Model Checking in the Cloud

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Cloud Computing is a Reality!

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- **Much more than "parallelism" or "big storage"**
  - Amazon AWS, Windows Azure, Google Cloud Platform, …
- **A new paradigm shaping the way hardware and software is designed**
  - Shift to server-side computing
  - Faster application development through software-as-a-service framework
- **Elasticity**
  - Dynamically change hardware requirements
  - Pay for resource usage by the hour
- **Scalability**
  - Ware-house scale computers
  - Large storage, memory, and fast network connectivity
- **Reliability**
  - Fault-tolerant architectures that support disaster recovery

Modeling Checking in the Cloud

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- **How can model checking and formal technology benefit from this new paradigm?**
  - Is this new paradigm suitable for model checking?
  - What are possible solutions beyond an “embarrassingly parallel” approach of running a single property per core?
  - Is there a specific subset of properties that might be more suitable to this form of analysis?
- **What is needed from the research and engineering community to achieve adoption within the next 5 years?**
- **Would a drive to model checking in the cloud increase the industry’s adoption of formal technology?**
- **What issues need to be addressed for design houses to adopt this technology?**
- **Will the current EDA license model change to adapt to the new requirements?**

Panelists

- Armin Biere, JKU
- Daryl Stewart, ARM
- Olivier Coudert, SiCAD
- Sven Beyer, OneSpin Solutions
- Vigyan Singhal, Oski Technology