



A FAST ALGORITHM FOR DIGITAL PRE-DISTORTION OF NONLINEAR POWER AMPLIFIERS (MonPmPO2)

✱ Author(s) :

Ernst Aschbacher
Holger Arthaber
Markus Rupp

(Vienna University of Technology, Austria)

(Vienna University of Technology, Austria)

(Vienna University of Technology, Austria)

✱ Abstract :

A fast iterative algorithm for pre-equalisation of a nonlinear dynamic (with memory) system is presented . The algorithm is based on the secant method for root-finding. Within a few iterations the nonlinear and dynamic effects of the system, modeled, e.g., with a Volterra or Wiener model, can be compensated very well. The algorithm is then used to linearise a nonlinear power amplifier, modeled as a Wiener system. Measurement results prove the excellent performance of the presented method.