





Special Issue Reprint

Advancements in the Practical Applications of Agents, Multi-Agent Systems and Simulating Complex Systems

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The relationship between individuality and aggregation is an important topic in Complex Systems Science, as both aspects are facets of emergence. This problem has generally been addressed by adopting a classical individual- versus population-level approach, in which boundaries emerge in segregated communities. More specifically, boundaries delimiting and interconnecting aggregates are at play. It is, therefore, crucial to define the properties of complex systems correctly, such as generic agent-based models, with which to simulate communities situated in grid- and scale-free network environments. To do this, complexities may be resolved through simulation, modeling and analysis techniques, which help provide confidence regarding the behavior of such systems, especially of those operating in dynamic environments or under unexpected constraints. Moreover, modeling and simulation help reduce the risks and costs involved in the design and development of validation tests.





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