2017
[3] Conference presentation (SIGCHI2015): VIZMO Game Browser: Accessing Video Games by Visual Style and Mood	20th of April 2015
[2] Korean IT Experts Society in Seattle (Invited talk): Information and Visualization: How visual aids people comprehending information	20th of Nov. 2014
[1] Conference presentation (SIGCHI2014): Traffigram: Distortion for Clarification via Isochronal Cartography	28th of April 2014

Services

Reviewer

ACM SIGCHI	2015 - 2017
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ACM UIST	2015 - 2017
ACM IUI	2015
ACM DIS	2017
IEEE InfoVis	2014 - 2015, 2017
IEEE VAST	2014
IEEE PacificVis	2017
Student Volunteer	
ACM SIGCHI (2015, 2017), ACM SIGDOC (2012)	

Extracurricular

Loves

Trail hiking, running, dogs and cats, computer games, reading research papers, graphic design, beer, and painting