

# Seraphina Yong

Email: seraphinayong@ntu.edu.tw

Phone: +886-931-225-657

Address: No. 2-6, Alley 17, Lane, 76, Section 2, Heping East Road, Daan District, Taipei, Taiwan 10662.

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## EDUCATION

**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: Professor Hao-Chuan Wang, Professor Yuan-Chi Tseng

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

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## 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

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## 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

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cognitive error. We assess issues encountered by depressed older adults in communication and perception of information relevant to their condition and 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.

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## **PUBLICATIONS**

**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.

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## **RESEARCH INTERESTS**

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

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## 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

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## OTHER EXPERIENCE

**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

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## 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)

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