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CPW-fed slot antenna arrays for K band applications

Talk by Dr. Marija Milijic, University of Niš (Serbia), December 12th, 4:00 p.m., IPQ Room 3.42, Building 30.10

The next 5G generation of mobile networks aim to allow an ubiquitous connection between hundreds different devices, improving the main properties such as great broadband capacities and transmission speeds. Therefore, new challenges are put to the to design of millimeter band antennas, composed of dozens of radiating elements, whose radiation properties is a crucial property, combined with the reduced sizes and higher gains. CPW (coplanar waveguide) - fed antennas are considered as good candidates for applications in 5G mobile communication systems due to their wide bandwidth, low cost, light weight, small size, and ease of fabrication and integration with active components.

In this talk, both symmetrical and asymmetrical slot antenna arrays are presented, designed for radar and wide-band applications in 5G frequency range 24.25-27.5 GHz. Aside from planar structure and inexpensive fabrication, the proposed antenna arrays offer the advantage of a wide operating bandwidth, great gain and radiation patterns corresponding series of identical slots that suggest its potential employment in future 5G applications.

Dr. Marija Milijic received the Dipl.-Ing. degree in Electrical Engineering from the University of Niš, Faculty of Electronic Engineering, Serbia in 2003 and the M.Sc. and Ph.D. degrees from same University in 2007 and 2016, respectively. She is a Teaching and Research Assistant with the University of Niš, Faculty of Electronic Engineering, Serbia. Her research areas are: antennas and artificial neural networks and their application in the field of microwaves. She has authored/co-authored more than 80 scientific papers.