

Weighted automata in modeling, performance analysis, optimization, and control of discrete-event and hybrid systems

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Weighted automata are classical finite automata in which transitions carry weights. These weights or multiplicities may represent, e.g., the amount of resources or time needed for a transition, the cost involved when executing a transition, or the probability of its successful execution. Theory of weighted automata has motivated ample studies, and there exists a wide variety of applications (performance evaluation and control of DES, image compression, natural language processing,...).

The special session aims at favoring the exchanges between the researchers interested in such diverse topics on weighted automata as optimal control of timed-discrete-event and hybrid systems, performance evaluation, theory and application of stochastic discrete-event systems.

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