ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Invitation to the Presentation about the Workplacement

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"Digital Pre-Distortion of 5G RF GaN Power Amplifier Modules"

N.1.44 | Monday, 22 April 2024 | 5:00 p.m.

Abstract

One of the most challenging aspects behind the conceptualisation and design of a 5G radio frequency (RF) power amplifier (PA) is the problem of linearity after digital pre-distortion (DPD) when operating in non-linear regions. Driving PAs in those regions will improve efficiency but might lead to spectral spread and distortion in the constellation diagram. These problems can be reduced to some extent by applying DPD to the transmission signal. In this talk we will derive the fundamental ideas behind DPD and illustrate, by use of the generalised memory polynomial (GMP) and decomposed vector rotation (DVR) model, how it can be applied to a gallium nitride (GaN) PA-module (PAM).

Barbara Kaltenbacher and the Department of Mathematics look forward to seeing you at the talk!