

# Soramichi Akiyama

RESEARCHER, ARTIFICIAL INTELLIGENCE RESEARCH CENTER, AIST

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## Education

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### Graduate School of Information Science and Technology, The University of Tokyo

Tokyo, Japan

PH.D. IN INFORMATION SCIENCE AND TECHNOLOGY

April 2012 - March 2015

- Supervisor: Prof. Shinichi Honiden
- Thesis: "Reducing Energy Consumption of Data Centers by Improving Virtual Machine Live Migration"

### Graduate School of Information Science and Technology, The University of Tokyo

Tokyo, Japan

M.Sc. IN INFORMATION SCIENCE AND TECHNOLOGY

April 2010 - March 2012

- Supervisor: Prof. Shinichi Honiden

### School of Informatics and Mathematical Science, Kyoto University

Kyoto, Japan

BACHELOR OF ENGINEERING

April 2006 - March 2010

- Supervisor: Prof. Hiroshi G. Okuno

## Experience

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### National Institute of Advanced Industrial Science and Technology (AIST)

Tokyo, Japan

RESEARCHER, ARTIFICIAL INTELLIGENCE RESEARCH CENTER

November 2015 - CURRENT

\*I was tentatively a post-doc for a month, and then I've been working as a full-time researcher

### Nippon Telegraph and Telephone (NTT)

Tokyo, Japan

RESEARCH ENGINEER, SOFTWARE INNOVATION CENTER

April 2015 - October 2015

### Microsoft Research

Redmond, WA, US

RESEARCH INTERN, ORLEANS PROJECT

May 2013 - August 2013

### National Institute of Advanced Industrial Science and Technology (AIST)

Tsukuba, Japan

INTERN, INFORMATION TECHNOLOGY RESEARCH INSTITUTE

July 2011 - August 2011

## Refereed Publications

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### Towards Write-back Aware Software Emulator for Non-Volatile Memory

ATSUSHI KOSHIBA, TAKAHIRO HIROFUCHI, SORAMICHI AKIYAMA, RYOUSEI TAKANO, MITARO NAMIKI

August 2017

In *Proc. of The 6th IEEE Non-Volatile Memory Systems and Applications Symposium (NVMISA)*, pp. 1 - 6

### Quantitative Evaluation of Intel PEBS Overhead for Online System-Noise Analysis

SORAMICHI AKIYAMA, TAKAHIRO HIROFUCHI

June 2017

In *Proc. of 7th International Workshop on Runtime and Operating Systems for Supercomputers (ROSS)*, pp. 1 - 8

### Performance Prediction of Memory Access Intensive Apps with Delay Insertion: A Vision

SORAMICHI AKIYAMA, TAKAHIRO HIROFUCHI, HIROTAKA OGAWA

December 2016

In *Proc. of 8th IEEE International Conference on Cloud Computing Technology and Science (CloudCom)*, pp. 492 - 496

### Fast Live Migration for IO-Intensive VMs with Parallel and Adaptive Transfer of Page Cache via SAN

SORAMICHI AKIYAMA, TAKAHIRO HIROFUCHI, RYOUSEI TAKANO, SHINICHI HONIDEN

December 2016

*IEICE Transactions on Information and Systems*, Vol. E99-D, No. 12, pp. 3024 - 3034

### Optimizing Distributed Actor Systems for Dynamic Interactive Services

ANDREW NEWELL, GABRIEL KLIOT, ISHAI MENACHE, ADITYA GOPALAN, SORAMICHI AKIYAMA, MARK SILBERSTEIN

April 2016

In *Proc. of The European Conference on Computer Systems (EuroSys)*, pp. 38:1 - 38:15

## Evaluating Impact of Live Migration on Data Center Energy Saving

SORAMICHI AKIYAMA, TAKAHIRO HIROFUCHI, SHINICHI HONIDEN

December 2014

In *Proc. of 6th IEEE International Conference on Cloud Computing Technology and Science (CloudCom)*, pp. 759 - 762

## Fast Live Migration with Small IO Performance Penalty by Exploiting SAN in Parallel

SORAMICHI AKIYAMA, TAKAHIRO HIROFUCHI, RYOUSEI TAKANO, SHINICHI HONIDEN

June 2014

In *Proc. of The 2014 IEEE 7th International Conference on Cloud Computing (IEEE CLOUD)*, pp. 40 - 47

## Fast Wide Area Live Migration with a Low Overhead Through Page Cache Teleportation

SORAMICHI AKIYAMA, TAKAHIRO HIROFUCHI, RYOUSEI TAKANO, SHINICHI HONIDEN

May 2013

In *Proc. of The 13th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid)*, pp. 78 - 82

## MiyakoDori: A Memory Reusing Mechanism for Dynamic VM Consolidation

SORAMICHI AKIYAMA, TAKAHIRO HIROFUCHI, RYOUSEI TAKANO, SHINICHI HONIDEN

June 2012

In *Proc. of The 2012 IEEE 5th International Conference on Cloud Computing (IEEE CLOUD)*, pp. 606 - 613

## Talks

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### Goplane: Open Source BUM-less Networking for Large Scale Docker Deployment

SORAMICHI AKIYAMA

August 2015

ContainerCon North America 2015 (in conjunction with LinuxCon North America 2015)

### Fast Live Migration for Data-intensive VMs by Exploiting Storage Area Network in Datacenter

SORAMICHI AKIYAMA

May 2014

LinuxCon Japan 2014 (LinuxCon Staging Session)

### Acceleration of Virtual Machine Live Migration on QEMU/KVM by Reusing VM Memory

SORAMICHI AKIYAMA

June 2012

LinuxCon Japan 2012 (Student Presentations Track)

## Honors & Awards

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- 2015 **Dean's Award**, Graduate School of Information Science and Technology, The University of Tokyo
- 2013 **Research Fellowship for Young Scientists**, Japan Society for the Promotion of Science
- 2012 **Computer Science Research Award for Young Scientists**, Information Processing Society of Japan
- 2011 **Best Paper Award**, 23rd Computer Systems Symposium (ComSys)
- 2011 **Best Student Poster/Demonstration Award**, 23rd Computer Systems Symposium (ComSys)

## Skills

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- Expertise** Virtualization, Operating System, Cloud Computing, HPC for AIs
- Programming Languages** C, C++, Python
- Languages** English, Japanese

## Academic Activities

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- 2018 **Publicity Chair (for Asia Region)**, The European Conference on Computer Systems (EuroSys)
- 2017 **External Reviewer**, The 6th IEEE Non-Volatile Memory Systems and Applications Symposium (NVMSA)
- 2017- **Committee Member**, Special Interest Group of Operating Systems, Information Processing Society of Japan
- 2015- **External Reviewer**, IEEE Transactions on Cloud Computing (TCC)
- 2010- **Member**, Special Interest Group of Operating Systems, Information Processing Society of Japan