What will be the next breakthrough solutions in Formal?

Ziyad Hanna
VP Research and Chief Architect
Jasper Design Automation
Nov 2009
Customers’ Most Pressing Problems

- Understand & manage design complexity
- Reduce verification and validation cost/TTM
- Early spec & verification at Arch/uArch level
- System level FV solution: “Game Changing”
- Progress metrics, coverage and predictability
FV Research Agenda

- High Level Modeling language, ver., and refine
- “Source Level” formal techniques:
  - Automatic Abstraction, SMT based reasoning, word level MC and symbolic simulation, ...
- Design for verification
- Interactive verification and search
- Formal coverage
- Post-Si FV
What customers find uninspiring in FV Research?

- Any research that has no direct link to their problems
- Methods which are hard to use/integrate in their flows
- Small tweaks of FV algorithms with marginal impact
Thanks