Accepted Manuscript

Title: New Applications of Learning Automata-based Techniques in Real-World Environments

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PII: S1877-7503(17)31200-0
DOI: https://doi.org/10.1016/j.jocs.2017.11.012
Reference: JOCS 803

To appear in:

Received date: 30-10-2017
Revised date: 19-11-2017
Accepted date: 25-11-2017

Please cite this article as: Alireza Rezvanian, S.Mehdi Vahidipour, Mehdi Esnaashari, New Applications of Learning Automata-based Techniques in Real-World Environments, Journal of Computational Science https://doi.org/10.1016/j.jocs.2017.11.012

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ACCEPTED MANUSCRIPT

New Applications of Learning Automata-based Techniques in Real-World Environments*

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Highlights

- New Applications of Learning Automata-based Techniques
- Learning automata are suitable for modelling, learning, and solving complex problems
- Summary of the papers accepted in the special issue

Abstract

Learning automaton (LA) as a promising technique of artificial intelligence is a self-adaptive decision-making device that interacts with an unknown stochastic environment and is progressively able to make optimal decisions even if provided with probabilistic wrong hints. LA has made a significant impact in many areas of computational science as well as engineering problems. The special issue on new applications of learning automata-based techniques in real-world environments for journal of computational science aims at collecting some of the most recent researches regarding theories, structures, and appliances of LA in real-world problems. This editorial summarizes the papers accepted in the special issue.

Computational Science is referred to the study of addressing effective usage of advanced computing capabilities for understanding and solving complex real-world problems. This discipline has been exploited in several domains thus far [1–5]. Artificial intelligence can be considered as an effective advanced computing methodology which is especially tailored for solving real-world problems. In this regard, both computational science and artificial intelligence are seeking the same direction using similar problem solving approaches.

The theory of learning automaton (LA) as a promising field of artificial intelligence is a powerful and untapped source of computational technique that could be exploited for solving many real-world problems. LA is a self-adaptive decision-making device that interacts with an unknown stochastic environment and is

* Editorial to the special issue on new applications of learning automata-based techniques in real-world environments for journal of computational science

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