

Radar Estimation Algorithm Using Neural Network Approach

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ABSTRACT

The multiple-target tracking algorithm is more important than that of tracking single target in a radar system. It will solve the problems of between radar measurements and existing targets. There is one new data association technique denoted Competitive Hopfield Neural Network (CHNN) is investigated in this thesis. It will take care of the computation of the relationships and to obtain the better tracking results. In order to compare the performance of the radar tracking algorithm, there are three approaches which are Multiple Model Estimator, One-Step Conditional Maximum Likelihood, and Maneuvering Estimation are conducted. According to the simulation results, we know that the performance of the proposed approach is the best one.

Keywords : Neural network ; maneuvering ; Data association

Table of Contents

目錄 封面內頁 簽名頁 授權書	iii	中文摘要	iii
. iv 英文摘要	iv	v 誌謝	v
. vi 目錄	vi	vii 圖目錄	vii
x 表目錄	x	xii 第一章 緒論 1.1研究動機與背景	xii
. 1 1.2 研究方法	1	. . . . . 2 1.3論文章節結構	2
. 3 第二章 類神經網路之理論 2.1簡介	3	. . . . . 5 2.2 ANN之優點	5
. , 5 2.2.1可以應用的領域非常廣	5	. . . . . , 5 2.2.2具有多層輸入輸出之系統	5
. , 5 2.2.3具有過濾資料之能力	5	. . . . . , 6 2.2.4具有適應性之學習能力	6
. , 6 2.3神經元模型	6	. . . . . 7 2.4類神經網路結構	7
2.5循環之網路	11	2.6離散型Hopfield之網路	13
卡門濾波器 3.1卡門濾波器簡介	16	3.2卡門濾波器之線性系統模式	17
17 3.3卡門濾波器之數學運算	19	3.4卡門濾波器之相關特性	23
線性的動態系統模式與擴展式卡門濾波器	25	第四章 多目標追蹤應用資料相關結合技術 4.1 前言	25
. 30 4.2 多目標追蹤程序	30	4.2.1目標追蹤起始	30
. , 31 4.2.2目標追蹤相互關係	31	4.2.3目標軌跡更新	31
. 32 4.2.4目標軌跡估測	32	4.2.5目標軌跡刪除	33
. 34 4.3 資料相關結合	35	4.3.1 Gating理論	35
4.3.2競爭式Hopfield 網路演算法	38	4.3.3 One-Step Conditional Maximum Likelihood	41
式Hopfield 網路演算法結合機率	43	第五章 多目標追蹤應用適應性程序 5.1前言	46
. , 46 5.2多目標追蹤系統之數學模式的建立	46	5.3變速度追蹤理論	46
. 50 5.4變速度追蹤動態系統理論	50	5.4.1動態系統之模型	56
. , 57 5.4.2變速度目標偵測與追蹤技術	57	. . . . . , 60 第六章 電腦模擬結果與分析 6.1 前言	60
. 67 6.2變速度單目標追蹤模擬分析	67	6.3 變速度雙目標追蹤模擬分析	69
. 74 6.4 變速度四目標追蹤模擬分析	74	. . . . . 79 第七章 結論	79
. 86 參考文獻	86	87 圖目錄 圖2.1 神經元的架構	87
. 7 圖2.2 個神經元組成的層	7	. . . . . 10 圖2.3 循環網路	10
. 12 圖2.4 延時方塊	12	. . . . . 12 圖2.5 Hopfield 網路結構	12
. 13 圖3.1 卡門濾波器之系統流程圖	13	. . . . . 16 圖3.2 卡門濾波器	16
之整體流程圖	22	圖3.3 卡門濾波器之動態系統模型	29
圖3.4 卡門	29	濾波器之運作流程圖	29
圖4.1 多目標系統之工作流程圖	31	. . . . . 31	31
圖4.2 追蹤初始相互關係判別圖	32	圖4.3 多目標追蹤之幾何圖形	33
. 33 圖4.4 追蹤程序之基本流程圖	33	圖4.5 目標物與量測值關係之Gates示意圖	36
. 36 圖4.6 目標軌跡與量測值示意圖	36	圖5.1 變速度追蹤理論流程圖	38
. 47 圖5.2 變速度追蹤適應性濾波器架構	47	圖5.3 The IMM Algorithm	55

.....	56	圖6.1 演算法一的單目標追蹤圖	.....	70	圖6.2 演算法一的單目標誤差圖	.....	70
.....	70	圖6.3 演算法二的單目標追蹤圖	.....	71	圖6.4 演算法二的單目標誤差圖	.....	71
.....	71	圖6.5 演算法三的單目標追蹤圖	.....	72	圖6.6 演算法三的單目標誤差圖	.....	72
.....	72	圖6.7 演算法四的單目標追蹤圖	.....	73	圖6.8 演算法四的單目標誤差圖	.....	73
.....	73	圖6.9 演算法一的雙目標追蹤圖	.....	75	圖6.10 演算法一的雙目標誤差圖	.....	76
.....	76	圖6.11 演算法二的雙目標追蹤圖	.....	76	圖6.12 演算法二的雙目標誤差圖	.....	77
.....	77	圖6.13 演算法三的雙目標追蹤圖	.....	78	圖6.14 演算法三的雙目標誤差圖	.....	78
.....	78	圖6.15 演算法四的雙目標追蹤圖	.....	79	圖6.16 演算法四的雙目標誤差圖	.....	79
.....	79	圖6.17 演算法一的四目標追蹤圖	.....	81	圖6.18 演算法一的四目標誤差圖	.....	81
.....	81	圖6.19 演算法二的四目標追蹤圖	.....	82	圖6.20 演算法二的四目標誤差圖	.....	82
.....	82	圖6.21 演算法三的四目標追蹤圖	.....	83	圖6.22 演算法三的四目標誤差圖	.....	83
.....	83	圖6.23 演算法四的四目標追蹤圖	.....	84	圖6.24 演算法四的四目標誤差圖	.....	84
.....	84	表目錄 表3.1 DISCRETE-TIME KALMAN FILTER EQUATIONS	.....	28	表6.1 單目標運動量之初始值	.....	69
.....	69	表6.2 單目標之變速度區間設定	.....	69	表6.3 演算法一、二、三、四之單目標誤差比較結果	.....	69
.....	69	表6.4 雙目標運動量之初始值	.....	74	表6.5 雙目標之變速度區間設定	.....	74
.....	74	表6.6 演算法一、二、三、四之雙目標誤差比較結果	75	表6.7 四目標運動量之初始值	79
.....	79	表6.8 四目標之變速度區間設定	80	表6.9 演算法一、二、三、四之四目標誤差比較結果	80

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