



A ROBUST NON-UNIFORM LUT INDEXING METHOD IN DIGITAL PREDISTORTION LINEARIZATION OF RF POWER AMPLIFIERS (MonAmOR9)

★ Author(s) :

Sonia Saied-Bouajina	(ENIT, Tunisia)
Meriem Jaidane	(ENIT, Tunisia)
Fadhel Ghannouchi	(POLY-GRAMES, Canada)
Slim Boumaiza	(POLY-GRAMES, Canada)

★ Abstract :

A new monotonic companding function is proposed for non-uniform lookup table (LUT) indexation employed in digital predistortion (PD) of Radio Frequency (RF) power amplifiers (PA) under wide band signals. This function, designed to be robust to the input signal statistics variations, overcomes the disadvantages of optimal indexation which depends on the input back-off (IBO) operation point of the PA. Simulation results show the robustness of the proposed companding function to IBO variations, comparing with conventional LUT indexing techniques, namely power, amplitude and optimal.