Workshop on Compiler and Architectural Techniques for Application Reliability and Security (CATARS) – June 26th, 2008

Program at a glance

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<th>Session Title</th>
<th>Time</th>
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<td>Session 1: Architectural Techniques for Application Reliability and Security (Session Chair: Karthik Pattabiraman)</td>
<td>9:00 AM to 10:30 AM</td>
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<td>Session 2: Compiler Techniques for Application Reliability and Security (Session Chair: Shuo Chen)</td>
<td>11:00 AM to 12:30 PM</td>
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<td>Session 3: Panel discussion on “Towards fault- and attack- resilient applications: where processor architects and compiler designers should converge”</td>
<td>2:00 PM to 3:30 PM</td>
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Detailed Program

Session 1: Architectural Techniques for Application Reliability and Security (9:00 A-10:30 A)
Session Chair: Karthik Pattabiraman

Towards Transient Fault Tolerance for Heterogeneous Computing Platforms, Nishant George, John Lach and Sudhanva Gurumurthi, University of Virginia (UVA)

IOTA: Detecting Erroneous I/O Behavior via I/O Transaction Auditing, Albert Meixner and Daniel J. Sorin, Duke University

Using Open Compilation to Simplify the Design of Fault-Tolerant VLSI Systems, Juan-Carlos Ruiz, David de Andrés, Pedro Gil and Sara Blanc, Universidad Politécnica de Valencia (UPV)

Session 2: Compiler Techniques for Application Reliability and Security (11:00 A-12:30 P)
Session Chair: Shuo Chen

Count&Check: Counting Instructions to Detect Incorrect Paths, Long Wang and Ravishankar K. Iyer, University of Illinois at Urbana-Champaign (UIUC)

Reverse Stack Execution in a Multi-Variant Execution Environment, Babak Salamat, Andreas Gal and Michael Franz, University of California, Irvine (UCI)

Intrusion Detection via Instrumented Software, William Mahoney and William Sousan, University of Nebraska at Omaha (UNO)

Session 3: Panel Discussion on “Towards fault- and attack- resilient applications: where processor architects and compiler designers should converge” (2:00 P – 3:30 P)
Moderator: Zbigniew Kalbarczyk, Panelists: Subhasish Mitra (Stanford University), Brendan Murphy (Microsoft Research), Calton Pu (Georgia Institute of Technology) and Mohan Rajagopalan (Intel)