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INVITED PAPER:

"Enhancement of Circuit Theory Course Using Low-Cost Software Defined Instruments"

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Abstract: In this paper, we show an array of use-case examples of the application of affordable programmable measurement hardware in circuit analysis as part of the graduate course on circuit theory and systems. Besides basic measurement modes, some advanced software-enabled capabilities in experiment control, postprocessing, and data visualization are shown. In conclusion, we consider different setup realizations, as well as the advantages and limitations of such software-defined equipment.

Short biography:

Nikola Basta was born in 1983 in Belgrade, Serbia. In 2008 he received the Dipl. Ing. degree from the School of Electrical Engineering, University of Belgrade, with a major in telecommunications. After graduation, he joined the Antenna Group at the Institute of Communications and Navigation of the German Aerospace Center (DLR), where he worked until 2014 on the design and characterization of smart antennas and RF systems for GNSS application, as well as on time-domain analysis of wideband pulsed antenna arrays. Since 2014 he has been working at the School of Electrical Engineering, University of Belgrade, where he obtained his PhD degree. Currently, he is employed as an assistant professor and his main interests are microwave circuits, applied electromagnetics, antenna systems, and array signal processing.