

Prof. Sathaporn “Hubert” Hu, Ph.D.

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Assistant Professor in Extended Reality

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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 <i>Algoma University, Sault Ste. Marie Campus</i> <ul style="list-style-type: none"> • I continued to improve on my unpublished work from Dalhousie University.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 <i>Dalhousie University, Studley Campus</i> <i>Global Artificial Intelligence Accelerator (GAIA), Ericsson</i> <ul style="list-style-type: none"> • 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 <i>Lenovo, Beijing</i> <ul style="list-style-type: none"> • I designed a mixed reality study and piloted it.
Sep 2015 – Dec 2018	M.Sc. Student <i>University of Calgary</i> <ul style="list-style-type: none"> • I developed Kalgan, a video player for language learning.
Sep 2014 – Sep 2015	H.B.Sc. Research Assistant <i>University of Toronto, St. George Campus</i> <ul style="list-style-type: none"> • 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

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

	<i>Dalhousie University, Online</i>
	Teaching Assistant for CSCI3160: Designing User Interfaces <i>Dalhousie University, Online</i>
Winter 2022	Teaching Assistant for SCIE4702: Science and Technology Innovation, Commercialization, and Entrepreneurship II <i>Dalhousie University, Online</i>
	Course Builder for PHYC 3010: Experimental Physics II <i>Dalhousie University, Online</i>
Fall 2021	Lecturer for CSCI6055: Research Methods and Statistics <i>Dalhousie University, Online</i>
Winter 2020	Teaching Assistant for CSCI4163/6610: Human-Computer Interaction <i>Dalhousie University, Studley Campus</i> <ul style="list-style-type: none"> Note: Due to the COVID pandemic of 2020, this position transitioned to online later in the semester.
	Emergency Course Builder <i>Dalhousie University, Remote</i> <ul style="list-style-type: none"> 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 <i>Dalhousie University, Studley Campus</i>
Winter 2019	Teaching Assistant for CSCI4163/6610: Human-Computer Interaction <i>Dalhousie University, Studley Campus</i>
Fall 2018	Teaching Assistant for CSCI4163/6610: Human-Computer Interaction <i>Dalhousie University, Studley Campus</i>
Winter 2018	Teaching Assistant for CSCI1101: Computer Science II <i>Dalhousie University, Studley Campus</i>
Fall 2017	Teaching Assistant for CPSC203: Introduction to Problem Solving Using Application Software <i>University of Calgary</i>
Winter 2017	Teaching Assistant for SENG513: Web-based Systems <i>University of Calgary</i>
Winter 2016	Teaching Assistant for SENG513: Web-based Systems <i>University of Calgary</i>
Fall 2015	Teaching Assistant for SENG217: Introduction to Computer Science for Multidisciplinary Studies I <i>University of Calgary</i>
Fall 2013	Teaching Assistant for CSC108: Introduction to Programming <i>University of Toronto (St. George Campus)</i>

Industry Experience

Jan 2021 – Jun 2022	Mitacs Ph.D. Intern <i>Dalhousie University and Ericsson</i> <ul style="list-style-type: none">• 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 <i>Windsor/West Hants Together, the Government of Nova Scotia</i> <ul style="list-style-type: none">• 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 <i>Dalhousie University, Truro Campus</i> <ul style="list-style-type: none">• I evaluated the classrooms at the Truro campus for their suitability for teaching and learning.
May 2018 – Oct 2019	Graduate Research Assistant <i>Dalhousie University, Studley and Carleton Campuses</i> <ul style="list-style-type: none">• I evaluated the classrooms at all Halifax campuses for their suitability for teaching and learning.
Sep 2016 – Dec 2016	Information Technology Intern <i>Lenovo, Beijing</i> <ul style="list-style-type: none">• I helped with preliminary data analysis and set up a virtual reality study.
May 2014 – Aug 2014	Information Technology Intern <i>Jet Asia Airways, Bangkok</i> <ul style="list-style-type: none">• I helped with setting up Microsoft Office 365 system at the airlines.• I also provided additional technical supports.

Publications and Patent

2024	<p>[Workshop Paper] Hu, S., Raza, M. & Reily, D. (2024). Gander: The Preliminary Design and Evaluation of an AR+Tablet System for Geospatial Analysis, <i>2024 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)</i>. Institute of Electrical and Electronics Engineers.</p> <ul style="list-style-type: none">• Presented online at MASK'24 Workshop at IEEE ISMAR'24. The workshop was held in Bellevue, WA, USA but the presentation was made remotely. <p>[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. <i>SUI '24: Proceedings of the 2024 ACM Symposium on Spatial User Interaction</i>, (17). The Association of Computing Machinery. https://dl.acm.org/doi/10.1145/3677386.3682091</p>
2023	<p>[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.), <i>International Conference on Artificial Reality and Telexistence Eurographics Symposium on Virtual Environments</i>. The European Association for Computer Graphics. https://doi.org/10.2312/egve.20231320</p> <ul style="list-style-type: none">• Presented in-person at ICAT-EGVE'23 in Dublin, Ireland. <p>[Poster Paper] Hu, S. & Reily, D. (2023). Parallax-based Glyph Composition Technique with Colour-Blending Glyphs. In A. Campbell, C. Krogmeier, & G. Young (Eds.), <i>International Conference on Artificial Reality and</i></p>

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 <i>Faculty of Computer Science & Technology, Algoma University</i>
Jun 2024 – Present	Member of the Graduate Research Committee <i>Association for Research in Digital Interactive Narratives (ARDIN)</i>
Winter 2024, Fall 2024	Mentor for International Collegiate Programming Contest Practices <i>Faculty of Computer Science & Technology, Algoma University</i>
2024	Emergency Peer Reviewer <i>ACM SUI Conference</i>
2020, 2022 – 2023, 2024	Peer Reviewer <i>IEEE ISMAR Conferences</i>
2019, 2023	Peer Reviewer <i>ACM SIGCHI Conferences</i>
2023	Peer Reviewer <i>IEEE VIS Conference</i>
May 2021 – Jul 2021	Organizer <i>Dalhousie Computer Science In-House Conference (DCSI)</i>
Jan 2020	Mentor <i>Dalhousie Computer Science In-House Conference (DCSI)</i>
May 2018	Student Volunteer <i>ACM SIGCHI Conference</i>
Jan 2018	Session Chair and Judge <i>Dalhousie Computer Science In-House Conference (DCSI)</i>
May 2016 – Aug 2016	Vice-President – Finance <i>Computer Science Graduate Society, University of Calgary</i>

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*)