

## عنوان مقاله:

A Thorough Analysis of Wire Bow-Tie Antenna

## محل انتشار:

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## خلاصه مقاله:

Ground penetrating radar (GPR) is one of the most important instruments in some cases such as remote sensing, non-destructive evaluation and microwave imaging. The radiation component (antenna) in these radars is very important. Features and constraints such as high impedance bandwidth, stable radiation patterns, minimum distortion of the antenna end reflections and consequently sending high-precision pulses makes many challenges in construction and design of the antenna. In addition, the antenna size, which is expected to cover both low frequencies and portability, adds to the difficulty of designing this antenna. In this paper, four possible modes of wire bowtie antenna, which is known as one of the most common antenna in impulse GPR applications are introduced and investigated. To this regard, late-time-ringing effect of the transmitted UWB waveform, pattern characteristics and impedance bandwidth of the proposed structures have been analyzed and compared. The results show that the other modes can be replaced to the original one in most cases.

## کلمات کلیدی:

Bowtie antenna, en, Ground penetrating radars, Wire structures, UWB pulse radiation, GPR antenna, input impedance, GPR pulses, Radiation pattern

## لینک ثابت مقاله در پایگاه سیویلیکا:

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