Yusuke Suzuki

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Hiyoshi-Toiwadai-Corpo 507
223-0061, JAPAN

Research Interests	System software, Web browsers, JIT compilers, Operating systems, Virtual machine technology, Distributed/Parallel systems and Graphic Processing Units (GPUs)

Education

Ph.D. student in Computer Science   *(expected Apr. 2015 – Mar. 2018)*
Supervisor: Prof. Kenji Kono   Keio University
- Integrating GPUs into system software abstractions and coordinating GPUs and the other devices.

M.E. in Computer Science   *Apr. 2013 – Present (expected Mar. 2015)*
Supervisor: Prof. Kenji Kono   Keio University
Master Thesis: *Design and Implementation of GPU Virtualization at the Hypervisor*
- Designed open architecture of GPU virtualization using Xen. Built a prototype of fully virtualizated GPUs and multiplexed virtualized GPUs.

B.E. in Computer Science   *Mar. 2013*
Supervisor: Prof. Kenji Kono   Keio University
Bachelor Thesis: *GPU Virtualization for General-purpose computing*
- Investigated GPU internals and interactions between GPUs and OS.

Awards and Honors

Yamashita SIG Research Award   *(expected Mar. 2015)*
Information Processing Society of Japan

Best Student Presentation Award   *Dec. 2013*
SIGOS, Information Processing Society of Japan

Yamauchi Prize for Encouragement   *Jan. 2013*
Information Processing Society of Japan

Nakanishi Award   *Mar. 2013*
Keio University

Teaching Experience

Teaching Assistant   *Apr. 2014 – Sept. 2014*
PROGRAMMING 1, COMPUTER SCIENCE   Keio University
- Supported for teaching C programming.
- Helped students with programming.
- Graded their reports.

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Work Experience	**Research Fellowships of the Japan Society for the Promotion of Science for Young Scientists; DC1**	*(expected Apr. 2015 – Mar. 2018)*
		Japan Society for the Promotion of Science

Software Engineering Intern *Aug. 2013 – Sep. 2013*
Google Japan Inc.

- At Google Chrome team, developed ECMAScript 6th Promises and optimized XMLHttpRequest Blob transferring. Created 30~ patches and became a Chromium committer.

Part-time Programmer *Oct. 2010 - July 2013*
Cloudstudy Inc.

- Developed iOS application by using Objective-C. And implemented JavaScript modules used on their web service.

Activities

WebKit
Committer

- Contributed to WebKit CSS JIT, that just-in-time compiles CSS selector to machine code to make matching against elements faster. Mainly focused on more intelligent backtrackig. Became a WebKit committer.
- Implemented ES6 Symbol into JavaScriptCore and now improving it.

Chromium
Committer

- Worked on Google Chrome and Blink as software engineering intern as `yusukesuzuki@chromium.org`.
- Improved Blob data handling in XMLHttpRequest.
- Landed the initial implementation of ES6 Promises in the Blink side.

iv/lv5
Building ECMAScript engine from scratch https://github.com/Constellation/iv

- Built the new ECMAScript engine that conforms ECMA262 5.1th spec.
- Found and reported many bugs in the spec and Test262 conformance suite.
- Implemented baseline JIT compiler for x86_64 environment including Inline Caches.

Escodegen, Esmangle, Estraverse etc.
ECMAScript language tools https://github.com/estools/escodegen

- Built an infrastructure of ECMAScript tools using Mozilla JavaScript AST.

Computer Skills		
	<u>Languages:</u>	ECMAScript, Python, CSS Selectors, C, C++, x86, x86_64 assembly language
	<u>Platforms:</u>	Linux, OSX

Publications

Refereed Papers	**Suzuki, Y.**, Kato, S., Yamada, H., and Kono, K. GPUvm: Why Not Virtualizing GPUs at the Hypervisor?. In *Proceedings of the 2014 USENIX Annual Technical Conference (USENIX ATC '14)*, pages 109–120, June 2014.
Non-Refereed Papers	**Suzuki, Y.**, Kato, S., Yamada, H., and Kono, K. GPU . Summer United Workshops on Parallel, Distributed and Cooperative Processing (SWoPP '13), pages 195–202, July 2013.
	Suzuki, Y. Escodegen and Esmangle: Using Mozilla JavaScript AST as an IR. Industry Track of Aspect-Oriented Software Development (AOSD '13), Mar. 2013.
Non-Refereed Posters	**Suzuki, Y.**, Kato, S., Yamada, H., and Kono, K. Design and Implementation of GPU Virtualization at the Hypervisor. JSSST Dependable System Workshop (DSW '14), Mar. 2014.
	Suzuki, Y., Kato, S., Yamada, H., and Kono, K. GPUvm: GPU . JSSST Dependable System Workshop (DSW '13), Dec. 2013.
	Suzuki, Y. Building modern JavaScript Engine. 2012 IPSJ Programming Symposium, Jan. 2012.