

BLUE (GEORGIANNA) LIN

Wearable health researcher
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<https://bluelin.me>

I study how to augment health and wellbeing information for marginalized communities through multimodal ubiquitous technologies. This includes leveraging wearable sensors for ovarian health, developing gaze-tracking technologies for cognitive assessment, and understanding how to support actionable interpretations from digital health trackers.

EDUCATION

- PhD University of Toronto, Computer Science** Sept. 2021 - Present
Thesis topic: Menstrual tracking, healthy pregnancy
Co-Advisors: Khai Truong and Alex Mariakakis
- MS Georgia Institute of Technology, Computer Science** Aug. 2019 - Dec. 2020
Focus: Assistive wearables, head-worn displays, menstrual tracking
Advisor: Thad Starner
Collaborators: Jim Foley, Neha Kumar, Elizabeth Mynatt
- BS Georgia Institute of Technology, Computer Science** Aug 2016 - May 2019

ACADEMIC FUNDING HISTORY

- Department of Computer Science Award - Wolfond Scholarship** February 2024
Awarded by the University of Toronto's Department of Computer Science for the 2023-2024 academic session based on academic merit.
Received: \$5,000 CAD, (competitive)
- University of Toronto Alumni Association Graduate Scholar** January 2024
Adel S. Sedra Distinguished Graduate Award finalist, a fellowship awarded annually to a doctoral student who demonstrates outstanding academic and extracurricular leadership.
Received: \$1,000 CAD, (competitive)
- Google PhD Fellowship** September 2023
Recognizes a select group of graduate students doing exceptional and innovative research in areas relevant to computer science and related fields.
Received: \$55,100 CAD, (competitive)
- Department of Computer Science Award - Wolfond Scholarship** February 2023
Awarded by the University of Toronto's Department of Computer Science for the 2022-2023 academic session based on academic merit.
Received: \$5000 CAD, (competitive)

- Mitacs Accelerate** April - Sep. 2022
 Funded research collaboration with top Canadian partner organizations based on relevant expertise.
 Received: \$20,000 CAD, (competitive)
- Wolfond Fellowship** 2021
 Recognizes outstanding scholars who are pursuing research at University of Toronto.
 Received: \$20,000 CAD, (competitive)
- GVU Distinguished Masters Student Award** 2020
 The GVU Distinguished Masters Student award is the highest honor given by the GVU Center at Georgia Tech to a singular Masters student.
 Received: \$1,000 USD, (competitive)
- Zell-Miller Scholarship** 2016 - 2019
 Georgia's Zell Miller Scholarship is available to students who have demonstrated academic achievement. Covers full tuition through undergraduate studies.
 Received: \$36,636 USD

RECOGNITIONS

- Distinction, Graduation Highest Honors** 2020
 Highest honors are given to graduate students who maintain a high GPA throughout all years of studies. Students must keep a minimum GPA of 3.55.
- Distinction, Thank-the-Teacher Certificate** 2020
 This award is given to teaching assistants each semester who receive exceptional praise from students in the class taught. Class: CS4605/CS7470 Mobile & Ubiquitous Computing
- Distinction, Graduation Highest Honors** 2019
 Highest honors are given to undergraduate students who maintain a high GPA throughout all years of studies. Students must keep a minimum GPA of 3.55.
- Distinction, Thank-the-Teacher Certificate** 2019
 This award is given to teaching assistants each semester who receive exceptional praise from students in the class taught. Class: CS3651 Prototyping Intelligent Devices
- Prize / Award, Overall Hackathon Finalist** HackGSU, 2019
 Placed within the overall top 10 teams in hackathon with 500+ participants.
- Prize / Award, Best Use of Google Cloud Platform Winner** HackGSU, 2019
 Awarded for the State Farm App Challenge by building an application that encourages the 'Neighborhood of Good message and community'.
- Prize / Award, State Farm App Challenge Winner** HackGSU, 2019

Awarded for the best use of Google Cloud Platform in solution.

Prize / Award, Infotech On the Spot Prize SwampHacks, 2019
Awarded for the best use of Google Cloud Platform in solution at SwampHacks.

Prize / Award, Top 3 Finalist PayPal Hack, 2018
Awarded top third overall PayPal hackathon winner.

Prize / Award, Most Creative Winner PayPal Hack, 2018
Awarded most creative solution prize.

Prize / Award, Biggest Wow Factor PayPal Hack, 2018
Awarded the biggest wow factor prize.

Prize / Award, Top 3 Finalist Code_Athalon, 2018
Awarded top three overall hackathon winner.

PUBLICATIONS

Journal Publications

(Peer-reviewed)

1. **Georgianna Lin**, Brenna Li, Helen Li, Chloe Zhao, Khai Truong, and Alex Mariakakis. 2023. Understanding the Menstrual Experience through Longitudinal Tracking and Physiological Sensors. Submitted to 2024 Proc. ACM Interact. Mob. Wearable Ubiquitous Technology (IMWUT' 24).
2. **Georgianna Lin**, Helen Li, Ken Christofferson, Khai Truong, and Alex Mariakakis. 2024. Understanding wrist skin temperature changes to hormone variations across the menstrual cycle. NPJ Women's Health. (Accepted)
3. **Georgianna Lin**, Rumsha Siddiqui, Zixiong Lin, Joanna Blodgett, Shwetak Patel, Khai Truong, and Alex Mariakakis. 2023. Blood glucose variance collected with continuous glucose monitors across the menstrual cycle. NPJ Digital Medicine.
4. **Georgianna Lin**, Malcolm Haynes, Sarthak Srinivas, Pramod Kotipalli, and Thad Starner. 2021. Towards Finding the Optimum Position in the Visual Field for a Head Worn Display Used for Task Guidance with Non-registered Graphics. Proc. ACM Interact. Mob. Wearable Ubiquitous Technology (IMWUT' 21). 5, 1, Article 22 (March 2021), 26 pages.
DOI:<https://doi.org/10.1145/3448091>

Conference Papers

(Peer-reviewed)

1. **Georgianna Lin**, Brenna Li, Pierre Lessard, Minh Truong, Khai Truong, and Alex Mariakakis. 2024. Functional Design Requirements to Facilitate Menstrual Health Data Exploration. In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA.

2. **Lin, Georgianna**, Jin Yi Li, Afsaneh Fazly, Vladimir Pavlovic, and Khai Truong. 2023. Identifying Multimodal Context Awareness Requirements for Supporting User Interaction with Procedural Videos. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA.
3. Suhyeon Yoo, **Georgianna Lin**, Hyeon J Byeon, Amy Hwang, and Khai Truong. 2023. Song signing: Exploring practices and challenges of accessing music by people who are deaf or hard of hearing. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA.
4. **Georgianna Lin**, Elizabeth D Mynatt, and Neha Kumar. 2022. Investigating Culturally Responsive Design for Menstrual Tracking and Sharing Practices Among Individuals with Minimal Sexual Education. In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI '22). Association for Computing Machinery, New York, NY, USA, Article 437, 1–15. <https://doi.org/10.1145/3491102.3501824>
5. Jacob Logas, **Georgianna Lin**, Kelsie Belan, Advait Gogate, and Thad Starner. 2021. Conversational Partner’s Perception of Subtle Display Use for Monitoring Notifications. In Augmented Humans Conference 2021 (AHs'21). Association for Computing Machinery, New York, NY, USA, 101–110. DOI:<https://doi.org/10.1145/3458709.3458942>
6. **Georgianna Lin**, Tanmoy Panigrahi, Jon Womack, Devansh Jatin Ponda, Pramod Kotipalli, and Thad Starner. 2021. Comparing Order Picking Guidance with Microsoft Hololens, Magic Leap, Google Glass XE and Paper. In Proceedings of the 22nd International Workshop on Mobile Computing Systems and Applications (HotMobile '21). Association for Computing Machinery, New York, NY, USA, 133–139. DOI:<https://doi.org/10.1145/3446382.3448729>

(Poster)

7. Jason Tu, **Georgianna Lin**, and Thad Starner. 2020. Conversational greeting detection using captioning on head worn displays versus smartphones. In Proceedings of the 2020 International Symposium on Wearable Computers (ISWC '20). Association for Computing Machinery, New York, NY, USA, 84–86. DOI:<https://doi.org/10.1145/3410531.3414293>

(Abstract-Reviewed)

8. Jason Tu, **Georgianna Lin**, and Thad Starner. 2020. Towards an Understanding of Real-time Captioning on Head-worn Displays. In 22nd International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '20). Association for Computing Machinery, New York, NY, USA, Article 33, 1–5. DOI:<https://doi.org/10.1145/3406324.3410543>

PRESENTATIONS AND INVITED LECTURES

Paper Presentation, “Functional Design Requirements to Facilitate Menstrual Health Data Exploration,”ACM CHI Conference on Human Factors in Computing Systems, May 2024.

Paper Presentation, “Identifying Multimodal Context Awareness Requirements for Supporting User Interaction with Procedural Videos,”ACM CHI Conference on Human Factors in Computing Systems, April 2023.

Invited Talk, “Investigating Gendered Health and Wellbeing through Tracking and Physiological Sensors,” Google Consumer Health Research Team Center Review, June 2022.

Paper Presentation, “Investigating Culturally Responsive Design for Menstrual Tracking and Sharing Practices Among Individuals with Minimal Sexual Education,” ACM CHI Conference on Human Factors in Computing Systems, April 2022.

Paper Presentation, “Towards Finding the Optimum Position in the Visual Field for a Head Worn Display Used for Task Guidance with Non-registered Graphics,” ACM International Joint Conference on Pervasive and Ubiquitous Computing, September 2021.

Paper Presentation, “Comparing Order Picking Guidance with Microsoft HoloLens, Magic Leap, Google Glass XE and Paper,” International Workshop on Mobile Computing Systems and Applications, February 2021.

Demo Presentation, “Towards an Understanding of Real-time Captioning on Head-worn Displays,” MobileHCI Conference Series, October 2020.

Paper Presentation, “Conversational greeting detection using captioning on head worn displays versus smartphones,” ACM International Joint Conference on Pervasive and Ubiquitous Computing, September 2020.

TEACHING EXPERIENCE

University of Toronto Sept. 2024- Dec. 2024

CSC318H: The Design of Interactive Computational Media

- Facilitated hands-on studio sessions, guided students through user-centered design processes, provided feedback on project iterations, and evaluated their final design solutions through grading and assessment.

University of Toronto Sept. 2023 - Dec. 2023

CSC2524H: Topics in Interactive Computing

- Coordinated grading for weekly student assignments and discussion on the uses of LLMs and GPT in ubiquitous computing applications

University of Toronto Sep. 2021 - May 2022

C4M Computing for Medicine Workshop

- Taught a three-phase workshop course averaging 20 medical students per semester, covering the following topics: python basics, human mobility and epidemic modeling, machine learning on sensor data
- Held office hours for assignments, projects, and lectures
- Review and coordinate project materials: handout, coding notebooks, lab assignments

Georgia Institute of Technology Aug. 2019 - Dec. 2020

CS 4605/CS7470 Mobile & Ubiquitous Computing

- Taught a mixed undergraduate/graduate course averaging 80 students per semester

- Developed quizzes, exams, and homework
- Coordinated grading and labs with a team of 3-4 teaching assistants
- Mentored multiple student groups for semester-long projects

Georgia Institute of Technology

Jan. 2020 - May 2020

CS3651 Prototyping Intelligent Devices

- Taught an undergraduate course averaging 40 students per semester for one semester
- Developed quizzes and homework
- Coordinated grading and labs with a team of 2 teaching assistants

LAB ACTIVITIES

DGP Lab Faculty Candidates Student Roundtable Panelist

Feb. 2022-

I welcome and provide graduate student perspectives for incoming prospective faculty interviewing with the University of Toronto DGP lab.

CHAI Lab Reading Group Coordinator

Sep. 2021-

I help coordinate and organize reading groups within and outside of CHAI lab headed by Dr. Alex Mariakakis. These focus on ubiquitous computing and health.

Undergraduate Mentor

Sep. 2021-

I currently mentor four undergraduates on three different projects within the CHAI lab. They are currently learning about the research pipeline from project conception to paper writing. One is beginning to propose their own independent research and applying for Mitacs funding award.

UNIVERSITY INVOLVEMENT

University of Toronto Computer Science Graduate Society Treasurer

Oct 2023-

Senior executive member overseeing financial business and budget spending of Society which acts as a course union for the graduate students of the Department of Computer Science at the University of Toronto.

Graduate Visit Day Graduate Student Panelist

Feb 2023

On graduate visit day for the University, I help organize and participated in a graduate student panel where prospective students can learn and ask questions about the University.

Graduate Application Assistance Program (GAAP)

Oct 2022-

As a volunteer, I offer support to prospective students in underrepresented groups in CS for their applications to grad school through mentorship and offering editing help.

PursueSTEM Mentorship Program

Summer 2022

Mentored team of grade 10 students as part of capstone projects competing for Canada Wide Science Fair and Canadian Black Scientist Network Youth Regional Fair.

PursueSTEM Workshop and Panel

Feb 2022

Help organize and create workshop activities for grade 10 students as part of an outreach program that encourages and supports Black students interested in STEM. Also held Q&A panel.

Department of Computer Science DCS Women Sep. 2021-
Regularly attends meetings and applied to be a mentor for female undergraduates interested in applying to graduate programs at University of Toronto.

Women and Gender Equity Center Sep. 2021-
Regularly attend meetings on allyship, advocacy, and women's health and hygiene resources at University of Toronto.

Girls Who Code Aug 2019- Aug 2020
Was an administrative coordinator for the Georgia Tech chapter of Girls Who Code. I served as a communicator between parents, clubs, sponsors, and schools and the chapter. We lead after-school programs at local public schools for girls to learn technical skills.

National Deaf Center and Office of Disabilities Jan 2019 - May 2020
Was a notetaker for Georgia Tech's Office of Disabilities as an extension of academic accommodations provided by the National Deaf Center. I took notes that were sent to students with disabilities and also earned a certificate for my accessible notes.

Student Alumni Association Aug 2018 - May 2020
Was an executive chair for the largest student organization on Georgia Tech campus. Prior, I was the mentorship chair and led the mentorship program between current and alumni students.

Chinese Student Association Aug 2016 - May 2017
Was the fundraising chair for the Chinese Student Association. I organized and ran fundraising events to fund organizational events and activities.

EMPLOYMENT

Student Researcher, Research Intern (Summer 2022) Sept 2022 - Present
Google Research, Mentor: Anupam Pathak

- Investigated accessible device interactions as well as cognitive assessment using ubiquitous gaze tracking.
- Investigating large-language models for human activity and behavior logging

Research Intern April 2022 - Sep. 2022
Samsung AI Centre, Mentor: Afsaneh Fazly

- Received competitive Mitacs accelerate award to work with top Canadian companies.
- Investigated user task experiences with advanced natural language smart assistants.
- Conducted 30-participant user study and analyzed data with open-coded sessions and statistical analysis.

- Lead author on paper submitted to CHI 2023.

Research Engineer May 2020 - Aug. 2020

Samsung Electronics America - Think Tank Team, Mentor: Sajid Sadi, Curtis Aumiller

- Built wearable experience with voice augmentation and gesture-detection using smartwatch sensors.
- Worked with an interdisciplinary team of bioengineers, physicists, business strategists, designers, and legal on productization of application.

Site Reliability Engineer May 2019 - Aug. 2019

PayPal- AI Team

- Innovated real-time data pipeline from internal sources to data warehouses using REST endpoints.
- Built machine learning models to predict required computational resources based on server metrics.
- Built NLP models for predicting product innovation ratings and metric data for PayPal innovation lab.

Data & Analytics Operations Developer May 2018 - Aug. 2018

Procter & Gamble

- Created big data visualization to provide business intelligence for internal DevOps, sales, and SRE teams.
- Saved tens of thousands of developer hours per year with live-data hub connections and custom templates.

START-UP VENTURES

Technical Product Manager Oct. 2019 - Sep. 2021

[Teleportal](#)

- Guided product vision, strategy, user experience, at augmented reality and CGI startup.
- Managed pipeline from gathering user requirements, prototyping, evaluation, production to marketing.
- Built accessible, collaborative, and secure spatial computing technologies.

Research Engineer Jan. 2021 - Aug. 2021

[Biocircuit Technologies](#)

- Collaborated with clients and clinicians to design and engineer a full-stack application for collecting and analyzing nerve signals through wearable electrophysiology devices for multi-million dollar start-up

MEMBERSHIPS

Committee Member, IMWUT Distinguished Paper Award May 2022 -

Proceedings ACM Interactive, Mobile, Wearable, and Ubiquitous Technologies (IMWUT)
Assist committee chairs in the selection and review process for the distinguished paper award.

REVIEWING ACTIVITIES

CHI 2023 Student Game Competition	February 2023
CHI Reviewer (Double blind)	December 2022 -
IEEE VR 2023 Reviewer (Double blind)	Oct 2022

ORGANIZING ACTIVITIES

UbiComp 2022 Student Volunteer	Sept 2022
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Helped organize the five-day long premier conference for Ubiquitous Computing. UbiComp 2022 was collocated with the 2022 ACM International Symposium on Wearable Computers (ISWC'22) with shared Workshops and Tutorials. I helped lead student volunteer training, was an AV for main tracks that was broadcasted in Atlanta and Cambridge simultaneously, and also managed conference registration.

COMMUNITY INVOLVEMENTS

Girls SySTEM	Aug 2022 -
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Part of the executive team for the Ontario-based non-profit organization. As an events lead for the Toronto chapter, I oversee a committee that organizes events that grows young girls' interests in STEM and inspires them to seek out STEM leadership opportunities.

PAWS Chicago Foster	May 2021 - August 2021
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I foster puppies, elderly, and sick/injured dogs for the rescue center PAWS Chicago. As a foster parent, I welcome pets into my home and provide them food, water, toys, training, socialization, and lots of love.