

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

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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**  
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**Tuesday, August 6, 2013**

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

9:00 - 9:30 am      **Welcome Remarks by CAC 2013 conference  
organizers**  
[Trade]

9:30 - 10:30 am    **Keynote: "Cloud Storage Services: A Model of  
(In)Consistency" - Dr. Doug Terry, Microsoft  
Corporation**  
[Trade]

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

**Session I - Autonomic Cloud Computing**

11:00 am - 12:30 pm [Trade]    **Presentations:**  
***Autonomic Resource Provisioning in Cloud Systems with  
Availability Goals*** - Emiliano Casalicchio, Daniel Menasce and  
Arwa Aldhalaan  
***Autonomic Performance-per-Watt Management (APM) of  
Cloud Resources and Services*** - Farah Fargo, Cihan Tunc,  
Youssif Al-Nashif and Salim Hariri  
***Autonomous, Failure-resilient Orchestration of  
Distributed Discrete Event Simulations*** - Matthew  
Malensek, Zhiquan Sui, Neil Harvev and Shrideep Pallickara

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

2:00 - 3:00 pm      **Keynote: "Big Data and Big Computing, and the  
Cloud"**  
[Trade]                **Dr. Frederica Darema, Air Force Office of Scientific  
Research**

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

3:30 - 5:00 pm      **Panel Discussion: *Cloud and Autonomic Computing  
Hot Topics: Challenges, Research Opportunities and  
Future Directions*** - Chair: Frederica Darema, AFSOR;  
[Trade]                Panelists: TBD

5:00 - 5:30 pm      **Poster Session Lightning Talks**  
[Bayfront A]

5:30 - 7:30 pm      **Reception, Demonstration and Poster Session**  
[Bayfront A]

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**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]

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**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**

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**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]

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**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]

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