

عنوان مقاله:

(Application of ANN Technique for Interconnected Power System Load Frequency Control (RESEARCH NOTE

محل انتشار:

ماهنامه بین المللی مهندسی، دوره 16، شماره 3 (سال: 1382)

تعداد صفحات اصل مقاله: 8

نویسندگان:

H. A. Shayanfar - *Electrical Engineering, Iran University of Science & Technology*

H. Shayeghi - *Engineering, University of Mohaghegh Ardabili*

خلاصه مقاله:

This paper describes an application of Artificial Neural Networks (ANN) to Load Frequency Control (LFC) of nonlinear power systems. Power systems, such as other industrial processes, have parametric uncertainties that for controller design had to take the uncertainties in to account. For this reason, in the design of LFC controller the idea of robust control theories are being used. To improve the stability of nonlinear power system, in the various operating point and under different disturbances this controller has been reconstructed with the use of neural network capability based on Radial Basis Function (RBF). The motivation of using the robust control for training of the RBF neural networks controller is taking the large parametric uncertainties into account in such away that both stability of the overall system and good performance have been achieved for all admissible uncertainties. The simulation results on interconnected power system show that the proposed Nonlinear Neural Controller (NNC) not only is robust to increasing of load perturbations and operating point variations, but also the NNC gives good dynamic response compared with conventional PI and robust controllers. It guarantees the stability of the overall system even in the presence of .(generation rate constraint (GRC

کلمات کلیدی:

Load Frequency Control, Radial Basis Function Neural Networks, power systems, Robust Control

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1415896>

