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Nota di contenuto	Chapter1. Finding the Limits of the Limes: Setting the Scene -- Part1. DEMOGRAPHY AND SETTLEMENT -- Chapter2. Current trends in Roman demography and empirical approaches to the dynamics of the limes populations -- Chapter3. Modelling the dynamics of demography in the Dutch Roman limes zone: a revised model -- Chapter4. Broad and coarse: modelling demography, subsistence, and transportation in Roman England -- Chapter5. A different vision of ancient settlement dynamics: creation and application of a model of evolution of Roman settlement of the Plateau Lorrain (France) -- Part2. ECONOMY -- Chapter6. The economic archaeology of Roman economic performance -- Chapter7. Modelling agricultural strategies in the Dutch Roman limes zone via agent-based modelling (ROMFARMS) -- Chapter8. The

economy of Laetanian wine. A conceptual framework for analyse an intensive/specialized winegrowing production system and trade (1st century BCE - 3rd century CE) -- Chapter9. The role of forts in the local market system in the Lower Rhine: toward a method of multiple hypothesis testing through comparative modelling -- Chapter10. A multi-scalar approach to long-term dynamics, spatial relations and economic networks of Roman secondary settlements in Italy and the Ombrone Valley system (southern Tuscany): towards a model? -- Part3. TRANSPORT AND MOVEMENT -- Chapter11. Modelling of routes and movement networks in archaeology: an overview of current approaches -- Chapter12. Palaeogeographic analysis approaches to transport and settlement in the Dutch part of the Roman limes -- Chapter13. Network analysis to model and analyse Roman transport and mobility -- Chapter14. Footprints and cartwheels on a pixel road: on the applicability of GIS for the modelling of ancient (Roman) routes -- Chapter15. Rethinking approaches for the study of urban movement at Ostia.

Sommario/riassunto

This open access book demonstrates the application of simulation modelling and network analysis techniques in the field of Roman studies. It summarizes and discusses the results of a 5-year research project carried out by the editors that aimed to apply spatial dynamical modelling to reconstruct and understand the socio-economic development of the Dutch part of the Roman frontier (limes) zone, in particular the agrarian economy and the related development of settlement patterns and transport networks in the area. The project papers are accompanied by invited chapters presenting case studies and reflections from other parts of the Roman Empire focusing on the themes of subsistence economy, demography, transport and mobility, and socio-economic networks in the Roman period. The book shows the added value of state-of-the-art computer modelling techniques and bridges computational and conventional approaches. Topics that will be of particular interest to archaeologists are the question of (forced) surplus production, the demographic and economic effects of the Roman occupation on the local population, and the structuring of transport networks and settlement patterns. For modellers, issues of sensitivity analysis and validation of modelling results are specifically addressed. This book will appeal to students and researchers working in the computational humanities and social sciences, in particular, archaeology and ancient history.