

## NEW CONCEPTS AND APPROACHES TO THE STUDY OF COLLECTIVE SPORTS GAMES

### **Abstract**

*Collective sports game is a complex phenomenon and occurs by implementation of the plan. The plan applies to agents of players as holders of the activities and the structure of the environment. Therefore, we have decided that the multifaceted way, using scientific contributions to areas such as sociology, linguistics, biology, mathematics, computer science, especially in the field of artificial intelligence, robotics and philosophy shed more light on this phenomenon. With more aspects we touched on the problem of simulation. In the field of artificial intelligence, we discuss different concepts of representation of the World and place as the agent in charge of activities in it. These themes were considered for the purpose of connecting with the problem of modelling. We analyzed the development of the field of artificial intelligence with a special focus on those elements which correspond to the issue of collective sports games. We believe that systematic and competent modelling collective sports games must be significantly marked by such a level platform. Resolving this issue in the context of all areas under consideration can be directly used to solve the modelling of players, teams and matches collectives.*

**Key words:** *agent, collective, robotics, situations and embodiment, multi-agent, swarm, simulation, artificial intelligence, emergence, plan, syntax, semantics, useful structures in the world*

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