

Ten Years of Creative Robotics Contests

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Abstract

Educational Robotics is a new field that did not win the position it deserves in the educational systems yet. The article is a contribution to the ongoing discussion on the robotics contests. We explain the concept of *virtual game*, representing an isolated world on its own with rules and facts that are comprehensible and contain goals and challenges to be achieved by systematic efforts by the pupils. We argue that virtual games are useful scenarios to stimulate creativity, self-motivation, goal-mindedness, and information processing, the competences that should lie in the centre of the educational system. The concept applies to informatics education in general. We elaborate on didactic purposes of competitions, which are a kind of virtual games, and discuss the frontline of robotics contests from a critical point of view. We share our belief about the most suitable forms of robotics contests: *creative robotics contest*. We have organized several creative contests in the past years in our region. These contests took different forms: 1) with a theme and a free choice for the project built, and 2) with a specific task. Examples that we realized in the recent years are shown, see figures 1 and 2. Our belief is supported at least by the ongoing interest in this form of the contest among participants.

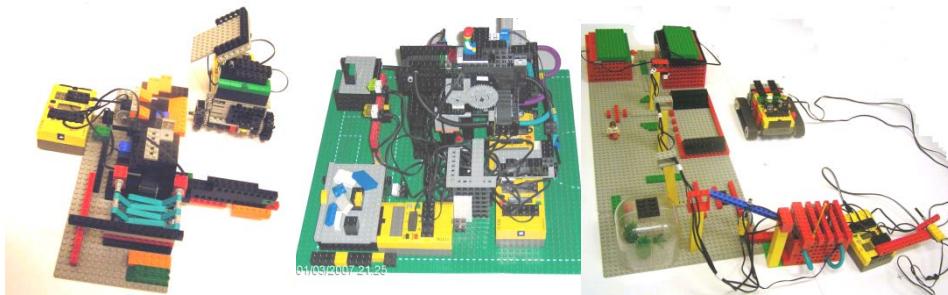


Figure 1. Example models from the creative contest. See robotika.sk/rcj for more.

The creative robotics contest is the true realization of the constructionist learning methodology. We believe it demands more attention and realization on wider scale.

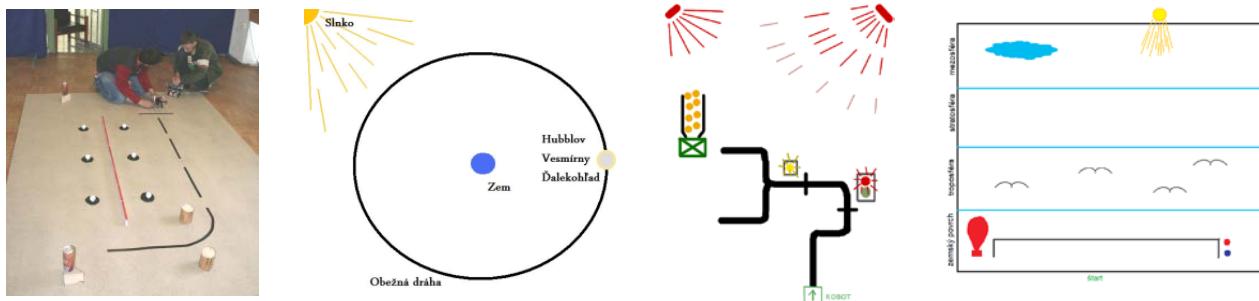


Figure 2. Playing fields for the creative contest in 2008-2011. Details at robotika.sk/rcj.

The actual value of the robotics contests is plentiful. Being interdisciplinary, they also support social, and cooperative skills, improve independence, confidence, and active attitude of pupils.

Keywords

educational robotics, contests, creativity, virtual games