

# **Abstract**

**Khaled Mahar**

## **Agent-Based Adaptive Testing System**

Reaching a testing system that satisfies a student ability level has been a study issue for a long time. Computerized adaptive testing (CAT) is one of the solutions for measuring student ability giving him a test that suit his ability. But CAT has some limitations that prevent it from the perfections that the students are aiming. This research will solve some of these limitations hoping to reach a better system performance of CAT; a more accurate student ability measure. The limitation is CAT systems always testing the student in random questions pattern in the whole topic so, student not administered enough items of all concepts in the topic failing to insure that their final ability estimate is accurate enough. This paper solved that the student couldn't really understand a concept in a topic by bad results that he may get, by offering a solution of this limitation using software agent technology with CAT.