Discussion 2: Research directions—making verification useful

- models from different domains with common variables and interactions
- interactions between subsystems influencing the same component
- different domains have different models of the same thing, with different architectural models
- abstraction—how to do it for real systems
- systems of systems—inferring properties of the composition from the individual system properties
- how to do composition with model checking
- proof checking—current tools find proofs. need a small tool highly trusted tool to check the proofs
- tech transfer—what's needed? demonstration projects are time-consuming/costly
- there's a barrier for industry people to participate in academically oriented conferences
- need rewards on both sides (academic and industry) to work together
- TACAS conference plug—good place for application papers
- need engineers who can communicate with CS
- verification is not well known by the engineers
- important open problem for real systems: probabilistic methods
- parallelism in hardware/multicore—need for formal methods
- need tools that can be used with existing models
- SMT standard language is an example for defining a standard format