

The aim of this thesis is a simulation of the motion a robot consisting from rigid bodies in two dimensions. The work, in general, introduces the reader with the basic principles of the simulation. In the first part, algorithms used in the simulation are described and explained in details. Furthermore, equations describing the algorithms are derived. Next, the description of the library for the simulation of the robot's motion is presented. Finally, a demonstrative program using the library is introduced. This application contains few examples of the robot's motion in the 2D, which are in good agreement with real 2D motion.