

Takaaki FUKAI

Postdoctoral researcher in RIKEN Center of Computational Science

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Affiliation

- Postdoctoral researcher in High Performance Big Data Research Team, RIKEN Center of Computational Science (R-CCS)
- Visited Researcher at Information Technology Center, The University of Tokyo

Work Experience

- January 2020-(Current): Postdoctoral researcher in High Performance Big Data Research Team, RIKEN Center of Computational Science (R-CCS)
- June 2019-(Current): Visited Researcher at Information Technology Center, The University of Tokyo
- April 2018-December 2019: Software Developer at IBM Japan
 - Worked as QA engineer of a web application and DevOps engineer of a cloud productions
 - Technical experience: Software test, CI/CD, Jenkins, Docker, Kubernetes, Helm

Degrees

- September 2018, Doctor of Philosophy in Engineering, University of Tsukuba
- March 2015, Master of Engineering, University of Tsukuba
- March 2013, Bachelor of Engineering, Okayama University

Research Interests

- OS Kernel, Virtualization Software (BitVisor, Linux kernel)
- Cloud Computing (Bare-metal clouds)

Publications

Journal Paper

1. Takaaki Fukai, Takahiro Shinagawa, Kazuhiko Kato. **Live Migration in Bare-metal Clouds**. IEEE Transactions on Cloud Computing, Jul 2018. (Open Access: <https://ieeexplore.ieee.org/document/8401692>)

International Conference Papers (Refereed)

1. Masanori Misono, Masahiro Ogino, Takaaki Fukai, Takahiro Shinagawa. **FaultVisor2: Testing Hypervisor Device Drivers against Real Hardware Failures.** In Proceedings of the 10th IEEE International Conference on Cloud Computing Technology and Science (CloudCom 2018), Dec 2018. (Acceptance Ratio: 19.8%) [**Best paper award**].
2. Iori Yoneji, Takaaki Fukai, Takahiro Shinagawa and Kazuhiko Kato. **Unified Hardware Abstraction Layer with Device Masquerade.** In Proceedings of the 33rd ACM Symposium On Applied Computing (ACM SAC 2018), Apr 2018.
3. Ilias Avramidis, Michael Mackay, Posco Tso, Takaaki Fukai, Takahiro Shinagawa. **Live Migration on ARM-based Micro-datacentres.** In Proceedings of the 3rd Workshop on Edge Computing (EdgeCom 2018), Jan 2018.
4. [*] Takaaki Fukai, Satoru Takekoshi, Kohei Azuma, Takahiro Shinagawa and Kazuhiko Kato. **BM-CArmor: A Hardware Protection Scheme for Bare-Metal Clouds.** In Proceedings of the 9th IEEE International Conference on Cloud Computing Technology and Science (CloudCom 2017), Dec 2017.
5. [*] Takaaki Fukai, Yushi Omote, Takahiro Shinagawa, and Kazuhiko Kato. **OS-Independent Live Migration Scheme for Bare-metal Clouds.** In Proceedings of the 8th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2015), Dec 2015. [**Best paper award**].

International Workshop Posters (Refereed)

1. Ryosuke Yasuoka, Takaaki Fukai and Takahiro Shinagawa. **Toward On-demand Nested Virtualization for Live-Refreshing Cloud Systems.** The Fifteenth EuroSys Conference 2020 (EuroSys '20). April, 2020 (To be appear).
2. Takaaki Fukai, Yushi Omote, Takahiro Shinagawa, and Kazuhiko Kato. **Live Migration of Bare-metal Instances** 5th Asia-Pacific Workshop on Systems (APSys 2014). June, 2014

Award

- **IEEE Computer Society Japan Chapter Young Author Award 2019** IEEE Computer Society Tokyo/Japan Joint Chapter, December 2019
- **Best Paper Award** The 10th IEEE International Conference on Cloud Computing Technology and Science, December 2018
- **Best Paper Award** The 8th IEEE/ACM International Conference on Utility and Cloud Computing, December 2015

Other Activity

Profile page (on Github pages) <https://fukai-t.github.io/profile-page/>

ResearchGate https://www.researchgate.net/profile/Takaaki_Fukai

Linkedin <https://www.linkedin.com/in/takaaki-fukai-b378a7141/?originalSubdomain=jp>

Slideshare <http://www.slideshare.net/DeepTokikane/presentations>

Github <https://github.com/fukai-t>

Bitbucket <https://bitbucket.org/ftakaaki/>