

# 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 - NOW

*\*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

## Academic Activities

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- 2018 **Program Committee Member**, IEEE 12th International Symposium on Embedded Multicore/Many-core Systems-on-Chip (MCSoc-2018)
- 2018 **Program Co-Chair**, The 7th IEEE Non-Volatile Memory Systems and Applications Symposium (NVMSA'18)
- 2018 **Publicity Chair (for Asia Region)**, The European Conference on Computer Systems (EuroSys'18)
- 2017 **Reviewer**, IEICE Transactions on Communications
- 2017 **Reviewer**, 13th IEEE International Conference on e-Science (eScience'17)
- 2017 **Reviewer**, The 6th IEEE Non-Volatile Memory Systems and Applications Symposium (NVMSA'17)
- 2017 - **Committee Member**, Special Interest Group of Operating Systems, Information Processing Society of Japan
- 2015 - **Reviewer**, IEEE Transactions on Cloud Computing (TCC)
- 2010 - **Member**, Special Interest Group of Operating Systems, Information Processing Society of Japan

## 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)

## 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

The 6th IEEE Non-Volatile Memory Systems and Applications Symposium (NVMSA), pp. 1 - 6

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

[SORAMICHI AKIYAMA](#), TAKAHIRO HIROFUCHI

June 2017

7th International Workshop on Runtime and Operating Systems for Supercomputers (ROSS), co-located with HPDC, pp. 3:1 - 3:8

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

[SORAMICHI AKIYAMA](#), TAKAHIRO HIROFUCHI, HIROTAKA OGAWA

December 2016

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

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

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

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

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

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)

## Skills

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<b>Expertise</b>	Virtualization, Operating System, Cloud Computing, HPC for AIs
<b>Programming</b>	C, C++, Python
<b>Languages</b>	English, Japanese