

Seminar On

Research on a Low-Profile FSS Structure for Enhanced Radiation Characteristics in Base Station Antennas

用於提升基站天線輻射特性的低剖面頻率選擇表面的研究

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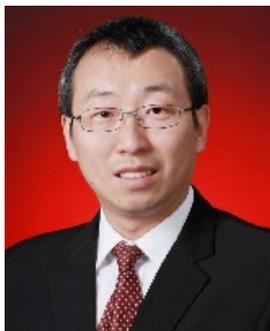
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Abstract

FSS is placed in the near-field area of the antenna in the base station antenna. In this scenario, it is difficult for electromagnetic waves to satisfy a uniform plane wave distribution, and the influence of FSS on antenna radiated electromagnetic waves needs to be investigated. Traditional FSS analysis methods are difficult to ensure their ideal bandpass characteristics in actual base station environments. It is essential to develop a low-profile Frequency Selective Surface (FSS) structure with the capability to maintain stability at large incidence angles. This design objective aims to achieve optimal radiation characteristics for base station antennas.

當頻率選擇表面被置於基站天線的近場區，頻率選擇表面的入射波不再是理想的平面波。在此場景下，頻率選擇表面的諧振特性和其對基站天線的影響需要被研究。基於傳統方法設計的頻率選擇表面難以在實際的基站環境中保持理想的帶通特性。因此，開發一種適用於基站天線場景的具有大角度入射穩定性的頻率選擇表面變得非常重要。據此，一款用於優化基站天線輻射特性的新穎頻率選擇表面被提出。

Biography



Jiahui Fu, born in 1973. Currently serving as a professor and doctoral supervisor in the Department of Microwave Engineering at the School of Electronic and Communication Engineering, Harbin Institute of Technology. His research focuses on microwave and millimeter-wave circuits, antennas, metamaterials, MEMS, and electromagnetic compatibility.

He currently serves as a committee member of the Antennas Branch of the China Electronics Society and as the chair of the IEEE Harbin Antennas Chapter.

傅佳輝，1973年生。現任哈爾濱工業大學電子與通信工程學院微波工程系教授，博士生導師；主要從事微波毫米波電路、天線、超常媒質、MEMS和電磁兼容等方面的研究。他目前是中國電子學會天線分會委員、IEEE哈爾濱天線分會主席。

*** ALL ARE WELCOME ***

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