

## EDUCATION

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**Massachusetts Institute of Technology**

Boston, MA

*Ph.D. in Computer Science*

*June 2020 –*

Advisor: Prof. Jonathan Ragan-Kelley

**The University of Tokyo**

Tokyo, Japan

*Bachelor of Science in Information Science. Major GPA: 3.98/4.0*

*April 2015 – March 2020*

Awarded a Dean's Award and ranked top at the Department of Information Science.

Advisor: Prof. Takeo Igarashi

## SELECTED PUBLICATIONS AND TALKS

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- **PaintersView: Automatic Suggestion of Optimal Viewpoints for 3D Texture Painting**

**Yuka Takahashi**, Tsukasa Fukusato, Takeo Igarashi

In *ACM SIGGRAPH Asia* 2019 technical brief (Overall Acceptance Rate 20%).

- **Migrating Large Codebases to C++ Modules**

**Yuka Takahashi**, Oksana Shadura, Vassil Vassilev

In *19th International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT)* 2019.

- **Stitch: An Interactive Design System for Hand-Sewn Embroidery**

**Yuka Takahashi**, Tsukasa Fukusato

In *ACM SIGGRAPH* 2018 poster (Overall Acceptance Rate 21%).

*ACM SIGGRAPH* Student Research Competition **3rd Place Award**.

- **Optimizing Frameworks' Performance Using C++ Modules-Aware ROOT**

**Yuka Takahashi**, Vasil Georgiev Vasilev, Raphael Iseman

In *23rd International Conference on Computing in High Energy and Nuclear Physics (CHEP)* 2018.

- **A Better Shell Command-line Autocompletion for Clang**

**Yuka Takahashi**

In *LLVM developer's meeting* 2017 Lightning Talk.

## EXPERIENCE

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**The University of Tokyo**

Tokyo, Japan

*Project Academic Support Specialist (research staff)*

*April 2020 – May 2020*

**UC Berkeley**

Berkeley, CA

*Visiting Student*

*August 2019 – September 2019*

Worked on Halide Scheduling Tool under a supervision of Prof. Jonathan Ragan-Kelley.

**CERN**

Geneva, Switzerland

*Research and Development Engineer*

*March 2018 – February 2019*

Worked on Cling C++ interpreter and Clang C++ Modules in ROOT team.

**Google Summer of Code**

Remote

*GSoC Student*

*April 2017 – August 2017*

Worked on a dynamic shell autocompletion project in LLVM/Clang organization.

## TEACHING AND MENTORING EXPERIENCE

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### Google Summer of Code

Remote

*Mentor*

*April 2019 – August 2019*

Advised an undergraduate student on Global Modules Index project at HEP software foundation.

### Security Mini-Camp

Japan

*Lecturer*

*September 2019*

Honored to give a compiler lecture to young students in the government-funded security lecturing project.

## INVOLVED PROJECTS

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- **ROOT** An open-source data analysis framework widely used in High Energy Physics field. Committer and an everyday contributor since March 2018. Maintaining Cling C++ interpreter and developing ROOT Runtime C++ Modules.
- **LLVM/Clang** An open-source compiler infrastructure. Committer and a regular contributor since 2017. Maintaining autocompletion feature and options in Clang Driver and developing C++ Modules in Clang ASTReader.

## GRANTS

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- **The Great Educators Fellowship** A fellowship from MIT EECS. This fellowship was offered to only the strongest candidates. Granted 9 months of tuition and stipend.
- **Dean's Award** Dean's Award from the University of Tokyo, for excellent academic performance and bachelor thesis. I was ranked top at the Department of Information Science.
- **Funai Overseas Scholarship** Doctoral research fellowship from Funai Foundation. Granted two years of tuition and stipend.
- **Research Internship Grant** *The university of Tokyo Study and Visit Abroad Program (SVAP)*, 2019.
- **Travel Grant** *The university of Tokyo Computer Science Alliance*, 2019.
- **Travel Grant** *LLVM organization*, 2017.