機械元件高速組合之模擬

There are several application in robotic and manufacturing in which rigid object are subject to multiple frictional contacts. In many previous work, rigid body models have been used to analyze such system. There are several problems with such an approach. First, the use of frictional laws, such as Coulomb's Law, introduce inconsistencies and ambiguities when used in conjunction with the principles of rigid body dynamics. Secondly, hypotheses traditionally used to model frictional impacts can lead to solution which violate principle of energy conservation. Third, the situation of static indeterminacy makes the unsolvable of the contact forces. A new approach to the simulation of mechanical system with multiple, frictional constraints is proposed which is free of such difficulties.