

BUSINESS INFORMATION SYSTEMS 2002

bis



Program

# BIS 2002

5<sup>th</sup> International Conference on  
Business Information Systems,  
Poznań, Poland, 24-25 April 2002







## Invitation

**BIS 2002** is the 5<sup>th</sup> conference devoted to Business Information Systems that will take place in April 2002 in Poznań, Poland. **BIS 2002** aims to discuss the development, implementation, application and improvement of computer systems for business processes. It is addressed to the scientific community, people involved in the development of business computer applications, consultants helping to properly implement computer technology and applications in industry. The conference will be an opportunity for interesting international discussions. This will be facilitated by a number of invited lectures presented by international experts. The **BIS 2002** international Program Committee was composed of 54 scientists from diverse locations – from the United States of America to Australia, from countries with a stable economy through to those undergoing economic transformation. This helped further enrich the conference program, which covers such topics as knowledge management, financial information systems, business processes management, e-marketplaces, e-business, web languages and web personalization, e-learning, pan-european legal information systems and others.

Witold Abramowicz  
The Poznań University of Economics, Poland  
Program Committee Chairman

Poznań, 24-25 April 2002

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fax +48 61 856 93 34  
<http://bis.kie.ae.poznan.pl>

# Workshops

## **BAVR – Business Applications of Virtual Reality**

This workshop is devoted to business opportunities provided by new challenging area, namely, Virtual Reality. This workshop will be a forum where researchers share their experience with businessmen interested in future areas of business activity and looking for new opportunities.

### **Organizers**

Wojciech Cellary, The Poznań University of Economics, Poland

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Nikolaos Ioannidis, Intracom S.A., Greece

Paul Lister, University of Sussex, United Kingdom

Krzysztof Walczak, The Poznań University of Economics, Poland

Martin White, University of Sussex, United Kingdom

## **WOOPS – Workshop on Object-Oriented Business Solutions**

Focuses on the exchange of new technology, methods, tools, and applications in the broad field of e-commerce applications and object-oriented technology. It is not a pure scientific meeting, but a mixed gathering where people from the industry and the academia are expected to exchange ideas, experiences and foster lively discussion on the topics the selected papers will deal with.

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M. Piattini – University of Catilla-La Mancha, Spain  
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F. Sánchez – University of Extremadura, Spain  
D. Tavangarian – University of Rostock, Germany  
B. Tekinerdogan – University of Twente, The Netherlands  
M. Toro – University of Seville, Spain  
V. Tosic – Carleton University, Canada  
I. Traoré – University of Victoria, Canada  
K. Zielinski – University of Mining and Metallurgy, Poland

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José L. Arjona – University of Sevilla, Spain.  
José A. Pérez – University of Sevilla, Spain.  
David Ruiz – University of Sevilla, Spain.  
Bartosz Bebel – The Poznan University of Technology, Poland.

# Special Sessions

## **Pan-European Legal Information Systems**

The purpose of this special session is to provide a special forum for and gather all who are interested in legal information technology and legal information systems issues.

### **Special Session Chairmen**

Erich Schweighofer, University of Vienna, Austria

Tadeusz Tomaszewski, The Poznań University of Economics, Poland

## **Socio-cognitive Engineering in the Modelling of Business Intelligence**

The special session brings together researchers and practitioners from a variety of disciplines who are addressing or facing issues in the role of human factor for business information systems. This session should provide new systemic integrated knowledge to the managers of large corporations, banks, insurance institutions, emergency managers on national and local levels, including information and organizational knowledge managers.

### **Program Committee**

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Nicholas Gessler, The University of California, USA

Charles J. Petrie, Stanford Networking Research Center, Stanford University, USA

Andrzej Straszak, Systems Research Institute - Polish Academy of Sciences, Poland

Vasyl Yanenko, Glushkov Institute of Cybernetics, National Academy of Sciences of Ukraine, Ukraine

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# 24<sup>th</sup> April

**10:00-12:30 Inauguration session and keynote presentations**  
**Aula**

**Chairman: Witold Abramowicz**



## **Arkady Zaslavsky**

School of Computer Science & Software Engineering, Monash University  
Melbourne, Australia

*Mobility in Enterprise Applications*

Arkady Zaslavsky is an Associate Professor at Monash University, Australia. He is also an Adjunct-Professor at the Lulea University of Technology, Sweden. He received MSc in Applied Mathematics majoring in Computer Science from Tbilisi State University (Georgia, USSR) in 1976 and PhD in Computer Science from the Moscow Institute for Control Sciences (IPU-IAT), USSR Academy of Sciences in 1987. Arkady Zaslavsky has more than 150 publications throughout his professional career. He organised and chaired many workshops and conferences in mobile computing area, including "Mobility in Databases and Distributed Systems" and International Conference on Mobile Data Management, MDM2003. He is an editorial board member for Elsevier journals "Computer Communications" and "Information and Software Technology". His research interests include mobile and pervasive computing; distributed and mobile agents and objects; wireless networks; distributed computing and database systems; distributed object technology and mobile commerce.

Arkady Zaslavsky has been awarded and involved in many research grants and projects including "M3: Enterprise Architecture for Mobile Computation", "Context-rich mobile agent technology to support information needs of financial institutions", "Adaptive Distributed Information Services", "Mobile City" and others. He is a member of ACS, ACM and IEEE Computer and Communication Societies.

### *Mobility in Enterprise Applications - Abstract*

In recent years, mobile computing has become the focus of intensive research efforts in various areas of information and communication technologies. These areas include wireless networking, distributed systems, operating systems, distributed databases, software engineering, applications development, just to name a few. Pervasive, ubiquitous, invisible, wearable computing all refer to different foci in addressing implications of mobility in diverse computer

applications. Mobile computing is associated with mobility of users, hardware, software and data. This talk concentrates on various aspects of mobility and its implications, as well as on enabling technologies. Enterprises are undergoing major evolution and changes linked to pervasiveness of distributed electronic services, available "anytime, anywhere". We will discuss challenges that business applications face with regards to mobility. These challenges include adaptability, context management, security, customisable interfaces, accuracy and credibility of information, system reliability and cost-efficiency. The architectural issues of building enterprise applications, which support mobile and pervasive computational activities, will also be presented. Finally, we will discuss a project on developing mobility-enabled enterprise architecture at the Cooperative Research Centre "Distributed Systems Technology Centre", CRC DSTC, funded by the Australian Government.

**Konrad Makomaski**

Chief Executive Officer, Otwarty Rynek Elektroniczny S.A. Marketplanet, Poland  
*B2B marketplace implementation in Poland - a practical case*

Konrad Makomaski has been CEO of Otwarty Rynek Elektroniczny S.A. Marketplanet, the first e-marketplace in Poland, since April 2001. Prior to his current position, he served as President of the Board at Informix Software Poland. Before joining Informix, he held several management and consulting positions at companies including Oracle France, Oracle International, Arche SQL, Bull, Huta Katowice. From 1982, he spent 11 years abroad (France, Germany, USA), where he led many DP projects for industry.

He graduated from the Technical University of Warsaw, Poland, and the International School of Business INSEAD, France.

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**13:30-15:00 Knowledge Management Session I**  
**Aula Chairman: Heinrich C. Mayr**

Gary Klein, W. Ben Martz, Venkat Reddy, College of Business and Administration, The University of Colorado, Colorado Springs, USA, James Jiang, Department of Management Information Systems, University of Central Florida, USA,

*An Exploration of Information Technology Infrastructure as Related to Knowledge Management Performance*

Gunnar Auth, Eitel von Maur, Markus Helfert, Institute of Information Management, University of St. Gallen, Switzerland,

*A Model-based Software Architecture for Metadata Management in Data Warehouse Systems*

Christian Dietze, J. Felix Hampe, Lu Nhiem, Silke Schönert Institute for IS Research, University of Koblenz-Landau, Germany,

*Knowledge Generation and Dissemination in Virtual Teams by Using Heterogeneous Media*

**15:15-16:45 Knowledge Management Session II**  
**Aula Chairman: Arkady Zaslavsky**

Zdzisław S. Hippe, Piotr Błajdo, Mariusz Wrzesień, Department of Expert Systems and Artificial Intelligence, University of Information Technology and Management, Rzeszów, Poland,

*New Hybrid Environment for Knowledge Discovery from Vector-Oriented Databases in Business and Management*

Witold Chmielarz, The Management Department, University of Warsaw, Poland,

*An Attempt at the Evaluation of the Websites of Polish Internet Stores*

Marek Wojciechowski, Maciej Zakrzewicz, The Poznan University of Technology, Institute of Computing Science, Poland,

*Access Paths for Data Mining Query Optimizer*

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# BIS 2002 at glance

## April 23, Tuesday

Room	236	213
14:00	Ryszard Kowalczyk, INTERSHOP Research, Australia, Introduction to Intelligent Software Agents in Dynamic e-Commerce	Janusz Dorozynski, ZETO Poznan, Poland IT Outsourcing – a solution for the hard times

## April 24, Wednesday

Room	Aula	213	236	115
10:00	Inauguration session and keynote presentations ( aula)			
12:30	Lunch (room 111)			
13:30	Knowledge Management I	E-marketplaces I	Web Languages and Web Personalization I	Special Session Pan-European Legal Information Systems I
15:00	Coffee break			
15:15	Knowledge Management II	E-marketplaces II	Web Languages and Web Personalization II	Special Session Pan-European Legal Information Systems II
16:45	Coffee break			
17:00	Knowledge Management III	E-Learning	Intelligent Text Processing for Business Information Systems	Special Session - Socio-Cognitive Engineering in the Modelling of Business Intelligence
19:00	Banquet			

## April 25, Thursday

Room	Aula	213	236	
8:00	Financial Information Systems	BAVR 2002 - Workshop on Business Applications of Virtual Reality I	WOOBS 2002 – Workshop on Object-Oriented Business Solutions I	
9:30	Coffee break			
9:45	Invited Speakers ( aula)			
12:00	Lunch (room 111)			
13:00	Business Processes Management I	BAVR 2002 - Workshop on Business Applications of Virtual Reality II	WOOBS 2002 – Workshop on Object-Oriented Business Solutions II	
14:30	Coffee break			
14:45	Business Processes Management II	BAVR 2002 - Workshop on Business Applications of Virtual Reality III	WOOBS 2002 – Workshop on Object-Oriented Business Solutions III	
16:15	Closing ceremony			

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**17:00-18:30 Knowledge Management Session III**  
**Aula Chairman: Zdzisław Hippe**

Otto Cordero, C. Enrique Peláez, Centro de Tecnologías de Información ESPOL, Guayaquil, Ecuador,  
*Dynamic Business Intelligence, Automated Decision Making with Fuzzy Cognitive Maps*

Alan Chmura, Solomon D. Trujillo Center for e-Business, College of Business, University of Wyoming, USA,  
*Transforming Operational Data to Fit the Data Warehouse*

K. Michalik, AITECH, Poland,  
*Hybrid AI Methods for Complex Problems Solving*

**13:30-15:00 E-marketplaces Session I**  
**room 213 Chairman: Stephanie Teufel**

Ryszard Kowalczyk, Bogdan Franczyk, Andreas Speck, Intershop Research, Germany, Peter Braun, Jan Eismann, Wilhelm Rossak, Friedrich Schiller University, Jena, Germany,  
*Integrating Mobile and Intelligent Agents in e-Marketplaces*

Frank Teuteberg, Karl Kurbel, Business Informatics, Europe University Viadrina, Germany,  
*Anticipating Agents' Negotiation Strategies in an E-marketplace Using Belief Models*

Harald Häuschen, Department of Information Technology, University of Zurich, Switzerland,  
*Trading of Ownership for Tangible and Digital Goods*

**15:15-16:45 E-marketplaces Session II**  
**room 213 Chairman: Ryszard Kowalczyk**

Jürgen Seitz, Krzysztof Woda, Department of Information Systems, Viadrina University, Germany,  
*The Role of Digital Watermarking to the Protection of Rights for Digital Media Assets*

Y. Ding, M. Korotkiy, B. Omelayenko, V. Kartseva, V. Zykov, M. Klein, E. Schulten, D. Fensel, Vrije Universiteit Amsterdam, Netherland,  
*GoldenBullet: Automated Classification of Product Data in E-commerce*

H. Lejmi, T. Zeller, R. Horstmann, Bavarian Information Systems Research Network (FORWIN), Germany,  
*Integration of ERP Software with B2B Marketplaces – a Case Study*

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**17:00-18:30 E-Learning Session**  
**room 213 Chairman: Eli Cohen**

Diana Wilson, Dermot Beirne, Dawn Hogan, Department of Computer Science, Trinity College Dublin, Ireland, John Keaney, Officer Ordnance School, Combat Service, Support Clancy Barracks Dublin, Ireland,  
*The Logistics of Learning: a Lotus Notes Prototype to Coordinate Training Support in the Irish Defence Forces*

Gaby Neumann, University of Magdeburg, Germany,  
*Towards More Personalised E-Learning in Logistics*

Anongnart Srivihok, Kasetsart University Thailand, Arunee Intrapairot, Rajamangala Institute of Technology, Thailand,  
*A Conceptual Framework for e-Learning in Tertiary Education in Thailand*

**13:30-15:00 Web Languages**  
**room 236 and Web Personalization Session I**  
**Chairman: Marcin Paprzycki**

Jaroslav Pokorny, Department of Software Engineering, Faculty of Mathematics and Physics Prague, Czech Republic,  
*XML- $\lambda$ : an Extendible Framework for Manipulating XML Data*

Stanislaw Ambroszkiewicz, Institute of Computer Science Polish Academy of Sciences, Dariusz Mikulowski, Leszek Rozwadowski, Institute of Informatics University of Podlasie, Siedlce, Poland,  
*Entish: e-Language for Web Service Integration*

Kinga Wójciak, T-Systems (Sponsor),  
*Web Services as a Platform for B2B Systems*

**15:15-16:45 Web Languages**  
**room 236 and Web Personalization Session II**  
**Chairman: Jaroslav Pokorny**

Simon R. Chudley, Ulrich Ultes-Nitsche, University of Southampton, UK,  
*Simulation and Implementation of an E-Commerce Communications Infrastructure using XML Specifications*

Benyu Zhang, Wenxin Li, Zhuoqun Xu, Department of Computer Science & Technology, Peking University, China,

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*Personalized Tour Planning System Based on User Interest Analysis*

Violetta Galant, The Wroclaw University of Economics, Poland, Marcin Paprzycki, Department of Computer Science, Oklahoma State University, USA,  
*Information Personalization in an Internet Based Travel Support System*

**17:00-18:30 Intelligent Text Processing  
room 236 for Business Information Systems  
Chairman: Dieter Fensel**

S. Beauregard, H. Huang, K. Konrad, S. Schmeier, XtraMind Technologies GmbH, Germany,  
*Industrial-Strength Text Classifiers*

Florence Duclaye, Pascal Filoche, Jerzy Sitko, Olivier Collin, France Télécom R&D Centre national d'Etudes des Télécommunications DMI/GRI Technopole Anticipa, France,  
*A Polish Question-answering System for Business Information*

M. Pondel, INFOMEDIA - Business Consultants & IT Solutions, Poland,  
*Filtering Large Databases in Economy by Using OLAP Technology*

**13:30-15:00 Special Session - Pan-European  
room 115 Legal Information Systems I  
Chairman: John Zeleznikow**

Maria Jean J. Hall, Donald Berman Laboratory for Information Technology and Law, University Bundoora, Australia, John Zeleznikow, Joseph Bell Centre for Forensia Statistics and Legal Reasoning, UK  
*The Context, Criteria, Contingency Evaluation Framework for Legal Knowledge-Based Systems*

Marie-Francine Moens, Jos Dumortier, Katholieke Universiteit Leuven, Belgium, Maarten Logghe, JCS International, Belgium,  
*Digital Legislation: Reflections on the Agora-Lex Project*

Erich Schweighofer, Gottfried Haneder, Andreas Rauber, Michael Dittenbach, University of Vienna, Austria,

*Improvement of Vector Representations of Legal Documents with Legal Ontologies*

**15:15-16:45 Special Session Pan-European  
room 115 Legal Information Systems II  
Chairman: Tadeusz Tomaszewski**

John Zeleznikow, Joseph Bell Centre for Forensia Statistics and Legal Reasoning, UK, Andrew Stranieri, Donald Berman Laboratory for Information Technology and Law, Australia,

*A Framework for the Construction of Legal Decision Support Systems*

Andrzej Malec, University of Białystok, Poland,  
*Forms of Legal Defining and Legal Information Systems*

Witold Abramowicz, Tadeusz Tomaszewski, The Poznan University of Economics, Poland,  
*Legal Information and Legal Information Representation*

**17:00-19:00 Special Session - Socio-cognitive  
room 115 Engineering in the Modelling  
of Business Intelligence  
Chairmen: Adam M. Gadomski,  
Andrzej Straszak**

Andrzej Straszak, Systems Research Institute – Polish Academy of Sciences, Adam M.Gadomski, Italian National Research Organization for Energy and the Environment,  
*Socio-Cognitive Engineering Paradigms for Business Intelligence Modelling: the TOGA conceptualization*

Andrzej Straszak, Systems Research Institute – Polish Academy of Sciences,  
*Socio-Cognitive Aspects of the Development of Business Management and Organization Systems: Human and Social Factors*

R.Bosco, Intersiel s.p.a., Via G.Rossigni, Italy, E. Maltseva, Universita 'degli Studi della Calabria, Italy,  
*Visual Data Mining for Monitoring of Territory*

Vincent Ong, Yanqing Duan, Luton Business School, University of Luton, Bedfordshire, UK, Mark Xu, University of Portsmouth, United Kingdom,  
*An Agent-based Environment For Supporting Executive Intelligence Activities*

# 25<sup>th</sup> April

## 8:00-9:30 **Financial Information Systems Session** **Aula** **Chairman: Chih-Cheng Hung**

Mahmood H. Shah, Rahat H. Bokhari, Department of Information Systems and Computing, Brunel University Uxbridge, Middlesex, United Kingdom,  
*Decision Making Framework for Internet Banking Based on Critical Success Factors Approach*

F. Xu, D. Kurz, J. Piskorski, S. Schmeier, DFKI GmbH, Germany,  
*Term Extraction and Mining Term Relations from Unrestricted Documents in the Financial Domain*

Willie Bossie, Department of Computer Science, Alabama A&M University, Normal, Alabama, USA, Chih-Cheng Hung, School of Computing & Software Engineering, Marietta, Georgia, USA,  
*A Hybrid Mixture of Neural Networks, Fuzzy Logic and Expert Systems for the Generation of Trading Signals in a Financial Market*

## 9:45-12:00 **Invited Speakers** **Aula** **Chairman: Gary Klein**



**Eli Cohen**  
USA

*An Analysys for Understanding Practical and Future Challenges to IT Education*

Prof. dr Cohen serves as Editor-in-Chief for two publications, Informing Science: The International Journal of an Emerging Discipline (<http://inform.nu>) and the Journal of Information Technology Education (<http://jite.org>). He has an interdisciplinary background, including 1) degrees in Management Information Systems, Computer Science, Mathematics, Education, Psychology, 2) Certification/ Licensure in Systems, Programming, DP Management, Psychology, 3) Work Experience in Faculty Development (Teaching, Research) among others, and Publications and Editorship in Literary, Religion, and Interdisciplinary Journals. He also serves as Conference Chair for the Informing Science + IT Education Conference (<http://is2002.com>). His resume can be found at <http://elicohen.net>.

### *An Analysis for Understanding Practical and Future Challenges to IT Education - Abstract*

Many, if not most of us who are called upon to teach information technology (IT) bring to the classroom a set of assumptions about both IT and education. However, the reality of IT education is complex. IT Education issues are multidimensional and within this framework, balanced.

This paper proposes a framework by which to place current and future IT education issues. The framework is built along the easy to understand dimensions of "Who", "What", "Where", "When", "Why", and "How". The paper begins by defining and explaining these dimensions. It then shows how they will be used in a line of exploratory research.



#### **Dieter Fensel**

Vrije Universiteit Amsterdam

The Netherlands

*Semantic Web Enabled Web Services*

Dieter Fensel is an associated professor at the Vrije Universiteit Amsterdam in the area of business informatics. After studying mathematics, sociology and computer science in Berlin, he joined in 1989 the Institute AIFB at the University of Karlsruhe. His major subject was knowledge engineering and his PhD thesis in 1993 was about a formal specification language for knowledge-based systems. From 1994 until 1996 he visited the SWI Department in Amsterdam. During this time his main interest were problem-solving methods of knowledge-based systems. In 1996, he come back as a senior researcher at the Institute AIFB finalizing his Habilitation in 1998. Currently, his focus is on the use of Ontologies to realize semantic web technology and to apply it in knowledge management and electronic commerce. He has published around 150 papers. He organized around 100 scientific workshops and conferences and has edited several special issues of scientific journals. He is associated editor of Knowledge and Information Systems: An International Journal (KAIS), Springer-Verlag, and IEEE Intelligent Systems. He is involved in several national and internal research projects, for example, in the running IST projects Htechsight, IBROW, Multiple, Obelix, On-to-Knowledge, Ontoweb, SWAP, and Wonderweb.

#### *Semantic Web Enabled Web Services – Abstract*

Currently, computers are changing from single, isolated devices into entry points to a worldwide network of information exchange and business transactions called the World Wide Web. However, the easy information access based on the success of the web has made it increasingly difficult to find,

present, and maintain the information required by a wide variety of users. In response to this problem, many new research initiatives and commercial enterprises have been set up to enrich available information with machine-understandable semantics. This semantic web will provide intelligent access to heterogeneous, distributed information, enabling software products to mediate between user needs and the information sources available. Web Services tackle with an orthogonal limitation of the current web. It is mainly a collection of information but does not yet provide support in processing this information, i.e., in using the computer as a computational device. Recent efforts around UDDI, WSDL, and SOAP try to lift the web to a new level of service. Software programs can be accessed and executed via the web. However, all these service descriptions are based on semi-formal natural language descriptions. Therefore, the human programmer need be kept in the loop and scalability as well as economy of web services are limited. Bringing them to their full potential requires their combination with semantic web technology. It will provide mechanization in service identification, configuration, comparison, and combination. Semantic Web enabled Web Services have the potential to change our life in a much higher degree as the current web already did.

**Norbert Fuhr**

University of Dortmund, Germany

*Information Retrieval Methods for XML Documents*

Norbert Fuhr is professor at the CS department of the University of Dortmund (Germany) since 1991. He received a master (diploma) in technical computer science in 1980 and a PhD (Dr) in 1986 from the Technical University of Darmstadt (Germany), where he also worked in the CS department from 1980-91.

His major research areas are information retrieval models and methods, especially for the integration of information retrieval and database systems, semistructured data and multimedia. Currently, he is involved in a number of national and international research projects dealing with the application of these concepts for digital libraries and XML documents.

*Information Retrieval methods for XML Documents – Introduction*

XML is going to be established as standard document format, especially for Web-based applications. The major purpose of

XML markup is the explicit representation of the logical structure of a document. Given this markup, different kinds of operations referring to the logical structure can be performed on XML documents: multiple views on a document can be generated, specific elements of an XML document can be extracted, or documents fulfilling specific structural conditions can be retrieved from a document base. Overall, if information is represented in XML format, exchange of this information between different software systems (especially on the Web) is simplified, thus supporting interoperability. Looking at the broad variety of XML applications and systems that are currently under development, one can see that there are in fact two different views on XML: The document-centric view focuses on structured documents in the traditional sense (based on concepts from electronic publishing, especially SGML). The data-centric view uses XML for exchanging formatted data in a generic, serialized form between different applications (e.g. spreadsheets, database records).

**13:00-14:30 Business Processes Management**  
**Aula Session I**  
**Chairman: Václav Řepa**

Ales Groznik, Andrej Kovacic, Faculty of Economics,  
University of Ljubljana, Slovenia,  
*Business Renovation: from Business Process Modelling  
to Information System Modelling*

Emilda Sindhu, Low Hock Chuan, Alex Lee, Institute of High  
Performance Computing, Singapore, Shaik Mohammad  
Salim, Ministry of Manpower Singapore,  
*COVES: Collaborative One Stop Virtual Engineering  
Services*

Barbara Begier, The Poznań University of Technology  
Poland,  
*A Tool Supporting Continual Improvement of Processes in  
Organisation*

**14:45-16:15 Business Processes Management**  
**Aula Session II**  
**Chairman: Witold Chmielarz**

Masao J. Matsumoto, Graduate School of Business  
Science, The University of Tsukuba, Tokyo, Japan,  
*Methodological Gap in e-business Architecture Modeling*

Andrzej Sobczak, Department of Business Informatics  
Warsaw School of Economics, Poland,  
*Defining Requirements for Information Systems in the  
Context of the Strategic Management to the Public*

Leszek Nowaczyk, Kleindienst Datentechnik Poland,  
(Sponsor),  
*Applications for efficient business process automation*

**8:00-16:15**      **BAVR - Workshop**  
**room 236**        **Chairmen:** Wojciech Cellary,  
Thanos Demiris, Nikolaos Ioannidis,  
Krzysztof Walczak, Martin White

A. M. Demiris, N. Ioannidis, M. Traka, Intracom S.A., C.  
Garcia, University of Crete, C. Malerczyk, ZGDV Computer  
Graphics Center, Germany, K. Klein, Fraunhofer Institut für  
Graphische Datenverarbeitung, Germany, K. Walczak, The  
Poznan University of Economics, Poland, P. Kerbirou,  
Thomson Multimedia, D. Curet, France Telecom, E.  
Reusens, Dartfish Ltd., E. Boyle, Dublin City University,  
Ireland, J. Wingbermhühle, University of Hannover,  
*Sprinting along with the Olympic Champions:  
Personalized, Interactive Broadcasting using Mixed Reality  
Techniques and MPEG-4*

K. Klein, Fraunhofer Institute for Computer Graphics,  
Darmstadt, Germany, C. Malerczyk, ZGDV, Darmstadt,  
Germany, J. Wingbermhühle, T. Wiebesiek, Institut für  
Theoretische Nachrichtentechnik und Informations-  
verarbeitung (TNT),  
*Creating a "Personalised, Immersive Sports TV Experience"  
via 3d Reconstruction of Moving Athletes*

E. Boyle, Teltec Ireland, Dublin City University, W. Cellary,  
O. Huminiecki, W. Picard, M. Stawniak, K. Walczak, R.  
Wojciechowski, The Poznan University of Economics,  
Poland,  
*Dynamic Creation of MPEG-4 Contents with X-VRML*

N. Mourkoussis, F. Liarokapis, J. Darcy, M. Pettersson,  
P. Petridis, P. L. Lister, M. White, The Centre for VLSI and  
Computer Graphics, School of Engineering and Information  
Technology, University of Sussex, UK,  
*Virtual and Augmented Reality Applied to Educational and  
Cultural Heritage Domains*

V. Vlahakis, N. Ioannidis, J. Karigiannis, M. Tsotros, M.Gounaris, INTRACOM S.A., Hellenic Telecommunications & Electronics Industry, Greece,  
*Virtual Reality and Information Technology for Archaeological Site Promotion*

P. Sayd, S. Naudet, F. Gaspard, Image and Embedded Computers Lab. (CEA - LIST), M. Viala, ActiCM SA, A. Dumont, F. Jallon, J.B. Monnerie, ESIC SN, L. Cohen, Université Paris IX Dauphine, France,  
*3D Modeling of Industrial Installation: towards the Digital Factory*

P.F. Lister, P.F. Newbury, P.L. Watten, L. Senkoro, A. Dountsis, M. Midha, I. Banerjee, V. Trignano, M. White, Centre for VLSI and Computer Graphics, University of Sussex, England, UK,  
*Virtual Reality in Electronic Systems*

**8:00-16:15**  
**room 213**

**WOOBS**

**Chairmen:** Rafael Corchuelo,  
David Ruiz, Robert Wrembel

**Invited talk on B2B integration software**

Michael Mertz, Ponton Consulting, Germany,

S.I. Ahamed, Arizona State University, USA,  
*Quality Attributes Based Requirements in Component-based Software Development*

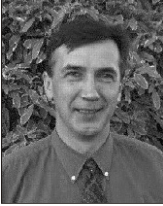
B. Müller, University of Applied Studies and Research, Germany, H. Wehr, University of Applied Studies and Research, Germany,  
*Uniform Information Processing with Heterogeneous Data Sources*

W. Golubski, University of Siegen, Germany,  
*Implementing Web-Based Business Applications by Using J2EE*

J. Hosszú, The Budapest University of Technology and Economics, Hungary,  
*Is Your Distributed Application Ready for Deployment?*



# Tutorials



## **Ryszard Kowalczyk**

*Introduction to Intelligent Software Agents in Dynamic e-Commerce*

Ryszard Kowalczyk received a Ph.D. in Computer Science from Technical University of Silesia in Poland. He has several years of basic research and industrial R&D experience in the area of Intelligent Systems involving knowledge-based systems, fuzzy systems, evolutionary systems and intelligent multi-agent systems for decision support and automation in mission critical enterprise solutions. After a number of years with a corporate R&D division of a major Australian corporation CRA, Dr. Kowalczyk joined Commonwealth Scientific and Industrial Research Organisation (CSIRO) in 1996 where he headed the Applied Artificial Intelligence R&D Group carrying out research on intelligent software agents for e-commerce, e-business and e-service delivery. Currently he also is affiliated with INTERSHOP Research where he leads research in intelligent software agents for e-negotiation in dynamic e-commerce.

Dr Kowalczyk has a number of patents in the area of intelligent agents and several publications including three edited books and more than sixty research papers in books, journals and international conference proceedings. He has been a technical book review editor in AI for Kluwer Academic Publisher Group and a regular reviewer for International Journal on Information Sciences, IEEE Transactions on Fuzzy Systems, IEEE Transactions on Systems, Man and Cybernetics, International Journal on Knowledge and Information Systems, ACS Journal of Research and Practice in Information Technology, and Journal of Applied Systems Studies.

### **Overview:**

As e-commerce quickly evolves an increasing number of systems based on software agent technologies are emerging to support and automate various stages of the trading process (e.g. product finding, supplier finding, auction bidding, product ordering, delivery monitoring etc). In particular it has been recognized that software agents will play an important role in so called dynamic e-commerce, which enables buying and selling goods and services through flexible pricing mechanisms that change with supply and demand, and enable mapping more complex negotiation models in business transactions to e-commerce

This tutorial will provide an introduction to applications of intelligent software agents in dynamic e-commerce according

to the following outline:

- Introduction to software agents and intelligent agents including basic definitions and characteristics,
- Examples of agent systems in Internet and e-commerce,
- Overview of dynamic e-commerce including industry needs, current state, trends in and some open problems,
- Selected market mechanisms and business negotiation models in e-commerce,
- Examples of intelligent software agents for dynamic e-commerce,
- Problem areas and open research issues.

The tutorial will conclude with some considerations of the requirements for successful deployment of intelligent software agents in dynamic e-commerce.



### **Janusz Dorożyński**

*IT Outsourcing - a solution for hard times*

Janusz Dorożyński, Ph.D. Chief System Engineer (Chief Technologist) and ISO Coordinator at ZETO SA in Poznań. He graduated from Moscow Lomonosov Institute of Fine Chemical Technology where in 1984 he obtained a doctoral degree. His responsibility in ZETO is maintenance and development of computer platforms IBM S/390 & zSeries combined with Wintel via Cisco access system, IT outsourcing, e-business products and system of quality management . Member of the Polish Computer Society since 1984.

#### *IT Outsourcing a solution for hard times - Abstract*

Outsourcing as an idea in business management has been known for more than 80 years. Difficult economic situation makes it more attractive: it allows companies to make both managerial and financial gains by focusing on their mainstream operations whereas the auxiliary activities are commissioned to specialised third parties. A typical area of outsourcing is the information technology.

ZETO S.A. in Poznań has provided IT outsourcing services to companies for many years. At present ZETO offers customers a three-tier solution where resources of a database-running IBM S/390 system are made available to remote users via an application server.

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