Sathaporn “Hubert” Hu, PhD.

Aka. สถาพร ฮู, 胡秀楷

Assistant Professor in Extended Reality at Algoma University

Email: hus@algomau.ca **Website:** https://husathap.github.io/ **Location:** Sault Ste. Marie, ON, Canada

Education

Jan 2018 – Jan 2024

Doctor of Philosophy in Computer Science, *Dalhousie University*

- **Funding:** Mitacs, Dalhousie University Travel Grant, Default Funding Package
- **Dissertation Title:** A Tablet + Augmented Reality Interface for Interactive Multiple Linear Regression with Geospatial Data
- **Examiners:** Prof. Derek Reilly (Supervisor), Prof. Joseph Malloch, Prof. Fernando Paulovich, Prof. Jamie Blustein, Prof. Pourang Irani (External)
- **Supervisor at Ericsson:** Dr. Saman Bashbaghi
- **Additional Certificates:** Certificate of University Teaching and Learning, GradPD

Sep 2015 – Dec 2017

Master of Science in Computer Science, *University of Calgary*

- **Funding:** Transformative Talent Internships (Fall 2016), Default Funding Package
- **Dissertation Title:** Designing and Evaluating a Lightweight Video Player for Language Learning
- **Examiners:** Prof. Wesley Willett (Supervisor), Prof. Usman Alim, Prof. Parmit Chilana (External)

Sep 2011 – Aug 2015

Honours Bachelor of Science, Specialist in Computer Science, Major in Cognitive Science (Computational Stream), Minor in French as a Second Language, *University of Toronto*

- **Award:** Graduated with Distinction (GPA: 3.23/4)

Certificate

Nov 2025

Cultural Safety Online Learning Program, *Algoma University*

Aug 2025 (Expires in Aug 2027)

Applied Suicide Intervention Skills Training, *LivingWorks*

Research

I am a multidisciplinary researcher with interests in immersive analytics, extended reality (XR) and artificial intelligence (AI). Specifically, my goals are to explore how XR technologies can help the user with a better understanding of AI.

Jan 2025 – Present

Assistant Professor in Extended Reality, *Algoma University*

- I am currently collaborating with researchers at the university on XR and AI projects.
- I am currently working on an XR-based visualization of machine learning techniques.
- I am writing a textbook about artificial intelligence.
- I am currently continuing to work on projects at Dalhousie University.

Jun 2024 – Dec 2024

Part-Time Professor, *Algoma University*

- I wrote an article on AI and cognitive science.
- I continued the work that I performed at Dalhousie University.

Jan 2018 – Jun 2024

Ph.D. Student, *Dalhousie University, and Global Artificial Intelligence Accelerator (GAIA) at Ericsson*

- I developed Gander, an AR+tablet, prototype for geospatial analysis and evaluated it in three human-participation studies.
- From Jan 2021 until around Jun 2022, Gander was developed with the cooperation of GAIA, Ericsson.

Sep 2016 – Dec 2016

Information Technology Intern, *Lenovo in Beijing*

- I worked on a natural language processing project.
- I initiated a virtual reality study.

Sep 2015 – Dec 2016

M.Sc. Student, *University of Calgary*

- I worked on Kalgan, a video player designed for language learning.

Sep 2014 – Sep 2015

Undergraduate Research Assistant, *University of Toronto*

- I assisted with TAGLab, a computer science laboratory for developing software and technology for seniors in their research endeavour. I was involved with Tangra, ALLT, and InTouch.
- I wrote a cognitive science report with the guidance of Prof. John Vervaeke.

Teaching

At Algoma University (Sault Ste. Marie)

Fall 2025

- **Lecturer for COSC5926: Advanced Topics in Human-Computer Interaction (Sessions F01, F02)**

Spring 2025

- **Lecturer for COSC5206: Graduate Seminar (Sessions 001, 003)**

Winter 2025

- **Lecturer for COSC4427: Special Topics in Computer II (Session 001)**

Topic: Cognitive Science & Computational Linguistics

- **Lecturer for COSC2006: Data Structure I (Sessions 002, 010C)**

Fall 2024

- **Lecturer for COSC 2006: Data Structure I (Sessions 001 and 002)**

Spring 2024

- **Lecturer for COSC2006: Data Structure I (Session A)**

Winter 2024

- **Lecturer for COSC3117: Artificial Intelligence (Session A)**
- **Lecturer for COSC2836: Computer Software for Science (Session A)**

At Dalhousie University

Fall 2022

- **Online Teaching Assistant for CSCI5610: Designing for UX**

Winter 2022

- **Online Lecturer for CSCI4169/6307: Human-Computer Interaction**

Fall 2021

- **Online Lecturer for CSCI6055: Research Methods and Statistics**

Winter 2021

- **Online Teaching Assistant for SCIE4702: Science and Technology Innovation, Commercialization, and Entrepreneurship II**
- **Online Teaching Assistant for CSCI3160: Designing User Interfaces**
- **Course Builder for PHYC 3010: Experimental Physics II**

Fall 2020

- **Online Teaching Assistant for SCIE4702: Science and Technology Innovation, Commercialization, and Entrepreneurship I**
- **Course Builder for PHYC 3000/3340: Experimental Physics I**

Spring 2020

- **Online Lecturer for CSCI6055: Research Methods and Statistics**

Winter 2020

- **Teaching Assistant for CSCI4163/6610: Human-Computer Interaction**
    - Due to the COVID pandemic, the position was transitioned to online.
- **Emergency Course Builder**

Fall 2019

- **Teaching Assistant for CSCI4163/6610: Human-Computer Interaction**

- **Teaching Assistant for CSCI4169/6307: Usable Privacy and Security**

Summer 2019
- **Teaching Assistant for CSCI6055: Research Methods and Statistics**

Winter 2019
- **Teaching Assistant for CSCI4163/6610: Human-Computer Interaction**

Fall 2018
- **Teaching Assistant for CSCI4163/6610: Human-Computer Interaction**

Winter 2018
- **Teaching Assistant for CSCI1101: Computer Science II**

At the University of Calgary

Fall 2017
- **Teaching Assistant for CPSC203: Introduction to Problem Solving Using Application Software**

Winter 2017
- **Teaching Assistant for SENG513: Web-based Systems**

Winter 2016
- **Teaching Assistant for SENG513: Web-based Systems**

Fall 2015
- **Teaching Assistant for CPSC217: Introduction to Computer Science for Multidisciplinary Studies I**

At the University of Toronto

Fall 2013
- **Teaching Assistant for CSC108: Introduction to Programming**

Industry Experience

Jan 2021 – Jun 2022

Mitacs Ph.D. Intern, ***Dalhousie University and Ericsson***
- I developed my Ph.D. project with guidance from Ericsson.
- Ericsson assisted me in filing a patent based on my work.

Dec 2019 – Jan 2020

Contract Data Analyst, ***Windsor/West Hants Together, the Government of Nova Scotia***

- I analyzed online survey results in order to advise how Windsor, Nova Scotia can best amalgamate with West Hants, Nova Scotia.

May 2019 – Aug 2019

Graduate Research Assistant, ***Dalhousie University***

- I evaluated the classrooms at the Truro campus for their suitability for teaching and learning.

May 2018 – Oct 2019

Graduate Research Assistant, ***Dalhousie University***

- I evaluated the classrooms at the Haligonian campuses (Sexton, Studley) for their suitability for teaching and learning.

Sep 2016 – Dec 2016

Information Technology Intern, ***Lenovo in Beijing***

- I helped with preliminary natural language processing data analysis and set up a virtual reality study.

May 2014 – Aug 2014

Information Technology Intern, ***JetAsia Airways***

- I helped with setting up the Microsoft Office 365 system at the airlines.
- I also provided additional technical support.

Publications and Patent

In 2025

Garcia-Ruiz, M. A., Lin, R., Nam, S., Hu, S., Nasir, M., Santana-Mancilla P. C. (2025). Integrating AI and XR for Smarter Learning in Computer Science Education: Teaching in the Age of Intelligence and Immersion. In W., N. A. W. Ali, S. Z. S. Idrus, M. N. bin Yaacob, I N. Marzuki (Eds.), *New Media Applications in Digital Education* (pp. 33-72). IGI Global Scientific Publishing.

Brown, S. A., Arbo, J., Colarieti, M., Hu, S., Mattey, J., Roy, S. B., Serbaescu, A. (2025). Foreword from the Association for Research in Digital Interactive Narratives Graduate Research Committee. *Journal of Interactive Narrative*. https://doi.org/10.62937/jin.2025.grad.2238

Hu, S. (2025, July). Chatbots as Turing Machines. *32nd IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing*. Institute of Electrical and Electronics Engineers. NOTE: Full Conference Paper.

In 2024

Hu, S., Raza, M. & Reilly, D. (2024). Gander: The Preliminary Design and Evaluation of an AR+Tablet System for Geospatial Analysis, *2024 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)*. Institute of Electrical and Electronics Engineers. https://doi.org/10.1109/ISMAR-Adjunct64951.2024.00059. NOTE: Workshop Paper.

Connor, C., Scheonborn, E. C., Hu, S., Porcino, T. M., Moore, C., Reily, D. & Lages, W. S. (2024, October 7). Examining Pair Dynamics in Shared, Co-located Augmented Reality Narratives. *SUI '24: Proceedings of the 2024 ACM Symposium*

on Spatial User Interaction, (17). The Association of Computing Machinery. https://dl.acm.org/doi/10.1145/3677386.3682091. NOTE: Full Conference Paper.

In 2023

Hu, S. & Reilly, D. (2023). Comparative Glyph-Field Trajectory Analyses with an AR+Tablet Hybrid User Interface for Geospatial Analysis Tasks. In J.-M. Normand, M. Sugimoto & V. Sundstedt (Eds.), *International Conference on Artificial Reality and Telexistence Eurographics Symposium on Virtual Environments*. The European Association for Computer Graphics. https://doi.org/10.2312/egve.20231320. NOTE: Full Conference Paper.

Hu, S. & Reilly, D. (2023). Parallax-based Glyph Composition Technique with Colour-Blending Glyphs. In A. Campbell, C. Krogmeier, & G. Young (Eds.), *International Conference on Artificial Reality and Telexistence Eurographics Symposium on Virtual Environments - Posters*. The European Association for Computer Graphics. https://doi.org/10.2312/egve.20231342 . NOTE: Poster Paper.

In 2022

Hu, S., Reilly, D., Bashbaghi, S. (2022). Augmented Reality + Tablet Interface for Multiple Linear Regression Model Creation. Ericsson. [Patent no. PCT/IB2022/052779]

In 2021

Hu, S., Malloch J. & Reilly, D. (2021). A Comparative Evaluation of Techniques for Locating Out of View Targets in Virtual Reality. *Proceedings of Graphics Interface 2021*. Canadian Human-Computer Communications Society. https://graphicsinterface.org/proceedings/gi2021/gi2021-32/. NOTE: Full Conference Paper.

In 2018

Hu, S., Willet, W. (2018). Kalgan: Video Player for Casual Language Learning. *CHI EA '18: Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems*. Association of Computing Machinery. https://doi.org/10.1145/3170427.3188498. NOTE: Poster Paper

Presentations

In 2025

- Presented a remote guest lecture titled “Using Augmented Reality for Analytics” for Bina Nusantara University.
- Presented Hu (2025) at the 32nd IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing.

In 2024

- Presented Hu, Raza & Reilly (2024) at the MASK Workshop at the IEEE ISMAR 2024.

In 2021

- Presented Hu, Malloch & Reilly (2021) at Graphics Interface 2021.

Services

Committee Member

Oct 2025 – Present
Vice Chair of the Research Ethics Board, *Algoma University*

Jul 2025 – Present
Member of the Research Ethics Board, *Algoma University*

Feb 2025 – Present
Member of the Equity, Diversity and Inclusion Committee, *Faculty of Computer Science & Technology (FCST) at Algoma University*

Jan 2025 – Present
Member of the XR Development Committee, *FCST at Algoma University*

June 2024 – Present
Member of the Graduate Research Committee, *Association for Research in Digital Interactive Narratives (ARDIN)*

May 2016 – Aug 2016
Vice-President – Finance, *Computer Science Graduate Society at University of Calgary*

Sep 2011 – Aug 2015
Administrator, *Cognitive Science and Artificial Intelligence Student Association (CASA) at the University of Toronto*

Conference Organizer and Volunteer

Oct 2025
Technical Program Committee Member, *IEEE International Conference on Computing, Networking and Communications (IEEE ICNC) 2026*

Jul 2025
Emergency Session Chair, *The 32nd IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (IEEE/ACIS SNPD Summer-2025 IV)*

Jun 2025
Chair for Future Directions in Interactive Digital Narratives – a Student Symposium (FIDN), *ARDIN*

Jan 2025 – Jun 2025
Organizer for FIDN, *ARDIN*

May 2021 – Jul 2021
Organizer, *Dalhousie Computer Science In-House Conference (DCSI)*

May 2018
Student Volunteer, *ACM Special Interest Group on Computer-Human Interaction Conference (ACM SIGCHI)*

Jan 2018
Session Chair and Emergency Judge, *DCSI*

Mentorship

Fall 2024
Mentor for International Collegiate Programming Contest Practices, *Faculty of Computer Science & Technology at Algoma University*

Winter 2024
Mentor for International Collegiate Programming Contest Practices, *Faculty of Computer Science & Technology at Algoma University*

Jan 2020
Mentor, *DCSI*

Sep 2012 – Apr 2013
Mentor, *Innis College Residence at the University of Toronto*

Peer Reviewer

2025
Reviewer, *IEEE ICNC*
Reviewer, *ACM SIGCHI*
Reviewer, *IGI Global Publishing*
Reviewer, *IEEE Visualization (IEEE VIS) Conference*
Reviewer, *ACM Virtual Reality Software and Technology (VRST) conference*
Special Session Reviewer, *IEEE/ACIS SNPD Summer-2025 IV*
Emergency Peer Reviewer, *Graphics Interface (GI) Conference*
Emergency Peer Reviewer, *ACM Designing Interactive Systems (DIS) Conference*

2024
Emergency Reviewer, *ACM Spatial User Interface (SUI) Conference*
Reviewer, *IEEE International Symposium on Mixed and Augmented Reality (ISMAR) Conference*

2023
Reviewer, *IEEE ISMAR Conference*
Reviewer, *IEEE VIS Conference*

2022
Reviewer, *IEEE ISMAR Conference*

2021
Reviewer, *IEEE ISMAR Conference*

2020
Reviewer, *IEEE ISMAR Conference*
Reviewer, *ACM SIGCHI Conference*

2019
Reviewer, *ACM SIGCHI Conference*

Skills

Technical Skills

- Data Analytics with R, Python, Tableau, and Excel
- Mixed Reality Development
- Cognitive Science and AI development
- Web Development with HTML/CSS, JavaScript, NodeJS
- UX and User Interface Design
- Scientific Writing with LaTeX
- Other Programming Languages: Java, Visual Basic, and etc.

Languages

- Thai *(Native)*
- English *(Advanced)*
- French *(Intermediate)*
- Mandarin *(Intermediate)*
- Japanese *(Beginner)*