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# Editorial

The articles in this special issue derive from nine of the 26 papers presented at two meetings organized in Spring 2004 by the School of Computer Science at Tel Aviv University (Israel), as part of an **International Logic and Computer Science Semester**, featuring guest lecturers from seven countries. Félix Costa, Nachum Dershowitz, Nissim Francez, Doron Peled, and Hilary Putnam were five of the speakers at the *Symposium on Models of Computation*, held March 10–12. Haim Gaifman, Vladimir Sazonov, Mooly Sagiv, and Eli Shamir presented papers at the *Symposium on Logic and Computation*, held March 17–19.

In his paper, “After Gödel”, Hilary Putnam describes various deep results (of his own and of others) in computability theory that were inspired by Gödel’s incompleteness theorems and their proofs. This includes his recent discovery that “scientific competence” (in the sense of Chomsky) cannot be both true and justified. Then, in “Naming and Diagonalization, from Cantor to Gödel to Kleene”, Haim Gaifman develops what he calls “naming systems”, and shows that they can serve as a general, uniform framework for dealing with self-reference phenomena, including Gödel’s proof, Kleene’s Recursion Theorem, and the solution to simultaneous fixed-point equations. “Comparing Computational Power”, by Udi Boker and Nachum Dershowitz, considers how one ought to compare the extensional power of computational models operating over different domains so as to avoid incompatibilities.

In “Undecidability over Continuous Time”, Jerzy Mycka and José Félix Costa highlight connections between a non-standard model of computations and the classical theory of computability. In “A Lambek Automaton”, Tatyana Veksler and Nissim Francez devise a new type of automaton, based on the Lambek logical calculus, for which there is a one-to-one relation between the automaton’s computation and derivations in type-logical grammars (from computational linguistics). “Querying Hyperset/Web-like Databases”, by Vladimir Sazonov, presents a hyperset approach to semistructured databases in a simple and intuitive way.

In “Satisfiability Decay along Conjunctions of Pseudo-random Clauses”, Eli Shamir computes the rate of decay in the size of the satisfaction set of pseudo-random sequences of  $k$ -CNF problems. Then, in “Adaptive Model Checking”, Alex Groce, Doron Peled, and Mihalis Yannakakis propose a methodology for model checking in the presence of inconsistency between a system and its corresponding model. Finally, in “Verifying Temporal Heap Properties Specified via Evolution Logic”, Eran Yahav, Thomas Reps, Mooly Sagiv, and Reinhard Wilhelm promote a first-order temporal-logic framework for verifying properties of programs that manipulate dynamically-allocated memory structures.

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