# STUDIES ON THE POSSIBILITIES OF PROGRAMMING INDUSTRIAL ROBOTS

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**Rezumat:** *Acest proiesct descrie o aplicatie pick&place, cum trebuie si cum nu trebuie programat un robot industrial. Metoda de programare folosita este Teach-in (cu telecomanda. Aplicația consta asamblarea a 3 piese: una cilindrica si doua paralelipipedice poziționate. Ordinea de asamblare a pieseleor este: piesa paralelipipedică; piesa cilindrică; piesa paralelipipedică;*

**Abstract:** *This project describes an application pick & place, the way of programming an industrial robot. The programming of the robot was made with the teachpad in order to to increase accuracy and optimize the robot trajectory in its workspace. .In this program have been used three pieces: one cylindrical and two rectangular. The order of assembly is: first rectangular piece; the cylindrical piece; second rectangular piece;*

*Keywords :*Industrial Robots; programming; traiectory; teach-pad

## 1. Introduction

An Industrial robot is a multifunctional manipulator that controls and reprograms the position automatically, with more degrees of freedom and being able to manipulate materials, parts, tools or special devices along planned pathways to pursue variety of tasks. (ISO Standard)

The most commonly used robot configurations are *articulated robots*, *SCARA robots* and *Cartesian coordinate robots*, (aka gantry robots or x-y-z robots). In the context of general robotics, most types of robots would fall into the category of robotic arms (inherent in the use of the word manipulator in the above-mentioned ISO standard). Robots exhibit varying degrees of autonomy:

- Some robots are programmed to faithfully carry out specific actions over and over again (repetitive actions) without variation and with a high degree of accuracy. These actions are determined by programmed routines that specify the direction, acceleration, velocity, deceleration, and distance of a series of coordinated motions.

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