Yuka Takahashi

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https://yamaguchi1024.github.io/

EDUCATION

- **The University of Tokyo** — Tokyo, Japan
  Bachelor of Science in Information Science. Major GPA: 3.90/4.0. — *April. 2015 – present*
  Advisor: Takeo Igarashi
  Graduation thesis: "PaintersView: Automatic Suggestion of Optimal Viewpoints for 3D Texture Painting"

PEER REVIEWED PUBLICATIONS AND TALKS

- **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. (oral)

- **Stitch: An Interactive Design System for Hand-Sewn Embroidery**: **Yuka Takahashi**, Tsukasa Fukusato.
  In *ACM SIGGRAPH* 2018 Posters.
  ACM SIGGRAPH Student Research Competition **3rd place**.

- **Optimizing Frameworks' Performance Using C++ Modules-Aware ROOT**:
  Yuka Takahashi, Vasil Georgiev Vasilev, Raphael Isemann.
  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

- **CERN** — Geneva, Switzerland
  Research and Development Intern — *March 2018 - February 2019*
  Affiliated with Cincinnati University and Princeton University.
  Worked on Cling C++ interpreter and Clang C++ Modules.

- **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

- **Google Summer of Code** — Remote
  Mentor — *April 2019 - present*
  Honored to be a mentor in LLVM organization and HEP software foundation.

- **Security mini-camp** — Japan
  Lecturer — *2019*
  Honored to give a compiler lecture to young students in the government-funded security lecturing project.

INVOLVED PROJECTS

- **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. Committer and a regular contributor since 2017. Maintaining autocompletion feature and options in Clang Driver, and developing C++ Modules.
- **IWACPU**: The university's CPU experiment project. Designed an original instruction set and implemented a CPU core, assembler, emulator, OS, and shell. The OS and shell can be run on the CPU.

SKILLS

- **Languages**: C/C++, Python, JavaScript, Verilog HDL
- **Technologies**: LLVM/Clang, C++ Modules, Computer Graphics
- **Natural Languages**: Japanese (native), English (fluent), Spanish (intermediate), Russian (intermediate)

GRANTS

- **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.