

Inherent limitations can facilitate design and verification of concurrent programs

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Abstract

This talk argues that exposing inherent limitations of synchronization can positively affect the design and verification of concurrent programs. This is demonstrated with two examples: The first shows that, for a large class of objects, any implementation must include specific, easy-to-detect patterns of memory accesses. The second is a reduction theorem showing that many locking protocols need only be verified in a sequential setting.

Biography

Hagit Attiya is a professor at the department of Computer Science at the Technion, Israel Institute of Technology.

She received all her degrees from the Hebrew University of Jerusalem.

Her research interests are in distributed and parallel computing, and she is the editor-in-chief for Springer's journal Distributed Computing.