This book is the post proceedings of the First International Workshop on Rational, Robust, and Secure Negotiations in Multi-Agent Systems. Negotiation mechanisms have been studied widely in the field of multi-agent systems. Such mechanisms have a variety of features to allow agents to negotiate with each other even in open environments. Emerging applications require that the negotiation mechanism function correctly despite all the complexity and uncertainty of the real world. However, previous work has made assumptions that limit the degree of the openness, primarily due to limitations in computational power available for negotiation reasoning. New generation computers with large amounts of computational power make it possible for agents to negotiation optimally, even in completely open and highly uncertain environments. Moreover, for practical use of multi-agent systems in the real world, the reliability of each agent’s behavior is essentially. Concretely, agents must obtain the most appropriate solution based on rational, robust, and secure negotiation among multiple agents even if the environment is inaccessible. This workshop will bring together researchers from these communities to learn about each other’s approaches, form long-term collaborations, and cross-fertilize the different areas to accelerate progress towards scaling up to larger and more realistic applications.

The quality of this workshop is a consequence of the outstanding papers that were received. Each submitted paper to RRS 2005 was reviewed by at least three referees. Seven papers were selected for presentation and publication in the proceedings. We would like to express our sincere thanks to the Program Committee and all the reviewers for their hard work. We would also like to thank Prof. Mike Wooldridge for his presentation of the invited talk session in RRS 2005. Finally, the workshop would not have been possible without the valuable support and contributions of the participants of the workshop.

1 December 2005

Takayuki Ito
Hiromitsu Hattori
Minjie Zhang
Tokuro Matsuo