Abstract of invited panel discussion

▶ PANELISTS: KIM B. BRUCE, PETER B. HENDERSON, DANIEL LEIVANT, AND JOHN S. SCHLIPF, *Panel discussion on logic in computer science education*.
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Logic is as important in computer science as calculus is in the natural science and traditional engineering fields. Yet many curricula play only lip service to its role, with logic being touched on in a discrete mathematics course that is usually poorly integrated with the rest of the computing curriculum. We argue that topics in logic should pervade the computing curriculum and point out courses where logic should play a major role. The courses and topics involving logic include architecture (logic gates), software engineering (modeling, specification and verification), programming languages (types, semantics, logic programming), database (relational algebra and SQL), artificial intelligence (automatic theorem proving, knowledge representation, and commonsense reasoning), algorithms (complexity and expressiveness), and theory of computation (general notions of computability).

Questions to be addressed include:

- What depth of logical knowledge is required of CS students?
- When and how should we teach logic (e.g., in a separate logic or discrete math course or integrated with computer science topics)?
- What materials and courseware are available and useful for teaching logic?
- How can we help students understand the importance of logical concepts to computer science?
- How can logic be reinforced throughout the CS curriculum?
- Should logic be presented to CS students differently than to mathematics and philosophy students?