

The Non-linear Modeling of Airplane Dynamo Based on BP NN

Wang Haibo , Liu Yongzhi

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2010 International Conference on Measuring Technology and Mechatronics Automation > 3 > 917 - 920

Abstract

This paper researches the principle and method of the BP NN modeling, makes use of the BP NN built up the non-linear model of airplane DC dynamo. After the model is trained by the characteristic data of airplane DC dynamo, successfully gets the empty characteristic curve and the voltage-time curve of impact load and impact unload by voltage adjustor. The result proves that the model of airplane DC dynamo which based on BP NN is effective.

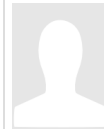
Identifiers

book ISBN : 978-1-4244-5001-5
 book e-ISBN : 978-1-4244-5739-7
 DOI 10.1109/ICMTMA.2010.260

Authors



Wang Haibo
Air Force Eng. Univ., Xian, China



Liu Yongzhi
Air Force Eng. Univ., Xian, China

Keywords

neural nets aircraft aircraft power systems backpropagation DC generators

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a -tensor is thus effectively reduced to its a_{ii} component, and turbulent diffusivity is deemed isotropic, reducing to a scalar quantity. \hat{A} linear in A, B , the parameter K thus sets the scale of the magnetic field amplitude in the model. 2.3 A non-kinematic a_{2X} mean-field dynamo model. The severity of aircraft response to the disturbance is related to the dynamic aerodynamics that results from the instantaneous changes of aircraft flight attitudes. To provide the mitigation concepts and promote the understanding of aerodynamic responses of the commercial transport aircraft in adverse weather conditions, the nonlinear and dynamic (i.e., time-dependent) aerodynamic models based on flight data would be needed. Regarding the flight data of commercial transport aircraft, the flight data recorder (FDR) is ICAO-regulated devices. The main objective in this paper was to illustrate the nonlinear unsteady aerodynamic models based on the FLM technique having the capability to evaluate the variations in stability of commercial aircraft with adverse weather effects. Nonlinear dynamo models (thesis). September 2004. Authors: Employing the standard solar interior model as input we construct a dynamically-consistent nonlinear dynamo model that takes into account the detailed description of the λ -effect, turbulent pumping, magnetic helicity balance, and magnetic feedback on the differential rotation and meridional circulation. The background mean-field hydrodynamic model of the solar convection zone accounts the solar-like angular velocity profile and the double-cell meridional circulation. We investigate an impact of the nonlinear magnetic field generation effects on the long-term variability and properties of α . It returns from $nn.Linear$ and it can take x as argument. What exactly is the purpose of `self.hidden`? python class deep-learning neural-network pytorch. share | improve this question |. @AbdurRehman it is not a part of $nn.Linear$, it is just an additional step which makes the the whole mapping non-linear (making the Neural Network more useful and able to recognize more complex patterns, generally speaking). \hat{A} Andreas K. Jul 1 at 17:13. Thank you for this.