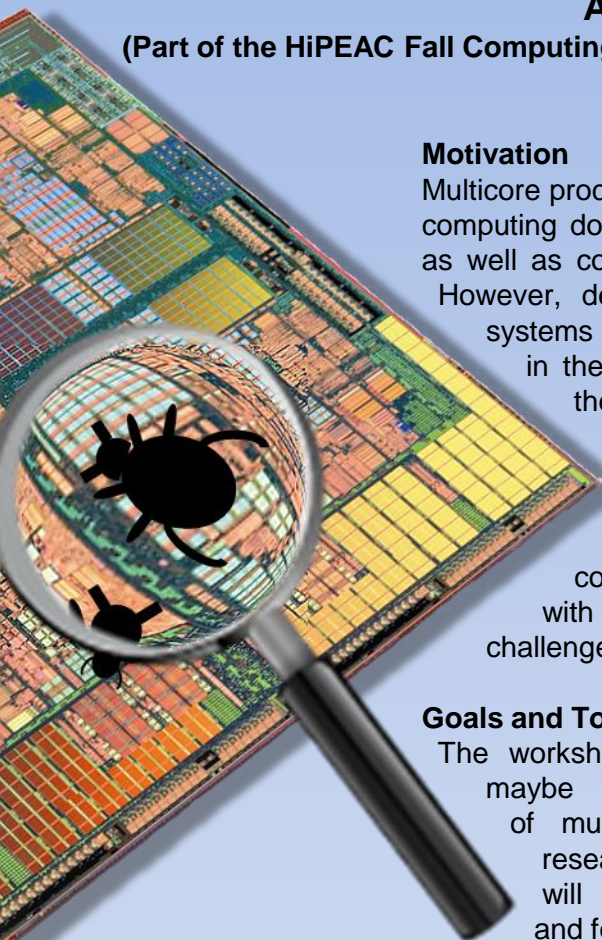# Call for Participation

2nd International Workshop on Multicore Application Debugging - MAD 2014

Oct 8, 2014
Athens, Greece

(Part of the HiPEAC Fall Computing Systems Week, www.hipeac.net/csw/2014/athens)

Motivation

Multicore processors and systems-on-chip have become predominant in all computing domains. Novel architectures, programming models and tools as well as compilers are well addressed both in research and industry. However, debugging, diagnosis, and validation of software/hardware systems have not yet received the corresponding level of attention in the multicore age, and still seem to be an afterthought. With the ever increasing complexity and multicore-specific effects and bugs, classical debug approaches like breakpointing and tracing have reached their limits. System developers face limited observability within SoC platforms, platform heterogeneity, and skyrocketing complexity of software and upcoming manycore systems with hundreds of integrated processing elements. These challenges demand for radically new debug approaches

Goals and Topics

The workshop is aimed at discussing upcoming issues and novel, maybe unconventional approaches related to all aspects of multicore application debugging. Position statements and research presentations by experts from academia and industry will provide the required background for fruitful discussions and follow-up activities in the area.

The following topics are of particular interest:

- Debugging of overall system including low level and application software as well as hardware to meet functional and non-functional requirements
- Debugging multicore/manycore-specific problems (e.g., races)
- Reduction of debug complexity by e.g. increasing software abstraction or incremental software development
- Novel, scalable debugging tools and methodologies for multicores/manycores
- Hardware support for software debugging
- Debug for certification
- Debugging software for timing errors
- Debugging model-based software

Workshop organizers:

Chairs
Rainer Leupers
(RWTH Aachen)
Andreas Herkersdorf
(TU Munich)

Management
Stefan Wallentowitz and
Philipp Wagner
(TU Munich)
Luis Gabriel Murillo
(RWTH Aachen)

For questions and registrations please contact: mad-workshop@lis.ei.tum.de

The workshop will be held on Wednesday Oct 8, from 9:00 to 12:30. Participation will be free of charge. For more information, please visit http://www.hipeac.net/csw/2014/athens and http://www.mad-workshop.de

Preliminary Agenda
Wednesday, October 8

9.00 – 9.15
Opening
(Andreas Herkersdorf, TU München and Rainer Leupers, RWTH Aachen)

9.15 – 9.45
[Keynote] Using Execution Traces to Debug Multicore SoCs: An Industrial Experience
(Miguel Santana, ST Microelectronics)

9.45 – 10.30
Session 1: Challenges and Opportunities of Modern SoC Debug Infrastructure
- **From Virtual Targets to USB: Upcoming SoC Debugging Approaches**
  Michael Eick (Lauterbach) and Rolf Kuehnis (Intel)
- **Multicore Start Execution Synchronization**
  Razvan Ionescu (Freescale)
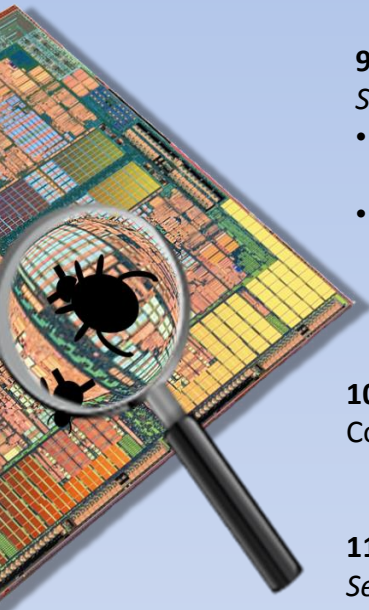
10.30 – 11.00
Coffee Break

11.00 – 12.30
Session 2: What's next?
- **On the Shoulders of Giants – Can we Learn Diagnosis from SoC's Larger Siblings?**
  Philipp Wagner (TU Munich)
- **Programming-Model Centric Debugging for Multicore Embedded Systems**
  Kevin Pouget (University of Grenoble)

Session 3: SW Development and Debugging for Manycore Systems
- **KPN-based Image Recognition Software Development for Scalable Manycore Processor SMYLEvideo**
  Yukoh Matsumoto (TOPS Systems)
- **SW Debugging for Multi-tile Systems: The EURETILE Methodology and Tools**
  Luis Murillo (RWTH Aachen)

Workshop Location

The workshop will be held as part of the HiPEAC Computing Systems Week, at the Divani Caravel Hotel in Athens. The hotel is located in the heart of the city.

Address: Divani Caravel Hotel
Vasileos Alexandrou Avenue 2, 16121 Athens, Greece
([Google Maps](#))

Travel Information

From Athens International Airport:

An average cost of the journey by **Taxi** on normal traffic is 35 EUR and is approx. 30 minutes drive to the Divani Caravel Hotel. The taxi waiting area can be found at Exit 3 in the arrivals Level of the airport.

By **Bus**, take bus route X95 at the arrival terminal of the airport (between Exit 4 and Exit 5) and get off at "ILISSIA" station, which is situated at a 10-minute walking distance from the hotel. The ticket costs 5 EUR per person. Busses run every 15-20 minutes, seven days a week and 24 hours a day. The trip duration is approx. 40 min.

By **Metro**, take the blue line at the airport (Line 3) and get off the train at "Evangelismos" station, which is located 600m away from the Divani Caravel Hotel. The trip from the airport to "Evangelismos" takes approx. 40 minutes and it costs 8 EUR. While in the station, take the left exit towards "Vas. Sofias" street. Walk pass the Hilton hotel (on your left hand side), cross "Michalakopoulou" street, continue straight on "Vas. Alexandrou" street and you will see the Divani Caravel hotel on your right. If you do not want to walk (approximately 5-7 minutes walk), you may take the 224 bus line (the stop is across the metro station exit) and get off at the "Caravel" bus stop.

Hotel Information

Please visit the [HiPEAC CSW website](#) for accommodation information and instructions about special rates. There are special rates for the CSW participants in the Divani Caravel Hotel as well as in the following neighboring hotels:

- **Divani Caravel Hotel.** Vasileos Alexandrou Avenue 2, 16121 Athens, Greece
  (€ 130.00 - € 150.00)

- **Hotel Apartments Delice** (5 min walking distance). Vassileos Alexandrou 3 & Vrassida, 11528 Athens, Greece
  (€ 80.00)

- **ILISIA Best Western** (8 min walking distance). Michalakopoulou 25, Athens 11528, Greece
  (€ 75.00)

- **Hotel Golden Age** (16 min walking distance). Michalakopoulou 57, Athens 11528, Greece
  (€ 85.00 - € 95.00)