

## عنوان مقاله:

Parameters Estimation of Micro Doppler signal of Rotating Rotor without Using Time Frequency Transform

## محل انتشار:

هشتمین کنفرانس ملی رادار و سامانه های مراقبتی ایران (سال: 1400)

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## نویسندگان:

Ali Shamsaddini - *electrical and computer engineering isfahan university of technology Isfahan, Iran*

Ehsan Yazdin - *electrical and computer engineering isfahan university of technology Isfahan, Iran*

## خلاصه مقاله:

Micro doppler signature of a target which have micro motions, can be employed to classify targets, and estimate details of structure of the targets. This signature is usually extracted by using time-frequency transforms of the received signal in the radar. When the target is a helicopter or drone with rotating blades, proper processing can be performed to extract the characteristics if the blades such as length, rotation frequency and number of blades, which can be used to determine the type of helicopter or drone. Since the time-frequency transform and subsequent image processing, imposes a heavy computational load and requires large amount of memory, in this article we propose a low complexity method which does not need the time-frequency transform to estimate the parameters of micro motion. In this method we use the real and imaginary parts of the received signal from rotor blades to estimate the length and number of bales and frequency of rotation bales. The results of computer simulation along with experimental results are provided to show the efficiency of the proposed method.

## کلمات کلیدی:

micro-Doppler, Time-frequency transform, Parameter estimation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1360848>

