Keynote Address

Abstraction, Composition, Symmetry, and a Little Deduction: The Remedies to State Explosion

Amir Pnueli

Faculty of Mathematics and Computer Science
The Weizmann Institute of Science
76100 Rehovot, Israel

Abstract. In this talk, we will consider possible remedies to the State Explosion problem, enabling the verification of large designs. All of these require some user interaction and cannot be done in a fully automatic manner. We will explore the tradeoffs and connections between the different approaches, such as deduction and abstraction, searching for the most natural and convenient mode of user interaction, and speculate about useful additional measures of automation which can make the task of user supervision even simpler.