Abstracts

Computational electromagnetic exploration of B-spline shaped microwave impedance matching circuits using evolutionary algorithms and information theory

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B-spline shaped transmission lines are investigated for use as microwave impedance matching circuits. Candidate matching circuits within the B-spline shape class are represented by a set of discrete parameters. This potentially vast space of matching circuit configurations is searched for best-performing candidates using evolutionary algorithms within an information theoretic context. The performance of each candidate configuration is evaluated using a full 3D method of moments analysis. The goal of this work is to increase our heuristic knowledge about this new class of microwave circuits.

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