基于事件驱动的信息物理融合系统建模

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摘 要:讨论了信息物理融合系统的事件驱动特性,针对目前基于框架事件模型没有充分考虑事件生命周期和事件融合的缺陷,为保证事件响应的有效性和合法性,提出了事件的多元组表示方法.多元组包含事件的类型、观察者、发生对象、发生或产生的时间和地点、描述的变量属性、可信度值等要素,通过基于事件机制的无人机编队控制仿真,验证了相关定义与方法的有效性.

关键词:CPS系统;事件驱动;CPS事件;编队控制
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Cyber Physical System Modeling Based on Event Driven

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Abstract: The event driven characteristics of cyber physical system are discussed. Aiming at the defects of the current frame event model, which is the life cycle and the fusion of events are not considered enough, in order to ensure the validity and legitimacy of event response, the multiple group representation of the event is given. Multiple groups include the type of event, the observer, the occurrence of the object, the time and place of the occurrence, the variables that describe the variables, and the reliability value. Through the simulation of unmanned aerial vehicle formation control based on event mechanism, the validity of the method is verified.

Key words: cyber physical system; event driven; cyber physical system event; formation control

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