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Invited Talk: Extensions of Graph Transformation Systems for Timed,  
Continuous, and Probabilistic Behavior

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## Invited Talk: Extensions of Graph Transformation Systems for Timed, Continuous, and Probabilistic Behavior

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**Abstract:** Graph transformation systems can be employed to describe systems with complex structural dynamics which states can be captured by attributed graphs. However, like many other standard computer science models such as automata in their basic form time, continuous behavior, or probabilistic behavior are not supported. In this talk we will report on a number of extensions for graph transformation systems that have been developed that permit to describe also time, continuous behavior, probabilistic behavior, timed probabilistic behavior. Referring to the development of related extensions for automata, we will discuss how these results have been transferred to graph transformation systems. We will discuss furthermore which specific problems had to be resolved to transfer the results to graph transformation systems, which tool support exists, and what are the open challenges for each of these directions