

# Prof. Sathaporn “Hubert” Hu (A.k.a. ศาพร ฮู, 胡秀楷)

Assistant Professor in Extended Reality at Algoma University

📍 **Work Address:** 1520 Queen St E, Sault Ste. Marie, ON P6A 2G3, Canada

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

## Education

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| <b>Jan 2018 – Jan 2024</b> | <b>Doctor of Philosophy, Computer Science</b><br><i>Dalhousie University</i> <ul style="list-style-type: none"><li>• <b>Funding:</b> Mitacs, Dalhousie University Travel Grant, Default Funding Package</li><li>• <b>Dissertation Title:</b> A Tablet + Augmented Reality Interface for Interactive Multiple Linear Regression with Geospatial Data</li><li>• <b>Examiners:</b> Prof. Derek Reilly (Supervisor), Prof. Joseph Malloch, Prof. Fernando Paulovich, Prof. Jamie Blustein, Prof. Pourang Irani (External)</li><li>• <b>Supervisor at Ericsson:</b> Dr. Saman Bashbaghi</li><li>• <b>Additional Certificates:</b> Certificate of University Teaching and Learning, GradPD</li></ul> |
| <b>Sep 2015 – Dec 2017</b> | <b>Master of Science in Computer Science</b><br><i>M.Sc. Computer Science</i> <ul style="list-style-type: none"><li>• <b>Funding:</b> Transformative Talent Internships, Default Funding Package</li><li>• <b>Dissertation Title:</b> Designing and Evaluating a Lightweight Video Player for Language Learning</li><li>• <b>Examiners:</b> Prof. Wesley Willett (Supervisor), Prof. Usman Alim, Prof. Parmit Chilana (External)</li></ul>   |
| <b>Sep 2011 – Aug 2015</b> | <b>Honours Bachelor of Science, Specialist in Computer Science, Major in Cognitive Science (Computational Stream), Minor in French as a Second Language</b><br><i>University of Toronto, St. George Campus</i> <ul style="list-style-type: none"><li>• <b>Award:</b> Graduated with Distinction (GPA: 3.23/4)</li></ul>  |
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## Research

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

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| <b>Jan 2025 - Present</b>  | <b>Assistant Professor in Extended Reality</b><br><i>Algoma University, Sault Ste. Marie Campus</i> <ul style="list-style-type: none"><li>• I am collaborating with researchers at the university on XR and AI projects.</li></ul>   |
| <b>Jun 2024 – Dec 2024</b> | <b>Part-Time Professor</b><br><i>Algoma University, Sault Ste. Marie Campus</i> <ul style="list-style-type: none"><li>• I continued to improve on my unpublished work from Dalhousie University.</li><li>• I submitted articles about AI, cognitive science, and XR.</li></ul> |
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<b>Jan 2018 – Jun 2024</b>	<b>Ph.D. Student</b> <i>Dalhousie University, Studley Campus</i> <i>Global Artificial Intelligence Accelerator (GAIA), Ericsson</i> <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> <i>Lenovo, Beijing</i> <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> <i>University of Calgary</i> <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> <i>University of Toronto, St. George Campus</i> <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>Spring 2025</b>	<b>Lecturer for COSC5206: Graduate Seminar (Sessions 001, 003)</b> <i>Algoma University, Sault Ste. Marie Campus</i>
<b>Winter 2025</b>	<b>Lecturer for COSC4427: Special Topics in Computer II (Session 001)</b> <i>Topic: Cognitive Science &amp; Computational Linguistics</i> <i>Algoma University, Sault Ste. Marie Campus</i>
	<b>Lecturer for COSC2006: Data Structure I (Sessions 002, 010C)</b> <i>Algoma University, Sault Ste. Marie Campus</i>
<b>Fall 2024</b>	<b>Lecturer for COSC 2006: Data Structure I (Sessions 001 and 002)</b> <i>Algoma University, Sault Ste. Marie Campus</i>
<b>Spring 2024</b>	<b>Lecturer for COSC2006: Data Structure I (Session A)</b> <i>Algoma University, Sault Ste. Marie Campus</i>
<b>Winter 2024</b>	<b>Lecturer for COSC3117: Artificial Intelligence (Session A)</b> <i>Algoma University, Sault Ste. Marie Campus</i>
	<b>Lecturer for COSC2836: Computer Software for Science (Session A)</b> <i>Algoma University, Sault Ste. Marie Campus</i>
<b>Fall 2022</b>	<b>Teaching Assistant for CSCI5610: Designing for UX</b> <i>Dalhousie University, Online</i>
<b>Winter 2022</b>	<b>Lecturer for CSCI4169/6307: Human-Computer Interaction</b> <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"> <li><b>Note:</b> Due to the COVID pandemic of 2020, this position transitioned to online later in the semester.</li> </ul>
	Emergency Course Builder <i>Dalhousie University, Remote</i>
	<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	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	<b>Mitacs Ph.D. Intern</b> <i>Dalhousie University and Ericsson</i> <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>
Dec 2019 – Jan 2020	<b>Contract Data Analyst</b> <i>Windsor/West Hants Together, the Government of Nova Scotia</i> <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>
May 2019 – Aug 2019	<b>Graduate Research Assistant</b> <i>Dalhousie University, Truro Campus</i> <ul style="list-style-type: none"><li>• I evaluated the classrooms at the Truro campus for their suitability for teaching and learning.</li></ul>
May 2018 – Oct 2019	<b>Graduate Research Assistant</b> <i>Dalhousie University, Studley and Carleton Campuses</i> <ul style="list-style-type: none"><li>• I evaluated the classrooms at all Halifax campuses for their suitability for teaching and learning.</li></ul>
Sep 2016 – Dec 2016	<b>Information Technology Intern</b> <i>Lenovo, Beijing</i> <ul style="list-style-type: none"><li>• I helped with preliminary data analysis and set up a virtual reality study.</li></ul>
May 2014 – Aug 2014	<b>Information Technology Intern</b> <i>Jet Asia Airways, Bangkok</i> <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

2024	<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>
2023	<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>

**[Poster 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>

- 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. & 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/>

- 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

**Apr 2025 - Jul 2025** Workshop Organizer (Topic: HCI and AI in the software development process: Opportunities and challenges)  
*IEEE/ACIS SNPD 2025 – Summer IV*

**Apr 2025** Emergency Peer Reviewer  
*Graphics Interface Conference*

**Feb 2025 – Mar 2025** Emergency Peer Reviewer  
*ACM DIS Conference*

**Feb 2025 – Present** Member of the EDI Committee  
*Faculty of Computer Science & Technology, Algoma University*

**Jan 2025 – Present** Chair for Future Directions in Interactive Digital Narratives (FIDN) – a Student Symposium  
*Association for Research in Digital Interactive Narratives (ARDIN)*

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

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

**2024** Emergency Peer Reviewer  
*ACM SUI Conference*

<b>2020, 2022 – 2023, 2024</b>	<b>Peer Reviewer</b> <i>IEEE ISMAR Conferences</i>
<b>2019, 2023</b>	<b>Peer Reviewer</b> <i>ACM SIGCHI Conferences</i>
<b>2023</b>	<b>Peer Reviewer</b> <i>IEEE VIS Conference</i>
<b>May 2021 – Jul 2021</b>	<b>Organizer</b> <i>Dalhousie Computer Science In-House Conference (DCSI)</i>
<b>Jan 2020</b>	<b>Mentor</b> <i>Dalhousie Computer Science In-House Conference (DCSI)</i>
<b>May 2018</b>	<b>Student Volunteer</b> <i>ACM SIGCHI Conference</i>
<b>Jan 2018</b>	<b>Session Chair and Judge</b> <i>Dalhousie Computer Science In-House Conference (DCSI)</i>
<b>May 2016 – Aug 2016</b>	<b>Vice-President – Finance</b> <i>Computer Science Graduate Society, University of Calgary</i>
<b>Sep 2011 – Aug 2015</b>	<b>Administrator</b> <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*)