

The 14th IEEE
International Conference on Autonomic Computing
(ICAC 2017)
in gorgeous and smart Columbus Ohio, USA



Program Companion

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ICAC 2017 Program

- Hotel room names are listed in *(italics)*

Time	Monday July 17	Tuesday July 18	Wed. July 19	Thrusday July 20		
8:00	On-Site Registration Continental Breakfast <i>(Legislative Foyer)</i>	On-Site Registration Continental Breakfast <i>(Legislative Foyer)</i>	On-Site Registration Continental Breakfast <i>(Legislative Foyer)</i>	On-Site Registration Continental Breakfast <i>(Legislative Foyer)</i>		
8:30						
9:00	Dr. Nelly Bencomo, Aston University <i>(House)</i>	Mark Patton, Columbus Smart Cities Initiative <i>(Legislative)</i>	Dr. Ragunathan Rajkumar, CMU <i>(Legislative)</i>	Dr. John Wilkes, Google <i>(Legislative)</i>		
9:30						
10:00	Coffee Break <i>(Legislative Foyer)</i>	Coffee Break <i>(Legislative Foyer)</i>	Coffee Break <i>(Legislative Foyer)</i>	Coffee Break <i>(Legislative Foyer)</i>		
10:30	Workshops: Feedback Computing <i>(Executive A)</i> Models@Runtime/SeAC <i>(House A)</i>	Welcoming Remarks (at 10:20am)	Techical Session: Autonomic Computing for Autonomous Systems Chair: Dr. Jose Fortes, University of Florida <i>(Legislative)</i>	Techical Session: Self-Driving Clouds Chair: Dr. Xiaoyun Zhu <i>(Legislative)</i>		
11:00		Techical Session: Self-Managing Platforms for Data Processing Chair: Dr. Zichen Xu, Nancheng University <i>(Legislative)</i>				
11:30						
12:00						
12:30	Lunch Break <i>(Congressional)</i>	Lunch Break <i>(Congressional)</i>	Lunch Break <i>(Congressional)</i>	Lunch Break <i>(Congressional)</i>		
13:00						
13:30						
14:00	Workshops: Models@Runtime/SeAC <i>(House A)</i> Feedback Computing <i>(Executive A)</i> Self-Organizing Self- Managing Clouds <i>(Senate)</i>	Techical Session: Candidates for the Karsten Schwan Best Paper Award Chair: Dr. Christopher Stewart, Ohio State <i>(Legislative)</i>	Air Force Museum1100 Spaatz Street Wright-Patterson AFB OH 45433 Note: The museum is about a 1 hour drive. The bus will leave promptly. <i>(3rd Street Entrance)</i>	Techical Session: Infrastructure Building Blocks of Autonomic Computing Chair: Dr. Nan Deng, Google <i>(Legislative)</i>		
14:30						
15:00						
15:30	Coffee Break <i>(Legislative Foyer)</i>	Poster Session <i>(Legislative Foyer)</i>			Coffee Break <i>(Legislative Foyer)</i>	
16:00	Workshops: Models@Runtime/SeAC <i>(House A)</i>					Techical Session: Autonomic Computing in the Wild Chair: Dr. Kirstie Bellman, The Aerospace Corporation <i>(Legislative)</i>
16:30						
17:00						
17:30	Welcome Reception <i>(Legislative Foyer)</i>				Farewell Remarks	
18:00						
18:30						
19:00		Conference Banquet M at Miranova 2 Miranova Pl, Columbus, OH 43215				
20:00						
21:00						
		Options 1) Walk along the Scioto River, 2) taxi. <i>(convene in the Legislative Foyer)</i>				
			Steering Comm. Dinner <i>(Plaza Restaurant)</i>			

Conference Program

Monday (July 17th)

09:00 – 10:00 **Keynote 1: Dr. Nelly Bencomo, Aston University**

10:30 – 12:30 Workshops in Parallel

- **Feedback Computing**
- **M@RT/SeAC**

12:30 – 14:00 Lunch

14:00 – 15:30 Workshops in Parallel

- **SOSeMC**
- **M@RT/SeAC**

18:00 – 19:00 Reception

Tuesday (July 18th)

09:00 – 10:00 **Keynote 2: Mr. Mark Patton, Columbus Smart Cities Initiative**

10:00 – 10:30 Break

10:30 – 12:30 **Session 1: Self-Managing Platforms for Data Processing**

- Prasanna Giridhar, Shiguang Wang, Tarek Abdelzaher, Lance Kaplan and Tanvir Al Amin, “*Social Fusion: Integrating Twitter and Instagram for Event Monitoring*”
- Evangelos Pournaras and Jovan Nikolic, “*Self-corrective Dynamic Networks via Decentralized Reverse Computations*”
- Johannes Grohmann, Nikolas Herbst, Simon Spinner and Samuel Kounev, “*Self-Tuning Resource Demand Estimation*”
- Nikos Zacheilas, Stathis Maroulis and Vana Kalogeraki, “*ExpREsS: EneRgy Efficient Scheduling of Mixed Stream and Batch Processing Workloads*”
- Wenxin Li, Di Niu, Yinan Liu, Shuhao Liu and Baochun Li, “*Joint Routing and Batch Sizing in Wide-Area Stream Processing Systems*”

12:30 – 14:00 Lunch

14:00 – 15:00 **Session 2: Candidates for the Karsten Schwan Best Paper Award**

- Haiyang Sun, Robert Birke, Walter Binder, Mathias Bjoerkqvist and Lydia Y. Chen, “*AccStream: Accuracy aware Overload Management for Stream Processing Systems*”
- Gil Jae Lee and José A. B. Fortes, “*Hierarchical Self-Tuning of Concurrency and Resource Units in Data-Analytics Frameworks*”
- Sona Ghahremani, Holger Giese and Thomas Vogel, “*Efficient Utility-Driven Self-Healing Employing Adaptation Rules for Large Dynamic Architectures*”

15:00 – 15:30 **Session 3: Overview of Co-Located Workshops**

15:30 – 17:00 **Poster Session**

Wednesday (July 19th)

09:00 – 10:00 **Keynote 3: Dr. Ragnathan Rajkumar, CMU**

10:30 – 12:30 **Session 4: Autonomic Computing for Autonomous Systems**

- Mohammad-Parsa Hosseini, Tuyen Tran, Dario Pompili, Kost Elisevich and Hamid Soltanian-Zadeh, “*Deep Learning with Edge Computing for Localization of Epileptogenicity using Multimodal rs-fMRI and EEG Big Data*”
- Marco Brocanelli and Xiaorui Wang, “*Smartphone Radio Interface Management for Longer Battery Lifetime*”
- Tianqi Zhao, Wei Zhang, Haiyan Zhao and Zhi Jin, “*A Reinforcement Learning-based Framework for the Generation and Evolution of Adaptation Rules*”
- Martin Rosali, Matthias Brust, Gregoire Danoy, Pascal Bouvry and Serge Chaumette, “*Coverage Optimization with Connectivity Preservation for UAV Swarms applying Chaotic Dynamics*”
- Philippe Lalanda and Eva Gerber-Gaillard, “*Self-Aware Context in Smart Home Pervasive Platforms*”

12:30 – 13:30 Lunch

13:30 – 18:00 Trip to Air Force Museum (Bus departs at 1:45pm and returns at 5:15pm. Don't miss the bus.)

Thursday (July 20th)

09:00 – 10:00 **Keynote 4: Dr. John Wilkes, Principal Software Engineer, Technical Infrastructure, Google**

10:30 – 12:30 **Session 5: Self-Driving Clouds**

- Nikita Mishra, John Lafferty and Henry Hoffmann, “*ESP: A Machine Learning Approach to Predicting Application Interference*”
- Seyyed Ahmad Javadi and Anshul Gandhi, “*DIAL: Reducing Tail Latencies for Cloud Applications via Dynamic Interference-aware Load Balancing*”
- Xin Chen, Ymir Vigfusson, Douglas M. Blough, Fang Zheng, Kun-Lung Wu and Liting Hu, “*GOVERNOR: Smoother Stream Processing Through Smarter Backpressure*”
- Shaoqi Wang, Xiaobo Zhou, Liqiang Zhang and Changjun Jiang, “*Dependency-Aware Network-Adaptive Scheduling of Data-Intensive Parallel Jobs in Clusters*”
- Sulav Malla and Ken Christensen, “*Reducing Power Use and Enabling Oversubscription in Multi-Tenant Data Centers Using Local Price*”

12:30 – 14:00 Lunch

14:00 – 15:30 **Session 6: Infrastructure Building Blocks of Autonomic Computing**

- Kuangyu Zheng, Bruce Beitman and Xiaorui Wang, “*CoSmart: Coordinating Smartphone with Desktop Computer for Joint Energy Savings*”
- Kyle Hale, Conor Hetland and Peter Dinda, “*Multiverse: Easy Conversion Of Runtime Systems Into OS Kernels Via Automatic Hybridization*”
- Phuong Nguyen and Klara Nahrstedt, “*MONAD: Self-adaptive Micro-service Infrastructure for Heterogeneous Scientific Workflows*”
- Wei Chen, Jia Rao and Xiaobo Zhou, “*Addressing Memory Pressure in Data-intensive Parallel Programs via Container based Virtualization*”

16:00 – 18:00 **Session 7: Autonomic Computing in the Wild**

- Emad Albassam, Jason Porter, Hassan Gomaa and Daniel Menasce, “*DARE: A Distributed Adaptation and Failure Recovery Framework for Software Systems*”
- Christian Krupitzer, Julian Otto, Felix Maximilian Roth, Alexander Frömmgen and Christian Becker, “*Adding Self-improvement to an Autonomous Traffic Management System*”
- Pablo Velarde, José M. Maestre, Hideaki Ishii and Rudy R. Negenborn, “*Vulnerabilities in Lagrange-based DMPC in the Context of Cyber-Security*”
- Tuyen Tran, Ayman Younis and Dario Pompili, “*Understanding the Computational Requirements of Virtualized Baseband Units using a Programmable Cloud Radio Access Network Testbed*”
- Shenjun Ma, Alexey Ilyushkin, Alexander Stegehuis and Alexandru Iosup, “*Ananke: a Q-Learning-Based Portfolio Scheduler for Complex Industrial Workflows*”

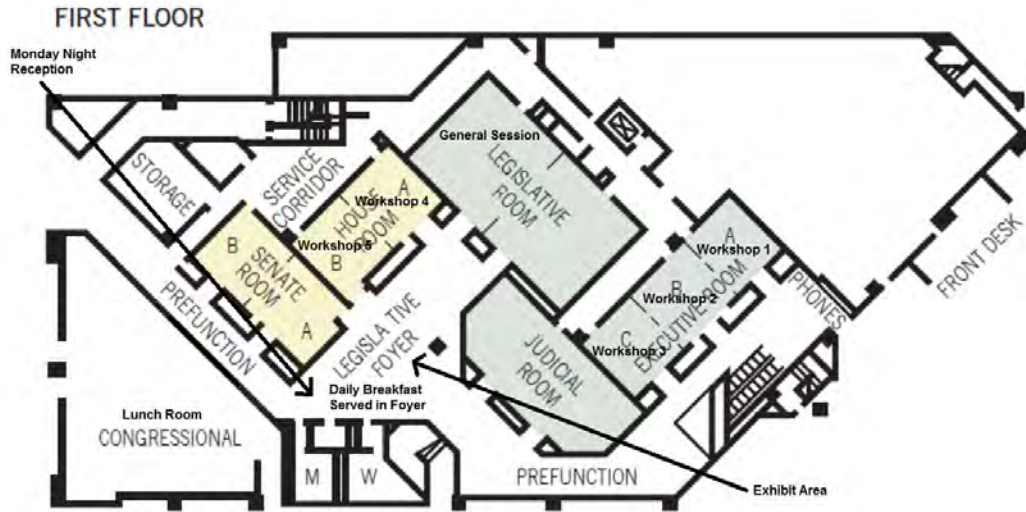
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Maps & Directions



Sheraton Columbus Capitol Square to ICAC Banquet (@M at Miranova) via Google Maps

Sheraton Columbus Capitol Square
75 E State St, Columbus, OH 43215

1. Walk through the Columbus Commons toward W Town St
2. Turn right onto W Town St
3. Turn left onto S Civic Center Dr
4. Continue onto 2nd St
5. Turn right onto W Mound St
6. Turn right onto Miranova Pl
7. Walk to the main tower in the Cover MyMeds building.

318 ft

M at Miranova

2 Miranova Pl, Columbus, OH 43215

