# Abstracts

## Neural based dynamic modeling of nonlinear microwave circuits (2002 Vol. II [MWSYM])

*Jianjun Xu, M.C.E. Yagoub, Runtao Ding and Q.J. Zhang. "Neural based dynamic modeling of nonlinear microwave circuits (2002 Vol. II [MWSYM])." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 1101-1104 vol.2.*

A neural network formulation for modeling nonlinear microwave circuits is achieved in the most desirable format, i.e., continuous time-domain dynamic system format. The proposed dynamic neural network (DNN) model can be developed directly from input-output data without having to rely on internal details of the circuit. An algorithm is developed to train the model with time or frequency domain information. A circuit representation of the model is proposed such that the model can be incorporated into circuit simulators for high-level design. Examples of dynamic-modeling of amplifiers, mixer and their use in system simulation are presented.

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