

Anticontrol of Chaos Reduces Spectral Emissions

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R�sum� en anglais	Switch-mode power supplies usually emit electromagnetic interferences at the switching frequency and its harmonics. Inducing chaos in these systems has recently been suggested as a means of reducing these spectral emissions, yet at the expense of aggravating the overall magnitude of the ripple in the output voltage. We propose here a new nonlinear feedback, which induces chaos and which is able at the same time to achieve a low spectral emission and to maintain a small ripple in the output. The design of this new and simple controller is based on the propriety that chaotic nonlinear systems present many independent chaotic attractors of small dimensions.
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