

The True Spirit of RoboCup

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The article by Alexander Ferrein, Stephen Marais, Anet Potgieter, and Gerald Steinbauer on RoboCupJunior in South Africa sheds some light on aspects of RoboCup that are often forgotten. Since its start in 1997, RoboCup has become very well known in the robotics and automation community as well as in the general public. Most people associate soccer playing robots with RoboCup, especially in the form of humanoid robots, as they receive considerable attention by the media during the events. Also, the main vision of RoboCup is to pave the way for a robot soccer team that can beat the human world-champion team in soccer by 2050. This obviously means a lot of research with a good deal of it devoted to the implementation of capable humanoids. However, the soccer-playing side is only one part of the story. There is much more in RoboCup.

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First of all, there are the other challenges in RoboCup such as Home and the Rescue leagues, which deal with service robots working in nonstandardized domestic settings, and robotic systems for urban search and rescue. These challenges are quite far from soccer playing, but it is interesting to see that there are some technology and knowledge transfers across leagues. This may be partially due to the fact that no matter which competition a team participates in, it is largely an integration effort that determines success and that many similar core components are employed across the different leagues. It may also be due to the fact that RoboCup is not only a competition but also a social event. Teams clearly want to win, but they are also open to share their knowledge and to receive some in return.

This brings me to RoboCupJunior (an element of RoboCup) that is even lesser known than its competitions beyond soccer. Many people assume that RoboCup teams consist of university students, doctorates, and their supervisors. This is definitely correct for one part of the event. However, for the last ten years, there has been an additional component targeted at primary and secondary school students. This RoboCupJunior is not just a reuse of the so-to-say RoboCup brand for primary and secondary school students. An important aspect of RoboCupJunior is that it is colocated with the senior RoboCup, i.e., the junior teams are a part of the overall event and experience its special atmosphere and social interactions. For these youngsters, it is a tremendous motivation to see advanced platforms performing challenging feats as well as occasional failures and setbacks that are part of the reality of research and to get the opportunity to interact with real scientists, e.g., when looking for a particular type of screw that is urgently needed as a replacement part or when helping out a senior team that may have forgotten to bring a soldering iron or a spare screwdriver.

Meanwhile, it is great to see that RoboCupJunior activities are also successfully running in South Africa as described in the article by Ferrein, Marais, Potgieter, and Steinbauer. It is remarkable as the difficulties had been and still have to be overcome, starting from the logistics of arranging practice session for participants coming from a widespread area with a rather poor infrastructure and reaching up to the still lasting damaging effects of several decades of apartheid. Despite these severe challenges, the RoboCupJunior project in South Africa has managed a very good start and gotten youngsters to engage in education activities in the true spirit of RoboCup using science and technology to develop systems that get closer to the IsaacAsimov dimension of robotics and automation for which soccer playing robots happen to be a pretty good metaphor.



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