Prof. Sathaporn “Hubert” Hu, Ph.D.
A.k.a. สถาพร ฮู, 胡秀楷

Assistant Professor in Extended Reality
Department of Information Technology and Professional Studies
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Education

Jan 2018 – Jan 2024

Doctor of Philosophy, 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
M.Sc. Computer Science
- **Funding:** Transformative Talent Internships, 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, St. George Campus
- **Award:** Graduated with Distinction (GPA: 3.23/4)

Research

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

Jan 2025 - Present

Assistant Professor in Extended Reality
Algoma University, Sault Ste. Marie Campus
- I am collaborating with researchers at the university on XR projects

Jun 2024 – Dec 2024	**Part-Time Professor** ***Algoma University, Sault Ste. Marie Campus*** • I continued to improve on my unpublished work from Dalhousie University. • I submitted articles about AI, cognitive science, and extended reality.
Jan 2018 – Jun 2024	**Ph.D. Student** ***Dalhousie University, Studley Campus*** ***Global Artificial Intelligence Accelerator (GAIA), Ericsson*** • I developed Gander, an AR+tablet, prototype for geospatial analysis and evaluated 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, Beijing*** • I designed a mixed reality study and piloted it.
Sep 2015 – Dec 2018	**M.Sc. Student** ***University of Calgary*** • I developed Kalgan, a video player for language learning.
Sep 2014 – Sep 2015	**H.B.Sc. Research Assistant** ***University of Toronto, St. George Campus*** • I assisted with TAGLab, a computer science laboratory for developing software and technology for seniors in their research endavour. I was involved with Tangra, ALLT, and InTouch. • I wrote a cognitive science report with the guidance of Prof. John Vervaeke.

Teaching

Winter 2025	**Lecturer for COSC4427: Special Topics in Computer II (Session 001)** ***Topic: Cognitive Science & Computational Linguistics*** ***Algoma University, Sault Ste. Marie Campus*** **Lecturer for COSC2006: Data Structure I (Session 002)** ***Algoma University, Sault Ste. Marie Campus***
Fall 2024	**Lecturer for COSC 2006: Data Structure I (Sessions 001 and 002)** ***Algoma University, Sault Ste. Marie Campus***
Spring 2024	**Lecturer for COSC2006: Data Structure I (Session A)** ***Algoma University, Sault Ste. Marie Campus***
Winter 2024	**Lecturer for COSC3117: Artificial Intelligence (Session A)** ***Algoma University, Sault Ste. Marie Campus*** **Lecturer for COSC2836: Computer Software for Science (Session A)** ***Algoma University, Sault Ste. Marie Campus***
Fall 2022	**Teaching Assistant for CSCI5610: Designing for UX** ***Dalhousie University, Online***
Winter 2022	**Lecturer for CSCI4169/6307: Human-Computer Interaction** ***Dalhousie University, Online***
Spring 2021	**Lecturer for CSCI6055: Research Methods and Statistics**

	Dalhousie University, Online
	Teaching Assistant for CSCI3160: Designing User Interfaces ***Dalhousie University, Online***
Winter 2022	**Teaching Assistant for SCIE4702: Science and Technology Innovation, Commercialization, and Entrepreneurship II** ***Dalhousie University, Online***
	Course Builder for PHYC 3010: Experimental Physics II ***Dalhousie University, Online***
Fall 2021	**Lecturer for CSCI6055: Research Methods and Statistics** ***Dalhousie University, Online***
Winter 2020	**Teaching Assistant for CSCI4163/6610: Human-Computer Interaction** ***Dalhousie University, Studley Campus*** • **Note:** Due to the COVID pandemic of 2020, this position transitioned to online later in the semester.
	Emergency Course Builder ***Dalhousie University, Remote*** • **Note:** This position was created by the university to help instructors transition their courses to online delivery.
Summer 2019	**Teaching Assistant for CSCI6055: Research Methods and Statistics** ***Dalhousie University, Studley Campus***
Winter 2019	**Teaching Assistant for CSCI4163/6610: Human-Computer Interaction** ***Dalhousie University, Studley Campus***
Fall 2018	**Teaching Assistant for CSCI4163/6610: Human-Computer Interaction** ***Dalhousie University, Studley Campus***
Winter 2018	**Teaching Assistant for CSCI1101: Computer Science II** ***Dalhousie University, Studley Campus***
Fall 2017	**Teaching Assistant for CPSC203: Introduction to Problem Solving Using Application Software** ***University of Calgary***
Winter 2017	**Teaching Assistant for SENG513: Web-based Systems** ***University of Calgary***
Winter 2016	**Teaching Assistant for SENG513: Web-based Systems** ***University of Calgary***
Fall 2015	**Teaching Assistant for SENG217: Introduction to Computer Science for Multidisciplinary Studies I** ***University of Calgary***
Fall 2013	**Teaching Assistant for CSC108: Introduction to Programming** ***University of Toronto (St. George Campus)***

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

May 2018 – Oct 2019 **Graduate Research Assistant**
Dalhousie University, Studley and Carleton Campuses
- I evaluated the classrooms at all Halifax campuses for their suitability for teaching and learning.

Sep 2016 – Dec 2016 **Information Technology Intern**
Lenovo, Beijing
- I helped with preliminary data analysis and set up a virtual reality study.

May 2014 – Aug 2014 **Information Technology Intern**
Jet Asia Airways, Bangkok
- I helped with setting up Microsoft Office 365 system at the airlines.
- I also provided additional technical supports.

Publications and Patent

2024 **[Workshop Paper] Hu, S.**, Raza, M. & Reily, 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.
- Presented online at MASK'24 Workshop at IEEE ISMAR'24. The workshop was held in Bellevue, WA, USA but the presentation was made remotely.

[Full Conference 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

2023 **[Full Conference Paper] Hu, S.** & Reily, 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
- Presented in-person at ICAT-EGVE'23 in Dublin, Ireland.

[Poster Paper] Hu, S. & Reily, 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

- Presented as a poster at ICAT-EGVE'23 in Dublin, Ireland.

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

- The application process is still ongoing.

2021 **[Full Conference Paper] Hu, S.**, Malloch J. & Reily, 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/

- Presented online at GI'21. The in-person presentation was cancelled due to the COVID-19 pandemic.

2018 **[Late-Breaking Work] 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

- Presented as a poster at ACM CHI'18 in Montreal, Canada.

Services

Jan 2025 – Present **Member of the XR Development Committee**
Faculty of Computer Science & Technology, Algoma University

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

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

2024 **Emergency Peer Reviewer**
ACM SUI Conference

2020, 2022 – 2023, 2024 **Peer Reviewer**
IEEE ISMAR Conferences

2019, 2023 **Peer Reviewer**
ACM SIGCHI Conferences

2023 **Peer Reviewer**
IEEE VIS Conference

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

Jan 2020 **Mentor**
Dalhousie Computer Science In-House Conference (DCSI)

May 2018 **Student Volunteer**
ACM SIGCHI Conference

Jan 2018 **Session Chair and Judge**
Dalhousie Computer Science In-House Conference (DCSI)

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

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

Skills

Technical Skills

- Data Analytics with R, Python, Tableau, and Excel
- Mixed Reality Development with Unity and MRTK
- Cognitive Science and AI with NLTK
- 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)*