

# Prof. Sathaporn “Hubert” Hu, Ph.D.

A.k.a. ศาพร ฮู, 胡秀楷

Assistant Professor in Extended Reality, Algoma University (Sault Ste. Marie)

**Address:** 205-723 Bay Street, Sault Ste. Marie, ON P6A6Y3

**Website:** <https://husathap.github.io/>

**Telephone:** 587-890-2772

**Email:** [hus@algonau.ca](mailto:hus@algonau.ca)

## 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- I continued to improve on my unpublished work from Dalhousie University.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.

<b>Jan 2018 – Jun 2024</b>	<b>Ph.D. Student</b> <b><i>Dalhousie University, Studley Campus</i></b> <b><i>Global Artificial Intelligence Accelerator (GAIA), Ericsson</i></b> <ul style="list-style-type: none"> <li>I developed Gander, an AR+tablet, prototype for geospatial analysis and evaluated in three human-participation studies.</li> <li>From Jan 2021 until around Jun 2022, Gander was developed with the cooperation of GAIA, Ericsson.</li> </ul>
<b>Sep 2016 – Dec 2016</b>	<b>Information Technology Intern</b> <b><i>Lenovo, Beijing</i></b> <ul style="list-style-type: none"> <li>I designed a mixed reality study and piloted it.</li> </ul>
<b>Sep 2015 – Dec 2018</b>	<b>M.Sc. Student</b> <b><i>University of Calgary</i></b> <ul style="list-style-type: none"> <li>I developed Kalgan, a video player for language learning.</li> </ul>
<b>Sep 2014 – Sep 2015</b>	<b>H.B.Sc. Research Assistant</b> <b><i>University of Toronto, St. George Campus</i></b> <ul style="list-style-type: none"> <li>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.</li> <li>I wrote a cognitive science report with the guidance of Prof. John Vervaeke.</li> </ul>

## Teaching

<b>Winter 2025</b>	<b>Lecturer for COSC4427: Special Topics in Computer II (Session 001)</b> <b><i>Topic: Cognitive Science &amp; Computational Linguistics</i></b> <b><i>Algoma University, Sault Ste. Marie Campus</i></b>
	<b>Lecturer for COSC2006: Data Structure I (Session 002)</b> <b><i>Algoma University, Sault Ste. Marie Campus</i></b>
<b>Fall 2024</b>	<b>Lecturer for COSC 2006: Data Structure I (Sessions 001 and 002)</b> <b><i>Algoma University, Sault Ste. Marie Campus</i></b>
<b>Spring 2024</b>	<b>Lecturer for COSC2006: Data Structure I (Session A)</b> <b><i>Algoma University, Sault Ste. Marie Campus</i></b>
<b>Winter 2024</b>	<b>Lecturer for COSC3117: Artificial Intelligence (Session A)</b> <b><i>Algoma University, Sault Ste. Marie Campus</i></b>
	<b>Lecturer for COSC2836: Computer Software for Science (Session A)</b> <b><i>Algoma University, Sault Ste. Marie Campus</i></b>
<b>Fall 2022</b>	<b>Teaching Assistant for CSCI5610: Designing for UX</b> <b><i>Dalhousie University, Online</i></b>
<b>Winter 2022</b>	<b>Lecturer for CSCI4169/6307: Human-Computer Interaction</b> <b><i>Dalhousie University, Online</i></b>
<b>Spring 2021</b>	<b>Lecturer for CSCI6055: Research Methods and Statistics</b> <b><i>Dalhousie University, Online</i></b>
	<b>Teaching Assistant for CSCI3160: Designing User Interfaces</b> <b><i>Dalhousie University, Online</i></b>

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

## Industry Experience

Jan 2021 – Jun 2022	<p>Mitacs Ph.D. Intern <i>Dalhousie University and Ericsson</i></p> <ul style="list-style-type: none"> <li>I developed my Ph.D. project with guidance from Ericsson.</li> <li>Ericsson assisted me in filing a patent based on my work.</li> </ul>
---------------------	--

<b>Dec 2019 – Jan 2020</b>	<b>Contract Data Analyst</b> <b><i>Windsor/West Hants Together, the Government of Nova Scotia</i></b> <ul style="list-style-type: none"> <li>I analyzed online survey results in order to advise how Windsor, Nova Scotia can best amalgamate with West Hants, Nova Scotia.</li> </ul>
<b>May 2019 – Aug 2019</b>	<b>Graduate Research Assistant</b> <b><i>Dalhousie University, Truro Campus</i></b> <ul style="list-style-type: none"> <li>I evaluated the classrooms at the Truro campus for their suitability for teaching and learning.</li> </ul>
<b>May 2018 – Oct 2019</b>	<b>Graduate Research Assistant</b> <b><i>Dalhousie University, Studley and Carleton Campuses</i></b> <ul style="list-style-type: none"> <li>I evaluated the classrooms at all Halifax campuses for their suitability for teaching and learning.</li> </ul>
<b>Sep 2016 – Dec 2016</b>	<b>Information Technology Intern</b> <b><i>Lenovo, Beijing</i></b> <ul style="list-style-type: none"> <li>I helped with preliminary data analysis and set up a virtual reality study.</li> </ul>
<b>May 2014 – Aug 2014</b>	<b>Information Technology Intern</b> <b><i>Jet Asia Airways, Bangkok</i></b> <ul style="list-style-type: none"> <li>I helped with setting up Microsoft Office 365 system at the airlines.</li> <li>I also provided additional technical supports.</li> </ul>

## Publications and Patent

<b>2024</b>	<p><b>[Workshop Paper]</b> Hu, S., Raza, M. &amp; 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"> <li>Presented online at MASK'24 Workshop at IEEE ISMAR'24. The workshop was held in Bellevue, WA, USA but the presentation was made remotely.</li> </ul> <p><b>[Full Conference Paper]</b> Connor, C., Scheonborn, E. C., Hu, S., Porcino, T. M., Moore, C., Reily, D. &amp; 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. <a href="https://dl.acm.org/doi/10.1145/3677386.3682091">https://dl.acm.org/doi/10.1145/3677386.3682091</a></p>
<b>2023</b>	<p><b>[Full Conference Paper]</b> Hu, S. &amp; 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 &amp; V. Sundstedt (Eds.), <i>International Conference on Artificial Reality and Telexistence Eurographics Symposium on Virtual Environments</i>. The European Association for Computer Graphics. <a href="https://doi.org/10.2312/egve.20231320">https://doi.org/10.2312/egve.20231320</a></p> <ul style="list-style-type: none"> <li>Presented in-person at ICAT-EGVE'23 in Dublin, Ireland.</li> </ul> <p><b>[Poster Paper]</b> Hu, S. &amp; Reily, D. (2023). Parallax-based Glyph Composition Technique with Colour-Blending Glyphs. In A. Campbell, C. Krogmeier, &amp; G. Young (Eds.), <i>International Conference on Artificial Reality and Telexistence Eurographics Symposium on Virtual Environments - Posters</i>. The European Association for Computer Graphics. <a href="https://doi.org/10.2312/egve.20231342">https://doi.org/10.2312/egve.20231342</a></p> <ul style="list-style-type: none"> <li>Presented as a poster at ICAT-EGVE'23 in Dublin, Ireland.</li> </ul>
<b>2022</b>	<p><b>[Patent]</b> Hu, S., Reilly, D., Bashbaghi, S. (2022). Augmented Reality + Tablet Interface for Multiple Linear Regression Model Creation. Ericsson. [Patent no. PCT/IB2022/052779]</p> <ul style="list-style-type: none"> <li>The application process is still ongoing.</li> </ul>

- 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 &amp; 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 &amp; 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 <i>Cognitive Science and Artificial Intelligence Student Association (CASA), University of Toronto</i>

# 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*)