Serena Ge Guo

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Education

2021 - now
Ithaca, US

Cornell University
Ph.D. Candidate in Information Science
Bowers College of Computing and Information Science
Minor in Social Psychology
Committee: Keith Evan Green, Gilly Leshed, Andrea Stevenson Won

2017 - 2020
New York, US

Columbia University
Master of Architecture
Graduate School of Architecture, Planning and Preservation
- Honor Award for Excellence in Design – Graduation Award (1/88)
- Award for Excellence in Animation - American Institute of Architects (AIA) (1/139)
- Buell Center Paris Prize - GSAPP Annual Award, 2019 & 2018 (1/88)
- William Kinne Fellows Traveling Prize - GSAPP 2020 - Graduation Award

2011 - 2015
Hong Kong

University of Hong Kong
Bachelor of Arts in Architectural Studies (Hons)
Department of Architecture
- HKU Degree Show for excellent graduation projects

Refereed Publications

Published:

Ge (Serena) Guo and Zhiwen Qiu. 2024. DentAR: Innovating Dental Visits with Sensory Experiences in AR for People with Autism Spectrum Disorder. In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '24, acceptance rate: 33%), May 11--16, 2024, Honolulu, HI, USA. ACM, New York, NY, USA 7 Pages. https://doi.org/10.1145/3613905.3650926

Ge (Serena) Guo, Gilly Leshed, and Keith Evan Green. 2023. "I normally wouldn't talk with strangers": Introducing a Socio-Spatial Interface for Fostering Togetherness Between Strangers. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23, acceptance rate: 27%), April 23–28, 2023, Hamburg, Germany. ACM, New York, NY, USA 20 Pages. https://doi.org/10.1145/3544548.3581325.
🏅 **Best paper Honorable Mention (top 5% of accepted papers)**

Ge (Serena) Guo, Gilly Leshed, Trevor Pinch, and Keith Evan Green. 2022. SocialStools: A Playful, Socio-Spatial Interface for Fostering Togetherness Across Strangers. In Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI EA '22, acceptance rate: 34%). Association for Computing Machinery, New York, NY, USA, Article 173, 1–5. https://doi.org/10.1145/3491101.3519877

Ge (Serena) Guo and Qi Yang. 2019. Methods of Applying Augmented Reality to Nudge User Behaviors by Changing the Public and Private Landscapes in a Library. Journal of Design Community. ISSN1674-9073. 113-117.

Revise and Resubmit:

Ge (Serena) Guo, Hsin-Ming Chao, Huong Pham, Gilly Leshed, and Keith Evan Green. 2024. Beyond the First Glance: Unraveling Strangers' Interactions through a Behavioral Framework and Evaluating it in the Field. (Revise and Resubmit to) the Journal of ACM Transactions on Computer-Human Interaction (TOCHI).

Ge (Serena) Guo, Chuanrui Liu, Swati Pandita, Jakki O. Bailey, and Andrea Stevenson Won. 2024. Investigating the Effects of Context and Experience on People's Attitudes toward Inconsistent Avatars. (Revise and Resubmit to) the ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW '24), Oct 19–23, 2024, San José, Costa Rica, ACM, New York, NY, USA

Ongoing:

Ge (Serena) Guo, Zhiwen Qiu, Gilly Leshed, Keith Evan Green, and Andrea Stevenson Won. Co-designing Augmented Reality Sensory Experiences for Dental Visits: Innovations for People with Autism Spectrum Disorder. (Full paper. In the process of submitting to the 2025 CHI Conference on Human Factors in Computing Systems CHI '25)

Ge (Serena) Guo, Raquel Cañete Yaque, Jenny Yu, and Keith Evan Green. Designing and Evaluating Reconfigurable Room-Scale Robotic Surfaces for Constrained Domestic Spaces. (Full paper. In the process of submitting to the 2025 CHI Conference on Human Factors in Computing Systems CHI '25)

Ge (Serena) Guo, Qi Yang, Guy Hoffman, and Keith Evan Green. Facilitating Synchronized Movement during Ice-Breaking Scenarios through a Real-World Reinforcement Learning Agent Using Non-Verbal Behaviors. arXiv preprint arXiv:2311.08456. (Full paper. In the process of submitting to the 2025 ACM/IEEE International Conference on Human-Robot Interaction HRI '25)

Research Experiences

2021 - now
Ithaca, NY, US

Architectural Robotics Lab, Cornell University
PhD Research Assistant with Prof. Keith Evan Green
- Project lead for the "RobotRoom" project, a physical reconfigurable foldable robotic system that affords multiple activities for people living in limited space. Duties include setting up the research scope, physical prototyping design, 3d modeling, lasercutting, fabrication, experiment design, user research, and writing up the manuscript.
- Drafted and revised NSF EAGER funding proposal.
- Managed and guided undergraduate and graduate RAs on research activities.

2023.6 - now
NYC, US

YAI - Center for Innovation and Engagement
PiTech PhD Research Fellow, Mixed Reality Designer & Researcher
- Project lead for the "DentAR" project, an AR sensory modulation experience for people with heightened sensory sensitivity towards the dental clinic physical environment. Duties include concept scoping, user research, collaboration with different stakeholders,

low-fi prototyping, and high-fi prototyping in Unity with C#, and writing up the manuscript.

2022.9 – 2024.1 Ithaca, NY, US	**Virtual Embodiment Lab, Cornell University** PhD Research Assistant with Prof. Andrea Stevenson Won • Project lead for "HandPerceive", a VR social interaction project, including setting up the research scope, experiment design, VR development in Unity, user research, and writing up the manuscript.
2019.6 - 2020.6 NYC, US	**Computer Graphics and User Interfaces Lab, Columbia University** Graduate Research Assistant with Prof. Steven K. Feiner, CS Department • AR Prototyping for Project "Collaborative Urban Virtual Environment" in Unity. • Designed and coded hand interaction methods (hand gestures and body movement) for pulling out yelp card and memo function of project "Curve" using C#, collaborating with programmers.
2015.8 - 2017.1 Beijing, China	**Center of Computational Design in Tsinghua Design Institute** Junior Architect with Prof. Qiang Chang Project: Data-driven Sustainable Methods for Revitalizing Vernacular Villages • Collaborated with sociologists to conduct over 100 home-in user interviews with villagers in rural China. • Surveyed over 100 vernacular residential buildings' floor plans. • Conducted thematic analysis and descriptive data visualization.

Teaching and Mentoring

2021 - 2024 Cornell University	**Lecturer/Instructor** INFO 3450/5355 Human-Computer Interaction Design • Taught the undergrad and graduate-level UX research core course to Cornell students during the summer. Duties include giving lectures, planning section activities, and mentoring 6 semester-long projects on human-centered-design including user research, interview, affinity diagram, storyboard, wireframe, prototype, and usability test. **Teaching Assistant** Courses • INFO 3450/5355 Human-Computer Interaction Design • INFO 4400/5400/6400 Qualitative User Research and Design Methods • INFO 1200 Information Ethics, Law, and Policy Duties • Teach weekly tutorial sessions with self-curated content based on the lecture • Mentor student semester-long project, including concept development, user research, design strategy, visualization, Arduino, and presentation. • Collaborated with the professors to update their syllabus. • Organized logistics for reviewers, grading, and attendance.
2018 - 2020 Columbia University GSAPP	**Teaching Assistant** Courses • ARCH 4001 Core III Architectural Design Studio • ARCH 4002 Advanced Architectural Design Studio Duties • Gave advices on concept, design strategy, visualization, and implementation twice a week. • Gave tutorials about the visual programming platform, virtual reality, augmented reality, and rendering software. • Collaborated with professors to organize teaching activities and logistics.

2018 - 2024	**Mentoring**
Cornell University	
Columbia University	

- Huong Pham, Cornell INFO B.S student 2024 – research, user study, writing
- Daoxin Chen, Columbia Master student – research, career
- Chuanrui Liu, Cornell INFO M.S. student – tech development, user study
- Daniel Lee, Cornell INFO B.S student 2024 – research, user study
- Jenny Yu, Cornell INFO B.S student – research, user study
- Hsin-Ming Chao, Cornell DEA M.S. student – research, user study, tech
- Joy Shen, Cornell INFO B.S. student – design, career, tech - Now at Parsons

Professional Experiences

2020.6 - 2021.3
NYC, US

The Glimpse Group
VR Product Designer/Developer
- Developed VR application for group psychotherapy in Unity and Figma.
- Coded the experience of swapping avatar's features using C# including building UI panels in Unity, wired up the functions of each buttons, and designed the user flows.

2018.12 - 2019.1
NYC, US

SO-IL
Architectural Intern
- Developed the structure and canopy system for the Veiled Project.
- Produced the visual documentation for one exhibition.

2018.6 - 2018.8
NYC, US

SOM | Skidmore, Owings & Merrill LLP
Junior Architectural Designer
- Collaborated with lighting consultants, engineers, chief architects, furniture manufacturers on the interior lighting design and construction for project Waldorf Astoria.
- Concept design, Graphic visualization, 3D Modeling for project Waldorf Astoria.

2015.8 - 2017.1
Beijing, China

Center of Computational Design of Tsinghua Design Institute
Junior Architectural Designer
- Devised development strategies with local community and local officials for two 900-people villages (implemented).
- Designed 36,000 sqft renovation project, procedure the full set of construction documentation, and supervised the construction (built).
- Developed socio-technical system diagram of local rural villages.

Honors, Awards, and Fellowships

2024	CHE Engaged Research Seed Grant ($5,000)
2024	Cornell Engaged Opportunity Grant ($5,000)
2024	CCSS Qualitative and Interpretive Research Grant ($2,000)
2023	Rev's Prototyping Hardware Accelerator Grant ($2,000)
2023	Gary Marsden Travel Awards ($2,000)
2023	XR Access Symposium Scholarship ($400)
2020	Honor Award for Excellence in Design ($2,000)
2020	Award for Excellence in Animation - American Institute of Architects (AIA)
2020	William Kinne Fellows Traveling Prize ($2,000)
2020	Panelist on DigitalFUTURES Young: AR/VR/Game Environments
2018, 2019	Buell Center Paris Prize ($2,000)
2017-2020	Selected for GSAPP Abstract 2017-2020

Exhibitions

| 2024 | Neurodiversity Celebration Research Exhibition, Project *DentAR*, Ithaca, NY. |

2023	XR Research Exhibition, Project *SocialStools*, New York, NY.
2022	ACM CHI Interactivity, Project *SocialStools*, New Orleans, LA.
2021	DigitalFUTURES Young: AR/VR/Game Environments, Project *ARLibrary*, New York, NY.
2017-2020	End of Year Show at Columbia University, Project *Occupying Language*, New York, NY.
2019	"Une Cambre Ailleurs" Exhibition, Project *Veiled*, Paris, France.
2018	AR Mobile Urban Environments Exhibition, Project *MCity*, Shanghai, China.
2014	Bi-city Biennale of Urbanism/Architecture, Project *Miao*, Shenzhen and Hong Kong, China.

Academic Service

Reviewer	The ACM Human Factors in Computing Systems (CHI)
Reviewer	The ACM Computer-Supported Cooperative Work & Social Computing (CSCW)
Reviewer	The ACM Designing Interactive System (DIS)
Reviewer	The ACM Creativity & Cognition (C&C)
Reviewer	The SIGCHI The Annual Symposium on Computer-Human Interaction in Play (CHI PLAY)
Reviewer	The ACM Tangible, Embedded and Embodied Interaction (TEI)