Twentieth European Meeting on Cybernetics and Systems Research 2010

Vienna, April 6 – 9, 2010 in the Main Building of the University of Vienna

PROGRAMME
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TWENTIETH EUROPEAN MEETING ON CYBERNETICS AND SYSTEMS RESEARCH (EMCSR 2010)

The Chairpersons have been requested to maintain the time table set out on the following pages. Should a scheduled speaker not be available, the allocated period will be used for discussions.

Symposia

A  Systems Science
   R. Belohlavek, USA, G. Klir, USA, and P. Prautsch, Czech Republic

B  Mathematical Methods in Cybernetics and Systems Theory
   J. Scharinger, Austria

C  The Cybernetics of Cybernetics: Cybernetics, Interaction and Conversation
   R. Glanville, UK

D  Biocybernetics and Mathematical Biology
   L. M. Ricciardi, Italy

E  Living Systems (cancelled)

F  Cognitive Rationality, Relativity and Clarity
   I. Ezhkova, Belgium

G  Governance of Knowledge & Technology as a Societal Distributed Process
   E. Buchinger, Austria

H  Management, Organizational Change, and Innovation
   M. Mulej, Slovenia, G. Steiner, Austria, and S. Umpleby, USA

I  Language Technology
   E. Buchberger, Austria

J  From Agent Theory to Agent Implementation - AT2AI-7
   J. P. Müller, Germany, and P. Petta, Austria

K  Agent-Based Modeling and Simulation
   S. Bandini, Italy, G. Vizzari, Italy, and P. Petta, Austria

L  Companions, Virtual Butlers, Assistive Robots: Empirical and Theoretical Insights for Building Long-Term Social Relationships
   D. Heylen, Netherlands, B. Krenn, Austria, and S. Payr, Austria

M  Theory and Applications of Artificial Intelligence
   V. Marik, Czech Republic, and O. Stepankova, Czech Republic

N  Challenges, Visions and Roadmaps of Systems Sciences
   G. Ossimitz, Austria, and G. Chroust, Austria

All events will take place in the Main Building of the University in Vienna 1, Dr. Karl-Lueger-Ring 1. The information desk is on the first floor, the lecture rooms as well as general information and a complete schedule can be found at the end of this programme.
GENERAL SCHEDULE

Tue., 6 April 9:00  Conference Office on 1st Floor of the Main Building of the University of Vienna opens

10:00  GREAT FESTIVAL HALL

WELCOME by Prof. Dr. Georg Winckler, Rector of the University of Vienna

OFFICIAL OPENING by the Federal Minister of Science and Research, Professor Dr. Beatrix Karl

ADDRESS by the Chairman of the Meeting, Prof. Dr. Robert Trappl, President, Austrian Society for Cybernetic Studies

PLENARY ADDRESS:

RESEARCH FOR A WORLD IN TRANSITION
Prof. Dr. Detlof von Winterfeldt, Director, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

Break for Lunch

14:00 – 19:00  SYMPOSIA (Time Table on the following pages)
Wed., 7 April 9:00 PRESENTATION OF THE INTERNATIONAL FEDERATION OF SYSTEMS RESEARCH (IFSR) (Room 41)

9:30 ROSS ASHY MEMORIAL LECTURE OF THE IFSR (Room 41)

GRAND CHALLENGES FOR COMPUTER SCIENCE RESEARCH
Prof. Dr. Johann Eder, University of Klagenfurt, Austria

11:00 – 13:00 SYMPOSIA

Break for Lunch

14:00 – 19:00 SYMPOSIA

Thu., 8 April 14:00 – 18:30 SYMPOSIA

Fri., 9 April 9:00 BEST PAPER AWARDS (Room 41)

9:30 PLENARY ADDRESS:

ROBOTIC HELPERS: INTERACTION, INTERFACES AND COMPANIONS IN ASSISTIVE AND THERAPY ROBOTS
Prof. Dr. Kerstin Dautenhahn, Adaptive Systems Research Group, School of Computer Science, The University of Hertfordshire, UK

11:00 – 13:00 SYMPOSIA

Break for Lunch

14:00 – 17:00 SYMPOSIA

20:00 Participants are kindly invited by the Mayor of Vienna and by the Austrian Society for Cybernetic Studies to the Heurigen 10er Marie
SYMPOSIA TIME TABLE

SYMPOSIUM A

Systems Science
R. Belohlavek, USA, G. Klir, USA, and P. Prautsch, Czech Republic

Thursday p.m. Room 47

14:00-14:30
Systems Theory in Design of Systems and Products
J. Korn, Middlesex University, United Kingdom

14:30-15:00
An alternative version of the main theorem of fuzzy concept lattices
M. Krupka, Palacký University, Olomouc, Czech Republic

15:00-15:30
Isotone concept-forming operators and closure operators
J. Konecny, Palacký University, Olomouc, Czech Republic

15:30-16:00 Coffee Break

16:00-16:30
Anticipatory Artificial Autopoiesis
D. M. Dubois, S. C. Holmberg, University of Liège, Belgium

16:30-17:00
Confluence of Fuzzy Relations over Similarity Spaces
T. Kuhr, V. Vychodil, Palacký University, Olomouc, Czech Republic

17:00-17:30
Reconstruction of Belemnite Evolution Using Formal Concept Analysis
R. Belohlavek, M. Kostak, P. Osicka, State University of New York, Binghamton, USA

17:30-18:00
Homo entropicus
F. Zucconi, Polytechnic University of Ancona, Italy
SYMPOSIUM B

Mathematical Methods in Cybernetics and Systems Theory
J. Scharinger, Austria

Friday a.m.  Room 34

11:00-11:30
Agent Cooperation vs. DES Control Synthesis
F. Capkovic, Slovak Academy of Sciences, Bratislava,
Slovak Republic

11:30-12:00
Optimal Inventory Control Under Uncertainty and Constraints
N. Nechval, M. Purgailis, K. Nechval, V. Danovich, T. Liepins,
University of Latvia, Riga, Latvia

12:00-12:30
Modelling and verification of cyber-physical system
M. Pluska, D. Sinclair, Dublin City University,
Ireland

12:30-13:00
A General Method for the Analysis and the Logical Generation of
Discrete Mathematical Systems in Programmable Logical Controller
D. M. Dubois, A. Mascia, University of Liège,
Belgium
SYMPOSIUM C

The Cybernetics of Cybernetics: Cybernetics, Interaction and Conversation
R. Glanville, UK

Tuesday p.m. Room 34

14:00-14:30
Complementary construction of the World and of the Self
R. Jung, Center for Systems Research, Kutná Hora, Czech Republic

14:30-15:00
"ESSE EST PERCIPI (AUT PERCIPERE)": The Minimum Time Principle of Maximal Information Transfer
P. Medina Martins, Technical University of Lisbon, Portugal

15:00-15:30
Based on No-thing - A Cybernetical Musing On Eastern Beauty
L. Pawlik, American Society of Cybernetics, Washington, USA

15:30-16:00 Coffee Break

16:00-16:30
Quasi Entailment Mesh
B. Pak, R. Glanville, Sint-Lucas Architectuur, Brussels, Belgium

16:30-17:00
Model Development for Magazine Cover Page Selection
Y. Soylu, N. Bayazit, Istanbul Technical University, Turkey

17:00-17:30
The game as a methodology for observing the observer
J. C. Bermeo, R. Zarama, Universidad de los Andes, Bogotá, Colombia

17:30-18:00
Labyrinths, Mazes and the Spaces Inbetween
S. McElhinney, Bartlett School of Architecture, UCL, London, United Kingdom
Wednesday a.m.          Room 34

11:00-11:30 
Universal University Coordination Scenario 
* M. F. Schreiber, Vienna University of Economics and Business, Austria *

11:30-12:00 
TXT2 - Art on Interaction and Conversation 
* G. Davidson, K. Williams, I. Grimstead, B. Goffin, Artstation, Cardiff, United Kingdom *

12:00-12:30 
How (Not) To Make Terrorists? 
* R. Pla-Lopez, Universitat de València, Burjassot, Spain *

12:30-13:00 
Balancing Security with Liberty; through Global Education for Cyber-systemically Informed Freedom 
* G. Boyd, V. Zeman, Education Department Concordia University, Montreal, Canada *

Wednesday p.m.          Room 34

14:00-14:30 
Conversation and control in the animal 
* J. van der Merwe, Cape Peninsula University of Technology, Cape Town, South Africa *

14:30-15:00 
Cybernetics for Post-Humans: Symbiotic Games of the Limited Creator 
* D. V. Galkin, Tomsk State University, Russia *

15:00-15:30 
Error 
* R. Glanville, CybernEthics Research, Southsea, United Kingdom *

15:30-16:00 Coffee Break

16:00-17:00 Discussion
Thursday p.m.

14:00-14:30
Biocomputation
P. Cull, Oregon State University, Corvallis, USA

14:30-15:00
Identities and Differences. A stimulating Aspect of Early Cybernetics
L. Montagnini, Università "Federico II", Napoli, Italy

15:00-15:30
On first passage problems for one-dimensional diffusions with random jump reflection at a boundary
M. Abundo, Università Tor Vergata, Roma, Italy

15:30-16:00 Coffee Break

16:00-16:30
On time non-homogeneous stochastic processes with catastrophes
A. G. Nobile, V. Giorno, A. Di Crescenzo, L. M. Ricciardi,
Università di Salerno, Fisciano, Italy

16:30-17:00
On the first exit time problem for a Gompertz diffusion
V. Giorno, G. Albano, P. Román, F. Torres, Università di Salerno,
Fisciano, Italy

17:00-17:30
More on cumulative entropy
A. Di Crescenzo, M. Longobardi, Università di Salerno, Fisciano, Italy

17:30-18:00
Transient analysis of a birth-death process with alternating rates
A. Iuliano, B. Martinucci, Università di Salerno, Fisciano, Italy
SYMPOSIUM F

Cognitive Rationality, Relativity and Clarity
I. Ezhkova, Belgium

Friday a.m.                      Room 46

11:00-11:30
Strategies for Stabilization Behaviour of Intelligent Dynamic Systems
G. Osipov, Institute for Systems Analysis of Russian Academy of Sciences, Moscow, Russia

11:30-12:00
Logical Analysis of Intelligence Systems by Algebraic Method
B. Kulik, A. Fridman, A. Zuenko, Russian Academy of Sciences (RAS), St. Petersburg, Russia

12:00-12:30
A Risk-Averse Approach to Technical Design
G. Szász, S. Benedikt, I. Kun, Dennis Gabor College, Budapest, Hungary

12:30-13:00
Natural Cognitive Mechanisms in the Tatar Language
D. Suleymanov, Tatarstan Republic Academy of Sciences, Kazan, Russia

Friday p.m.                      Room 46

14:00-14:30
About the Verification Problem at Cognitive Mapping of Ill-structured Situations in the Context of Cognitive Clarity and Relativity Principles
N. A. Abramova, Russian Academy of Sciences, Moscow, Russia

14:30-15:00
Experience in cognitive modeling of complex systems
G. Gorelova, V. Verba, B. Bujanov, Technological Institute at South Federal University, Taganrog, Russia

15:00-15:30
Negotiating Boundaries
S. Vrobel, The Institute for Fractal Research, Bad Nauheim, Germany

15:30-16:00 Coffee Break
16:00-16:30
Cognitive Complexity of Rule-based Disambiguation Method
O. Nevzorova, Kazan State University, Russia

16:30-17:00
Cognitive Relativity, Rationality and Clarity in Uniformology
I. Ezhkova, N. Efimov, International Institute of Applied Technologies,
Brussels, Belgium

Some of OFAI’s Partners:
Thursday p.m. 

14:00-14:30  
Mapping and its Observer  
*M. Füllsack, University of Vienna, Austria*

14:30-15:00  
Living Systems Theory and Typology of Migrations  
*I. Riss, Central Bureau of Statistics, Jerusalem, Israel*

15:00-15:30  
Governance as Societal Distributed Process: A Multi-agent, Multi-mechanism, Multi-level Approach (M3)  
*E. Buchinger, Austrian Institute of Technology, Vienna, Austria*

15:30-16:00 Coffee Break

16:00-16:30  
Social innovations in climate adaptation strategies - first lessons from a regional study  
*K.-H. Simon, University of Kassel, Germany*

16:30-17:00  
Nuclear Knowledge Management in Multilevel Community Networks: Synergetic approach  
*A. Dreimanis, Radiation Safety Centre of the State Environment Service, Riga, Latvia*

17:00-17:30  
Communication and knowledge in the Finnish Nuclear waste management programme  
*M. Silvan-Lempinen, I. Kantola, University of Turku, Finland*

17:30-18:00  
Distributed Decision Support in Home Care  
*L. Lhotska, J. Dolezal, J. Dolezel, Czech Technical University, Prague, Czech Republic*

18:00-18:30  
Governing Innovation Processes in Complex Social Systems  
*P. Ahrweiler, University College Dublin, Ireland*
Tuesday p.m.                    Room 50

14:00-14:30
   Presentation of Abstracts

14:30-15:00
   From Complexity to Reflexivity: The Next Step in the Systems Sciences
   S. Umpleby, The George Washington University, Washington, USA

15:00-15:30
   Spreading Systems Concepts through the Practices of Collaboration and
   Symbiosis
   A. Leonard, The Complementary Set, Toronto, Canada

15:30-16:00 Coffee Break

16:00-16:30
   A Cybernetic Approach to Virtual Collaboration: Collaboration Platform
   for the Public Education
   N. Assimakopoulos, I. Theocharopoulos, University of Piraeus, Greece

16:30-17:00
   Constructing New World Views by Practicing New Management Methods:
   A Constructivist Approach to Education
   T. A. Medvedeva, Siberian State University of Transport,
   Novosibirsk, Russia

17:00-17:30
   Conceptualising and Mapping Social Forces
   J. Raven, Independent, Edinburgh, United Kingdom

17:30-18:00
   The Global 2008 - Crisis and Innovation of Managers' Attributes
   M. Mulej, V. Potocan, Z. Zenko, T. Strukelj, A. Hrast, S. Zizek,
   University of Maribor, Slovenia

Wednesday a.m.                  Room 50

11:00-11:30
   Crisis Prevention - What Is Necessary to Avoid the Next Crisis?
   M. Schwaninger, S. Grösser, University of St. Gallen, Switzerland
11:30-12:00
The credit crisis: the iceberg overturns

J. D. M. Kruisinga, Independent, The Hague, The Netherlands

12:00-12:30
The information requirements and resources for managing dynamic multi-project companies

I. Perko, A. Hauc, I. Vrecko, University of Maribor, Slovenia

12:30-13:00
Managing Knowledge Assets for Competitiveness in the Knowledge Era

M. Ristovska, Z. Popovska, M. Stankosky, University "Ss Cyril and Methodius", Skopje, Macedonia

Wednesday p.m. Room 50

14:00-14:30
Innovation Project Participants Interaction Optimization Models

I. Dubina, Altai State University, Barnaul, Russia

14:30-15:00
Knowledge Creation, Explicit Knowledge and Control

H. Nechansky, nechansky - Engineering Efficiency, Vienna, Austria

15:00-15:30
Innovation Sustaining Life in Change, Crisis - An Overarching Systemic, Semiotic Evolutional Attempt

H. Löckenhoff, Independent Research, Backnang, Germany

15:30-16:00 Coffee Break

16:00-16:30
"Creating Sustainable Futures by Innovation from within": Radical Change is in Demand of Radical Innovation

M. F. Peschl, C. Raffl, T. Fundneider, S. Blachfellner, University of Vienna, Austria

16:30-17:00
Coyotes, Jazz, and Creative Teams: Facing and Seeking Variance

R. Derickson, K.S. Long, V.S. Gordon, A. Tana, W. Tremblay, Innovation Affinity Group, Broomfield, USA

17:00-17:30
How Transdisciplinarity becomes a Member in the Club of Science - Some Preliminary Thoughts on the Contribution of Systems Theory to Theorizing Transdisciplinarity

B. Freyer, J. Bingen, S. Helgenberger, University of Natural Resources and Applied Life Sciences BOKU, Vienna, Austria
17:30-18:00
Current Discourses in Management Science: Comparing Interpretive and Constructivist Approaches
A. Paucar-Caceres, R. Harnden, Manchester Metropolitan University Business School, United Kingdom

Friday a.m. Room 50
11:00-11:30
Creative communication management within complex entrepreneurial innovation processes: a transdisciplinary systems approach
G. Steiner, F. Risopoulos, University of Graz, Austria

11:30-12:00
An Organizational Cybernetics framework for diagnosing and designing organizations
J. P. Ríos, University of Valladolid, Spain

12:00-12:30
Holistic understanding of interactions among innovations and projects
I. Vrecko, M. Mulej, University of Maribor, Slovenia

12:30-13:00
Network topography and coordination synthesis for dynamic networking of manufacturing enterprises
S.-V. Rehm, WHU - Otto Beisheim School of Management, Vallendar, Germany

Friday p.m. Room 50
14:00-14:30
Sustainability Solution Space for the Swiss milk value added chain: Combing LCA data with socio-economic indicators
C. R. Binder, J. Steinberger, A. Schmid, University of Graz, Austria

14:30-15:00
J.-P. Ngana, Independent, Toronto, Canada

15:00-15:30
Elements of a Systemic View on Bank Downscaling
V. Pozdnyakov, Independent, Voronezh, Russia
SYMPOSIUM I

Language Technology
E. Buchberger, Austria

Friday a.m.               Room 41

11:00-11:30
Computer Assisted Language Learning: A Pattern Based Paradigm and a Tool (Cica)
E. Buchberger, Medical University of Vienna, Austria

11:30-12:00
A Joint Model for Resolution and Generation of Referring Expressions in a Restricted Domain
H. Horacek, M. Wolska, DFKI GmbH, Saarbrücken, Germany

12:00-12:30
Bulgarian Possessive and Reflexive-possessive Pronouns in DATR
V. Stoykova, Bulgarian Academy of Sciences, Sofia, Bulgaria

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Tuesday p.m.  

16:00-16:30  
Coordination in Multi-Agent Systems: A Declarative Approach using Coordination Spaces  
A. Vilenica, A. Pokahr, L. Braubach, W. Lamersdorf, J. Sudeikat, W. Renz, University of Hamburg, Germany

16:30-17:00  
Monitoring Time-Aware Social Commitments with Reactive Event Calculus  
F. Chesani, P. Mello, M. Montali, P. Torroni, DEIS - University of Bologna, Italy

17:00-17:30  
Behavior Adaptation in RMAS: An Agent Architecture based on MDPs  
M. S. Fagundes, H. Billhardt, S. Ossowski, University Rey Juan Carlos, Madrid, Spain

17:30-18:00  
Using CSP in the Formal Specification of the Micro-Organizational Level of Multiagent Systems  
R. de Miranda Barbosa, A.C. Rocha Costa, P. C. de Azevedo Resteli Tedesco, A. C. Mota, Instituto de Informática, Porto Alegre, Brazil

18:00-19:00  
Wrap up discussion
Wednesday a.m.          Room 47

11:00-11:30
   Security in Agent-Mediated Negotiation Frameworks 
   R. Ssekibuule, Makerere University Kampala, Uganda

11:30-12:00
   EnvSupport: A Framework for Developing Virtual Environments 
   K. Jander, L. Braubach, A. Pokahr, University of Hamburg, Germany

12:00-12:30
   Use and Reuse of Multi-Agent Models and Techniques in a Distributed 
   Systems Development Framework 
   A. Poggi, M. Tomaiuolo, Università degli Studi di Parma, Italy

12:30-13:00
   Component-Based Agent Architectures to Build Dedicated Agent Frameworks 
   V. Noel, J.-P. Arcangeli, M.-P. Gleizes, Université de Toulouse, France

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SYMPOSIUM K

Agent-Based Modeling and Simulation
S. Bandini, Italy, G. Vizzari, Italy, and P. Petta, Austria

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Danny Weyns

Wednesday p.m.  Room 46

14:00-14:30
Combining Multi Agent System modeling and System Dynamics modeling
E. Gebetsroither, Austrian Institute of Technology, Vienna, Austria

14:30-15:00
A Model and Language for Simulating Asynchronous Automata Networks
S. Bandini, A. Bonomi, G. Vizzari, University of Milano-Bicocca, Italy

15:00-15:30
Development of a game simulation to analyze coalitions in agents
D. Lala, T. Nishida, Kyoto University, Japan

15:30-16:00 Coffee Break

16:00-16:30
Agent-based Exploration of Wirings of Biological Neural Networks
Ö. Gürcan, O. Dikenelli, K. S. Türker, Ege University Bornova, Izmir, Turkey

16:30-17:00
A Framework for Processing Agent Based Pedestrian Activity Simulations in Shopping Environments
J. Dijkstra, J. Jessurun, H. Timmermans, B. de Vries, Eindhoven University of Technology, The Netherlands

17:00-17:30
Designing an Agent-based Simulation of Collective Emotions
S. Rank, Austrian Research Institute for Artificial Intelligence, Vienna, Austria
17:30-18:00
Large-scale Agent-based Simulation of Air-traffic
D. Sislak, P. Volf, M. Pechoucek, Czech Technical University, Prague, Czech Republic

18:00-18:30
Learning by Modeling: Insights from an Agent-based Model of University-Industry Relationships
A. Pyka, G. Triulzi, University of Hohenheim, Stuttgart, Germany

18:30-19:00
Wrap up discussion

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SYMPOSIUM L

Companions, Virtual Butlers, Assistive Robots: Empirical and Theoretical Insights for Building Long-Term Social Relations
D. Heylen, Netherlands, B. Krenn, Austria, and S. Payr, Austria

Thursday p.m. Room 34

14:00-14:30
Prerequisites for Human-Agent- and Human-Robot Interaction: Towards An Integrated Theory
S. C. Eimler, N. C. Krämer, A. M. von der Pütten, University of Duisburg-Essen, Germany

14:30-15:00
Conversation in Context: what should a robot companion say?
P. Wallis, S. Creer, S. Cunningham, V. Maier, The University of Sheffield, United Kingdom

15:00-15:30
Acceptance and Use of a Zoomorphic Robot in a Domestic Setting
T. Klamer, S. B. Allouch, University of Twente, Enschede, The Netherlands

15:30-16:00 Coffee Break

16:00-16:30
Ritual or Routine: Communication in Long-Term Relationships with Companions
S. Payr, Austrian Research Institute for Artificial Intelligence, Vienna, Austria

16:30-17:00
Methodological Considerations for Long-Term Experience with Robots and Agents
T. Ganster, S. C. Eimler, A. M. von der Pütten, L. Hoffmann, N. C. Krämer, University of Duisburg-Essen, Germany
Tuesday p.m.

14:00-14:30
The Role of Recursion in and for Scientific Creativity
*M. Franova, Université Paris-Sud, Orsay, France*

14:30-15:00
Solving the Shortest Common Supersequence Problem Using Iterative Optimization with Evolved Hypermutations
*J. Kubalík, F. Zelezný, Czech Technical University, Prague, Czech Republic*

15:00-15:30
Privacy Protection Using Semantic Technologies
*P. Kremen, M. Blasko, Z. Kouba, Czech Technical University, Prague, Czech Republic*

15:30-16:00 Coffee Break

16:00-16:30
Subspace clustering and the structural chessboard problem
*L. Nováková, O. Stepánková, Czech Technical University, Prague, Czech Republic*

16:30-17:00
On a Mobile Robotics E-learning System
*M. Kulich, K. Kosnar, J. Faigl, L. Preucil, J. Chudoba, Czech Technical University, Prague, Czech Republic*

17:00-17:30
Expert system for blust-furnaces process control
*E. Ivanov, Russian Academy of Sciences, Moscow, Russia*

17:30-18:00
Inferring Optimal Kernel Hyperparameters Using Cox Regression for Cancer Outcome Prediction
*V. Jumutc, P. Zayakin, Riga Technical University, Latvia*

18:00-18:30
Evaluation of Atrial Fibrillation in Human Using Artificial Intelligence Methods
*V. Kremen, L. Lhotska, Czech Technical University, Prague, Czech Republic*
Tuesday p.m. Room 41

16:00-16:30
The Relevance of Systems Science Competence in Professional Life
C. von der Hellen, University of Graz, Austria

16:30-17:00
Teaching Systems-Science: A reality check
A. Kreuzeder, C. R. Binder, University of Graz, Austria

17:00-17:30
Professional Systemics: New Era for Management Practitioners by the Hellenic Society for Systemic Studies
N. Assimakopoulos, I. Theocharopoulos, M. Konstantopoulou, University of Piraeus, Greece

Wednesday p.m. Room 41

14:00-14:30
Systems Science Informing Service (Systems) Science
J. Wilby, The Business School, University of Hull, United Kingdom

14:30-15:00
Metanoia and Aporias: Linking Systems Thinking with Yin/Yang Daoism
T. Vlk, G. Ossimitz, Technical University Graz, Austria

15:00-15:30
Generic System Structures of Catastrophes
M. Mrotzek, C. R. Binder, University of Graz, Austria

15:30-16:00 Coffee Break

16:00-16:30
Critical Reflections on Lean Systems Thinking
A. J. Gregory, University of Hull, United Kingdom

16:30-17:00
Win" - Going beyond Zero-sum Enterprises
G. Frankl, G. Ossimitz, University of Klagenfurt, Austria
The Austrian Research Institute for Artificial Intelligence (Österreichisches Forschungsinstitut für Artificial Intelligence, OFAI) is a research institute of the Österreichische Studiengesellschaft für Kybernetik (OSGK), a registered scientific society founded in 1969.

The OFAI is one of Europe's leading non-profit contract research institutions. It has been cooperating with international and national organisations, companies, universities and research institutes from 28 countries.

In solving the problems of its partners, OFAI uses methods like machine learning and data mining, language and speech technology, neural networks, intelligent software agents and other software technologies, with many of the underlying methods developed in-house.

Services offered range from consultancy, basic and applied research on a contractual base, to working as partner or prime contractor in scientific projects on a national or European level, with a more than twenty year experience in a diversity of domains, from economic, engineering, administrative to social and cultural tasks.

Currently, 25 specialists, mainly computer scientists and linguists, all graduates from universities, work as employees at the OFAI, plus 9 scientists, mainly professors at universities, on a contractual base.

At the Austrian Research Institute for Artificial Intelligence (OFAI) basic and applied research is performed in several areas of AI, most notably:

- Language Technology
- Interaction Technologies
- Intelligent Music Processing and Machine Learning
- Intelligent Software Agents and New Media
- AI and Society

Please find a list of projects currently undertaken or recently successfully finalized on the next page. More details can be found at www.ofai.at.
### PROJECTS CURRENTLY UNDERTAKEN OR RECENTLY SUCCESSFULLY COMPLETED AT THE AUSTRIAN RESEARCH INSTITUTE FOR ARTIFICIAL INTELLIGENCE (OFAI)

#### Projects funded by the EU

<table>
<thead>
<tr>
<th>Project</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Collective Emotions in Cyberspace</td>
<td>CYBEREMO</td>
</tr>
<tr>
<td>Integrating Research in Interactive Storytelling</td>
<td>IRIS</td>
</tr>
<tr>
<td>Learning for Security</td>
<td>L4S</td>
</tr>
<tr>
<td>Social Engagement with Robots and Agents</td>
<td>SERA</td>
</tr>
<tr>
<td>Responsive Artificial Situated Cognitive Agents that Live and Learn on the Internet</td>
<td>RASCALLI</td>
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#### Project funded by the Austrian Science Fund (FWF)

<table>
<thead>
<tr>
<th>Project</th>
<th>Code</th>
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<tbody>
<tr>
<td>Towards automatic annotation of electro-acoustic music</td>
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</table>

#### Projects funded by the Austrian Research Promotion Agency (FFG)

<table>
<thead>
<tr>
<th>Project</th>
<th>Code</th>
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<tr>
<td>Companions für UserInnen</td>
<td>C4U</td>
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<tr>
<td>Expert Seeking Support System</td>
<td>EXPERTSEEK</td>
</tr>
<tr>
<td>Ontologiebasierte Informationsextraktion und Suche</td>
<td>OREX-2</td>
</tr>
<tr>
<td>Multifaceted Analysis of News Articles for Intelligent User- and Context-Sensitive Presentation</td>
<td>MAGNIFICENT</td>
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#### Projects funded by the Vienna Science and Technology Fund (WWTF)

<table>
<thead>
<tr>
<th>Project</th>
<th>Code</th>
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<tbody>
<tr>
<td>Audio-Miner: Mathematical Signal Analysis and Modeling for Manipulation of Sound Objects.</td>
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<tr>
<td>Viennese Sociolect and Dialect Synthesis</td>
<td>VSDS</td>
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</tbody>
</table>

#### Projects funded by the Federal Ministry of Economics and Labour – K-net program

<table>
<thead>
<tr>
<th>Project</th>
<th>Code</th>
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<tbody>
<tr>
<td>Competence Network for Advanced Speech Technologies</td>
<td>COAST</td>
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</tbody>
</table>

An Overview of some of our partners is to be found on page11.
In case you are interested in a project or your institution (institute, company, etc.) may be interested to be a partner or to have OFAI as a partner in a project proposal, e.g. for a EU program, please contact us.
Participants are kindly invited by the Mayor of Vienna and by the Austrian Society for Cybernetic Studies to the Heurigen 10er Marie on Friday 9 April at 20:00

How to get to the Heurigen “10er Marie” using public transport

The wine tavern "10er Marie" is easily reached by public transport! The tram line J runs directly past the house and the underground line 3 is also nearby.

Take the tram line J (from the Ring, for example the Viennese Opera house) – stop Johann-Krawarik-Gasse or Ottakringer Str./Erdbrustgasse.

Take the underground line 3 (from Vienna centre or the railway station west) to the final tube station Ottakring, then continue walking for about 3 minutes.
## Restaurants and Cafés near the University

### Restaurants

#### Viennese/Austrian Kitchen

<table>
<thead>
<tr>
<th>Restaurant</th>
<th>Address</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Hebenstreit**</td>
<td>Rockhgasse 1, 1010 Wien</td>
<td>11:30 – 24:00</td>
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<tr>
<td>Fromme Helene**</td>
<td>Josefstädter Strasse 15, 1080 Wien</td>
<td>11:00 – 24:00</td>
</tr>
<tr>
<td>Lebenbauer**</td>
<td>Teinfaltstraße 3, 1010 Wien</td>
<td>11:00 – 15:00, 17:30 – 22:30</td>
</tr>
<tr>
<td>Zum Leupold**</td>
<td>Schottengasse 7, 1010 Wien</td>
<td>10:00 – 24:00</td>
</tr>
</tbody>
</table>

#### International Kitchen

<table>
<thead>
<tr>
<th>Restaurant</th>
<th>Address</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akakiko*</td>
<td>Heidenschuss 3, 1010 Wien</td>
<td>11:00 – 23:00</td>
</tr>
<tr>
<td>Appiano***</td>
<td>Schottenbastei 4, 1010 Wien</td>
<td>12:00 – 14:30, 18:00 – 23:00</td>
</tr>
<tr>
<td>Molly Darcy’s Irish Pub**</td>
<td>Teinfaltstraße 6, 1010 Wien</td>
<td>11:00 – 02:00</td>
</tr>
<tr>
<td>Mr. Lee*</td>
<td>Dr. Karl-Lueger-Ring 4, 1010 Wien</td>
<td>11:00 – 23:30</td>
</tr>
<tr>
<td>Pizzeria Il Sestante*</td>
<td>Piaristengasse 50, 1080 Wien</td>
<td>11:30 – 23:30</td>
</tr>
<tr>
<td>Trattoria Martinelli***</td>
<td>Freyung 3, 1010 Wien</td>
<td>12:00 – 15:00, 18:00 – 24:00</td>
</tr>
</tbody>
</table>

### Cafés

<table>
<thead>
<tr>
<th>Café</th>
<th>Address</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Café Central***</td>
<td>Corner Herrengasse/ Strauchgasse</td>
<td>07:30 – 22:00</td>
</tr>
<tr>
<td>Café Landtmann***</td>
<td>Dr.-Karl-Lueger-Ring 4, 1010 Wien</td>
<td>07:30 – 24:00</td>
</tr>
<tr>
<td>Café im Schottenstift**</td>
<td>Schottengasse 2, 1010 Wien</td>
<td>07:00 – 23:00</td>
</tr>
<tr>
<td>Café Stein**</td>
<td>Währinger Straße 6-8, 1090 Wien</td>
<td>07:00 – 01:00</td>
</tr>
<tr>
<td>Demmers Tearoom**</td>
<td>Mölker Bastei 5, 1010 Wien</td>
<td>09:00 – 18:00</td>
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</table>

Price Level: * low, ** average, *** high

Wireless Local Area Network available: (***)
Main Building of the University of Vienna
Author Index

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GENERAL INFORMATION

WELCOME TO THE EMCSR 2010!

The University of Vienna is one of the oldest European universities, founded in 1365, and has been a leading institution of scientific teaching and research ever since. The conference will be held at the main building of the University of Vienna at Dr. Karl Lueger-Ring1, 1st district.

CONFERENCE DESK: The Conference Desk on the first floor will be at your service on Tuesday from 09:00 a.m. to 07:00 p.m., on Wednesday from 08:30 a.m. to 07:00 p.m., on Thursday from 01:30 to 06:00 p.m. and on Friday from 08:30 a.m. to 05:00 p.m. for registration and information. You may also contact members of the Organizing Committee for help and information.

BADGES: You are kindly asked to wear your badge all through the Conference to identify you as a Congress participant, because the university building is open to the public.

INTERNET ACCESS: There are numerous small Internet cafés throughout the city. You can find a list of restaurants and cafés near the University providing WLAN on page 27.

REFRESHMENTS: Coffee will be available free of charge at the Conference Desk office during the coffee breaks. Other refreshments can be bought in the university building (look for “Buffet”).

SOCIAL PROGRAMME: Friday, 9 April 2010, at 08:00 p.m. invitation to a “Heurigen” by Dr. Michael Häupl, the Mayor of Vienna, and by the Austrian Society for Cybernetic Studies. Special invitations will be available at the registration desk on Thursday, 8 April.

FEES: The conference fee (€ 250,- for payments received by February 5, 2010, € 300,- if received later, € 350,- for payment at the registration desk) includes participation in the Twentieth European Meeting, attendance at the Heurigen, and the volumes of the proceedings.


We are happy to welcome you in Vienna and hope that your stay here will be successful and pleasant!

The Organizing Committee of the 20th EMCSR 2010.
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<td>Great Festival Hall</td>
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**A Systems Science**
R. Belohlavek, USA, G. Klir, USA, and P. Prautsch, Czech Republic

**B Mathematical Methods in Cybernetics and Systems Theory**
J. Scharinger, Austria

**C The Cybernetics of Cybernetics: Cybernetics, Interaction and Conversation**
R. Glanville, UK

**D Biocybernetics and Mathematical Biology**
L. M. Ricciardi, Italy

**F Cognitive Rationality, Relativity and Clarity**
I. Ezhkova, Belgium

**G Governance of Knowledge & Technology as a Societal Distributed Process**
E. Buchinger, Austria

**H Management, Organizational Change, and Innovation**
M. Mulej, Slovenia, G. Steiner, Austria, and S. Umpleby, USA

**I Language Technology**
E. Buchberger, Austria

**J From Agent Theory to Agent Implementation - AT2AI-7**
J. P. Müller, Germany, and P. Petta, Austria

**K Agent-Based Modeling and Simulation – ABModSim 2010**
S. Bandini, Italy, G. Vizzari, Italy, and P. Petta, Austria

**L Companions, Virtual Butlers, Assistive Robots: Empirical and Theoretical Insights for Building Long-Term Social Relationships**
D. Heylen, Netherlands, B. Krenn, Austria, and S. Payr, Austria

**M Theory and Applications of Artificial Intelligence**
V. Marik, Czech Republic, and O. Stepankova, Czech Republic

**N Challenges, Visions and Roadmaps of Systems Sciences**
G. Ossimitz, Austria, and G. Chroust, Austria

*Plenary Lecture*