Yusuke Izawa, Ph.D. student

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🌐 https://3tty0n.github.io

Education

2020-now	🔖	**Ph.D., Tokyo Institute of Technology**.
2018-2020	🔖	**M.Sc. Mathematical and Computing, Tokyo Institute of Technology**. Thesis title: *Stack Hybridization: A Mechanism for Bridging Two Compilation Strategies in a Meta Compiler Framework*
2014-2018	🔖	**B.Sc. Mathematical and Computing, Tokyo Institute of Technology**. Thesis title: *BacCaml: A Meta-JIT Compiler Based on Both Tracing and Method JIT Compilations*

Employment History

2020.11-2023.3	🔖	Tokyo Institute of Technology, Dept. of Math. and Comp., Research Assistant.
2018.6 – 2019.2	🔖	Recruit Marketing Partners, Inc., Software Engineer, Self-employment.
2018.8	🔖	Cookpad, Inc., Software Engineer, Internship. (**Won 2nd Place**)
2017.4 – 2018.3	🔖	FOLIO, Inc., Software Engineer, Internship.
2016.8 – 2017.3	🔖	DOWANGO, Inc., Software Engineer, Internship.
2016.1 – 2016.6	🔖	Summaly, Inc., Software Engineer, Internship

Grants, Honours and Scholarships

2021	🔖	**Research Fellowship for Young Scientists (JSPS DC2)**. Fellowship from the Japan Society for the Promotion of Science (JSPS), covering living expenses. Research expensec covered by KAKENHI.
2020	🔖	**JST Strategic Basic Research Programs ACT-X**. Research expenses covered by Japan Science and Technology Agency (JST).
	🔖	**Tokyo Tech Tsubame Scholarship for Doctoral Students**. Covering living expenses.
2019	🔖	**Travel Grants by Information Science Incentive Fund**. By dept. of mathematical and computing science, Tokyo Tech.
	🔖	**2nd Place, Graduate Category, ACM Student Research Competition,** *Association for Computing Machinery*. [*]
2014	🔖	**Scholarship by the Showa Scholarship Foundation**. Covering living expensed by Showa Scholarship Foundation.

Publications

Peer-reviewed

1. Izawa, Y., Masuhara, H., Carl Friedrich, B.-T., & Youyou, C. (2021). Threaded code generation with a meta-tracing jit compiler. In *Proceedings of the 14th workshop on implementation, compilation, optimization of object-oriented languages, programs and systems*, Virtual. Retrieved from
🔗 https://arxiv.org/abs/2106.12496

2 Izawa, Y., & Masuhara, H. (2020a). Amalgamating different jit compilations in a meta-tracing jit compiler framework. In *Proceedings of the 16th acm sigplan international symposium on dynamic languages* (pp. 1–15). 🔗 doi:10.1145/3426422.3426977

3 Izawa, Y. (2019). Baccaml: The meta-hybrid just-in-time compiler. In *Proceedings of the conference companion of the 3rd international conference on art, science, and engineering of programming*. **Awarded [*]**. 🔗 doi:10.1145/3328433.3328466

4 Izawa, Y., Masuhara, H., & Aotani, T. (2019). Extending a meta-tracing compiler to mix method and tracing compilation. In *Proceedings of the conference companion of the 3rd international conference on art, science, and engineering of programming*. 🔗 doi:10.1145/3328433.3328439

Non Peer-reviewed

1 Izawa, Y., Masuhara, H., Aotani, T., & Cong, Y. (2019). A stack hybridization for meta-hybrid just-in-time compilation. In K. Ito (Ed.), *Proceedings of the 36th jssst annual conference* (No. 2–L). nonrefereed. Shibaura Institute of Technology, Tokyo, Japan. Retrieved from 🔗 http://jssst.or.jp/files/user/taikai/2019/proceedings.html

Talks

Oral and Poster Sessions

1 Izawa, Y., & Masuhara, H. (2021). Amalgamating different JIT compilations in a meta-tracing JIT compiler framework. The 23nd JSSST Workshop on Programming and Programming Languages. Reproduction of the DLS'20 talk at JSSST PPL, **Invited**. Retrieved from 🔗 https://jssst-ppl.org/workshop/2021/

2 Izawa, Y., Masuhara, H., & Cong, Y. (2021). An interpreter design for supporting different JIT compilations in rpython framework. The 23nd JSSST Workshop on Programming and Programming Languages. Poster Presentation. Retrieved from 🔗 https://easychair.org/smart-program/PPL2021/

3 Takahashi, S., Izawa, Y., Masuhara, H., & Cong, Y. (2021). 汎言語的ライブプログラミング環境のためのデータ構造解析手法. The 23nd JSSST Workshop on Programming and Programming Languages. Poster Presentation. Retrieved from 🔗 https://easychair.org/smart-program/PPL2021/

4 Izawa, Y., & Masuhara, H. (2020b). Making different jit compilations dancing to the same tune, acting in the meta-level. The 22nd JSSST Workshop on Programming and Programming Languages. Poster Presentation. Retrieved from 🔗 https://easychair.org/smart-program/PPL2020/

5 Masuhara, H., Takahashi, S., Izawa, Y., & Cong, Y. (2020). Toward a multi-language and multi-environment framework for live programming. Talk at the 2020 Workshop on Live Programming (colocated with SPLASH 2020). **Peer-reviewed**. Retrieved from 🔗 https://2020.splashcon.org/home/live-2020

6 Takahashi, S., Izawa, Y., Masuhara, H., & Cong, Y. (2020). ライブプログラミング環境は多言語化/多開発環境化の夢を見るか. The 37th JSSST Anual Conference. Japan Society for Software Science and Technology. Poster Presentation. Retrieved from 🔗 https://jssst2020.wordpress.com/program/

7 Izawa, Y., Masuhara, H., & Aotani, T. (2018). メタ混合 JIT コンパイラの提案. The 20nd JSSST Workshop on Programming and Programming Languages. Poster Presentation. Retrieved from 🔗 https://jssst-ppl.org/workshop/2018/program.html

Academic Services

2021 🔖 Artifact Evaluation Committee, ECOOP 2021.

2020 🔖 Member of Student Volunteer, SPLASH 2020.

Academic Services (continued)

- Co-reviewer of Onward! Essays, SPLASH 2020.
- Candidate of Programming Language Mentoring Workshop, PLDI 2020.
- 2019 Member of Student Volunteer, Programming 2019.

Teaching

- 2020 Programming II, Tokyo Institute of Technology, Math. and Comp. Science, TA.
- 2019 Programming II, Tokyo Institute of Technology, Math. and Comp. Science, TA.
- Introduction to Computer Science, Tokyo Institute of Technology, TA.
- 2018 Programming II, Tokyo Institute of Technology, Math. and Comp. Science, TA.
- Information Literacy I, Tokyo Institute of Technology, TA.

Skills

- Languages English (fluent), Japanese (native)
- Coding OCaml (S), Scala (S), Python (S), C (A), Java (A), Ruby (A), Shell (A), R (B), SQL (C), LaTeX(SS)
- Misc. Academic research, teaching, training, consultation, LaTeX typesetting and publishing.