PROGRAM AT A GLANCE

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08:45-09:45
Robot-Discoverer: A Role Model for Any Intelligent Agent

Jan M. Zytkow</td><td colspan="2" rowspan="3">Panel: Trends and Prospects of IAT
10:00-10:50

Chair: Jeffrey M. Bradshaw</td></tr>
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How Can AI Systems Deal with Large and Complex Problems?

Setsuo Ohsuga</td></tr>
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Tutorial 2: Linguistic Geometry: Winning Strategies for Multiagent Systems
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14:00-15:00
Steps Toward the Permanent Colonization of Cyberspace

Jeffrey M. Bradshaw</td><td colspan="2" rowspan="2">Agent Exhibition Show Time (Best IAT Demo Award Presentation)
14:15-15:45

Chair: Jianchang Mao</td><td colspan="2" rowspan="2">Invited Talk
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Intelligent Agents: Embodied and Disembodied

Daniel T. Ling</td></tr>
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<tr><td colspan="2">Cruise and Banquet Party (Best IAT Paper Award Presentation)
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Tuesday, December 14 1999

08:10-08:30	**Workshop and Tutorial Registration** [Conference Centre Lobby]
08:30-08:35	**WAEC Opening Remarks** [Room A/WLB204]
08:35-08:50	**ETI Best Workshop Paper Award Presentation by C. J. Tan** [Room A/WLB204]
08:50-11:15	**WAEC: Workshop on Agents in Electronic Commerce** [Room A/WLB204 and Room B/NAB 205]
10:40-12:40	**Tutorial 1: Intelligent Pattern Recognition and Applications** [Room C/NAB 206] Patrick S. Wang, Northeastern University
11:15-11:25	**Coffee Break**
11:25-12:40	**WAEC cont.**
12:40-13:50	**Lunch**
14:00-16:45	**WAEC cont.**
14:00-16:00	**Tutorial 2: Linguistic Geometry: Winning Strategies for Multiagent Systems** [Room C/NAB 206] Boris Stilman, University of Colorado at Denver
16:00-18:00	**IAT'99 Pre-Conference Registration** [Conference Centre Lobby]
16:45-16:55	**Coffee Break**
16:55-18:10	**WAEC cont.**

Wednesday, December 15 1999

08:30-09:00	**Registration** [Conference Centre Lobby]
09:00-09:15	**Opening Ceremony** [Room A/WLB 204]
09:15-09:30	**Reception** [Room A/WLB 204]
09:30-10:30	**Invited Talk** [Room A/WLB 204] **Chair: Ernest Lam** **How Can AI Systems Deal with Large and Complex Problems?** **Setsuo Ohsuga (Waseda University, Japan)**
10:35-11:35	**Session 1 Agent Architectures (I)** [Room A/WLB 204] Chair: K. Suzanne Barber (1) A Framework for Multi-Agent Systems Development David Kinny (University of Melbourne, Australia) (2) A Reactive Scheduling Agent Architecture for Coordinating Assistants Wayne Wobcke (BT laboratories, UK) Arash Sichanie (Imperial College of Science, Technology and Medicine, UK) (3) Evaluating the FIPA Standards on the Field: An Audio Video Entertainment Application R. Cattoni and A. Potrich (ITC-irst, Centro per la Ricerca Scientifica e Tecnologica SSI Division, Italy) P. Charlton and E. Mamdani (Imperial College of Science, Technology and Medicine, UK)
10:35-11:35	**Session 2 Multiagent Cooperation (I)** [Room B/WLB 304] Chair: Issam A. Hamid (1) Facilitate Agreement in Cooperative Design by Detecting Irrational Claims in Negotiation T. Yoshida, T. Teduka and S. Nishida (Osaka University, Japan) (2) Mutual Valuations between Agents and Their Coalitions Stefan J. Johansson (University of Karlskrona/Ronneby, Sweden) (3) Reinforcement Learning with Bidding for Automatic Segmentation Ron Sun (University of Missouri, USA) Chad Sessions (University of Alabama, USA)
11:35-11:50	**Coffee Break**

11:50-12:50	**Session 3 Agent Architectures (II)** [Room A/WLB 204] Chair: P. Charlton (1) A Multi-Agent Approach to Self-Organizing Vision Systems Thorsten Graf and Alois Knoll (University of Bielefeld, Germany) (2) Robot Media Communication: A Real-World Guide Agent to Construct Transparent Knowledge Boundaries between Real and Virtual Spaces Noriko Etani (Nara Institute Of Science and Technology, Japan) (3) Gate Growth: Grammar Encoded Evolutionary Design for Autonomous Agent Kensuke Takita (Tokyo Institute of Technology, Japan) Yukinori Kakazu (Hokkaido University, Japan)
11:50-12:50	**Session 4 Software Agents (I)** [Room B/WLB 304] Chair: Alexis Tsoukias (1) Training Intelligent Agents Using Human Internet Data Elizabeth Sklar (Brandis University, USA) Alan D. Blair (University of Queensland, Australia) Pablo Funes and Jordan Pollack (Brandeis University, USA) (3) Goodinator: Quick and Prudent Meeting Coordination with a Multi-Agent System Koji Kida, Kenji Yoshifu, Takayoshi Asakura and Toshiaki Miyashita (NEC Corporation, Japan) (3) Natural Language Processing in Multi-Agent Systems Jingye Zhou (Xiangtan University, China) Jianwen Yin, Jianer Chen and John Yen (Texas A&M University, USA)
12:50-14:00	**Lunch**
14:00-15:00	**Invited Talk** [Room A/WLB 204] **Chair: Setsuo Ohsuga** **Steps Toward the Permanent Colonization of Cyberspace** **Jeffrey M. Bradshaw (The Boeing Company, USA)**
15:05-16:05	**Session 5 Multiagent Cooperation (II)** [Room A/WLB 204] Chair: T. Yoshida (1) How to Cooperate in Iterated Chicken Game and Iterated Prisoner's Dilemma? Bengt Carlsson (University of Karlskrona/Ronneby, Sweden) (2) An Argument-Based Agent System with the Contract Net Protocol Shinya Maeda, Chunyang Guan and Hajime Sawamura (Niigata University, Japan) (3) Design and Implementation of Multi-Agent Coordination David Ramamonjisoa and Issam A. Hamid (Iwate Prefectural University, Japan)

15:05-16:05	**Session 6 Mobile Agents (I)** [Room B/WLB 304] Chair: Nong Ye (1) Intrusion Detection and Intrusion Route Tracing by Use of Mobile Agents Midori Asaka (Information-technology Promotion Agency (IPA), Japan) Takefumi Onabuta (The Japan Research Institute, Ltd. Japan) Shinichi Nakasuka (University of Tokyo, Japan) (2) Intention Spreading: An Extensible Theme to Protect Mobile Agents from Read Attack Hoisted by Malicious Hosts Sau-Koon Ng and Kwok-Wai Cheung (The Chinese University of Hong Kong, HK) (3) DBMAS: A Multi-Agent System for Databases Jianrong Chen, Sue Greenwood and John Nealon (Oxford Brookes University, UK)
16:05-16:20	**Coffee Break**
16:20-18:00	**Session 7 Distributed Intelligence** [Room A/WLB 204] Chair: Ron Sun (1) From A-Life Agents to a Kingdom of N Queens Han Jing (University of Science and Technology of China, China) Jiming Liu (Hong Kong Baptist University, HK) Cai Qingsheng (University of Science and Technology of China, China) (2) Soap Bubbles and the Dynamical Behavior of Multi-Agent Systems W. K. F. Lor and P. De Wilde (Imperial College of Science, Technology and Medicine, UK) (3) The Motivation for Dynamic Adaptive Autonomy in Agent-Based Systems K. Suzanne Barber, Anuj Goel and Cheryl E. Martin (The University of Texas at Austin, USA) (4) A Team Model in a Dynamic Fire World M. Goyal and N. Parameswaran (University of New South Wales, Australia) (5) How Flexible Should Agent Behaviour Languages Be? B. Mayoh, T. Krink, E. G. Werk (University of Aarhus, Denmark) Du Junping (Beijing Institute of Light Industry, China)

16:20-18:00	**Session 8 Formal Agent Theories (I)** [Room B/WLB 304] Chair: Paul Davidsson (1) Knowledge Granularity Spectrum, Action Pyramid, and the Scaling Problem Yiming Ye (IBM T. J. Watson Research Center, USA) John K. Tsotsos (University of Toronto, Canada) (2) Embodied Ontologies: Ontologies for Real Agents Hiroshi Tsukimoto (Toshiba Corporation, Japan) (3) Recipe Structure for Dynamic Worlds S. Au and N. Parameswaran (University of New South Wales, Australia) (4) Dynamic Planning Model for Agent's Preference Satisfaction: First Results Pavlos Moraitis (Technical University of Crete Greece, Greece) Alexis Tsoukias (University of Paris-Dauphine France, France) (5) Belief-Goal-Role Agents: From Conception to Specification Walid Chainbi (FSEG-SFAX, Tunisia)

Thursday, December 16 1999

08:45-09:45	**Invited Talk** [Room A/WLB 204] **Chair: Ning Zhong** **Robot-Discoverer: A Role Model for Any Intelligent Agent** **Jan M. Zytkow (University of North Carolina, USA)**
09:50-11:10	**Session 9 Agent-Supported Enterprise (I)** [Room A/WLB 204] Chair: David Kinny (1) Improving Telecom Service Access Convergence Using Software Agents Marko Palola, Marko Heikkinen and Rauli Kaksonen (VTT Electronics, Finland) (2) Allocative Auctions: An Application Context for CSCW and Intelligent Agents Helen Meng, Yuk Chi Li, Ka Kit Lau and Yun Wing Lee (The Chinese University of Hong Kong, HK) (3) Self-Adaptation and Reconfiguration of an Agent-Based Production System: Virtual Factory Yingjiu Liu, Pierre Massotte and Pierre Couturier (Ales School of Mines, France) (4) Supporting Collaborative Building Design: A Multi-Agent Approach Wei Dai, R. Drogemuller, J. Mashford, M. Rahilly and K. K. Yum (Commonwealth Scientific and Industrial Research Organisation, Australia)
09:50-11:10	**Session 10 Personalized Web Agents (I)** [Room B/WLB 304] Chair: Kelvin Wong (1) A Personalized Web Agent with Implicit Feedback and Hybrid Filtering Strategy Junggee Han and Juntae Kim (Dongguk University, Korea) (2) User Profile Based Personalized Web Agent Young Jun. So, Hae Jung Baek, and Young-Tack Park (Soongsil University, Korea) (3) Multi-Agent Based Approach for Information Retrieval in the WWW Tarek Helmy, Babak Hodjat and Makoto Amamiya (Kyushu University, Japan) (4) Distributed Information Retrieval Agent JMAT Zhongzhi Shi, Wei Li, Hu Cao and Xiaoli Li (Chinese Academy of Sciences, China)
11:10-11:25	**Coffee Break**

11:25-13:05	**Session 11 Knowledge Discovery and Data Mining Agents** [Room A/WLB 204] Chair: Eugene Santos Jr. (1) An Agent-Based Architecture in Knowledge Discovery and Data Mining T. B. Ho, T. D. Nguyen and N. B. Nguyen (Japan Advanced Institute of Science and Technology, Japan) (2) Integration of Multiple Heterogeneous Databases Using a Client-Side Meta Search Agent Taehee Kim, Seonho Kim, Sun-Hwa Hahn and Jin-Hyung Kim (Korea Research and Development Information Center, Korea) (3) An Efficient K-Means-Based Clustering Algorithm D. L. Yang, J. H. Chang, M. C. Hong and J. S. Liu (Feng Chia University, Taiwan) (4) Design of Robust, Survivable Intrusion Detection Agent Sourav Bhattacharya and Nong Ye (Arizona State University, USA) (5) Learning Novel Concepts through Natural Language Jingye Zhou (Xiangtan Univeristy, China) Jianwen Yin, Jianer Chen and John Yen (Texas A&M University, USA)
11:25-12:45	**Session 12 Formal Agent Theories (II)** [Room B/WLB 304] Chair: Wayne Wobcke (1) Modeling Sociality in the BDI Framework Pietro Panzarasa, Timothy J. Norman and Nicholas R. Jennings (Queen Mary and Westfield College, University of London, UK) (2) Modeling Agents as Reflective Intentional Systems Maria Fasli (University of Essex, UK) (3) Circumscribed-Polyhedron Approximation for Maximum Hypersphere Search Hiroshi Watanabe and Einoshin Suzuki (Yokohama National University, Japan) (4) Towards Situation-Specific Agent Theories Paul Davidsson and Bertil Ekdahl (University of Karlskrona/Ronneby, Sweden)
13:05-14:15	**Lunch**
14:15-15:45	**Agent Exhibition *Show Time*** **(Best IAT Demo Award Presentation)** [Room C/NAB 209] **Chair: Jianchang Mao** (1) Focused Crawler and Personal Assistant J. Mao, B. Dom, W. Swatling, R. Myers, et al (IBM Almaden Research Center, USA) (2) Personalized Web Links Recommendation Agent Kwong Pok Chow, Jiming Liu and Y. T. Wu (Hong Kong Baptist University)

	(3) Information Retrieval and Intrusion-Route Tracing for Intrusion Detection by Use of Mobile Agents Midori Asaka, Takefumi Onabuta and Tadashi Inoue (Information-technology Promotion Agency (IPA), Japan) (4) Learning Improves Mobile Agent Efficiency: File Search Memo S. Joseph, M. Hattori and Naokikase (Toshiba Corporation, Japan) (5) Goodinator: Quick and Prudent Meeting Coordination with a Multi-Agent System K. Kida, K. Yoshifu, T. Asakura and T. Miyashita (NEC Corporation, Japan) (6) Plan Recognition and Delegation in Personalized Interface Agents Ka Keung Hui, Jiming Liu and Kelvin K. C. Wong (Hong Kong Baptist University) (7) From A-Life Agents to a Kingdom of N Queens Han Jing (University of Science and Technology of China, China) Jiming Liu (Hong Kong Baptist University) and Cai Qingsheng (University of Science and Technology of China, China) (8) Applying Market Based Agent to Fuzzy Decision Support System Pouwan Lei (University of Macao, Macao) (9) Argument-Based Agent System Directed by the Contract Net Protocol C. Guan, S. Maeda and H. Sawamura (Niigata University, Japan) (10) EcomTradex: Coping the Global Challenges of Real-Time E-Commerce Trade Ike Iqbal Singh (Duke University and SoftEcom, USA) (11) The Jini Compositional Agent Framework for the Enterprise (JiniCAFE) J. Mckim (MITRE Corporation, USA)
15:45-19:45	**Sightseeing Tour**
20:00-23:00	**Cruise and Banquet Party** **(Best IAT Paper Award Presentation)**

Friday, December 17 1999

10:00-10:50	**Panel: Trends and Prospects of IAT** [Room A/WLB 204] **Chair: Jeffrey M. Bradshaw**
10:50-11:05	**Coffee Break**
11:05-12:45	**Session 13 Personalized Web Agents (II)** [Room A/WLB 204] Chair: James Kwok (1) Information Filtering on the Web: a Hybrid Case-Based Approach G. L. Gentili, M. Marinilli, A. Micarelli and F. Sciarrone (Universit di Roma Tre Dipartimento di Informatica e Automazione, Italy) (2) Engineering Information Discovery and Monitoring Systems along the Dimensions of Agency and Ontology Kwang Mong Sim and Pui Tak Wong (Hong Kong Polytechnic University, HK) (3) Intelligent Information Discovery with Self-Training Autonomous Agents D. Fragoudis and S. D. Likothanassis (University of Patras, Greece) (4) More Efficient Web Searching by Modeling Users' Long-Term Goals Dimitre Dimitrov and James Warren (University of South Australia, Australia) (5) Information Retrieval Agents Based on Evolutionary Computation to Reflect User Preference Jee-Haeng Lee and Sung-Bae Cho (Yonsei University, Korea)
11:05-12:45	**Session 14 Agent-Supported Enterprise (II)** [Room B/WLB 304] Chair: Yiming Ye (1) Going Beyond the Dynamic Marketplaces: Challenges for Multi-agent Systems (Ike Iqbal Singh, SoftEcom, USA) (2) Agent-Based Information Gathering System for Life Cycle Costs Tiemei Irene Zhang and Elizabeth Kendall (Royal Melbourne Institute of Technology, Australia) (3) Applying Market Based Agent to Fuzzy Decision Support System P. W. Lei, M. I. Heywood and C.R. Chatwin (University of Macao, Macao) (4) Virtual Enterprise Information System Li Yu, Huang Biqing and Wu Cheng (Tsinghua University, China) (5) A Virtual Shop Navigation System Based on the Multi-Agent Technology N. Bensaid and Ph. Mathieu (Universite de Lille I, France)
12:45-14:00	**Lunch**

14:00-15:00	**Invited Talk** [Room A/WLB 204] **Chair: P. C. Yuen** **Intelligent Agents: Embodied and Disembodied** **Daniel T. Ling (Microsoft Corporation, USA)**
15:00-15:15	**Coffee Break**
15:15-16:15	**Session 15 Software Agents (II)** [Room A/WLB 204] Chair: Kensuke Takita (1) Active User Interfaces for Building Decision-Theoretic Systems Scott M. Brown (Air Force Research Laboratory, USA) Eugene Santos Jr. (University of Connecticut, USA) Sheila B. Banks (Calculated Insight, Orlando, USA) (2) System Expansion and Integration with Agents in HSTAT Xiaocheng Luan (AppNet Inc., USA) Maureen Prettyman (National Library of Medicine, USA) Robert Antonucci (AppNet Inc., USA) (3) Software Interface Agents Yong Jin Cho, Dong Hyun Roh and Hyun S. Yang (Korea Advanced Institute of Science and Technology, Korea)
15:15-16:15	**Session 16 Mobile Agents (II)** [Room B/WLB 304] Chair: Kwang Mong Sim (1) Learning Improves Mobile Agent Efficiency Sam Joseph, Masanori Hattori and Naoki Kase (Toshiba Corporation, Japan) (2) Increasing the Dependability in a Multi-Agent System Ralph Deters (University of Saskatchewan, Canada) (3) An Efficient Fault-tolerant Protocol for Mobile Agents Ting On Lee and Kam W. Ng (The Chinese University of Hong Kong, HK)