

ular Spike Detection Approach for isry Neuronal Data

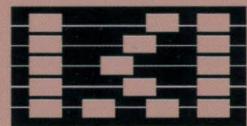
orteza Saraf, Karim Mohammadi and
Saeid Sanei

ential, named spike, plays an important role in central nervous systems. Neuronal spike detection due to the effect of strong noise and non-wo main problems for almost all conventional hes. First, a filtering approach is often followed ata. Selection of the filter parameters is a time-vercome this problem we suggest utilizing position (EMD) and a modified adaptive filter tuned automatically. The second problem is ion method is signal dependent and the onsiderably when the data changes. To tackle approach which utilizes the data distribution exploits the fuzzy set theory to combine a cctors to achieve a higher performance. The e superiority of the proposed method.

Adaptive Parameter Selection in Comperehensive Learning Particle Swarm Optimizer

*Mohammad Hasanzadeh, Mohammad Reza Meybodi and
Mohammad Mehdi Ebadzadeh*

The widespread usage of optimization heuristics such as Particle Swarm Optimizer (PSO) imposes huge challenges on parameter adaption. One variant of PSO is Comprehensive Learning Particle Swarm Optimizer (CLPSO), which uses all individuals' best information to update their velocity. The novel strategy of CLPSO enables population to read from exemplars for specified generations which is called refreshing gap m . In this paper, we develop two classes of Learning Automata (LA) in order to study the learning ability of automata for CLPSO refreshing gap tuning. In the first class, a learning automaton is assigned to the population and in the second one each particle has its own personal automaton. We also compare the proposed algorithm with CLPSO and CPSO-H algorithms. Simulation results show that our algorithms outperform their counterpart algorithms in term of performance, robustness and convergence speed.



انجمن کامپیوتر ایران
Computer Society of Iran

The Symposiums Guide & Book of Abstracts

The 2013 CSI International symposium on
Artificial Intelligence and Signal Processing (AISP)
AND
Computer Networks and Distributed Systems (CNDS)
AND
Computer Science and Software Engineering (CSSE)

December 25-26 2013
Sharif University of Technology
Tehran, IRAN