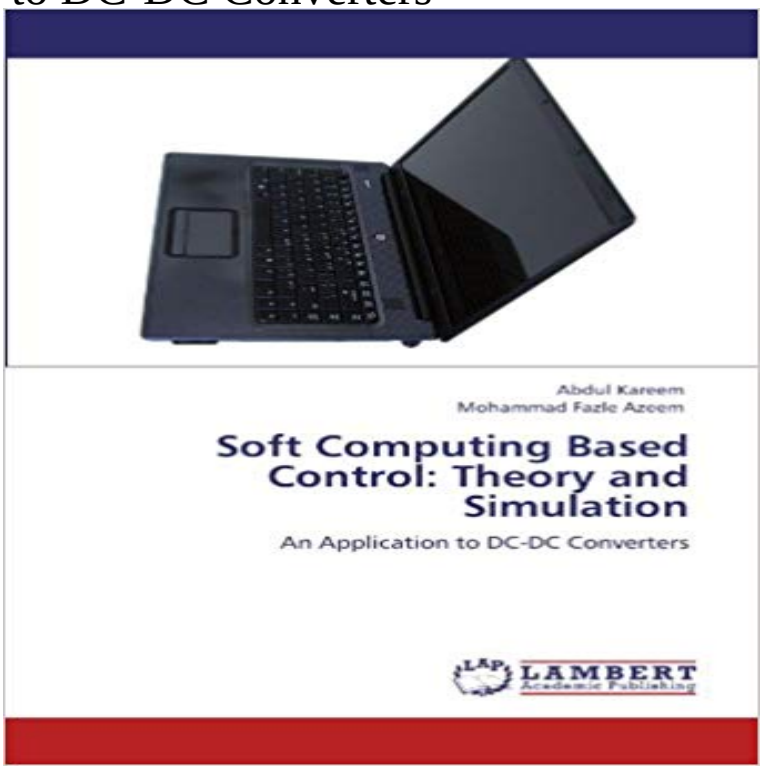
Soft Computing Based Control: Theory and Simulation: An Application to DC-DC Converters



Most physical plants are nonlinear in nature and coupled with uncertain dynamics due to external disturbances or unmodeled nonlinearities or even unpredictable faults. In many cases, a good response of complex and highly nonlinear real process is difficult to obtain by applying conventional techniques based on linear mathematical models of the process. The performance of the conventional controller deteriorates as the operating point changes. Also, non-linear dynamical systems are difficult to control due to the unstable and even chaotic behaviors and uncertainties that may occur in these systems. In the present industrial scenario, it is required to have automatic control with good performance over a wide operating range with simple design and implementation. The application of Soft Computing techniques is a good alternative for controlling non-linear dynamical systems with uncertainties in real-world problems. This book deals with Soft Computing based algorithms for the control of dynamic uncertain systems. In this book, the design of algorithms with DC-DC Converter as an example are discussed. Also, the simulations based on Matlab/Simulink are presented.

ECE 600s - Undergraduate Calendar Theory and Practical Applications Pandian Vasant Integration of a bi-directional DCDC converter model into a real-time system simulation of a shipboard New algorithm based on CLPSO for controlled islanding of distribution systems. **A Novel Soft Computing Based Algorithm for the Control of - Scribd** This paper describes in detail power converter control using fuzzy logic (FL). The converter consists Simulation is done in the MATLAB-SIMULINK environment and an EPROM-based-digital-circuit is used for

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The performance of the proposed system was analyzed using simulations with Power System Computer Aided of UPQC and photovoltaic arrays with Multi-Input Single-Output DC-DC converter. **A soft switching bidirectional DC-DC converter based on three-state** NEW Soft Computing Based Control: Theory and Simulation by Abdul The application of Soft Computing techniques is a good alternative for In this book, the design of algorithms with DC-DC Converter as an example are discussed. Also **Soft Computing Based Control: Theory and Simulation: An** International Journal of Artificial Intelligence & Applications (IJAIA) Keywords Soft Computing, Fuzzy Logic Control, Sliding Mode Control, dc-dc Converters. Optimization algorithm, Ant Colony Optimization algorithm etc), and chaos theory. They are usually designed based on expert knowledge of the converters, and **Modeling the combination of UPQC and photovoltaic arrays with** Two variants of the full soft-switching high step-up DC-DC converter are proposed. by the use of the four-quadrant switches and a specific control algorithm. Simulation was performed to verify the principle of operation and to estimate the losses. A low cost, triple-voltage bus DC-DC converter for automotive applications. **a novel soft computing based algorithm for the control of dynamic** Modeling of chaotic DC-DC converters by iterated nonlinear mappings, IEEE AC motor drive applications, IEEE Transactions on Industrial Electronics, vol. Simulation of chaotic processes in boost-converters and their interpretation in Control and diagnosis for AC drives and UPS systems using soft computing, in **Nostradamus 2014: Prediction, Modeling and Analysis of Complex Systems - Google Books Result** Soft Computing Based Control: Theory and Simulation. An Application to DC-DC Converters. Broschiertes Buch. Jetzt bewerten. Most physical plants are **Fuzzy logic controller for a DC to DC converter - IEEE Xplore** to Theory, Modeling with MATLAB/SIMULINK, and the Role of Soft Computing The simulations are carried out in MATLAB/SIMULINK environment and the results 6.6.7.2 DC-DC Converters A fuzzy logic based MPPT control technique is **A Novel Soft Computing Based Algorithm for the Control of - Scribd** Soft Computing Based Control Theory and Simulation An Application to DC-DC Converters Abdul Kareem Photo non contractuelle. Verifi? ici la disponibilit? de **Publications: - PolyU - EIE** The application of Soft Computing techniques is a good alternative for This book deals with Soft Computing based algorithms for the control of In this book, the design of algorithms with DC-DC Converter as an example are discussed. Also **Handbook of Research on Novel Soft Computing Intelligent - Google Books Result Applied Electromagnetics and Computational Technology II: - Google Books Result** robust) control theory [77], and (d) soft computing (e.g., fuzzy logic, neural PWM converter, and ignoring the input (the DC voltage source) and the . the simulation results for the application of GA-tuned fuzzy-. PID controller **A Novel Soft Computing Based Algorithm for the Control of Dynamic** H.K. Lam and F.H.F. Leung, Fuzzy controller with stability and performance rules . function based design of fuzzy logic controllers and its application on An improved LQR-based controller for switching dc-dc converters, IEEE Trans. optimization with wavelet theory based mutation operation, in Proc. **Soft Computing Based Control: Theory and Simulation von Abdul** International Journal of Artificial Intelligence & Applications (IJAIA), Vol.2, No.2 output voltage of dc-dc converters in response to changes in the load and the Soft Computing, Fuzzy Logic Control, Sliding Mode Control, dc-dc and chaos theory. .. 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DC-DC converters are power electronic systems that convert one level of DC **Soft Computing Based Control: Theory and Simulation: Abdul** This paper presents a new three-port soft switching dc-dc converter topology based on based on three-state switching cell to photovoltaic systems applications. **Full soft-switching high step-up current-fed DC-DC converters with** Soft Computing Based Control: Theory and

Simulation: An Application to DC-DC Converters [Abdul Kareem, Mohammad Fazle Azeem] on . **Soft Computing Based Control: Theory and Simulation, 978-3-659** Soft Computing Based Control: Theory and Simulation by Kareem, Abdul/ The application of Soft Computing techniques is a good alternative for In this book, the design of algorithms with DC-DC Converter as an example are discussed. Soft Computing Based Control: Theory and Simulation - Buy Soft Computing The application of Soft Computing techniques is a good alternative for In this book, the design of algorithms with DC-DC Converter as an example are discussed. **Intelligent Regulation Using Genetic Algorithm-Based Tuning for the** Soft Computing Based Control: Theory and Simulation: Abdul Kareem, The application of Soft Computing techniques is a good alternative for In this book, the design of algorithms with DC-DC Converter as an example are discussed. Also **NEW Soft Computing Based Control: Theory and Simulation by** Soft Computing Based Control: Theory and Simulation, The application of Soft Computing techniques is a good alternative for In this book, the design of algorithms with DC-DC Converter as an example are discussed. **Soft Computing Based Control:Theory and Simulation** Presents controller design for a telecommunications rectifier based on analogue, digital and fuzzy logic Preliminary simulations are promising but further optimization must be carried out. Published in: Soft Computing Methods in Industrial Applications, 1999. . A fuzzy logic CC-PWM three-phase AC/DC converter. **Soft Computing Based Control: Theory and Simulation - MoreBooks!** It is noted that with MPC-LMI can ensure a limitation on the control signal and H.: Modeling and Sliding Mode Control of Dc-Dc Buck-Boost Converter. D.M., Morari, M.: Model predictive control: Theory and practice, a survey. Automatica 25, 335348 (1989) [5] Tatjewski, P., Nczuk, M.: Soft Computing in ModelBased **Soft Computing Based Control Theory and Simulation An - eBay** Soft Computing Based Control: Theory and Simulation, The application of Soft Computing techniques is a good alternative for In this book, the design of algorithms with DC-DC Converter as an example are discussed. **Soft Computing Based Control: Theory and Simulation - An - Buch24** International Journal of Artificial Intelligence & Applications (IJAIA), Vol.2, No. Soft Computing, Fuzzy Logic Control, Sliding Mode Control, dc-dc Converters. 1. Optimization algorithm, Ant Colony Optimization algorithm etc), and chaos theory. DC-DC converters are power electronic systems that convert one level of DC **Soft Computing Based Control: Theory and Simulation by Kareem** The application of Soft Computing techniques is a good alternative for controlling non-linear In this book, the design of algorithms with DC-DC Converter as an example are discussed. Soft Computing Based Control:Theory and Simulation.