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Nonlinear Analysis: Hybrid Systems welcomes all important research and expository papers in the area of hybrid dynamic systems, i.e., systems involving the interplay between discrete and continuous dynamic behaviors.

Computer and embedded reactive control systems which includes discrete switching logic and event-driven interactions with continuous systems are ubiquitous in everyday life. These systems become increasingly complex and difficult to design and to verify while the requirements for dynamics performances and safety are also increasing. The development of systematic methods for efficient and reliable design of hybrid systems is a key issue in control technology and industrial information, and thus it is currently of high interest to control engineers, computer scientists and mathematicians in research institutions as well as in many industrial sectors.

Contributions are invited in all areas pertaining to hybrid dynamic systems including: Modeling, modeling languages and specification; Analysis, computability and complexity; Stochastic systems; Impulsive systems; Verification; Abstraction; Optimization; Control synthesis and real-time control; Computation and control over networks; Neural or fuzzy approaches to hybrid systems; Synchronization of oscillators and chaotic systems; Fault diagnosis and dependability; Simulation, implementation and tools.

Contributions on applications of hybrid dynamic systems methods are also encouraged. Fields of interest include: process industry, automotive, avionics, communication networks, energy systems, transportation networks, embedded systems, biology and other sciences, manufacturing and robotics.

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Mathematicians, Statisticians and Systems Engineers

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