

Non-linear Spatio-temporal modelling using the Integro-Difference Equation

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Abstract

Index Terms

Dynamic spatio-temporal modelling, Integro-Difference Equation (IDE), ...

Non-linear Spatio-temporal modelling using the Integro-Difference Equation

I. INTRODUCTION

Non-linear spatio-temporal behaviour...

II. NEURAL FIELD MODEL

III. STATE SPACE REPRESENTATION OF THE SPATIO-TEMPORAL NON-LINEAR IDE

IV. ESTIMATION OF THE NON-LINEAR SPATIO-TEMPORAL IDE MODEL

A. Unscented Kalman Filter

B. Unscented RTS Smoother

C. Parameter Estimation

D. Computational Complexity

V. EXAMPLE

VI. CONCLUSION

APPENDIX

Lemma 1:

Proof:

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