点击复制

基于**BP**神经网络的有控炸弹攻击区拟合分析(PDF)

❖ 工具/TOOLS

引用本文的文章/References

下载 PDF/Download PDF(290KB)

立即打印本文/Print Now

Title:	Attack Zone Fitting and Matlab Simulation of Guided bomb Based on BP Neural Network

作者： 黄国强; 南英; 陈芳

南京航空航天大学航天学院，南京210016

Author(s): HUANG Guoqiang; NAN Ying; CHEN Fang

College of Astronautics, Nanjing University of Aeronautics and Astronautics，Nanjing 210016,China

摘要： 针对目前用传统的线性回归等方法拟合有控炸弹攻击点所存在的问题，文中提出了采用BP神经网络算法对某有控炸弹的攻击点进行拟合的新方法。该方法可以用Matlab仿真软件实现，其拟合效果直观。有控炸弹攻击点与攻击条件可以通过神经网络的阈值和权值来表现。通过实例说明了应用BP神经网络进行有控炸弹攻击区拟合，不但具有算法可行性好、拟合精度高、速度快，而且运算简单，在实战中很有参考价值和工程实用价值。

Abstract: According to traditional linear regression analysis technique fitting existence problem of attack points of guided   bomb, the paper presents a new method of back propagation neural network algorithm(BP) which fit attack points of some guided   bomb was proposed. The relation between attack points of guided bomb and attack conditions can be displayed with threshold and weight of BP neural network. The results of simulation show that the BP method has not only good feasibility and high precision, but also simple operation. Matlab was used in the process of simulation. The conclusion possesses reference value and practical engineering value in real application.

参考文献/REFERENCES

   [1] Zhao Yiyuan．Optimal control of an aircraft flying through a downburst[D]. USA: Stanford University, 1989．
   [2] 南英，陈士橹，严辉．基于数字仿真的再入飞行器滚转异常边界条件研究[J]．宇航学报，1997, 18(1)：19-20．

［3］Nan Ying, Zhao Yiyuan. Optimal trajectories in free flight[R]. Technical Report in University of Minnesota, 1997-1998.

［4］涂永梅，南英. 载机与巡航弹最优突防策略[J]. 弹道学报，2007，19(3)：41-42.

［5］周开利，康耀红. 神经网络模型及其MATLAB仿真程序设计[M]. 北京：清华大学出版社，2005.