任意分布参数平面连杆机构运动精度可靠性稳健设计

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关键词： 连杆机构 运动精度 可靠性 稳健设计

摘 要： 将可靠性优化设计理论、可靠性灵敏度技术和稳健设计方法相结合,讨论了具有任意分布参数的平面连杆机构运动精度可靠性稳健设计问题，提出了可靠性稳健设计的数值计算方法。在基本随机参数的前四阶矩已知的情况下，通过计算机程序可以实现平面连杆机构的运动精度可靠性稳健优化设计,迅速准确地得到平面连杆机构的设计信息。 By combining the reliability-based optimization design theory, the reliability sensitivity technique and the robust design method, the reliability-based robust design for kinematic accuracy of the planar linkage mechanism with arbitrary distribution parameters was discussed extensively. Subsequently, a numerical method for reliability-based robust design was proposed. Under the condition that the first four moments of basic random parameters are available, computer programs based on this model can be used to complete the reliability-based robust design for kinematic accuracy of planar linkage mechanism accurately and quickly.

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