Preface

The AAAI-02 Workshop on "Multi-Agent Modeling and Simulation of Economic Systems" focuses on multi-agent modeling framework and simulation method of economic systems. By economic system, we mean weakly connected multi-agent system where chain of exchange exists, i.e., good, currency, credit and information is continuously exchanged in the system.

The target system under analysis is not limited to financial market or whole economy system. It can be a system where the chain of exchange exists, such as market mechanism for environment protection (recycling, greenhouse gas emissions), electric power market, human or vehicle flow where exchange of physical status and information occurs, and so on. The main purpose of the workshop is to reveal the mechanisms of phenomena emerging from the chain of exchange, in addition to applying economic mechanism such as market structure to engineering context. For the purpose, we think that computational methods for modeling and simulating economic systems as multi-agent systems are indispensable.

This volume includes the papers that are accepted for presentation at MAMSES-02. All the papers address research topics that should be treated in both artificial intelligence and economics contexts, which is the main focus of the workshop.

I would like to thank Akio Sashima who is one of the workshop secretariats for his contribution to preparing workshop materials.

May 2002

Koichi Kurumatani
Timetable

Opening 8:55

Session 1: Agent Modeling in Economic Context 9:00-10:00

User Intention Market for Multi-Agent Navigation - An Artificial Intelligent Problem in Engineering and Economic Context
(Koichi Kurumatani)

Selecting Service Providers based on Reputation
(Sandip Sen, Neelima Sajja)

Does Learning by Market Participants Make Financial Markets Complicated?
(Kiyoshi Izumi)

Break 10:00-10:10

Session 2: Multi-Market Structure 10:10-11:10

Emergence of Key Currency by Interaction among International and Domestic Markets
(Tomohisa Yamashita, Yuichi Sasaki, Hedenori Kawamura, Koichi Kurumatani, Azuma Ohuchi)

Information and Product Quality Dynamics in Tiered Supply Networks
(Leif M. Johnson, Peter R. Wurman)

Autonomous Selection of Meta-Agent Roles in Social Dilemma
(Keiji Suzuki)

Invited Talk 11:10-12:10

Explorations in Trading Strategy Spaces
(Michael Wellman, University of Michigan)
Session 3: Agent Strategy and Market Structure 13:30-14:50

Non-Rational Agents Explain GARCH Model: Agent Simulation for Behavioral Finance
(Hiroshi Takahashi, Takao Terano)

Exogenous Information and Endogenous Market Behavior with Artificial Learning Traders
(Hidenori Kawamura, Daisuke Kanehira, Koichi Kurumatani, Azuma Ohuchi)

A Learning Algorithm for Agents in Electronic Marketplaces
(Thomas Tran, Robin Cohen)

The Influence of Investor Sentiment on the Formation of Golden-cross and Dead-cross
(Kotaro Miwa, Kazuhiro Ueda)

Break 14:50-15:10

Session 4: Multi-Agent Analysis of Market 15:10-16:10

Strategic Bidding for Multiple Units in Simultaneous and Sequential Auctions
(Stephane Airiau, Sandip Sen, Gregoire Richard)

An Agent-Based Simulation on the Market for Offenses
(Pinata Winoto)

Contrary Opinion Phenomena in an Artificial Stock Market
(Takashi Yamada, Takashi Okatsu, Kazuhiro Ueda)

Session 5: Computational Methodology 16:10-16:50

Boxed Economy Foundation Model
(Takashi Iba, Yoshihide Chubachi, Yohei Takabe, Ken Kaiho, Yoshiyasu Takefuji)

A Method for Linking the Agent-based Social Simulation to the Real World
(Hiroki Shima, Yoshiyasu Takefuji)

Closing 16:50