Seraphina Yong

Email: yong0021@umn.edu

Phone: +1-626-696-6841

Address: 200 Union St SE, 4-192 Keller Hall, Minneapolis, MN 55455.

EDUCATION

Ph.D., Department of Computer Science,
University of Minnesota (Minneapolis, MN) — 2021-
Lab: GroupLens Research
Advisors: Lana Yarosh, Evan Suma Rosenberg

M.S., Department of Computer Science,
National Tsing Hua University (Hsinchu, Taiwan) — 2017-2019
Labs: Collaborative Social Computing Lab, Human Interaction Science & Design Lab
Advisors: Hao-Chuan Wang, Yuan-Chi Tseng

Relevant Coursework: Foundations of Human-Computer Interaction, Applied Quantitative Methods for Human-Computer Interaction, Intelligent Agents, Interaction Design

B.S., Department of Computer Science,
University of Chicago (Chicago, IL) — 2012-2016

Relevant Coursework: Cognitive Psychology, Developmental Psychology, Psychological Research Methods, Perspectives on Cognitive Development and Health, Sensation and Perception, Neuroscience and the Media, Graph Theory, Formal Languages, Networks and Distributed Systems, Advanced Distributed Systems

WORK EXPERIENCE

NTU IoX Center Research Institute,
National Taiwan University, Taiwan 2019—
Research Assistant
Primary Investigator: Professor Bing-Yu Chen
Projects: Using thermal-augmented media to enhance recall of social emotional memory in depressives; Designing information presentation and communication for depressed older adults

Media and Interactives, Department of Exhibits,
Field Museum of Natural History, USA 2016-2017
Digital Interactives Producer
Projects: Designing and building novel digital touchscreen interfaces to present a variety of academic topics; also responsible for software-hardware integration and user analytics

Collaborative Social Computing Lab,
National Tsing Hua University, Taiwan 2015.07-2015.09
Taiwan International Graduate Program (TIGP) Research Intern
Advisor: Professor Hao-Chuan Wang
Project: HandVis – visualized gesture support for remote cross-lingual communication

Development of Social Cognition Lab, Department of Psychology,
University of Chicago, USA 2014-2016
Research Assistant
Primary Investigator: Professor Katherine Kinzler
Projects: Role of social valence on infant assessment of preferences
Penalty-oriented investigation of moral development

Sleep, Metabolism and Health Center, Department of Medicine,
University of Chicago, USA 2014.06-2014.09
Research Assistant
Primary Investigator: Professor Eve Van Cauter
Project: Restoring Insulin Secretion (RISE) national project ancillary study on impact of insulin resistance and sleep quality on cognitive ability

PROJECTS

Thermally-Augmented Media for Enhancement of Social Emotional Memory in Depressed Individuals, 2020—
Depressed individuals experience compromised memory accuracy and specificity, involving lower memory sensitivity to non-negative social events; this significantly affects social problem-solving ability. We propose that the link between thermal perception and emotional activation can be leveraged to support their memory sensitivity to non-negatively-valenced social events.

Data Presentation and Communication Design for Depressed Older Adults, 2020—
Geriatric depression entails unique challenges that result from the complex interplay of issues specific to both the aging and depressed, such as health anxiety, conservative value system, and cognitive error. We assess issues encountered by depressed older adults in communication and perception of condition-relevant information to focus on ways to present information to the users and ways to communicate with their support network to better facilitate recovery.

Task-Targeted Perceptualization for Spatial Collaboration, 2017-2020
Large scope, relational spatial knowledge constructed from a virtual space is used in many applications (e.g. spatial strategy and design), but task-tailored multimodal feedback channels may be needed to support visual cues in the virtual world. We explore sonification-focused multimodal tools to support understanding in synchronous relational spatial communication.

HandVis 2015-2016
A prototype video-conferencing interface that visualizes movement path of hand gesture to compensate for language deficits occurring in remote communication between speakers who may not both be fluent in their communication language. Gesture visualization is designed to encourage gesture use in this context as a language-independent communication medium.

NBrain, 2015-2016
A messaging tool designed to support cross-lingual brainstorming productivity. Functions include shareable messages that are initially private to counter fear of evaluation, as well as visible selective translation to aid shared understanding of language needs, and fast positive feedback to encourage upwards comparison.

PUBLICATIONS

Ruei-Che Chang, Chih-An Tsao, Fang-Ying Liao, **Seraphina Yong**, Tom Yeh, and Bing-Yu Chen. Daedalus in the Dark: Designing for Non-Visual Accessible Construction of Laser-Cut Architecture. In The 34th Annual ACM Symposium on User Interface Software and Technology (UIST) 2021.

Seraphina Yong, Min-Wei Hung, Chien Wen (Tina) Yuan, Chih-Chiang Chiu, Ming-Chyi Huang, Chuang-Wen You. Attitudes Toward Health and Communication in Depressed Older Adults. Proceedings of the 23rd ACM Conference on Computer Supported Cooperative Work and Social Computing Companion (CSCW Poster) 2020.

Chiu-Hsuan Wang, **Seraphina Yong**, Hsin-Yu Chen, Yuan-Syun Ye, Liwei Chan.
HMD Light: Sharing In-VR Experience via Head-Mounted Projector for Asymmetric Interaction. Proceedings of the 33rd Annual ACM Symposium on User Interface Software & Technology (UIST) 2020.

Chiu-Shuan Wang, Chia-En Tsai, **Seraphina Yong**, Liwei Chan. Slice of Light : Transparent and Integrative Transition among Realities in a Multi-HMD User Environment. Proceedings of the 33rd Annual ACM Symposium on User Interface Software & Technology (UIST) 2020.

Seraphina Yong, Yuan-Chi Tseng, Hao-Chuan Wang. AuralTrace: Pitch-Based Sonified Referencing to Support Reception of Virtual Spatial Communication. Taiwan Computer Human Interaction Conference (TAICHI) 2019. *Best Paper Award*

Seraphina Yong, Hao-Chuan Wang. Using Spatialized Audio to Improve Human Spatial Knowledge Acquisition in Virtual Reality. 23rd International Conference on Intelligent User Interfaces Companion, Poster (IUI Poster) 2018.

Chen-Wei Huang, Pornlada Ittipornpithak, Ko-Ren Chang, **Seraphina Yong**.
NBrain: Customizable Messaging Support for Cross-Lingual Brainstorming. Taiwan Computer Human Interaction Workshop Demo (TAICHI Demo) 2016.

Kuan-Yu Lin, **Seraphina Yong**, Shuo-Ping Wang, Chien-Tung Lai, Hao-Chuan Wang.
HandVis: Visualized Gesture Support for Remote Cross-Lingual Communication. Proceedings of ACM Conference on Human Factors in Computing Systems, Extended Abstract (CHI EA) 2016.

RESEARCH INTERESTS

Human-Computer Interaction
Social Cognition, Perception and Behavior
Sensemaking
Multimodal, Multisensory Integration
Cross-cultural, Multilingual Communication

AWARDS AND GRANTS

TAICHI 2019 Best Paper Award (AuralTrace: Pitch-Based Sonified Referencing to Support Reception of Virtual Spatial Communication**)**

International Student Scholarship, National Tsing Hua University 2017-2018

Dean's List, University of Chicago 2012-2016

OTHER EXPERIENCE

Blog writer for ACM UIST on Medium (read it here)

ACM CHI, CSCW Conference reviewer since January 2020

CSCW Asia Winter School 2020
Attendee and presenter

CSCW Asia Winter School 2019
Attendee and presenter

College Core Tutor Program, University of Chicago 2015-2016
Computer Science Tutor

SKILLS

Programming: Python | C# | C++ | JavaScript | R | HTML&CSS

Software: Blender | Git | Unity | HTC Vive | SteamVR | OpenVR | JMP | SPSS

Languages: English (Native), Mandarin Chinese (Fluent)