Abstracts

An Orthogonal Almost-Periodic Fourier Transform for Use in Nonlinear Circuit Simulation

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This letter describes a new Almost-Periodic Fourier Transform (APFT) for use in nonlinear circuit simulation. First, a rigorous APFT theory based on the two norm is summarized. Then, the new transform is introduced. It is simple and fast to implement and the number of sampling points required is usually not much larger than the theoretical minimum. Aliasing effects are minimized with this APFT since the columns of the matrix implementation of its inverse are exactly orthogonal. Finally, results that confirm the performance expected from the theory are presented.

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