10^{th} Session of Lecture Series on
Formal and Logical Aspects of Computer Science

Logical Modeling of Social Systems

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Time : Thursday, November 12, 2009 (Aban 21, 1388) 14:00 to 16:00

Place : School of Mathematics, IPM, Niavaran Square, Tehran, Iran

Abstract: A social procedure consists of a society of agents accompanied with each agent a set of instructions, in order to obtain specific social goals. In a society, each agent assumed to be rational and thus each agent works for her individual aims not the social goals. So, the instructions of an agent in a successful social procedure must be compatible with the rationality of the agent. In a society, agents interact(with), learn(of), cooperate(with) and obligate to each other to derive their individual purposes. We study how formal methods as Epistemic logic, Deontic logic, Game theory and game logic can be applied to describe social procedures, in order to verify whether they successfully provide their desired social goals.

(Note : Topics covered by this lecture series are computational logic, type theory, topology in theoretical computer science, proof carrying code, formal specification and verification of systems, computability, proof theory, model checking, and so on.)