Introduction

The 3rd International Workshop *"Teaching robotics, teaching with robotics"* was aimed to promote exchange and sharing of experiences among researchers in the field of educational robotics. The workshop was held in Riva del Garda (Trento), Italy, on Friday April 20th, 2012. The workshop followed the spirit of the TERECoP project (www.terecop.eu) and continued the tradition of two previous successful workshops organised in Venice (2008) and in Darmstadt (2010) . It took place concurrently with the Italian Robocup Junior national tournament and the Discovery on Film exhibition (organized by the Town Museum of Rovereto-IT).

The focus of the workshop was on the integration of robotics in school curriculum. Several efforts developed recently to integrate robotics in tertiary and school education, mainly in science and technology subjects, were presented in the workshop and are reported in the workshop proceedings.

At tertiary level, whereas robotics is present as a regular subject, essentially in mechanical and information engineering curricula, a problem is still present: how to make large classes of students to access laboratorial activities at affordable costs. For example, robots could be used as reference platforms to apply basic knowledge on computer programming and computer architecture, subjects usually taught at the first semesters of the computer engineering curricula, and therefore followed by most students of the year. Some papers deal with this sort of problems; special attention is put on the integration of Robotics education with other curricular disciplines and on choosing suitable robotic architectures and supporting tools.

At school education level, robotics projects are reported from kindergarten to primary and high secondary school, either as interdisciplinary learning activities or focused on specific school subjects, mostly on Science, Maths, Informatics and Technology. Constructivism/constructionism is the predominant paradigm in several papers, whereby robotics technologies are seen and used as tools to support new ways of thinking in teaching and learning. Other reported projects involved students in authentic problem solving, experiments and investigations helping them to acquire teamwork skills, independence, imagination and creativity. Some papers address specific groups of learners (minority students, visually impaired children, etc.) while others report efforts and methodologies for training future or in-service teachers. The use of assessment for learning methodologies and evaluation of long-term effects of educational robotics are presented in some other interesting works. Finally, experiences and lessons learned from robotics competitions are also reported.

We really hope that the proceedings of this workshop, and the discussion held during the event as well, will contribute to the further development and advancement of the dialogue among the research community of educational robotics at European level.

The Chairs
Dimitris Alimisis, Dept. of Education, School of Pedagogical and Technological Education, Patras, Greece
Michele Moro, Dept. of Information Engineering, Univ. of Padova, Italy
(Local chair) Emanuele Menegatti, Dept. of Information Engineering, Univ. of Padova, Italy