Tuesday November 15

09:30-   **Opening Ceremony Address**

Yoshiteru Nakamori

Welcome Address

Jifa Gu, Gerhard Chroust

10:00-11:00   **Keynote Speech 1**

KS-1   The Third Basic Program for Science and Technology - Science and Technology Policy in Japan

Koji Omi

Member of the House of Representatives, Japan

11:30-12:30   **Keynote Speech 2**

KS-2   The Second Scientific Revolution in Capital Letters - Informatic Turn -

Tamito Yoshida

Member of the Japan Academy and Professor Emeritus of Tokyo University, Japan

14:00-15:30   **Symposium 1**   **Technology Creation Based on Knowledge Science**

Session 1   **JAIST COE Program(1)**

Chair: Toshiya Kobayashi

S1-1-1   The Meaning of JAIST-COE Program and The Changing Circumstances of Academic Research in JAPAN

Saburo Ogata

S1-1-2   Design and Evaluation of Creative Environments in Academia

Yoshiteru Nakamori, Tomoko Kikuchi

S1-1-3   The Elaboration of Academic Technology Roadmap (ATRM) -Three Cases at the Academic Material Science Laboratories -

Shoko Okutsu, Takashi Tatsuse

S1-1-4   Knowledge Management in Scientific Labrotories: A survey-based study of a research institute

Jing Tian, Yoshiteru Nakamori

16:00-17:30   **Symposium 1**   **Technology Creation Based on Knowledge Science**

Session 2   **JAIST COE Program(2)**

Chair: Kozo Sugiyama

S1-2-1   Knowing Thyself and Creating Knowledge

Masahiro Takagi

S1-2-2   The Method to Prepare the Environments to Encourage and Cultivate the Original Scientific and Technical Ideas

Shinzoh Hide Hori, Nobuhito Inami, Hideo Iwasaki, Mikio Koyano, Yuuji Shinoda

S1-2-3   Effects of Interaction and Environments on Growth of Students

Tomoko Kikuchi, Yoshiteru Nakamori

S1-2-4   Study on a Roadmapping Process Model as a Way for Supporting Technology Creation in University Setting

Jie Yan, Yoshiteru Nakamori

14:00-15:30   **Symposium 2**   **Creation of Agent-Based Social Systems Sciences**
          Session 1   **Systems Thinking and Applications**
<div align="right">

Chair: Tatsuyuki Negoro
</div>

S2-1-1   Ludwig von Bertalanffy Forerunner of Evolutionary Systems Theory
          Wolfgang Hofkirchner

S2-1-2   Learning to be Responsible? A Systems View of the Organization-Environment Relationship
          Amanda Gregory

S2-1-3   UK Radioactive Waste Disposal Policy; A Role for Social Systems Science?
          Michael G. Norton, David R. Cope

16:00-18:36   **Symposium 2**   **Creation of Agent-Based Social Systems Sciences**
          Session 2   **Management Systems**
<div align="right">

Chair: Chihiro Suematsu
</div>

S2-2-1   Close Inter-firm Relationships in the Open Network Systems that Maintain Competition and Cooperation
          Tatsuhiko Inoue

S2-2-2   Business Model Analysis as a Systems Approach
          Tatsuyuki Negoro

S2-2-3   Module and Interface from the Transaction Cost Approach
          Chihiro Suematsu, Masashi Ueda

S2-2-4   Business Models in Rural Area Telecommunications
          Yoriko Fujii

S2-2-5   Influence of new mobile tools on communication
          Saori Murata, Fujio Toriumi, Kenichiro Ishii

S2-2-6   "Project-based Collective On-the-Job Training" Methodology using Soft Systems Methodology
          Hisako Chujo, Kyoichi Kijima

S2-2-7   Organizational Learning Oriented Model of Organizational Adaptation
          Yusuke Goto, Shingo Takahashi

14:00-15:30   **Symposium 3**   **Intelligent Information Technology and Applications**
          Session 1   **Men and Computing**
<div align="right">

Chair: Akiyoshi Wakatani
</div>

S3-1-1   Performance Analysis and Evaluation for Multi-Traffic Networks Using Priority Based Controlled Available Bit Rates
          Wuyi Yue, Dequan Yue, Huachen Zhang, Fengsheng Tu

S3-1-2   An Agent based Human Resource Management Information System
          Yan Su, Daiping Hu, Huanchen Wang, Weiguo Xu, Aizhong Lei

S3-1-3   A Fault Diagnosis Support System Using Agents
          Daiping Hu, Huizhang Shen, Huanchen Wang, Wei Qian

S3-1-4   Algorithm For Generating All Spanning Trees of Complete Undirected Graphs
          El Bekkaye Mermri, Hideki Katagiri, Kosuke Kato, Masatoshi Sakawa

16:00-18:10   Symposium 3   Intelligent Information Technology and Applications

Session 2   Pattern Recognitiion with Applications

Chair: Masahiro Tanaka

S3-2-1   Software of Dynamic Signature Authentication Using Global and Local Features
Masahiro Tanaka

S3-2-2   Automatic Facial Gesture Construction Using Image Warping
Stephen Karungaru, Minoru Fukumi, Norio Akamatsu

S3-2-3   Age and Gender Recognition Using Facial Edge Information
Miyoko Nakano, Minoru Fukumi

S3-2-4   A Semantic Network Based Vocabulary Learning System
Mengyu Li, Daiping Hu, Yinsheng Li, Xiangru Shao

S3-2-5   Automatic Answering System to Learners' Questions in e-Learning Contents
Rong Ma, Kenji Yoshida, Tomoko Nishishita, Hirotaka Nakayama

S3-2-6   Development of a Human-like e-Learning System for Students' Active Learning
Kenji Yoshida, Koji Miyazaki, Akira Iwamoto, Kayoko Nakagami, Rong Ma, Hirotaka Nakayama

Room 404

14:00-15:30   Symposium 4   Meta-synthesis and Complex Systems

Session 1   Meta-synthesis Approach

Chair: Jifa Gu

S4-1-1   Metasynthesis System Approach for Solving Social Complex Problems
Jifa Gu, Xijin Tang, Wenyuan Niu

S4-1-2   Meta-synthesis Approach to Exploring Constructing Integrated Transportation System in China
Xijin Tang, Kun Nie, Yijin Liu

S4-1-3   Integrated Approach to System Researches of Complex Problems of Medicine and Biology
Galyna Onopchuk, Kostyantyn Polinkevych

S4-1-4   Knowledge System Construction and Knowledge Creation in HWMSE
Xiaoji Zhou, Jingyuan Yu

16:00-17:30   Symposium 4   Meta-synthesis and Complex Systems

Session 2   Complex Problem Solving (I)

Chair: Olgierd Hryniewicz

S4-2-1   Merging Fuzzy Statistical Data with Imprecise Prior Information-Application in Solving Complex Decision Problems
Olgierd Hryniewicz

S4-2-2   Generalized Nets Modeling: A General Concept
Maciej Krawczak, Krassimir Atanassov

S4-2-3   On Vector Network Equilibrium Problems
Guangya Chen

S4-2-4   Framework for Evaluating Sensitivity on Domestic Energy Consumption
Akihiro Koretsune, Shingo Aoki, Hiroshi Tsuji, Yukihiro Jinno, Eiji Mimura

Room 406

14:00-15:30   Symposium 6   Vision of Knowledge Civilization
Session 1   Future of Knowledge Civilization
Chair: Leen Hordijk/Mordecai I. Henig

S6-1-1   A Vision of New Era of Knowledge Civilization
Akio Kameoka, Andrzej P. Wierzbicki

S6-1-2   On Grid Technology in Science, Media And Industry
Manfred Erich Grauer

S6-1-3   Virtual Modeling Laboratories for Knowledge Integration and Creation
Marek Makowski

16:00-18:00   Symposium 6   Vision of Knowledge Civilization
Session 2   Tradition versus Globalization
Chair: Akio Kameoka

S6-2-1   Framework for Virtual Knowledge City: A Case of City Dalian, China
Zhongtuo Wang, Donghua Pan

S6-2-2   Global *Agoras* for a Knowledge Society: The Example of the Center of Excellence (COE) Boundary-Spanning Dialog Approach (BDA) Project at International Christian University (ICU)
Paul R. Hays, Jacqueline Wasilewski

S6-2-3   Creative Transfer of Tradition and Next-Generation Innovation Traditional Japanese Culture and Creativity
Toshiko Asai, Susumu Kunifuji

S6-2-4   Poland 21st Century Infrastructure for "Global Great Transition" (Eco - Info - Communalism) Scenarios: Looking for Future System Research Solutions
Lucyna Bogdan, Andrzej Straszak, Jan Studzinski

14:00-15:00   Symposium 7   Foundations of the Systems Sciences
Session 1   Systems Theory and Foundations

Chair: Gary S. Metcalf

S7-1-1   Will Systems Work? A search for models for the 21st century.
Gary S. Metcalf

S7-1-2   Philosophical and Ethical Foundations of Systems Thinking
Debora R. Hammond

16:00-17:50   Symposium 7   Foundations of the Systems Sciences
Session 2   Systems Theory and Foundations

Chair: Søren Brier

S7-2-1   Common Sense of the Uncommon Sense Called Systems Thinking and Systems Theory: Holism
Matjaz Mulej, Stefan Kajzer, Vojko Potocon

S7-2-2   How System Models Contributes to the Design of Information Systems
Maria M. Clusella, Susana I. Herrera, Gregorio N. Tkachuk, Pedro A. Luna

S7-2-4   Systemic Epistemology: A Synthetic View For The Systems Science Foundations
Maria M. Clusella, Maria E. Ortiz, Pedro A. Luna

S7-2-5   Applying a Critical Systematic Review Process to Hierarchy Theory
Jennifer Wilby

S7-2-6   From Dualism to Complementarity: A Systemic Concept for the Research Process
Markus S. Schwaninger

Wednesday November 16

9:00-10:30 **Symposium 1** **Technology Creation Based on Knowledge Science**
Session 3 **JAIST COE Program(3)**

Chair: Masahiro Takagi

S1-3-1 Framework Development and Process Analyses of Organizational Knowledge Creation in Academic Research Projects
Kozo Sugiyama

S1-3-2 Shifting Boundaries on the Knowledge Landscape: Creativity towards Innovation
Totok H. Wibowo

S1-3-3 Appropriating Scientific Knowledge: Using and Providing Ultraviolet Ray Information in Japan
Boumsoung Kim, Yoriko Kato, Akio Hiramatsu

S1-3-4 Knowledge Creation and Systems Research: Implications from Memory Science
Bertolt M. Meyer, Tunc D. Medeni

11:00-12:30 **Symposium 1** **Technology Creation Based on Knowledge Science**
Session 4 **Knowledge/Technology Management(1)**

Chair: Tomofumi Sumita

S1-4-1 Metasynthesis and Knowledge Creation
Jifa Gu, Xijin Tang

S1-4-2 Understanding a Large Scientific Project from Network Perspective
Kun Nie, Xijin Tang, Jifa Gu, Yoshiteru Nakamori

S1-4-3 A Network System for Knowledge Sharing in Learning Organization
Hongtao Ren, Yoshiteru Nakamori

S1-4-4 Setoral System of Innovation in China - the Case of Software Sector
Qiong Wu, Kumiko Miyazaki

14:00-15:30 **Symposium 1** **Technology Creation Based on Knowledge Science**
Session 5 **Knowledge/Technology Management(2)**

Chair: John T. Boardman

S1-5-1 Innovation in Services~ Assessment of Competitiveness based on the Case of International Pre-paid Calling Cards in Japan
Kumiko Miyazaki, Edmar Wiggers

S1-5-2 A Framework to Explain Failures in MOT
Tomofumi Sumita, Masahito Shimazaki, Keisuke Matsuyama

S1-5-3 An Analysis of R&D Project Performance from Research to Commercialization ~ Evidence from a Japanese Electric Company
Yoshitaka Osawa, Kumiko Miyazaki

S1-5-4 Organizational R&D Concept Creating Activities Using Six-Lenses Model
Takashi Yoshinaga, Ryoko Toyama

16:00-17:30 **Symposium 1** **Technology Creation Based on Knowledge Science**
Session 6 **Knowledge/Technology Management(3)**

<div align="right">Chair: Kumiko Miyazaki</div>

S1-6-1 Nanotechnology Innovation System - Strategic Perspectiv
Nazrul Islam, Kumiko Miyazaki

S1-6-2 High-tech Innovation Through Partnerships - Systemic Perspective
Krzysztof Klincewicz

S1-6-3 An Investigation to the Situation of Master's/doctorate Degree Holders Assigned to Manufacturing Sites and their Intended Roles in Japan
Hidetomo Oyaizu, Toshiya Kobayashi

S1-6-4 The Trend of the Academic Scientists after the Soviet Collapse and Conversion of the Japanese Science and Technology Policy in the 1990s
Toshiya Kobayashi

<div align="right">

Room 402

</div>

9:00-10:30 **Symposium 2** **Creation of Agent-Based Social Systems Sciences**
Session 3 **Formal Systems**

<div align="right">Chair: Naoki Shiba</div>

S2-3-1 Landscape Model with Dynamic Parameters - Alliance Formation of Enterprises influenced by the Consumer Behavior -
Shotaro Murata, Kyoichi Kijima

S2-3-2 Collaborative Filtering versus Personal Log based Filtering: Experimental Comparison for Hotel Room Selection
Ryosuke Saga, Hiroshi Tsuji

S2-3-3 Simple Decision Heuristics in Perfect Information Games
Naoki Konno, Kyoichi Kijima

S2-3-4 Consulting as Outsourcing of Decision Making
Norimasa Kobayashi, Kyoichi Kijima

11:00-11:44 **Symposium 2** **Creation of Agent-Based Social Systems Sciences**
Session 4 **Gaming and Simulation**

<div align="right">Chair: Ichiro Nishizaki</div>

S2-4-2 Design of a Software Agent for Business Gaming Simulation
Yuji Shinoda, Mina Ryoke, Takao Terano, Yoshiteru Nakamori

S2-4-3 A Simulation Model on an Artificial Society with Multiple Adaptive Agents for Financing Public Goods with Lotteries
Ichiro Nishizaki, Tomohiko Sasaki

14:00-15:30 **Symposium 2** **Creation of Agent-Based Social Systems Sciences**
Session 5 **Decision Systems**

<div align="right">Chair: Utomo S. Putro</div>

S2-5-1 The Theoretical Foundation of Potential Utility
Ryohei Matsumura, Norimasa Kobayashi

S2-5-2	Modeling Sequential Bargaining Game Agents towards Human-like Behaviors: Comparing Experimental and Simulation Results
	Tetsuro Kawai, Yuhsuke Koyama, Keiki Takadama
S2-5-3	Confrontation Resolution Analysis of Pre-play Mechanism for Increasing Social Welfare
	Takashi Matsumoto, Kyoichi Kijima
S2-5-4	Methodology of Data Mining - Utilization of Reduct and Identification of Decision Rule -
	Kaede Niwano, Kyoichi Kijima

16:00-17:30   Symposium 2   Creation of Agent-Based Social Systems Sciences

Session 6   Agent-based Applications (1)

Chair: Hideaki Kitanaka

S2-6-1	A Study of the Agent-based DSS which supports the Marketing Strategy
	Hirokazu Tanaka, Hideaki Kitanaka, Naoki Shiba
S2-6-2	An Agent-Based Model for Analyzing Product Penetration for Consumer goods
	Naoki Shiba, Hideaki Kitanaka, Hirokazu Tanaka
S2-6-3	Agent Based Simulation For Knowledge Management
	Utomo S. Putro, Manahan Siallagan, Pri Hermawan
S2-6-4	Analyzing the Effect of New Product Development Using an Agent Based Consumer Behavior Model - An Application to the Sanitary Products Market in Japan
	Hideaki Kitanaka, Naoki Shiba, Hirokazu Tanaka

Room 403

9:00-10:30   Symposium 3   Intelligent Information Technology and Applications

Session 3   Networks and Agents

Chair: Manfred Erich Grauer

S3-3-1	On Scalability in Simulation and Optimization of Complex Systems
	Manfred Erich Grauer, Frank Thilo
S3-3-2	VQ Compression Algorithms on A Multiprocessor System
	Akiyoshi Wakatani
S3-3-3	Interacting Knowledge Bases in the Area of Tension Between Information and Knowledge - a Pattern for Systems of Men and Computer
	Marion A. Weissenberger-eibl, Carsten H.J. Borchers
S3-3-4	Decision Support Systems for Mouse-Clickers
	Chunhui Xu

11:00-12:06   Symposium 3   Intelligent Information Technology and Applications

Session 4   Models and Systems Engineering

Chair: Yasuhiko Takahara

S3-4-1	Computer-acceptable Set Theory for Model Construction
	Yasuhiko Takahara
S3-4-2	Dichotomic Architectural Patterns in Systems Engineering
	Gerhard Chroust

S3-4-3	Objectives' Evaluation as Knowledge Development
	Ludmila Domeova, Milan Houska

14:00-15:30 **Symposium 3** **Intelligent Information Technology and Applications**
Session 5 **Evaluation and Standards**

Chair: Hirotaka Nakayama

S3-5-1	Finding Efficiency and Inefficiency: Multi-View Point Approach
	Shingo Aoki, Kiyosei Minami, Hiroshi Tsuji
S3-5-2	Psychometric Evaluation with Correlation for Multiple Perceptions
	Hidehiko Hayashi, Masao Nakagawa, Hidetoshi Nakayasu
S3-5-3	Design Analysis of the Standard Necessity Examination Model
	Jun Oura
S3-5-4	How to Create Holistic Standardization of Business Decision-Making in Production Management
	Vojko Potocan

16:00-17:30 **Symposium 3** **Intelligent Information Technology and Applications**
Session 6 **Knowledge Management**

Chair: Wuyi Yue

S3-6-1	An Attempt to Prevent Operational Incidents by Applying the SECI Model
	Takeshi Okada
S3-6-2	A Double Helix Architecture of Knowledge Discovery System Based on Data Grid and Knowledge Grid for Multimedia Communication Network
	Jing He, Wuyi Yue, Yong Shi
S3-6-3	*skillMap*: Identification of Unrecognized Parallel Developments and of Communities of Practice in Distributed Organizations
	Bertolt M. Meyer, Sarah Spiekermann, Manuel Hertlein
S3-6-4	Subscriber Number Forecasting Tool Based on Subscriber Attribute Distribution for Evaluating Improvement Strategies
	Ayako Hiramatsu, Yuji Shono, Hiroaki Oiso, Norihisa Komoda

Room 404

9:00-10:30 **Symposium 4** **Meta-synthesis and Complex Systems**
Session 3 **Methodology and Applications**

Chair: Taketoshi Yoshida

S4-3-1	Coordination as a means to understand and to organize complex systems
	Krzysztof Malinowski, Piotr Tatjewski
S4-3-2	Complex problem solving: HeXie Management Theory from China
	Xian-ju Zeng
S4-3-3	Soft Systems Methodology Embedded in Organizational Knowledge-Creating Process
	Taketoshi Yoshida
S4-3-4	A Study on the Vitalization of Music Halls of Tokyo - An Application of Extended Soft Systems Methodology
	Kiyomi Murase

11:00-12:12 Symposium 4 Meta-synthesis and Complex Systems

Session 4 Complex Problem Solving (II)

Chair: Jian Chen

S4-4-1 An Analysis Framework of Enterprise Documents for Strategic Scenario-based Management
Masanori Akiyoshi, Norihisa Komoda

S4-4-2 Profit and Risk Sharing in Virtual Enterprises
Jian Chen, Jianfeng Chen

S4-3-5 Studies of Quantitative Criminology Based on Complexity Theory
He Ping

S4-4-4 Control of a chaotic economic system
Weiguo Xu, Daiping Hu, Huizhang Shen, Aizhong Lei

14:00-15:22 Symposium 4 Meta-synthesis and Complex Systems

Session 5 Knowledge Creation and Transfer

Chair: Xijin Tang

S4-5-1 Study in Museum Knowledge Management in the Field of Planning Exhibition by Application of ISM
Hiroharu Murase

S4-5-2 A Visual Measurement of Decision Consensus - An Idea Derived from GAE
Yuntao Bai, Yifei Mu, Youmin Xi

S4-2-5 Toward Policymaking Support Based on Remote Sensing Data
Mitsumi Miyashita, Yoshiteru Nakamori

Room 405

9:00-10:30 Symposium 5 Data/Text Mining from Large Databases

Session 1 Data Mining

Chair: Saori Kawasaki

S5-1-1 Active Mining - A Spiral Model of Knowledge Discovery from Data
Hiroshi Motoda

S5-1-2 Pattern Recognition in Metabonomics Using Self Organizing Maps
Stefan W. Roeder

S5-1-3 Knowledge Discovery of Interview Survey on Fresh Food Management
Mina Ryoke, Yukihiro Yamashita, Kiichiro Hori, Yoshiteru Nakamori

11:00-12:30 Symposium 5 Data/Text Mining from Large Databases

Session 2 Text Mining

Chair: Lung Shu Lin

S5-2-1 Co-Training of Conditional Random Fields for Segmenting Sequence Data
Hieu Xuan Phan, Minh Le Nguyen, Bao Tu Ho, Yasushi Inoguchi, Susumu Horiguchi

S5-2-2 The Word Clustering Method for Lexical Knowledge Acquisition from Domain-Specific Documents
Takahiro Saito, Isamu Watanabe, Kunio Matsui, Akira Terada, Takashi Saito

S5-2-3 A Primary Studies on Summarization of Documents in Vietnamese
Mai Chi Luong, Ha Thanh Le, Thang Quyet Huynh

S5-2-4   Sentence Extraction with support vector Machine Ensemble

Minh Le Nguyen, Akira Shimazu, Bao Tu Ho, Hieu Xuan Phan, Susumu Horiguchi

14:00-15:30   Symposium 5   Data/Text Mining from Large Databases

Session 3   Data Mining

Chair: Mina Ryoke

S5-3-1   Weighted Combination of Classifiers Based on Dempster-Shafer Theory and OWA Operators in Word Sense Disambiguation

Nam Van Huynh, Cuong Anh Le, Akira Shimazu, Yoshiteru Nakamori

S5-3-2   Forecasting of Leaving Probability of Customer by Using Data Mining

Lung Shu Lin, Wen Chin Chen

S5-3-3   General State Space Modeling and Japan's Stock and China's Stock Volatility

Zhang De Hong, Takatoshi Yoshida

S5-3-4   Detecting Terrorism Activity Patterns Using Investigative Data Mining Tool

Nasrullah Memon

16:00-17:30   Symposium 5   Data/Text Mining from Large Databases

Session 4   Text Mining

Chair: Stefan W. Roeder

S5-4-1   Ant-based Text Clustering Using Semantic Similarity Measure : Progress Report and First Stage Experiment

Haoxiang Xia, Shuguang Wang, Zhaoguo Xuan, Taketoshi Yoshida

S5-4-2   Comparison of Phrase Indexing for Biomedical and Newswire Documents

Jose C. Clemente Litran, Kentaro Torisawa, Kenji Satou

S5-4-3   Extracting Background Knowledge from the Medical Literature

Saori Kawasaki, Bao Tu Ho

S5-4-4   Wrapper feature Extraction for Time Series Classification Using Singular Value Decomposition

Hui Zhang, Tu Bao Ho, Saori Kawasaki

Room 406

9:00-10:30   Symposium 6   Vision of Knowledge Civilization

Session 3   Integrating Knowledge

Chair: Zhongtuo Wang

S6-3-1   Systems for Integrating and Creating Knowledge

Yoshiteru Nakamori, Andrzej P. Wierzbicki

S6-3-3   A Method to Measure the Implicit Knowledge Indirectly of Enterprises

Tong Li, Zhongtuo Wang

S6-7-3   The Complex Network Modeling Method and Its Application to the Knowledge System

Yunjiang Xi, Yanzhong Dang, Jiangning Wu

11:00-12:30   Symposium 6   Vision of Knowledge Civilization

Session 4   **Future Technology**

Chair: Yoshiteru Nakamori

S6-4-1   Technology and Change : The Role of Technology in Knowledge Civilization
Andrzej P. Wierzbicki

S6-4-2   Research on XML-based Information Retrieval Model
Yanping Wang, Kuanjiu Zhou

S6-4-3   A High Precision Algorithm for Automatic Extracting of High-frequency Words
Based on Statistics
Zhaoguo Xuan, Yanzhong Dang, Shaohua Jiang, Mingwei Zhao

14:00-15:30   Symposium 6   Vision of Knowledge Civilization

Session 5   **Future Computataions**

Chair: Andrzej P. Wierzbicki

S6-5-1   Non-Model-Based Decision Support Systems and Computing with Words
and Perceptions: A Promising Approach to an Efficient Decision Support in
the New Knowledge Civilization Era
Janusz Kacprzyk

S6-5-2   Topic Map and Its Application to Document Retrieval
Haiyan Tian, Jiangning Wu, Guangfei Yang

S6-5-3   An Ontology-based Knowledge Matching Algorithm for the Strategic Study
Lili Rong, Zhihao Shang

S6-8-3   Study of Object-Oriented Model for the Knowledge Base System
Mingwei Zhao, Yanzhong Dang

16:00-18:00   Symposium 6   Vision of Knowledge Civilization

Session 6   **Society and Knowledge**

Chair: Janusz Kacprzyk

S6-6-1   Knowledge Construction as Evolutionary Gaming
Zhichang Zhu, Yoshiteru Nakamori

S6-6-2   A Novel Approach to the Combination of Knowledge Flow with Organizational
Learning Process
Weiqi Dai, Doanghua Pan

S6-6-3   Research on Model of Web Pages Clustering
Kuanjiu Zhou, Yifei Qu, Tiyun Huang

Room 407

9:00-10:30   Symposium 7   Foundations of the Systems Sciences

Session 3   **Models and Applications**

Chair: Debora R. Hammond

S7-3-1   Java Mathematical Kit: A Dynamic Mathematical Guide
Nasrullah Memon, Abdul Rasool Qureshi, Muhammad Urs Shaikh,
Abdul Qadeer Khan Rajput

S7-3-2	Putting General Systems Sciences to Practical Use: Methodological Issues and Case of Business Process Engineering
	Ryo Sato
S7-3-3	Control Structures in Natural Systems: The Foundations for a Theory of Organizational Control
	Norman D. Cook, Max Von Zedtwitz
S7-3-4	Development of Science and Design of Systems
	Janos Korn

11:00-12:14   Symposium 7   Foundations of the Systems Sciences

Session 4   Economic and Environmental Issues

Chair: Markus S. Schwaninger

S7-4-2	Some Positive Aspects and Limits of System Dynamics in Present Conditions
	Stanislava Mildeova
S7-4-3	The Cybersemiotic Model of Communication: An Evolutionary View on the Threshold between Semiosis and Informational Exchange
	Søren Brier

14:00-14:52   Workshop   The New Roles of Systems Sciences for a
**   Knowledge-based Society**

Session 1

Chair: Hellmut Loeckenhoff

WS-1-1	The Roles of Creative Thinking and Decision-Making Tools for Building Knowledge Societies
	Matjaz Mulej
WS-1-2	Workshop: New Roles of Systems Science in a Knowledge Society
	Matjaz Mulej
WS-1-3	The Cultures of Cooperation in a Systems Context
	Robert G. Dyck

16:00-16:52   Workshop   The New Roles of Systems Sciences for a
**   Knowledge-based Society**

Session 2

Chair: Gerhard Chroust

WS-2-1	Strategic Planning for Systems Applications
	Robert G. Dyck
WS-2-2	Holistic Approach to Innovating and Excellence - Application to Business School
	Vesna Kolenc
WS-2-3	Systems Evolvement for Societal Evolution - The ICT Case for Transdisciplinarity
	Hellmut Loeckenhoff

Thursday November 17

9:00-10:30 **Symposium 1** **Technology Creation Based on Knowledge Science**
Session 7 **Modeling and Systems(1)**
Chair: Martina Berankova

S1-7-1 Decision Engineering Methodology
Kazimierz Zaras, Christian Fonteix, Laszlo Kiss, Jules Thibault

S1-7-2 Specific Type of Knowledge Map: Mathematical Model
Milan Houska, Martina Berankova

S1-7-3 An Object-oriented Knowledge Link Model for General Knowledge Management
Xiao-hong Chen, Bang-chuan Lai

S1-7-4 International Sematic Mapping of Copyright Law - A Conceptualization Supporting System with Capability of "Intention" and Ontology
Wenhuan Lu, Mitsuru Ikeda

11:00-12:30 **Symposium 1** **Technology Creation Based on Knowledge Science**
Session 8 **Modeling and Systems(2)**
Chair: Kazimierz Zaras

S1-8-1 Knowledge Based Communication Interface
Martina Berankova, Ludmila Domeova

S1-8-2 A Multi-Regional Model of the Development in Technology Industries
Yoshiki Kazuno, Hiroyuki Masuda, Takeshi Arai

S1-8-3 Role-driven Business Process Models
Weidong Zhao

S1-8-4 Modeling Endogenous Technological Change with Heterogeneous Agents
Tieju Ma

9:00-10:00 **Symposium 2** **Creation of Agent-Based Social Systems Sciences**
Session 7 **Systems Science and Applications**
Chair: Shingo Takahashi

S2-7-1 Communicating System Science(s)
Guenther Ossimitz

S2-7-2 Social Agent Models – Abstract
Norman Y. Foo, Pavlos Peppas

11:00-11:44 **Symposium 2** **Creation of Agent-Based Social Systems Sciences**
Session 8 **Agent-based Applications (2)**
Chair: Sorin Eugen Zaharia

S2-8-1 Agent Based Simulation For Learning Model
Pri Hermawan, Santi Novani, Utomo Sarjono Putro

S2-8-2 University as "Agent-Based Social Systems Sciences"
Sorin Eugen Zaharia

9:00-10:30 Symposium 3 Intelligent Information Technology and Applications

Session 7 Computational Intelligence (1)

Chair: Minoru Fukumi

S3-7-1 An Adaptive BP Learning Algorithm for Stock Market Prediction
Kin Keung Lai, Lean Yu, Shouyang Wang

S3-7-2 A Study of Driver State Classification Using In-vehicle Sensors by Neural Networks
Yuhki Shiraishi, Fumiaki Takeda, Toshihiro Nishikage, Masaaki Uechi, Kazuya Sasaki

S3-7-3 Malaysian License Plate Recognition Using Artificial Neural Networks and Evolutionally Computation
Stephen Karungaru, Minoru Fukumi, Norio Akamatsu

S3-7-4 Integration of Multi-objective Genetic Algorithms and Expert Systems for Agroindustrial Systems Design
Y. Yandra, Hiroyuki Tamura

11:00-12:06 Symposium 3 Intelligent Information Technology and Applications

Session 8 Computational Intelligence (2)

Chair: Fumiaki Takeda

S3-2-7 A proposal of Alarm Sound Recognition System for the Medical Instrument
Toshihiro Nishikage, Fumiaki Takeda, Yuhki Shiraishi

S3-8-2 Potentiality Evaluation for Revegetation of Abandoned Lands from Coal Mining Activities based on Support Vector Machine
Zhuang Chuanli, Li Daoliang, Guo Xiangyun, Fu Zetian

S3-8-3 Ensemble Learning with Neural Networks for Classifying Environmental Sounds
Ayako Hiramatsu, Asato Simotaki, Kazuo Nose, Toshio Minakata, Kenji Tennmoku, Osamu Hattori

9:00-10:30 Symposium 6 Vision of Knowledge Civilization

Session 7 Teaching and Knowledge

Chair: Zhichang Zhu

S6-7-1 E-Teaching - the Lost Lead-Time
Gerhard Chroust

S6-7-2 Common Representations of Soft and Hard Declarative Knowledge
Wieslaw Traczyk

S6-8-2 Network Structures in a Society Composed of Individuals with Utilities Depending on their reputation
Tomohiro Hayashida, Ichiro Nishizaki, Hideki Katagiri

11:00-12:30   **Symposium 6**   **Vision of Knowledge Civilization**
                      Session 8   **Objectivity and Networks**

<div align="right">

Chair: Gerhard Chroust
</div>

S6-8-1   An Objective-Subjective Structure to Assist Decision Making: An Application to Environmental Issues
Mordecai I. Henig

S6-8-4   From Knowledge to Innovation Society
Matjaz Mulej, Miroslar Rebernik, Jozica Knez-Riedl, Zdenka Zenko, Dusko Ursic, Vojko Potocan

Closing Discussion

<div align="right">

Room 407
</div>

9:00-10:06   **Workshop**   **The New Roles of Systems Sciences for a Knowledge-based Society**
                      Session 3   **Requisite Holism by Modeling**

<div align="right">

Chair: Matjaz Mulej
</div>

WS-3-1   System Dynamics Market Model with Aspects of Economic Policy
Stanislava Mildeova, Ingeborg Nemcov

WS-3-2   Knowledge, Corporate Governance & HR - A Systemic Approach
Ana Arun

WS-3-3   Standardization of Decision-Making between Holism and Variety
Vojko Potocan, Matjaz Mulej, Stefan Kajzer

11:00-12:06   **Workshop**   **The New Roles of Systems Sciences for a Knowledge-based Society**
                      Session 4   **Culture, Language and Creative Co-operation**

<div align="right">

Chair: Stanislava Mildeova
</div>

WS-4-1   The Role of Language within Knowledge Creation Processes
Filippina Risopoulos

WS-4-2   Innovation and Creativity from the Viewpoint of Systems Thinking and Chaos Theory
Gerald Steiner

WS-4-3   Europe from a point of view of economic-cultural orientations
Matjaz Mulej

<div align="right">

International Conference Room
</div>

14:00-15:00   **Keynote Speech 3**   **Chair: Marek Makowski**

KS-3   On the Future Role of Environmental Systems Analysis
Leen Hordijk
International Institute for Applied Systems Analysis, Austria

15:00-16:30   **Panel Discussion**   **Chair: Kyoichi Kijima**

Panel Members   *Andrzej Wierzbicki, Jifa Gu, Gerhard Chroust, Debora Hammond, Matjaz Mulej, Leen Hordijk*

Kick-off speech   Integrated Systems Thinking
PD-1   Kyoichi Kijima

PD-2   Lack of Systemic Thinking and Innovation; Case of Slovenia - A Transitional Country
Matjaz Mulej

16:30-17:00   **Student Award Presentation Ceremony**   **Address: Gerhard Chroust**

<div align="right">

Presented By: Jifa Gu
</div>

17:00-17:30   **Closing Ceremony**   **Closing Address: Gerhard Chroust**