

Recommended Readings for ABS

Reference

Agent-based modeling: Methods and techniques for simulating human systems by E. Bonabeau (2002) <https://pmc.ncbi.nlm.nih.gov/articles/PMC128598>

An Introduction to Agent-Based Modeling: Modeling Natural, Social, and Engineered Complex Systems with NetLogo by U. Wilensky & W. Rand (2015) [MIT Press](#)

Agent-Based Models (SAGE Series in Quantitative Methods) by (various) (2nd ed) methods.sagepub.com

Agent-based modelling and simulation (ABMS): A brief tutorial by C. M. Macal & M. J. North (2009) [ResearchGate+1](#)

A systematic review of the agent-based modelling/mobility domain by M. Mehdizadeh et al. (2022) [ScienceDirect](#)

Experimenting with Agent-Based Model Simulation Tools by A. Antelmi et al. (2022) [MDPI](#)

Large language models empowered agent-based modeling and simulation: a survey and perspectives by C. Gao et al. (2024) [Nature](#)

A SYSTEMATIC LITERATURE REVIEW OF AGENT-BASED MODELLING TO INFORM POLICY-MAKING by M. Belfrage (2024) [Diva Portal](#)

Why it's important

A classic paper that lays out the paradigm of ABM in human/social systems. Useful for understanding what distinguishes ABM from other simulation methods.

A hands-on book with examples in NetLogo, useful if you want to start building ABMs.

A more methodologically oriented text covering design, implementation, validation of ABMs.

A tutorial-style article explaining the foundations of ABMS — good for a technical introduction.

A recent review covering applications of ABM in mobility contexts — good for seeing how ABM is used in practice.

Focuses on ABM tools/software: useful if you want to compare platforms for simulation.

Covers a very recent frontier: combining large language models (LLMs) with ABM. Useful if you are interested in cutting-edge simulation methods.

A review focusing on how ABMs are used for policy-relevant simulation. Good for applied/public-policy use of ABM.