

## Control of Chaotic Behaviour in Parallel-Connected DC-DC Buck-Boost Converters

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**Abstract :** Chaos control is used to design a controller that is able to eliminate the chaotic behaviour of nonlinear dynamic systems that experience such phenomena. The paper describes the control of the bifurcation behaviour of a parallel-connected DC-DC buck-boost converter used to provide an interface between energy storage batteries and photovoltaic (PV) arrays as renewable energy sources. The paper presents a delayed feedback control scheme in a module converter comprises two identical buck-boost circuits and operates in the continuous-current conduction mode (CCM). MATLAB/SIMULINK simulation results show the effectiveness and robustness of the scheme.

**Keywords :** chaos, bifurcation, DC-DC Buck-Boost Converter, Delayed Feedback Control

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