

# AYAKA YORIIHIRO

ayaka@cs.cornell.edu

## EDUCATION

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### Cornell University

*September 2020 - Present*

Ph.D. in Computer Science.

M.S. in Computer Science.

*May 2024*

Advisor: Adrian Sampson.

### Swarthmore College

*September 2016 - May 2020*

B.A., Computer Science and Music (double major).

Elected Phi Beta Kappa.

Advisor: Zachary Palmer.

## HONORS AND AWARDS

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**NSF GRFP Honorable Mention**

*2022*

**Cornell University Outstanding Teaching Award**

*2022*

**Cornell University Fellowship**

*2020*

**Lockwood Fellowship, Swarthmore College**

*2020*

## PUBLICATIONS

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**A FIRRTL Backend for the Calyx High-Level Accelerator  
Compilation Infrastructure.**

*OSDA 2024*

**Ayaka Yorihiro**, Griffin Berstein, Kevin Laeuffer, and Adrian Sampson.  
Workshop on Open-Source Design Automation (OSDA).

**eMOP: A Maven Plugin for Evolution-Aware Runtime Verification**

*RV 2023*

**Ayaka Yorihiro**, Pengyue Jiang, Valeria Marqués, Benjamin Carleton, and Owolabi Legunsen.  
International Conference on Runtime Verification (RV).

**A Set-Based Context Model for Program Analysis**

*APLAS 2020*

Leandro Fachinetti, Zachary Palmer, Scott F. Smith, Ke Wu, **Ayaka Yorihiro**.  
Asian Symposium on Programming Languages and Systems (APLAS).

## PROFESSIONAL EXPERIENCE

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### Research Assistant

*Summer 2021, Jan - Aug 2022, Spring 2023, Sept 2024 - Present*

Cornell University, Ithaca, NY.

### Research Assistant

*Jan - Dec 2019*

Swarthmore College, Swarthmore, PA.

### C++ Engineering Intern

*Summer 2018*

Electronic Arts, Orlando, FL.

## TEACHING EXPERIENCE

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<b>Instructor of Record for CS 2110:</b> <b>Object-Oriented Programming and Data Structures</b> Cornell University, Ithaca, NY.	<i>Summer 2024</i>
<b>Teaching Assistant for CS 2110:</b> <b>Object-Oriented Programming and Data Structures</b> Cornell University, Ithaca, NY.	<i>Fall 2023, Spring 2024</i>
<b>Teaching Assistant for CS 5154: Software Testing</b> Cornell University, Ithaca, NY.	<i>Fall 2021, Fall 2022</i>
<b>Teaching Assistant for CS 73: Programming Languages</b> Swarthmore College, Swarthmore, PA.	<i>Spring 2020</i>
<b>Teaching Assistant for CS 46: Theory of Computation</b> Swarthmore College, Swarthmore, PA.	<i>Spring 2020</i>
<b>Student Mentor for CS 21: Introduction to Computer Science</b> Swarthmore College, Swarthmore, PA.	<i>Fall 2018</i>

## PRESENTATIONS

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<b>Languages and Tools for Hardware Accelerator Design</b> Comp 321: Programming Languages Guest Lecture Ithaca College, Ithaca, NY.	<i>November 2024</i>
<b>Languages and Tools for Hardware Accelerator Design</b> Swarthmore College, Swarthmore, PA.	<i>September 2024</i>
<b>Towards Better Specifications for Runtime Verification</b> Joint UT-Cornell Software Engineering Seminar	<i>Summer 2022</i>
<b>Towards Better Specifications for Runtime Verification</b> Programming Languages Discussion Group Retreat Cornell University, Ithaca, NY.	<i>Fall 2021</i>

## SERVICE

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<b>Department of Computer Science, PL Website Czar</b> Cornell University, Ithaca, NY.	<i>Spring 2025 - Present</i>
<b>Department of Computer Science, Ph.D. Mentorship Czar</b> Cornell University, Ithaca, NY.	<i>Spring 2022 - Present</i>
<b>Co-organizer, Joint UT-Cornell Software Engineering Seminar</b>	<i>Summer 2022</i>
<b>CS Ph.D. Student Visit Day Student Panelist</b> Cornell University, Ithaca, NY.	<i>Spring 2022</i>
<b>CS Ph.D. Student Visit Day Organizer</b> Cornell University, Ithaca, NY.	<i>Spring 2021</i>

## SKILLS AND INTERESTS

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<b>Programming Languages</b>	Rust, Java, Python, Bash, OCaml, C/C++, L <sup>A</sup> T <sub>E</sub> X
<b>Languages</b>	English (Fluent), Japanese (Fluent)
<b>Interests and Activities</b>	Viola, Orchestra, Chamber Music, Special Needs