



Cognitive Radio parameters optimization using Bio-Inspired Algorithms

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Cognitive Radio parameters optimization based on GA, PSO and Spectrum mobility based on DNA inspired computing | Cognitive Radio Engine model optimizes wireless transmission parameters for spectrum management and decision supports, results analyzed and compared among multi-channel with algorithms based on Base-10 Genetic Algorithms (GA), Particle Swarm Optimization (PSO) and hybrid of GA+PSO. Multi-objective fitness functions established the relationships among the environmental parameters, transmission parameters, and objectives of QoS performance. Using theoretical relationships between various different parameters and the weighted cumulative sum approach, equations for each objective to be used within Cognitive Radio engines were developed. The objectives of these multi-objective fitness functions were controlled by the values of the weights on each defined function. A robust technique for spectrum mobility of secondary users based on DNA inspired computing, satisfies the solution to problem given by S. Haykin paper "Cognitive Radio: Brain-Empowered Wireless Communications". However, this involves only one transmission parameter (i.e. received power) and at last, cognitive radio security threats discussed based on Simulink model. | Format: Paperback | Language/Sprache: english | 160 pp.



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