

Literature Review

Keiran Suchak

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1 Introduction

2 Pedestrian Modelling

- What is pedestrian modelling?
- Why should we care?

3 Agent-Based Modelling

- How does agent-based modelling fit into this?
- What is agent-based modelling?
- Why should we use it?

3.1 Model Description

- How do we go about describing ABMs?
 - Systematically in words (ODD) [1]
 - Computationally/algorithmically [2]
 - Mathematically [3, 4]

3.2 Model Design Concepts

- What concepts feed into our model design process? [5]
 - Emergence
 - Observation
 - Sensing
 - Adaptive behaviour
 - Prediction
 - Interaction
 - Scheduling
 - Stochasticity
 - Collectives

3.3 Limitations

4 Model Analysis

4.1 Validation

- [6]
- [7]
- [8]

4.2 Sensitivity Analysis

- What does it mean to perform sensitivity analysis?
- Why do we do it?
- How do we do it? [9, 10]

4.3 Calibration

- Calibration of ABMs
 - Different methods of model calibration [9]
- Pros and cons of different methods

5 Data Assimilation for Agent-Based Models

- What work has been done so far with data assimilation for ABMs [11, 12]

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