

## عنوان مقاله:

Spectrum Allocation with Control of Interference Based on Differential Evolution Algorithm between Cognitive Radio Users

## محل انتشار:

بیستمین کنفرانس مهندسی برق ایران (سال: 1391)

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## خلاصه مقاله:

Cognitive Radio (CR) has been regarded as a promising technology to improve the spectrum utilization significantly. One of the considered issues in CR is the allocation of frequency channels between its users. In this paper, at first, spectrum allocation model is presented, then a new spectrum allocation method based on Differential Evolution (DE) algorithm is proposed. In this algorithm in order to decrease the search space we propose a mapping process between the channel assignment matrix and the position of candidate solutions of DE based on the characteristics of the channel availability matrix and the interference constraints. Then DE Results show efficiency of our proposed method. Corresponding results show that our proposed method fast converge in maximizing three objective functions which are: Max-Sum-Reward (MSR), Max-Min-Reward (MMR), and Max-Proportional-Fair (MPF); this feature makes our proposed methods useful for practical applications.

## کلمات کلیدی:

Cognitive radio, differential evolution, spectrum allocation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/154300>

