



The Institute Colloquium

# Hybrid automata: modeling and reachability analysis

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Hybrid automata extend finite state machines with real valued variables that are subject to continuous evolutions (during time elapsing) constrained by differential constraints and subject to discrete evolutions (during mode switches) constrained by guards and updates. A large part of the talk will target a general audience of researchers interested in the modeling of systems ranging from embedded control systems to biological systems. In a last part of the talk, I will present recent results about the decidability frontier of the time-bounded reachability problem for hybrid automata.

**Monday, October 10, 2011, 4.45 pm**

**Raiffeisen Lecture Hall, Central building, 1st floor**



This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage (note that the IST Shuttle times are highlighted in lilac): [http://www.ist.ac.at/fileadmin/user\\_upload/pdfs/IST\\_shuttle\\_2011.pdf](http://www.ist.ac.at/fileadmin/user_upload/pdfs/IST_shuttle_2011.pdf). The IST Shuttle bus is marked IST Shuttle (line 242) and has the Institute Logo printed on the side.