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Title: A Method of Ballistic Recognition Based on Online Learning

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关键词: 弹道识别; 支持向量机(SVM); 在线优化; Pegasos

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摘要: 用SVM机器学习算法来解决弹道识别问题极大提高了识别精度,然而在处理过程中采用批处理优化方法很难缩短识别时间。考虑到实际中雷达捕获弹道数据是以在线的方式存在的,文中提出一种基于在线学习的弹道识别方法。仿真实验结果表明,在线算法在保证识别精度相当的情形下,大大的缩短了弹道识别时间。从而认为基于在线学习的识别方法是一种值得引进的弹道识别方法。

Abstract: Solution to ballistic recognition based on SVM's method can greatly improve recognition accuracy, but recognition time can hardly be shortened by batch method during processing. Considering that in fact ballistic data captured by radar exists in online mode, in this paper, an online-learning method was proposed to solve ballistic recognition problem. The final simulation results show that the method maintains the same recognition accuracy and greatly shortens recognition time, the online-learning algorithm based on online learning is worthy of being introduced into ballistic recognition.

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