

Fully probabilistic

Nondeterministic

Discrete  
time

Discrete-time  
Markov chains  
(DTMCs)

Markov decision  
processes (MDPs)  
(probabilistic automata)

Continuous  
time

Continuous-time  
Markov chains  
(CTMCs)

CTMDPs/IMCs

Probabilistic timed  
automata (PTAs)