

## عنوان مقاله:

Adaptive Parallel interference cancellation for CDMA Systems- A weight selection and filtering scheme

## محل انتشار:

سومین کنفرانس مهندسی برق و الکترونیک ایران (سال: 1390)

تعداد صفحات اصل مقاله: 38

## نویسندگان:

Amin Aliabadi - *Msc in The Telecommunication*

Ali Alavian - *Phd in The Telecommunication*

Reza Dianat - *Phd in The Telecommunication*

Hedy Ghafari

## خلاصه مقاله:

Parallel interference cancellation (PIC) is a well-known multiuser detection algorithm in direct-sequence code-division multiple-access architecture. One problem associated with the PIC is that unreliable interference cancellation may occur in the early stages and the system performance may be degraded. Thus, the partial PIC detector was developed to control the cancellation level by use of interference cancellation factors. Partial PIC can be implemented with an adaptive form, in which optimal weights are derived using the least mean square (LMS) algorithm. In this paper, we propose an algorithm improving the conventional adaptive partial PIC. The main idea is to reduce the number of active weights in the LMS algorithm, and to perform weight post-filtering such that the resultant excess mean square error can be reduced. We also analyze the performance of the proposed algorithm outperforms the conventional partial PIC, and derived analytical results are accurate.

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/125266>

