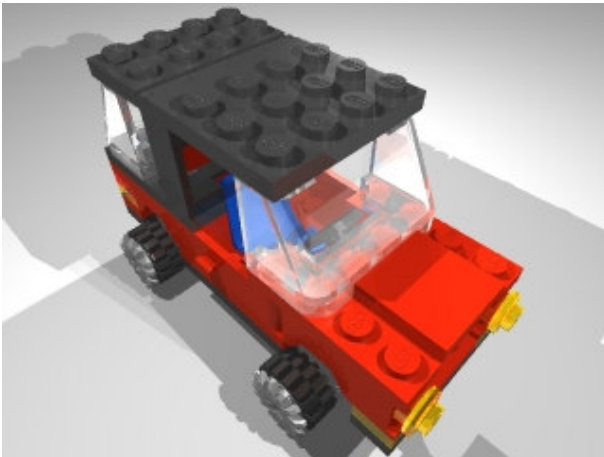


# LeoMCAD: A Lego-based Mechanical CAD system

Gonzalez, Francisco; Jesus Amador Perez; Patow, Gustavo A.



Mechanical Design (MCAD) tools are used for creating 3D digital prototypes used in the design, visualization, and simulation of products. In this paper we present LeoMCAD, a Lego-based mechanical system designed to be used as an education tool both for kids and Lego hobbyists; but which features a novel solver that naturally and seamlessly computes the interaction between the pieces that build-up a given model, solving an otherwise complex forward kinematic system of equations in a much simpler way. The results show how our system is able to cope with situations that would produce dead-lock situations in more

advanced commercial systems.