

The ACM Cloud and Autonomic Computing Conference
InterContinental Hotel, Miami, Florida, USA
August 5 - August 8, 2013

Monday, August 5, 2013

**1st International Workshop on
Autonomic Management of Grid and Cloud Computing**

| | |
|-------------------------------------|---|
| 8:30 - 5:00 pm [Flaqler Fover] | Registration and Check-in |
| 9:30 - 9:40 am [Flagler] | Welcome Remarks by AMGCC13 workshop organizers |
| 9:40 - 10:40 am [Flagler] | Keynote - Dr. Kate Keahey, Argonne National Laboratory, University of Chicago - <i>Clouds and Observatories: How Infrastructure Clouds Can Change the Way We Do Science</i> |
| 10:40 - 11:00 am [Flagler Foyer] | BREAK |
| 11:00 am - 12:30 pm [Flagler] | Presentations: <i>An Adaptive Data Transfer Algorithm using Block Device Reconfiguration in Virtual MapReduce Clusters</i> - Kwonyong Lee; Yoonsung Nam; Taekhee Kim; Sungyong Park <i>Autonomic Load Balancing Mechanisms in the P2P Desktop Grid</i> - Jik-Soo Kim; Beomseok Nam; Alan Sussman <i>A Vision for Monitoring Cloud Application Platforms as Sensor Networks</i> - Rustem Dautov; Iraklis Paraskakis |
| 12:30 - 2:00 pm [Gusman] | LUNCH |
| 2:00 - 3:00 pm [Flagler] | Invited Talk - Dr. Alan Sill Texas Tech University - <i>Crossing Organizational Boundaries In Development of Cloud and Grid Management Standards and APIs</i> |
| 3:00 - 3:30 pm [Flagler] | Presentations: <i>An Integrated Management System of Virtual Resources based on Virtualization API and Data Distribution Service</i> - Yongseong Cho; Jongsun Choi; Jaeyoung Choi |
| 3:30 - 4:00 pm [Flaqler Fover] | BREAK |

The ACM Cloud and Autonomic Computing Conference
InterContinental Hotel, Miami, Florida, USA
August 5 - August 8, 2013

4:00 - 5:30 pm
[Flagler]

Presentations:

An Allocation and Provisioning Model of Science Cloud for High Throughput Computing Applications - Seoyoung Kim; Jik-Soo Kim; Soonwook Hwang; Yoonhee Kim

Self-Optimizing Autonomic Control of Geographically Distributed Collaboration Applications - Bogdan Solomon; Dan Ionescu; Marin Litoiu; Cristian Gadea; Stejarel Veres

Simulation Process Support for Climate Data Analysis - Yunhee Kang; Sanghwan Kung; Haeng-Jin Jang

5:30 - 5:40 pm
[Flagler]

Workshop Summary and Closing Remarks

The ACM Cloud and Autonomic Computing Conference
InterContinental Hotel, Miami, Florida, USA
August 5 - August 8, 2013

Wednesday, August 7, 2013

8:30 - 5:00 pm **Registration and Check-in**
[Trade Foyer]

9:00 - 10:00 am **Keynote: "Cloud 3.0: Software Defined Environment"**
[Trade] **Chung-Sheng Li, IBM**

10:00 - 10:30 am **BREAK**
[Trade Foyer]

Session II - Autonomic Cloud Computing

10:30 am - 12
Noon [Trade] **Presentations:**
A Flexible Elastic Control Plane for Private Clouds -
Upendra Sharma - Prashant Shenoy and Sambit Sahu
Improving Cloud Infrastructure Utilization through
Overbooking - Luis Tomas and Johan Tordsson
A Virtual Machine Re-packing Approach to the Horizontal
vs. Vertical Elasticity Trade-off for Cloud Autoscaling -
Mina Sedaghat, Francisco Hernandez-Rodriguez and Erik
Elmroth

Noon - 1:30 pm **LUNCH**
[Flaaler]

Session III - Autonomic Cloud Computing

1:30 - 3:00 pm **Presentations:**
[Trade] ***ElastMan: Elasticity Manager for Elastic Key-Value Stores***
in the Cloud - Ahmad Al-Shishtawy and Vladimir Vlassov
A Case for MapReduce over the Internet - Hrishikesh
Gadre, Ivan Rodero, Javier Diaz-Montes and Manish Parashar
A Truthful Approximation Mechanism for Autonomic
Virtual Machine Provisioning and Allocation in Clouds -
Lena Mashayekhy, Mahyar Movahed Nejad and Daniel Grosu

3:00 - 3:30 pm **BREAK**
[Trade Foyer]

The ACM Cloud and Autonomic Computing Conference
InterContinental Hotel, Miami, Florida, USA
August 5 - August 8, 2013

Session IV - Autonomic Applications and Tools

3:30 - 5:00 pm
[Trade]

Presentations:

Autonomic Cloud-based Operation of Massively Multiplayer Online Games - Vlad Nae, Radu Prodan and Alexandru Iosup

A Quantitative Study of Virtual Machine Live Migration - Wenjin Hu, Andrew Hicks, Long Zhang, Eli M. Dow, Vinay Soni, Hao Jiang, Ronny Bull, Jeanna N. Matthews

QACO: Exploiting Partial Execution in Web Servers - Jinhan Kim, Sameh Elnikety, Yuxiong He, Seung-Won Hwang and Shaolei Ren

6:00 - 9:00 pm
[Isles]

Conference Dinner

The ACM Cloud and Autonomic Computing Conference
InterContinental Hotel, Miami, Florida, USA
August 5 - August 8, 2013

Thursday, August 8, 2013

8:30 - 5:00 pm **Registration and Check-in**
[Trade Fover]

Session V - Autonomics at Extreme Scales

9:00 am - 10:30 am [Trade] **Presentations:**
Mammoth: Autonomic Data Processing Framework for Scientific State-Transition Applications - Xin Yang, Ze Yu, Min Li and Xiaolin Li
On the Role of Topology in Autonomously Coping with Failures in Content Dissemination Systems - Ryan Stern and Shrideep Pallickara
Autonomously Improving Query Evaluations over Multidimensional Data in Distributed Hash Tables - Matthew Malensek, Sanami Pallickara and Shrideep Pallickara

10:30 - 11:00 am **BREAK**
[Trade Fover]

Session VI - Autonomic Cybersecurity

11:00 - 12:30 pm [Trade] **Presentations:**
A Model-based Approach to Self-Protection in Computing System - Qian Chen, Sherif Abdelwahed and Abdelkarim Erradi
Resilient Cloud Data Storage Services - Hemayamini Kurra, Youssif Al-Nashif and Salim Hariri
Self-Protecting and Self-Optimizing Database Systems: Implementation and Experimental Evaluation - Firas Alomari and Daniel Menasce

12:30 - 2:00 pm **LUNCH**
[Flagler]

2:00 - 3:30 pm **Panel Discussion: *Cloud and Critical Infrastructure Security/Management*** - Chair: Dr. Rick Sheldon, Oak Ridge National Laboratory; Panelists: TBD

3:30 - 4:00 pm **BREAK**
[Trade Fover]

4:00 - 5:00 pm **Conference Closing and Award Presentation**
[Trade]

**The ACM Cloud and Autonomic Computing Conference
InterContinental Hotel, Miami, Florida, USA
August 5 - August 8, 2013**

Friday, August 9, 2013

9:00 - 12:30 pm **Tutorial: Fundamentals of Cloud Security**
[Flagler]

Salim Hariri, University of Arizona

Cloud Computing is an emerging paradigm that aims at delivering computing, information services, and data storage as a utility service over a network (e.g., Internet). There is a strong interest in cloud computing due to their performance and host, but their rapid deployment will exacerbate the security problem. In cloud computing, organizations relinquish direct control of many security aspects to the service providers such as trust, privacy preservation, identity management, data and software isolation, and service availability. The adoption and proliferation of cloud computing and services will be severely impacted if cloud security is not adequately addressed. The main goal of this tutorial is discuss the limitations of current cybersecurity approaches to clouds and then focus on the fundamental issues to address the cloud security and privacy such as the confidentiality, integrity and availability of data and computations in clouds. In this tutorial we will examine cloud computing models, look into the threat model and security issues related to data and computations outsourcing, and explore practical applications to make cloud resources secure and resilient to cyber attacks.

10:30 - 11:00 am **BREAK**
[Flagler Foyer]

The ACM Cloud and Autonomic Computing Conference
InterContinental Hotel, Miami, Florida, USA
August 5 - August 8, 2013

