

## عنوان مقاله:

Kinematics Analysis of a New Spatial 3-DOF Parallel Mechanism

## محل انتشار:

سیزدهمین کنفرانس سالانه مهندسی مکانیک (سال: 1384)

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## خلاصه مقاله:

This paper proposes a new spatial 3-DOF (two degrees of translational freedom and one degree of rotational freedom) parallel mechanism. The parallel mechanism is a variation to the 3-DOF manipulator proposed in [1] and consists of a fixed base plate, a mobile platform, and three connecting legs. The inverse and forward kinematics problems are described in closed forms. The velocity equations and Jacobian matrices are obtained and three kinds of singularities are also discussed in detail. The workspace for the mechanism is analyzed systematically. Finally a numerical example is presented. We believe this mechanism could have wide application in the fields of industrial robots, simulators and parallel machine tools.

## کلمات کلیدی:

Spatial 3-DOF Parallel Mechanism - Inverse and Forward Kinematics - Singularity - Workspace

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/27254>

