

Christopher Morse

/work

- 2022- **AMAZON**, Seattle WA (Remote)
Sr. Innovation and Design Engineer; XR + Ergonomics Subject Matter Expert
Develop VR tools and workflows to simulate warehouse workstations; integration of motion capture technologies into Unity-based custom applications; ergonomic analysis and data collection; research and validation of VR processes for evaluating ergonomics
- 2019- **ASSEMBLY OSM**, New York NY
22 **Lead Developer**; Interactive Visualizations, AR and VR
Mobile application development for architectural and manufacturing visualization. Computational design. Developed APIs and routines for procedural building data generation and cross-platform data transfer
- 2017- **SHoP ARCHITECTS**, New York NY
19 **Associate**; Interactive Visualizations
Developed interactive XR architectural experiences; Design technology R&D; Plugin development for CAD interoperability, Parametric and computational design. Work with design teams to produce realtime visualizations for concept presentation and design evaluations.
- 2017 **CORNELL UNIVERSITY, PROGRAM OF COMPUTER GRAPHICS**, Ithaca NY
Research Associate and Virtual Reality Designer
Developed 3D modelling application for VR. Implemented spline based mesh geometry for both creating and editing 3d models in VR Improved performance and UI/UX of sketching plugin for Rhino 3D; vspline.com
- 2016- **JENNY SABIN STUDIO**, Ithaca NY
17 **Associate Designer and Research Associate, Lumen**
Developed interactive VR architectural experience for MOMA PS1 YAP competition Produce and optimize complex mesh geometry for 3d printing Collaborate as member of a competition design team
- 2016 **CODA**, Ithaca, NY
Project Leader, Urchin
Designed and produced documentation for architectural installation located at Cornell University Coordinated assembly team Developed parametric model to approximate structural loading of unusual construction materials and produce construction documents
- 2015 **MODELAB**, New York, NY
Design Intern; Instructor for AA Visiting School; Parametric scripting expert
Contributor to the Grasshopper Primer and Dynamo Dictionary

/teaching

- 2019-22 **Cornell University, College of Art Architecture and Planning**, Ithaca NY
Visiting Lecturer
ARCH 4509 (Fall 2022) "Design in the Age of Digital Twins" with Donald Greenberg, Program of Computer Graphics
INFO 5420 (Spring 2021) "Urban Design Strategies and Case Studies" with Robert Balder and Sharon Ayalon
Arch 4101 (Fall 2020) "VPVR Studio", with Henry Richardson
Arch 4101 (Spring 2020), "Virtual Places", with Henry Richardson
Arch 4509 (Spring 2020) "New Realities in Representation"
Arch 4509 (Fall 2019) "Virtual Places: Real Time Experiential Design and Visualization of Urban Spaces" with Henry Richardson
- 2016-17 Teaching Associate, Introduction to Architecture Summer Program
Teaching Assistant, Core Studio III, Jenny Sabin and Martin Miller
Teaching Assistant, Constructed Drawing II, James Lowder
- 2015 **Architectural Association Visiting School NY**, New York NY
Instructor
- 2011-13 **American School in Taichung**, Taichung, Taiwan
Math + Physics Teacher
- 2006-10 **High School of Hospitality Management**, New York NY
Math + Physics Teacher

/education

- 2013-17 **CORNELL UNIVERSITY, College of Art Architecture and Planning**, Ithaca NY
Master of Architecture
- 2005-06 **TEACHERS COLLEGE, COLUMBIA UNIVERSITY**, New York NY
Master of Arts, Mathematics Education
- 2001-05 **NORTHWESTERN UNIVERSITY**, Evanston IL
Bachelor of Arts, Physics, concentration in Astrophysics
- 2003-04 **ETH ZURICH**, Zurich Switzerland
Study Abroad, Computer Science, Astrophysics

/presentations + talks

- 2022 **Augmented World Expo**, Santa Clara CA
Presenter with Adam Chernick and Thaisa Yamamura
“AR in Architecture: From Design to Construction”
- 2021 **Florida AIA Convention**, Orlando FL
Invited Speaker, with Adam Chernick “Immersive Design with VR & AR for Architecture”
- 2020 **DigitalFUTURES 2020**, Virtual Conference
Discussion Panelists XR in Architecture
- 2019 **ACADIA 2019**, Austin TX
Workshop leader, with Erik Martinez, Philip Richardson, and Charlie Wynter
“Design to Fabrication: A Critical Look at Interactive Visualization and Automation in Construction”
- XRDC**, San Francisco CA
Presenter, with Adam Chernick “XR Development for Architecture”
- Unity Unite**, Copenhagen
Presenter, with Adam Chernick “Accelerating Communication in AEC with Unity Reflect”
- Tech+ Conference**, New York NY
Invited Speaker, “Immersive Storytelling: Communication with XR in Architecture”
- New York Digital Design Community**, New York NY
Invited Speaker, with Adam Chernick “Interactive Visualization”
- nVIDIA GTC**, San Jose CA
Presenter, with Geoffry Bell
“The Industry That Time Forgot: Pioneering the Digital Future in Architecture”
- 2018 **Chaos Group V-Ray Days**, New York NY
Presenter, with Mengyi Fan
“UX of Interactive Visualization”

/publications + conference papers

- 2024 **Morse, C.**, Mokhlespour Esfahani, M. I., & Krishnan, S. (2024). ErgoReality: A Virtual Reality Simulations Software for Ergonomic Analysis of Workstation Design. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 68(1), 659-662.
- 2020 Chernick, A., **Morse C.**, Menard, D., Li, T., London, S., and Cerone, J. (2020) "On-site BIM-Enabled Augmented Reality for Construction" Proceedings of the 2020 DigitalFUTURES
- Morse, C.**, Martinez, E., Richardson, P., Wynter, C., and Cerone, J. (2020) "Interactive Design to Fabrication - Immersive Visualization and Automation in Construction" Construction Robotics pp 163-173
- 2019 **Morse, C.** and Solous, F. (2019) "Interactive Facade Detail Design Reviews with the VR Scope Box" ACADIA 2019 Proceedings
- Gehron, L., Chernick, A., **Morse, C.**, Naumovski, S., and Ren, Z. (2109) "Sound Space: An Interactive VR Tool to Visualize Room Acoustics for Architectural Designers" ACADIA 2019 Proceedings
- Morse, C.**, Naumovski, S., Chernick, A., Gehron, L., and Ren, Z. (2019) "Sound Space: Communicating Acoustics Through Interactive Visualization" IEEE GEM Conference Proceedings
- 2018 Novelli, N., Andow, B., Overall, S., Aly, M., **Morse, C.**, and Matalucci, B. (2018) "Power Generation and Visual Comfort Performance of Photovoltaic Toplighting Technologies in Transient Spaces" IBPC Conference 2018 Proceedings
- 2017 Arnowitz, E., **Morse, C.** and Greenberg, D. (2017) "vSpline: Physical Design and the Perception of Scale in Virtual Reality" ACADIA 2017 Proceedings
- Luben, D., Sabin, J, and **Morse, C.** (2017) "Eyes Wide Open Inward" ACSA Fall Conference 2017 Proceedings

/installations

- 2019 **LA Design Festival**, Los Angeles CA
Skygazing Tower, VR Interactive Experience
In collaboration with SomePeople