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Multi-Agent Systems and Agent-Based Simulation

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Preface

Fifteen papers were presented at the first workshop on *Multi-Agent Systems and Agent-Based Simulation* held as part of the *Agents World* conference in Paris, July 4--6, 1998. The workshop was designed to bring together two developing communities: the multi-agent systems researchers who were the core participants at *Agents World*, and social scientists interested in using MAS as a research tool. Most of the social sciences were represented, with contributions touching on sociology, management science, economics, psychology, environmental science, ecology, and linguistics.

The workshop was organised in association with *SimSoc*, an informal group of social scientists who have arranged an irregular series of influential workshops on using simulation in the social sciences beginning in 1992.

While the papers were quite heterogeneous in substantive domain and in their disciplinary origins, there were several themes which recurred during the workshop. One of these was considered in more depth in a round table discussion led by Jim Doran at the end of the workshop on 'Representing cognition for social simulation', which addressed the issue of whether and how cognition should be modelled. Quite divergent views were expressed, with some participants denying that individual cognition needed to be modelled at all, and others arguing that cognition must be at the centre of social simulation.

Another theme which was repeatedly mentioned in the presentations was the idea of 'emergence': that features observable at the level of a group or society should emerge from individual behaviour. Some participants (like Servat et al.) argued that it was appropriate to model macro-level features directly and then study ways in which individual agents could discover and adapt to those macro-level features.

Over 50 abstracts were received in response to the call for participation, but time constraints meant that only 16 could be accepted. This volume presents the revised versions of the papers presented in this workshop. In addition, we have provided an introduction pointing out several similarities and differences between these research fields and showing that they are complementary in several aspects, so that each one can benefit from results that emerge from the other. We finish this introduction by presenting and classifying the contributions in this volume.

We would like to thank the organisers of *Agent World* for the invitation to organise the workshop, hoping that it could be the first one of a fruitful series.

São Paulo, October 1998

Jaime Simão Sichman
Rosaria Conte
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