











### Revolutionizing Embedded Software Development

Imperas Newsletter: June 2018

"Silicon without software is just sand."



#### **EVENTS**



### See Imperas at DAC 2018

Imperas will participate in the <u>Design Automation Conference</u> (DAC) 2018, and invites developers of electronic products to visit us there!

**DAC 2018 EXHIBIT**: Please email <u>info@imperas.com</u> to set up a meeting or demo of Imperas virtual platform solutions for embedded software and systems design, development, debug and test, in the Imperas pod in the RISC-V booth, #2638 at DAC!

**WHERE:** Moscone Convention Center, San Francisco, CA. **WHEN:** June 24-28, 2018. Exhibits are open June 25-27.

Read more here.

**DAC DEMO HIGHLIGHTS:** See Imperas virtual platforms and <u>Open Virtual Platforms (OVP)</u> models for embedded software development, debug, analysis, and verification, featuring RISC-V. Demos will showcase:

- Virtual platforms based on RISC-V processors from Andes, SiFive and others.
- RISC-V processor models, including an example with custom instructions.
- The Imperas software Verification, Analysis and Profiling (VAP) tools, including OS-aware tools.
- Heterogeneous multi-processor / multicore debugging capabilities.

### DAC EVENTS:

Visit Imperas at the RISC-V Foundation booth (West Hall, Level Two at Booth No. 2638).

- Join us for a networking event, drinks and a daily prize draw at the booth at 5PM Monday, June 25 and also at 5PM Tuesday, June 26.
- Monday: RISC-V: Enabling innovation in Embedded and Enterprise Data-Centric Computing Architectures by Zvonimir Bandic - Western Digital Corporation
- Tuesday: Keynote on Vision and History of RISC-V by Yunsup Lee Co-Founder & CTO, SiFive, Inc.

PRESENTATIONS: See Imperas presentations at the booth Monday 4:30pm and Tuesday 3pm.

**PANEL:** The key role for the Commercial Software Tools Ecosystem for RISC-V, with Simon Davidmann, Tuesday, June 26, 1 PM at the booth.

PANEL: Meet the RISC-V Members at DAC 2018, Monday June 25, 1 PM at the booth.

DAC POSTER SESSION PRESENTATION: SOFIA: A Fault Injection Tool for Detailed and Efficient Multicore Soft Error Vulnerability Analysis will be presented June 27, 6-7 pm, by Felipe Rosa, Univ. Federal do Rio Grande do Sul, Porto Alegre, Brazil. Co-authored by Luciano Ost of Loughborough Univ.; Gennaro S. Rodrigues, Fernanda Kastensmidt and Ricardo Reis, of Univ. Federal do Rio Grande do Sul; and Simon Davidmann and Larry Lapides of Imperas Software Ltd.

**NEWS** 



## Andes Certifies Imperas Models and Simulator as a Reference for Andes RISC-V Cores

Imperas virtual platforms, software simulator and OVP models for AndesCore N25 and NX25 processors, with AndeStar V5m extensions are now certified as a reference by Andes Technology.

Read more.



# UltraSoC Embedded analytics and Imperas virtual platforms combine to enhance multicore development and debug

Advanced debug environment for multicore processor designs used for both hardware and simulation.

Read more.

**ARTICLES** 



### Mars, Methodologies and Mastery of Embedded Systems Development

Embedded software in military, defense and aerospace programs is on an exponential complexity curve. Yet fail-safe reliability durability and security have always been paramount for the military and aerospace sectors, which excel at building systems including significant hardware and software components. This discipline sent us to the moon, to Mars, and beyond. How can we leverage these defense industry lessons, with their focus on leading interdisciplinary communications and methodologies, augmented by today's new system and software development technologies? A JPL engineer reviews the Mars Viking 1976 program and explores the latest virtual platform technologies for embedded systems and software reliability and accelerated development.

### **OVPsim Release News**

OVP: Fast Simulation, Free open source models, Public APIs: Open Virtual Platforms.



A new Imperas and OVP release will be available in July 2018.

The <u>Open Virtual Platforms</u> portal is one of the most exciting open source software developments in the embedded software world since GNU created GDB.

• For embedded software developers, virtual platforms are increasingly important, especially for multi-core designs.

The resources on this portal can significantly accelerate your development and test. The next release of OVPsim is expected to be available in September 2018.

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