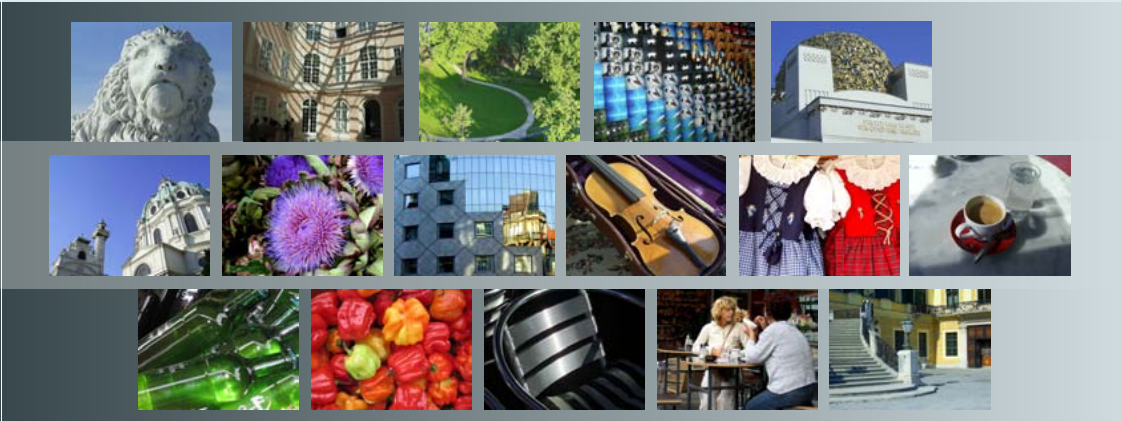


July 23-27 2007, Vienna, Austria
www.indin2007.org



INDIN 2007

CONFERENCE PROGRAM

5th IEEE International Conference on
Industrial Informatics

SIEMENS



TECHNISCHE
UNIVERSITÄT
WIEN
VIENNA
UNIVERSITY OF
TECHNOLOGY

OVE



IEEE



Mon 23rd	Tue 24th	Wed 25th	Thu 26th	Fri 27th
<p>Tutorials</p> <p>9:30 - 12:30 Tutorial 1</p> <p>9:30 - 17:30 Tutorial 2</p> <p>13:30 - 17:30 Tutorial 3</p>	<p>08:30 - 08:40 Welcome</p> <p>08:40 - 09:25 Keynote</p> <p>09:25 - 10:10 Keynote</p> <p>10:10 - 10:20 Break</p> <p>10:20 - 12:05 Sessions S01-1 (Room 1.2) T03-1 (Room 3.1) T08-1 (Room 3.2) T04-1 (Room 4.1)</p> <p>12:05 - 13:05 Lunch</p> <p>13:05 - 13:35 Posters I1 (Room 0.5)</p> <p>13:35 - 15:20 Sessions S01-2 (Room 1.2) T03-2 (Room 3.1) T08-2 (Room 3.2) T01-1 (Room 4.1) T09-1 (Room 4.2)</p> <p>15:20 - 15:30 Break</p> <p>15:30 - 17:00 Sessions S08-1 (Room 1.2) T03-3 (Room 3.1) T08-3 (Room 3.2) T01-2 (Room 4.1) T09-2 (Room 4.2)</p>	<p>08:40 - 09:25 Keynote</p> <p>09:25 - 10:10 Keynote</p> <p>10:10 - 10:20 Break</p> <p>10:20 - 12:05 Sessions T02-1 (Room 1.2) S05-1 (Room 3.1) S04-1 (Room 3.2) T06-1 (Room 4.1)</p> <p>12:05 - 13:05 Lunch</p> <p>13:05 - 13:35 Posters Student Poster Session (Room 0.5)</p> <p>13:35 - 15:20 Sessions S03-1 (Room 1.2) S05-2 (Room 3.1) T05-1 (Room 3.2) T04-2 (Room 4.1) T10-1 (Room 4.2)</p> <p>15:20 - 15:30 Break</p> <p>15:30 - 17:00 Sessions S03-2 (Room 1.2) S07-1 (Room 3.1) T05-2 (Room 3.2) T04-3 (Room 4.1) T09-3 (Room 4.2)</p>	<p>08:30 - 09:15 Keynote</p> <p>09:15 - 09:25 Break</p> <p>09:25 - 10:55 Sessions T02-2 (Room 1.2) T03-4 (Room 3.1) EU (Room 3.2) T04-4 (Room 4.1) T10-2 (Room 4.2)</p> <p>10:55 - 11:05 Break</p> <p>11:05 - 12:35 Sessions S02-1 (Room 1.2) S07-2 (Room 3.1) T05-3 (Room 3.2) T04-5 (Room 4.1) T10-3 (Room 4.2)</p> <p>12:35 - 13:35 Lunch</p> <p>13:35 - 14:05 Posters I2 (Room 0.5)</p> <p>14:05 - 15:50 Sessions T07-1 (Room 1.2) S06-1 (Room 3.1) T05-4 (Room 3.2) T06-2 (Room 4.1) T10-4 (Room 4.2)</p> <p>15:50 - 16:00 Break</p> <p>16:00 - 16:20 Closing</p>	<p>Industrial Day 8:30 Bus Transfer from Tech Gate Vienna</p>
<p>Welcome Reception Meeting point 18:30 "Otto Wagner Pavillon" Karlsplatz</p>		<p>18:30 Conference Banquet Palais Niederösterreich</p>	<p>18:30 Industrial Day Dinner Palm House, Hofburg</p>	<p>All plenary sessions take place in Room 0.1</p> <p>Please find session abbreviations explained in the track list on the last page</p>



Contents

Welcome Message from the conference chairs	2
General Information	3
Registration Desk	3
Badge	3
Internet Access	4
Panel presentations	4
Posters.....	4
Tutorials	5
Industrial Day	5
Bank, Currency, Credit Cards	5
Liability & Insurance.....	5
Public Transport.....	5
Conference Venue.....	7
Technical Program	8
Monday, 23rd of July – Tutorials.....	8
Tuesday, 24th of July – INDIN Sessions	9
Wednesday, 25th of July – INDIN Sessions	19
Thursday, 26th of July – INDIN Sessions	27
Friday, 27th of July – Industrial Day	36
Social Program	37
Welcome Reception.....	37
Conference Banquet at “Palais Niederösterreich”	38
Industrial Day Dinner – Dine in “Palmenhaus”.....	39
Q&A	40



Welcome Message from the conference chairs

On behalf of the IEEE Industrial Electronics Society (IES) and the INDIN 2007 Organizing Committee, it is our pleasure to welcome you to the 5th IEEE Conference on Industrial Informatics in Vienna. INDIN has become one of the major annual events of the IES, attracting a large number of experts in the area of industrial information technologies. INDIN 2007 is organized by the IES and the Vienna University of Technology, in cooperation with OVE, ONEEIDA, and with substantial support from Siemens Austria.

We would like to thank all the volunteers who have made INDIN 2007 possible. Most notably, we thank our Track Chairs, Special Session Chairs and the Technical Program Committee on putting together an excellent technical program. Special thanks go to all authors for their participation in INDIN 2007, as well as the many reviewers worldwide for their contribution in making this a quality conference. Finally, we express our sincere thanks to the members of the Local Organizing Committee for their excellent preparation to make this a memorable event.

Beside the scientific program – tutorials, panel presentations, poster discussions and panel discussions at the Industrial Day – INDIN 2007 offers a charming social program. A welcome reception at a Winery on the hills of Grinzing and a conference banquet in one of Vienna's famous palais are an attempt to introduce the INDIN community to this marvellous venue and its famous cuisine.

This 5th IEEE Conference on Industrial Informatics promises to be an excellent opportunity for all delegates to further their technical knowledge, and enjoy the hospitality of Vienna. We look forward to seeing all of you at INDIN 2007, renewing old friendships, making new ones and enjoying an outstanding technical and social program.

Yours sincerely,



Dietmar Dietrich

General Co-Chair



Gerhard Hancke

General Co-Chair



Peter Palensky

Technical Program Chair



General Information

Registration Desk

Please register at our registration desk in the hall as soon as possible during our opening hours (see below). Here you will receive your conference bag, the printed proceedings and your badge, which serves as admission ticket for all INDIN events.

Opening hours

The registration desk is open on Tuesday, Wednesday and Thursday, starting from 8:00 am.

On-site registration

If you have not already registered for INDIN online in advance, you can also register at the conference venue

Additional social program ticket

At the registration desk you can purchase additional tickets for the welcome reception and the Banquet dinner (both in one), in case you have not already registered for these events online in advance, or you would like to take a non-INDIN delegate with you. The price for the social program ticket is EUR 100.

Accepted payment methods

You can pay by VISA, MasterCard or Diners as well as in cash (Euro only).

Badge

Upon registration you receive your **INDIN Badge**. Please wear it at all technical and social program events of the INDIN Conference. Your badge serves as admission ticket for panel sessions, conference banquet and all other INDIN events.

Internet Access

There will be free wireless Internet access available for you at the venue. Please connect to the open WLAN with SSID “**TGV x.x**”, where x can vary depending on room and floor. Configure the WLAN using the following settings:

Network Authentication: Open
Data Encryption: Disabled

Panel presentations

Panel presentations are to be done via PPT or PDF presentations with maximum 20 minutes of time (including questions). Laptop computers and digital projectors for presentation are available; bring your files on a USB thumb drive or CD. Please come forward to the session organisers in the break/coffee break before your session for copying your files on the presentation computer.

Please note that we do not guarantee that video clips included in your presentations will actually work.

If you have only hand written transparencies, please mail black-and-white A4 paper copies to the conference secretariat; we will scan it into a PDF file for presentation.

Posters

Poster sessions are on Tuesday, Wednesday and Thursday after lunch (see section “Technical Program”). On Wednesday there will be a Student Poster display. The best student poster will be awarded during the conference diner.

If you have been accepted for a poster presentation, please print the poster by yourself and bring it with you. The presentation is interactive and has typically more time, and a larger and very interested audience. Poster format is ISO A0 (1189 x 841 mm, 46.81 x 33.11 inch). There are no restrictions in layout. The poster must include the following parts of your paper:

- the full title and all authors
- the abstract
- all (important) figures
- the problem statement
- the solution

Tutorials

INDIN 2007 aims to network researchers, academics, engineers, and industry experts to discuss break-through research, new ideas, recent developments, and new applications related to industrial informatics.

Tutorials are held on **Monday, July 23**. For more details, please refer to Page 8.

Industrial Day

The first IEEE INDIN Industrial Day is a forum for technology experts, researchers and industrial managers to discuss today's and tomorrow's challenges in academic/industrial cooperation. The motto of this industrial day is "the future of manufacturing". More information can be found in the technical program section.

Bank, Currency, Credit Cards

The national currency in Austria is Euro (€). Money can be drawn from cash machines using Maestro cards and credit cards. Please check with your own bank for applying transfer fees.

In the inner city major credit cards such as MasterCard, Visa etc. are widely accepted.

At the **INDIN Registration Desk** you can pay for your on-site registration by VISA, MasterCard or Diners as well as in cash (Euro only).

Liability & Insurance

The organizers cannot be held responsible for accidents to conference participants or accompanying persons, for damage, or loss of their personal property, or for cancellation expenses regardless of cause.

Public Transport

In the city

Vienna has an extensive tram and bus network - the tram network being third largest in the world. In the most populated areas of Vienna, transportation systems are run so frequently (even during off-peak hours), that any familiarity with departure timetables is virtually unnecessary. The convenience and flexibility of the public transport is therefore reflected through its popularity.

To and from the airport

By taxi – This way of transportation costs approximately 30 €. The actual price depends on the taxi company.

By train – There are two trains available, the ÖBB S-Bahn and the City Airport Train (CAT). Both trains arrive at the station "Landstraße Wien-Mitte", where you can change to subways U3 and U4. The **S-Bahn** departs each 30 minutes (Airport .09 and .39) and costs 3,40 €. It takes 24 minutes to "Landstraße Wien-Mitte". The **City Airport Train** has also a frequency of 30 minutes, but leaves the airport at .05/.35 and needs only 16 minutes for journey. Tickets cost 8 € for one direction and 15 € for round trip.

By bus – Two bus services connect the airport with Westbahnhof and Schwedenplatz. Both have a 30 minutes frequency. Tickets start from 6 € for a single trip.

At the airport exit there is a screen showing the next departures of trains and buses.

For information about the **conference venue** please refer to the next chapter.



Tech Gate Vienna – The conference venue



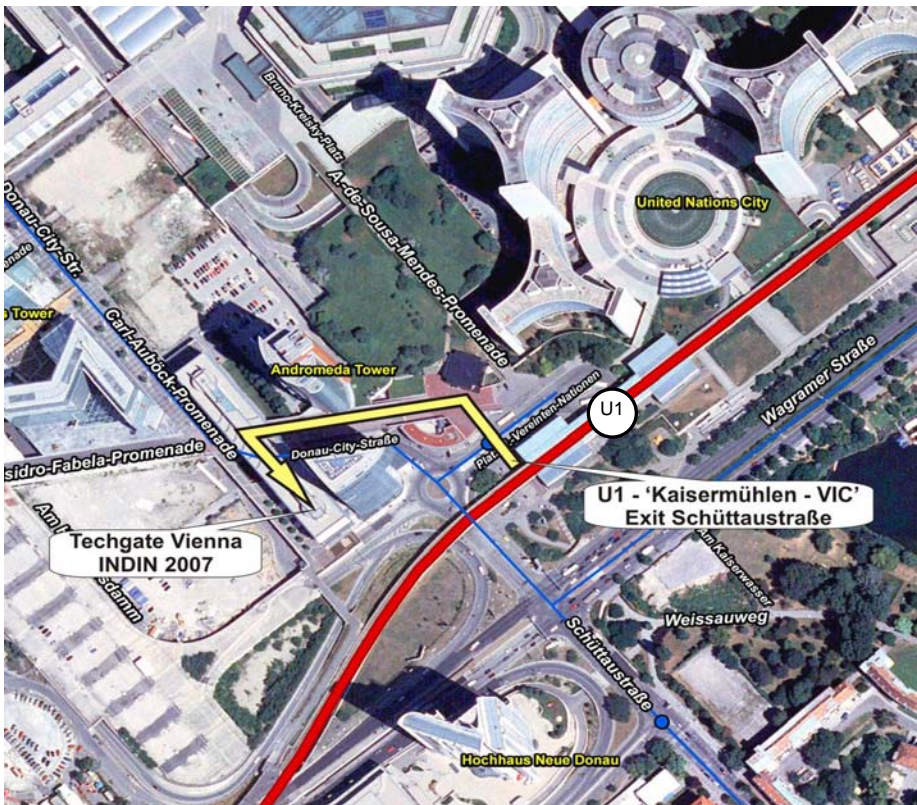
Conference Venue

The conference takes place at:

Tech Gate Vienna Wissenschafts- und Technologiepark GmbH
Donau-City-Straße 1
1220 Vienna, Austria

Arrival by underground train:

Use Vienna's underground line **U1** and go to the station
"Kaisermühlen – VIC" (Exit Schüttaustraße).



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Technical Program

Monday, 23rd of July – Tutorials

9:30 – 12:30 Tutorial 1

Joint European Effort in creating a Safe Network based on the EN 14908 networking standard (LON)

Presenters:

Dr. Jürgen Hertel, Consortium Manger of SafetyLon Project (Tutorial Coordinator)
Dr. Peter Wratil, Managing Director of Innotec GmbH (Hamburg)
Dr. Dietmar Loy, Engineering Manager, Loytec GmbH, Vienna
Grzegorz Hayduk, Software Engineer, AGH-UST University, Krakow
Martin Mentzel, Technical Project Coordinator, Fachhochschule Dortmund
Chris Brönnimann, Managing Director of Ingenieurbüro Brönnimann, Thun (CH)

9:30 – 17:30 Tutorial 2

Modeling Distributed Control Systems within ODECE based on IEC 61499

Presenters:

Dr. Thomas Strasser, Profactor Produktionsforschungs GmbH, Steyr
Alois Zoitl, ACIN, Vienna University of Technology

13:30 – 17:30 Tutorial 3

Agent-Oriented Software Engineering

Presenter

Massimo Cossentino, ICAR-CNR

Tuesday, 24th of July – INDIN Sessions

08:30 - 08:40 Welcome

Peter Palensky, Technical Program Chair

08:40 - 09:25 Keynote

Trends and Innovations in Process Automation

Norbert Schadler, Siemens

09:25 - 10:10 Keynote

Technologies for Achieving Field-Ubiquitous Computing

Akira Nagashima, Yokogawa Electric Corporation

10:10 - 10:20 Break

10:20 - 12:05 Panel Sessions

S01-1 ENERGY MANAGEMENT AND MICRO GRIDS IT AND ENERGY

ROOM 1.2

TUESDAY, 24/07/2007, 10:20 - 12:05

A closer look on load management

Friederich Kupzog, Charlotte Roesener, WF-005169, Volume 2, Page 899

KNIVES: Network based Demand and Supply Control System - Enhancement for Network and Environmental Affinity -

Toshihiko Handa, Charlotte Roesener, Junichi Ichimura, Hiroaki Nishi, WF-003859, Volume 2, Page 919

Neural Implementation of MicroGrid Central Controllers

Fabrizio Pilo, Giuditta Pisano, Gian Giuseppe Soma, WF-006637, Volume 2, Page 925

VPPs information needs for effective operation in competitive electricity markets

Hugo Morais, Marílio Cardoso, Luís Castanheira, Zita Vale, Isabel Praça, WF-006084, Volume 2, Page 931

T03-1 MODELS FOR FACTORY AUTOMATION
FACTORY AUTOMATION
ROOM 3.1
TUESDAY, 24/07/2007 10:20 - 12:05

An Open Source IEC 61131-3 Integrated Development Environment

Edouard Tisserant, Laurent Bessard, Mário de Sousa, WF-005932, Volume 1, Page 183

Development of a Methodological Framework for the Self Reconfiguration of Automated Visual Inspection Systems

Hugo Garcia, Rene Villalobos, WF-003263, Volume 1, Page 207

New Simulation Models to Evaluate Performance of PROFINET IO Class 1 Systems

Paolo Ferrari, Alessandra Flammini, Daniele Marioli, Andrea Taroni, Francesco Venturini, WF-004952, Volume 1, Page 237

Service model for the management of industrial environments. Dynamic reconfiguration of production elements

Diego Marcos-Jorquera, Francisco Maciá-Pérez, Virgilio Gilart-Iglesias, Juan Antonio Gil-Martínez-Abarca, WF-004871, Volume 1, Page 249

Simulation of Industrial Applications using the Execution Environment SCXML

Raimundo Moura, Luiz Guedes, WF-000981, Volume 1, Page 255

T08-1 COGNITIVE SCIENCE 1
COGNITIVE SCIENCE IN INDUSTRIAL INFORMATICS
ROOM 3.2
TUESDAY, 24/07/2007 10:20 - 12:05

A Comparative Study of Dynamic Learning Rate BPN and Wavelet Neural Networks

Y. Z. Zhao, J. B. Zhang, A. J. R. Aendenroomer, WF-000574, Volume 2, Page 611

Developing Intentional Systems with the PRACTIONIST Framework

Vito Morreale, Susanna Bonura, Giuseppe Francaviglia, Fabio Centineo, Michele Puccio, Massimo Cossentino, WF-006475, Volume 2, Page 633

Learning by Bagging and Adaboost based on Support Vector Machine

Yu Wang, Cheng-De Lin, WF-002828, Volume 2, Page 663

Modeling Product Engineering and Manufacturing Activity in Vehicle Development Process

João Ferreira, André Carvalho, João Pimentel, Marco Guedes, Francesco Furini, Nuno Silva, WF-03921, Volume 2, Page 675

T04-1 POWER SYSTEM APPLICATIONS APPLICATIONS OF INDUSTRIAL INFORMATICS

ROOM 4.1

TUESDAY, 24/07/2007 10:20 - 12:05

Design and Implement of Distribution Transformer Outage Detection System

Hau-Ren Lu, Leether Yao, WF-005908, Volume 1, Page 323

Outlier Identification and Justification Using Multi-Objective PSO based Clustering Algorithm in Power System

Li Feng, Ziyang Liu, Chao Ma, WF-002364, Volume 1, Page 365

Platform based development of embedded systems for traction and power engineering applications - experiences and challenges

Sinisa Marijan, Ivan Petrovic, WF-005576, Volume 1, Page 371

The Efficient Offline Search System for High Risk Events of Power Systems Caused by Transient Stability

Tetsushi Miki, WF-001945, Volume 1, Page 399

12:05 - 13:05 Lunch

13:05 - 13:35 Poster Session

I1 INTERACTIVE SESSION 1 INTERACTIVE SESSION

ROOM 0.5

TUESDAY, 24/07/2007 POSTER SESSION 13:05 - 13:35

Design of a communication system for integration of industrial networks over public IP networks

Nunzio Torrasi, Dennis Brandão, Rodrigo P. Pantoni, João F. G. Oliveira, WF-005428, Volume 1, Page 201

Extending the Mean-Value Analysis Algorithm According to the Thread Pool Investigation

Ágnes Bogárdi-Mészöly, Tihamér Levendovszky, Hassan Charaf, WF-006122, Volume 2, Page 731

Measuring Semantic Gap: An Information Quantity Perspective

Qinsheng Zhuang, Junkang Feng, Hong Bao, WF-000663, Volume 2, Page 669

Radio Map Filter for Sensor Network Indoor Localization Systems

Yong Wu, Jianbin Hu, Zhong Chen, WF-003573, Volume 1, Page 63

Removal of Muscular and Artefacts Noise from the ECG by a Neural Network

Jorge Mateo Sotos, José Manuel Blas Arnau, Ana María Torres Aranda, César Sánchez Meléndez, WF-006939, Volume 2, Page 687

Requirement Analysis and Optimization of combined Networks

Andriy Luntovskyy, Volodymyr Vasyutynskyy, Cemal Oezluek, Dietbert Guetter, WF-000515, Volume 1, Page 69

Simulation Results for the ARS-PA Model

Tobias Deutsch, Heimo Zeilinger, Roland Lang, WF-007587, Volume 2, Page 1021

The Realization of the Performance Estimation System on AIS SOTDMA Algorithm

Hyosung Lee, Seungmin Lee, Heungho Lee, WF-006815, Volume 1, Page 405

Two-stage product definition for mass customization

Li Yu, Liya Wang, WF-002925, Volume 2, Page 699

UPnP Compression Implementation for Building Automation Devices

Stefan Knauth, Rolf Kistler, Daniel Käslin, Alexander Klapproth, WF-004715, Volume 1, Page 75

**S01-2 POWER MARKETS AND ENERGY BUSINESS
IT AND ENERGY
ROOM 1.2**

TUESDAY, 24/07/2007 13:35 - 15:20

Establishing Large-Scale Renewable Reserve Capacity through Distributed Multi-Agent Support

Horst F. Wedde, Sebastian Lehnhoff, Edmund Handschin, Olav Krause, WF-004634, Volume 2, Page 905

Incentive-oriented market platforms to increase total efficiency of electricity systems

Karl Derler, Ewald Traxler, WF-004022, Volume 2, Page 913

Integration of Power Plant information system with Business information system in the open electricity market: challenges and solutions

Tuan Dang, WF-003913, Volume 2, Page 1209

**T03-2 MODELING AND IEC 61499
FACTORY AUTOMATION
ROOM 3.1**

TUESDAY, 24/07/2007 13:35 - 15:20

A Methodology for Multidisciplinary Modeling of Industrial Control Systems using UML

Elisabet Estevez, Marga Marcos, Isabel Sarachaga, Dario Orive, WF-006327, Volume 1, Page 171

An IEC 61499 Based Approach for Distributed Batch Process Control

Kleanthis Thramboulidis, Seppo Sierla, Nikolaos Papakonstantinou, Kari Koskinen, WF-003077, Volume 1, Page 177

Management of Replicated IEC 61499 Applications

Mario de Sousa, Adriano Santos, WF-006602, Volume 1, Page 231

Using the CIP Protocol with IEC 61499 Communication Function Blocks

Frans Weehuizen, Alois Zoitl, WF-003697, Volume 1, Page 261

T08-2 COGNITIVE SCIENCE 2
COGNITIVE SCIENCE IN INDUSTRIAL INFORMATICS
ROOM 3.2
TUESDAY, 24/07/2007 13:35 - 15:20

Image Processing and Neuro-Fuzzy Computing for Cork Quality Classification

Beatriz Paniagua-Paniagua, Miguel Ángel Vega-Rodríguez, Juan Manuel Sánchez-Pérez, Juan Antonio Gómez-Pulido, WF-005894, Volume 2, Page 657

Perception of Pseudo-Stereoscopic Image Depths of Three-Dimensional Objects Displayed on VDT Screen

Tetsuya Muraoka, Hiroaki Ikeda, WF-000213, Volume 2, Page 681

Route Selection for Vehicle Navigation and Control

Grantham Pang, Ming Hei Chu, WF-001171, Volume 2, Page 693

Vision for Cognitive Systems: A New Compound Concept Connecting Natural Scenes with Cognitive Models

Peter Goebel, Markus Vincze, WF-005029, Volume 2, Page 705

T01-1 MODELING, SIMULATION AND INTEGRATION
BUILDINGS, NETWORKS AND AUTOMATION
ROOM 4.1
TUESDAY, 24/07/2007 13:35 - 15:20

Automated measurement-based Device Traffic Modeling in Control Networks

Joern Ploennigs, Mario Gürtler, Mario Neugebauer, Klaus Kabitzsch, WF-004766, Volume 1, Page 27

Deadband Sampling in PID Control

Volodymyr Vasylutynskyy, Klaus Kabitzsch, WF-005916, Volume 1, Page 45

Petri net based Building Automation and Monitoring System

Luis Gomes, Aniko Costa, Joao Paulo Barros, Rui Pais, Tiago Rodrigues, Richard Ferreira, WF-007676, Volume 1, Page 57

Vertical Integration in Building Automation Systems

Stefan Soucek, Dietmar Loy, WF-007374, Volume 1, Page 81

Web Services in Building Automation: Mapping KNX to oBIX

Matthias Neugschwandtner, Georg Neugschwandtner, Wolfgang Kastner, WF-006947, Volume 1, Page 87

**T09-1 SOA PLATFORMS
SERVICE-ORIENTED ARCHITECTURE
ROOM 4.2
TUESDAY, 24/07/2007 13:35 - 15:20**

Automated SOC development for the power distribution industry

Cristina Marin, Philippe Lalanda, WF-004472, Volume 2, Page 719

Platform-Based Design for Clinical Information Systems

Jan Werner, Janos Mathe, Sean Duncavage, Brad Malin, Akos Ledeczi, Jim Jirjis, Janos Sztipanovits, WF-006556, Volume 2, Page 749

Service Discovery in Industrial Agent Systems

Omar López, Jose Lastra, WF-006645, Volume 2, Page 761

The Challenge of Evolving Existing Systems to Service-Oriented Architectures

John Hutchinson, Gerald Kotonya, James Walkerdine, Peter Sawyer, Glen Dobson, Victor Onditi, WF-006041, Volume 2, Page 773

XML-based monitoring and operating for Web Services in automation

Annerose Braune, Stefan Hennig, Torsten Schaft, WF-006459, Volume 2, Page 797

15:20 - 15:30 Break

15:30 - 17:00 Panel Sessions

**S08-1 E2050: CHALLENGES IN IT AND ENERGY
CHALLENGES IN IT AND ENERGY
ROOM 1.2
TUESDAY, 24/07/2007 15:30 - 17:00**

DG DemoNet-Concept - A new algorithm for active distribution grid operation facilitating high DG penetration

Friederich Kupzog, Helfried Brunner, Wolfgang Prügler, Tomaž Pfajfar, Andreas Lugmaier, WF-005231, Volume 2, Page 1197

Economic Load Dispatch of Higher Order Cost Polynomials Using Modified Particle Swarm Optimization

Ahmed Yousuf Saber, Atsushi Yona, Masatake Higashi, WF-002569, Volume 2, Page 1203

Intelligent Metering

Horst Lunzer, WF-007439, Volume 2, Page 1215

The power of electronic power management

Andreas Urschitz, Erich Prem, Jörg Malzon-Jessen, Timothy Maloney, WF-004057, Volume 2, Page 1221

**T03-3 VISUALIZATION AND DESCRIPTION OF FACTORY AUTOMATION
FACTORY AUTOMATION**

ROOM 3.1

TUESDAY, 24/07/2007 15:30 - 17:00

3D Profile Reconstruction of Solder Paste Based on Phase Shift Profilometry

Tak-Wai Hui, Grantham Pang, WF-001252, Volume 1, Page 165

An open and non-proprietary device description for fieldbus devices for public IP networks

Rodrigo Palucci Pantoni, Nunzio Torrisi, Dennis Brandão, WF-001449, Volume 1, Page 189

Internet Visualization of PLCs Programs

Ramón Piedrafita Moreno, Víctor Larraga Egado, José Luis Villarroel Salcedo, WF-006335, Volume 1, Page 225

XML based Visualization of the IEC 61131-3 Graphical Languages

Elisabet Estevez, Marga Marcos, Dario Orive, Edurne Irisarri, Fabian Lopez, WF-006343, Volume 1, Page 279

**T08-3 COGNITIVE SCIENCE 3
COGNITIVE SCIENCE IN INDUSTRIAL INFORMATICS**

ROOM 3.2

TUESDAY, 24/07/2007 15:30 - 17:00

A generalised CFD learning and prediction system

William Becker, Xinghuo Yu, Jiyuan Tu, WF-003271, Volume 2, Page 615

An Approach to Cognition in Factory Automation by applying Functional Systems Theory

Aleksandra Dvoryanchikova, Ivan Delamer, Jose Lastra, WF-005665, Volume 2, Page 621

Context-based Knowledge Recommendation: A 3-D Collaborative Filtering Approach

Kaichun Liang, Shuqin Cai, Qiankun Zhao, WF-002917, Volume 2, Page 627

Development strategy and implementation of a generalized model for FPGA-based artificial cell in bio-inspired hardware systems

Csaba Szasz, Virgil Chindris, WF-001007, Volume 2, Page 639

Formal Support for Failure Knowledge Modeling and Diagnostic Reasoning Using Polychromatic sets

Guo Li, WF-000817, Volume 2, Page 645

T01-2 WIRELESS TECHNOLOGIES BUILDINGS, NETWORKS AND AUTOMATION

ROOM 4.1

TUESDAY, 24/07/2007 15:30 - 17:00

BACnet over ZigBee: a new approach to the wireless datalink channel for BACnet

Tae Jin Park, You Jin Chon, Dong Kyu Park, Seung Ho Hong, WF-005371, Volume 1, Page 33

Credibility of Routing Information in Wireless Sensor Networks

Jonathan Page, Gerhard Hancke, WF-007161, Volume 1, Page 39

Monitoring, Controlling and Configuring of Wireless Household-Electric Network through Remote Virtual Interface

Antonio Heronaldo de Sousa, Ana Teruko Yokomizo Watanabe, José de Oliveira, Luiz Ricardo Lima, Bruno Henrique Kikumoto de Paula, WF-001627, Volume 1, Page 51

Wireless Technologies in Home and Building Automation

Christian Reinisch, Wolfgang Kastner, Georg Neugschwandtner, Wolfgang Granzer, WF-006203, Volume 1, Page 93

**T09-2 APPLYING SEMANTICS IN SOA
SERVICE-ORIENTED ARCHITECTURE**

ROOM 4.2

TUESDAY, 24/07/2007 15:30 - 17:00

A Policy Driven Approach for Service-Oriented Business Rule Management

Shuying Wang, Miriam Capretz, WF-001538, Volume 2, Page 713

Discovering Web Services Using Semantic Keywords

Mauricio Espinoza, Eduardo Mena, WF-005584, Volume 2, Page 725

Semantic Service for Abnormal Situation Management

Mika Viinikkala, Seppo Kuikka, WF-006629, Volume 2, Page 755

**Towards semantically-assisted design of collaborative business processes in
EAI scenarios**

Andreas Friesen, Asma Alazeib, Andras Balogh, Markus Bauer, Athanasios Bouras, Panagiotis Gouvas, Gregoris Mentzas, Albina Pace, WF-006149, Volume 2, Page 779

Wednesday, 25th of July – INDIN Sessions

08:40 - 09:25 Keynote

Global Megatrends and their Effects on the Production of the Future

Thomas Schott, Siemens

09:25 - 10:10 Keynote

Technologies for Achieving Field-Ubiquitous Computing

Pierantonio Ragazzini, Industria Macchine Automatiche

10:10 - 10:20 Break

10:20 - 12:05 Panel Sessions

**T02-1 SYSTEM SECURITY
SECURITY AND SAFETY**
ROOM 1.2
WEDNESDAY, 25/07/2007 10:20 - 12:05

Detecting Network Attacks via Improved Iterative Scaling

Xin Jin, Ronghuai Huang, Rongfang Bie, WF-007277, Volume 1, Page 113

Low Cost Self-Testing Implementation for MISTY1 Cryptographic Algorithm

Rodica Tirtea, Mircea Vladutiu, Geert Deconinck, WF-003867, Volume 1, Page 119

Modelling Security Risks in Real-Time Operating Systems

Jan Kiszka, Bernardo Wagner, WF-005401, Volume 1, Page 125

Optimizing Security Computation Cost for Mobile Agent Platforms

Najmus Saqib Malik, Albert Treytl, WF-006513, Volume 1, Page 143

Securing communications in automation networks

Dirk Reinelt, Arndt Lüder, Thomas Fuchs, WF-006394, Volume 1, Page 149

S05-1 AGENTS THEORY AND PRACTICE FOR INDUSTRY 1
AGENTS THEORY AND PRACTICE FOR INDUSTRY

ROOM 3.1

WEDNESDAY, 25/07/2007 10:20 - 12:05

A Self-Organizing and Holonic Model for Optimization in Multi-Level Location Problems

Sana Moujahed, Nicolas Gaud, David Meignan, WF-003476, Volume 2, Page 1053

Dynamic conversations between agents with the PRACTIONIST Framework

Vito Morreale, Michele Puccio, Giuseppe Cammarata, Giuseppe Francaviglia, WF-006688, Volume 2, Page 1065

Enhancing JADE Interoperability through the Java-based Interoperable Mobile Agent Framework

Giancarlo Fortino, Alfredo Garro, Wilma Russo, WF-004804, Volume 2, Page 1071

Multiagent oriented modeling and simulation for manufacturing systems control

Selma Azaiez, Georges Habchi, Marc-Philippe Huget, Magali Pralus, Jihene Tounsi, WF-007099, Volume 2, Page 1079

Separation of Concerns and Role Implementation in the PASSI Design Process

Luca Sabatucci, Salvatore Gaglio, WF-003611, Volume 2, Page 1097

S04-1 COGNITIVE AUTOMATION
COGNITIVE AUTOMATION

ROOM 3.2

WEDNESDAY, 25/07/2007 10:20 - 12:05

Action planning model for autonomous mobile robots

Charlotte Roesener, Roland Lang, Tobias Deutsch, Andreas Gruber, Brigitte Palensky, WF-007528, Volume 2, Page 1009

Hidden Markov Models for Traffic Observation

Dietmar Bruckner, Brian Sallans, Gerhard Russ, WF-007552, Volume 2, Page 1015

Smart Nodes for Semantic Analysis of Visual and Aural Data

Gerhard Pratl, Laurentiu Frangu, WF-007412, Volume 2, Page 1027

Technical Model for Basic and Complex Emotions

Wolfgang Burgstaller, Roland Lang, Patricia Pörscht, Rosemarie Velik, WF-007455, Volume 2, Page 1033

The Semantic Web in action: semantically enabled Device Descriptions

Sebastian Hegler, Martin Wollschlaeger, WF-005088, Volume 2, Page 1039

T06-1 INFRASTRUCTURE MANAGEMENT INFRASTRUCTURE AND TECHNOLOGY

ROOM 4.1

WEDNESDAY, 25/07/2007 10:20 - 12:05

A Framework for Managing Enterprise Knowledge for Collaborative Decision Support

Allan N. Zhang, WF-005762, Volume 1, Page 517

Co-ordinated Management of Intelligent Pervasive Spaces

Chee Y. Yong, Bing Qiao, Duncan J. Wilson, Min Wu, Derek Clements-Croome, Kecheng Liu, Richard Egan, Chris G. Guy, WF-003123, Volume 1, Page 529

Memory-based algorithms for abrupt change detection in sensor data streams

Daniel Nikovski, Ankur Jain, WF-005436, Volume 1, Page 547

Strategy of virtual measurement for optimization of dynamic dead-time processes in automated control systems

A. Dementjev, H.-D. Ribbecke, H. Kubin, K. Kabitzsch, WF-001384, Volume 1, Page 565

12:05 - 13:05 Lunch

13:05 - 13:35 Poster Session

STUDENT POSTER SESSION

ROOM 0.5

13:05 - 13:35

S03-1 DEPENDABLE EMBEDDED SYSTEMS 1

DEPENDABLE EMBEDDED SYSTEMS

ROOM 1.2

WEDNESDAY, 25/07/2007 13:35 - 15:20

Detection of Out-of-Norm Behaviors in Event-Triggered Virtual Networks

Roman Obermaisser, Philipp Peti, WF-007153, Volume 2, Page 971

Hardware Failure Virtualization Via Software Encoded Processing

Ute Wappler, Christof Fetzner, WF-007684, Volume 2, Page 977

Internet Firewalls in the DECOS System-on-a-Chip Architecture

Armin Wasicek, Wilfried Elmenreich, WF-004898, Volume 2, Page 983

Safety Considerations for Cooperating Vehicles using Wireless Communication

Kristoffer Lidström, Tony Larsson, Lars Strandén, WF-007536, Volume 2, Page 995

S05-2 AGENTS THEORY AND PRACTICE FOR INDUSTRY 2

AGENTS THEORY AND PRACTICE FOR INDUSTRY

ROOM 3.1

WEDNESDAY, 25/07/2007 13:35 - 15:20

A Flexible Multi-Agent System Architecture for Plant Automation

Quibin Feng, Aleksey Bratukin, Albert Treytl, Thilo Sauter, WF-007714, Volume 2, Page 1047

An Agent-Oriented Programming Model for SOA and Web Services

Alessandro Ricci, Claudio Buda, Nicola Zagnini, WF-006874, Volume 2, Page 1059

Resource Allocation in Continuous Production using Market-Based Multi-Agent Systems

Holger Voos, WF-003689, Volume 2, Page 1085

Resource-oriented scheduling in the distributed production

Aleksey Bratukhin, Basit Khan, Albert Treytl, WF-007706, Volume 2, Page 1091

Workflow Modelling with INGENIAS methodology

Alberto Garcia, Jorge J. Gomez-Sanz, Juan Pavon, WF-004448, Volume 2, Page 1103

**T05-1 IMAGE PROCESSING AND APPLICATIONS
ROBOTICS AND AUTONOMOUS SYSTEMS**

ROOM 3.2

WEDNESDAY, 25/07/2007 13:35 - 15:20

A Quadtree Driven Image Fusion Quality Assessment

Mohammed Mahmoud Hossny, Saeid Nahavandi, Doug Creighton, WF-001716, Volume 1, Page 419

Analyzing the Impact of Commercial Video Encoders in Remotely Teleoperated Mobile Robots through IEEE 802.11 Wireless Network Technologies

Pablo Piñol, Miguel Martinez-Rach, Otoniel Lopez, Manuel P. Malumbres, Jose Oliver, WF-005274, Volume 1, Page 425

Concepts for Day-Night Stereo Obstacle Detection in the Pantograph Gauge

Bernhard Hulin, WF-006505, Volume 1, Page 449

Performance Evaluation of Point Feature Detectors for Eye-in-Hand Visual Servoing

Corneliu Lazar, Adrian Burlacu, WF-005126, Volume 1, Page 497

**T04-2 INTELLIGENT SYSTEM APPLICATIONS II
APPLICATIONS OF INDUSTRIAL INFORMATICS**

ROOM 4.1

WEDNESDAY, 25/07/2007 13:35 - 15:20

A collaborative design in the shipbuilding: Two case studies

Maryna Solesvik, WF-004782, Volume 1, Page 299

A RFID based knowledge management systems – an intelligent approach for managing logistics processes

Harry K.H Chow, K.L. Choy, W.B. Lee, T.Q. Wang, WF-002992, Volume 1, Page 287

Development of an OPC Server for a Fieldbus Diagnosis Tool

Hassan Kaghazchi, John Hayes, Donal Heffernan, WF-004987, Volume 1, Page 329

Software Agents Based Home Automation Software Agent Based Home Automation- An Intelligent Electrical Billing and Maintenance System

Umakant Kulkarni, Shreehari Joshi, Jayateerth Vadavi, Anil Yardi, Ranganath Yadawad, WF-003433, Volume 1, Page 381

Using Web Services to exchange power plant process data

Olivier Pasteur, Tuan Dang, Pierre-Etienne Delon, WF-002372, Volume 1, Page 411

T10-1 DEVELOPMENT METHODOLOGIES EMBEDDED AND NETWORKED CONTROL IN COLLABORATIVE MANUFACTURING

ROOM 4.2

WEDNESDAY, 25/07/2007 13:35 - 15:20

An Agile methodology for Manufacturing Control Systems development

Giovanni Aiello, Marco Alessi, Manfredi Bruccoleri, Carlo D'Onofrio, Giuseppe Vella, WF-006521, Volume 2, Page 817

Design and Implementation of Heterogeneous Distributed Controllers - A Case Study

Martin Hirsch, Christian Gerber, Hans-Michael Hanisch, Valeriy Vyatkin, WF-002984, Volume 2, Page 829

Integrating a New Machine into an Existing Manufacturing System by using Holonic Approach

Wutthiphath Covanich, Duncan McFarlane, James Brusey, Amro Farid, WF-005002, Volume 2, Page 861

UML Automation Profile: Enhancing the Efficiency of Software Development in the Automation Industry

Tuukka Ritala, Seppo Kuikka, WF-003832, Volume 2, Page 885

15:20 - 15:30 Break

15:30 - 17:00 Panel Sessions

S03-2 DEPENDABLE EMBEDDED SYSTEMS 2 DEPENDABLE EMBEDDED SYSTEMS

ROOM 1.2

WEDNESDAY, 25/07/2007 15:30 - 17:00

An Open System for Dependable System Validation and Verification Support – The DECOS Generic Test Bench

Egbert Althammer, Erwin Schoitsch, Henrik Eriksson, Jonny Vinter, András Pataricza, György Csertán, WF-007668, Volume 2, Page 965

Model-Based Simulation of Distributed Real-time Applications

Wolfgang Herzner, Rupert Schlick, Alain Le Guennec, Bruno Martin, WF-007404, Volume 2, Page 989

Towards a DECOS Fault Injection Platform for Time-Triggered Systems

Henrik Eriksson, Jonny Vinter, Bernhard Leiner, Martin Schlager, WF-007498, Volume 2, Page 1001

S07-1 EXECUTION SEMANTICS AND MODELS OF IEC 61499 FUNCTION BLOCK APPLICATIONS

EXECUTION SEMANTICS OF IEC 61499 FUNCTION BLOCK APPLICATIONS

ROOM 3.1

WEDNESDAY, 25/07/2007 15:30 - 17:00

A Device and Resource Execution Model for IEC 61499 Control Devices

Alois Zoitl, Christoph Sünder, Thomas Strasser, Marco Colla, WF-005991, Volume 2, Page 1143

Execution Models for the IEC 61499 elements Composite Function Block and Subapplication

Christoph Sünder, Alois Zoitl, James H. Christensen, Marco Colla, Thomas Strasser, WF-003093, Volume 2, Page 1169

Modeling and Clarifying the Execution of IEC 61499 Function Blocks Using XNet

Nils Hagge, Bernardo Wagner, WF-005738, Volume 2, Page 1177

Sequential Axiomatic Model for Execution of Basic Function Blocks in IEC61499

Valeriy Vyatkin, Victor Dubinin, WF-003344, Volume 2, Page 1183

T05-2 ROBOT CONTROL SYSTEMS ROBOTICS AND AUTONOMOUS SYSTEMS

ROOM 3.2

WEDNESDAY, 25/07/2007 15:30 - 17:00

Autonomous Mechanical Controlled Grippers for Capturing Flying Objects

Heinz Frank, Dennis Barteit, Norbert Wellerdick-Wojtasik, Thorsten Frank, Gregor Novak, Stefan Mahlknecht, WF-003425, Volume 1, Page 431

Autonomous Vehicle Formation Control with Kinematic Constrains

Jurek Z. Sasiadek, Dan Neculescu, Maciek Kepka, Bumsoo Kim, WF-001767, Volume 1, Page 437

Control System for Unmanned Aerial Vehicles

Ondrej Spinka, Stepan Kroupa, Zdenek Hanzalek, WF-006491, Volume 1, Page 455

Off-line Programming and simulation for automatic robot control software generation

Manfredi Bruccoleri, Carlo D'Onofrio, Umberto La Commare, WF-005223, Volume 1, Page 491

T04-3 WIRELESS / SAFE COMMUNICATION APPLICATIONS APPLICATIONS OF INDUSTRIAL INFORMATICS

ROOM 4.1

WEDNESDAY, 25/07/2007 15:30 - 17:00

Adapting the FTT-CAN Master for multiple buses operation

Valter Silva, José Fonseca, Joaquim Ferreira, WF-007722, Volume 1, Page 305

Application of Wireless Sensor Network to Military Information Integration

Scott Diamond, Marion Ceruti, WF-002135, Volume 1, Page 317

Discrete Event Simulation Framework for Power Aware Wireless Sensor Networks

Daniel Weber, Johann Glaser, Stefan Mahlkecht, WF-005827, Volume 1, Page 335

On Architecture of Low Power Wireless Sensor Networks for Container Tracking and Monitoring Applications

Stefan Mahlkecht, Sajjad Madani, WF-005517, Volume 1, Page 353

T09-3 SOA APPLICATIONS IN FACTORY AUTOMATION SERVICE-ORIENTED ARCHITECTURE

ROOM 4.2

WEDNESDAY, 25/07/2007 15:30 - 17:00

Industrial Machines as a Service: Modelling industrial machinery processes

Virgilio Gilart-Iglesias, Francisco Maciá-Pérez, Diego Marcos-Jorquera, Francisco José Mora-Gimeno, WF-004901, Volume 2, Page 737

Loosely-coupled Automation Systems using Device-level SOA

Ivan M. Delamer, Jose L. Martinez Lastra, WF-002224, Volume 2, Page 743

Verification of the Consistency of Timing Constraints of the Orchestration of Factory Automation Web Services

Corina Popescu, Jose L. Martinez Lastra, WF-006009, Volume 2, Page 785

Thursday, 26th of July – INDIN Sessions

08:30 - 09:15 Keynote

How open standard based tools can support the future of flexible manufacturing

Julien Chouinard, ICS Triplex

09:15 - 09:25 Break

09:25 - 10:55 Panel Sessions

**T02-2 SAFE AUTOMATION
SECURITY AND SAFETY
ROOM 1.2
THURSDAY, 26/07/2007 09:25 - 10:55**

Blackbox testing methodology for SafetyLON according to the IEC 61508 Standard

Pawel Kwasnowski, Grzegorz Wrobel, Grzegorz Hayduk, Zbigniew Mikos, WF-007293, Volume 1, Page 107

Network Management for a Safe Communication in an Unsafe Environment

Peter Fischer, Michael Holz, Martin Mentzel, WF-003999, Volume 1, Page 131

Online Self Tests for Microcontrollers in Safety Related Systems

Thomas Tamandl, Peter Preininger, WF-006432, Volume 1, Page 137

Technology of safe Drives

Peter Wratil, WF-002348, Volume 1, Page 155

**T03-4 REAL TIME SYSTEMS
FACTORY AUTOMATION
ROOM 3.1
THURSDAY, 26/07/2007 09:25 - 10:55**

Analysis of Response Times in 802.11 Industrial Networks

Gianluca Cena, Ivan Cibrario Bertolotti, Adriano Valenzano, Claudio Zunino, WF-004839, Volume 1, Page 195

Real-Time-Oriented Identification Strategies for Failure Diagnosis in Complex Automation-Systems

H. - Dieter Ribbecke, Sylvia Kunath, WF-001503, Volume 1, Page 243

Violations of Real Time Communication Constraints caused by Memory Transfers exceeding CPU Cache Limits in RTAI and RTnet

Kai Zhou, Bernhard Breinbauer, Thomas Rausch, WF-005673, Volume 1, Page 267

Wireless Extensions of Wired Industrial Communication Networks

Gianluca Cena, Adriano Valenzano, Stefano Vitturi, WF-004707, Volume 1, Page 273

EU CURRENT RESEARCH AND THE 7TH FRAMEPROGRAM CURRENT RESEARCH AND THE 7TH FRAMEPROGRAM

ROOM 3.2

THURSDAY, 26/07/2007 09:25 - 10:55

Current Research and the 7th Frameprogram

Gordana Popovic, European Commission, Directorate General for Information

Society and Media: FP7 and Call Objectives in Micro/Nanosystems, Embedded System & Future and Emerging Technologies

T04-4 INTELLIGENT SYSTEMS APPLICATIONS I APPLICATIONS OF INDUSTRIAL INFORMATICS

ROOM 4.1

THURSDAY, 26/07/2007 09:25 - 10:55

Neuro-Fuzzy Versus PI Speed Loop for a Vector Control Based Electrical Drive System with Asynchronous Motor.

D. Mihai, C. Vasile, WF-001996, Volume 1, Page 341

Robust Preprocessing: Denoising and Whitening in the context of Blind Source Separation of Instantaneous Mixtures

Aurobinda Routray, Niva Das, Pradipta Dash, WF-005355, Volume 1, Page 377

Texture Cue Based Tracking System Using Wavelet Transform and a Fuzzy Grammar

Manuel Ferreira, Cristina Santos, João Monteiro, WF-004413, Volume 1, Page 393

Web services for Implementing Vendor Managed Inventory

Vikash Singh, Mamata Jenamani, WF-005444, Volume 2, Page 791

T10-2 DISTRIBUTED FUNCTION BLOCK ARCHITECTURE EMBEDDED AND NETWORKED CONTROL IN COLLABORATIVE MANUFACTURING

ROOM 4.2

THURSDAY, 26/07/2007 09:25 - 10:55

A Migration Path to IEC 61499 for the Batch Process Industry

Jukka P. Peltola, James H. Christensen, Seppo A. Sierla, Kari O. Koskinen, WF-003719, Volume 2, Page 811

Challenges to Industry Adoption of the IEC 61499 Standard on Event-based Function Blocks

Kenwood H. Hall, Raymond J. Staron, Alois Zoitl, WF-006483, Volume 2, Page 823

Formal description of an IEC 61499 runtime environment with real-time constraints

Christoph Sünder, Hermann Rofner, Valeriy Vyatkin, Bernard Favre-Bulle, WF-003107, Volume 2, Page 853

Towards Formal Verification of IEC61499: modelling of Data and Algorithms in NCES

Cheng Pang, Valeriy Vyatkin, WF-005975, Volume 2, Page 879

10:55 - 11:05 Break

11:05 - 12:35 Panel Sessions

S02-1 IT IN MANUFACTURING IT AND MANUFACTURING

ROOM 1.2

THURSDAY, 26/07/2007 11:05 - 12:35

Advanced IC tools for maximising virtual team creativity and Innovation in Manufacturing environments

Mikel Sorli, Íñigo Mendikoa, Alberto Armijo, WF-002208, Volume 2, Page 939

Ambient Intelligence Based System for Life-cycle Management of Complex Manufacturing and Assembly Lines

Dragan Stokic, Rui Neves-Silva, Maria Marques, Philip Reimer, Jon Agirre Ibarbia, WF-002666, Volume 2, Page 945

Diagnosis using Service Oriented Architectures (SOA)

Jose Barata, Luis Ribeiro, Armando Colombo, WF-005045, Volume 2, Page 951

Risk Assessment to Support Decision on Complex Manufacturing and Assembly Lines

Maria Marques, Rui Neves-Silva, WF-004286, Volume 2, Page 957

**S07-2 EXECUTION DESCRIPTION LANGUAGES FOR IEC 61499
EXECUTION SEMANTICS OF IEC 61499 FUNCTION BLOCK APPLICATIONS**

ROOM 3.1

THURSDAY, 26/07/2007 11:05 - 12:35

Alternatives for Execution Semantics of IEC61499

Valeriy Vyatkin, Victor Dubinin, Luca Ferrarini, Carlo Veber, WF-007471, Volume 2, Page 1151

Defining IEC 61499 Compliance Profiles using UML and OCL

Tanvir Hussain, Georg Frey, WF-006416, Volume 2, Page 1157

Enhanced IEC 61499 Device Management Execution and Usage for Downtimeless Reconfiguration

Thomas Strasser, Christoph Sünder, Alois Zoitl, Martijn N. Rooker, Jeroen E.J. Brunnenkreef, WF-005622, Volume 2, Page 1163

Synchronous Execution of IEC 61499 Function Blocks Using Esterel

Li Hsien Yoong, Partha Roop, Valeriy Vyatkin, Zoran Salcic, WF-001961, Volume 2, Page 1189

**T05-3 LOCALIZATION AND TRACKING
ROBOTICS AND AUTONOMOUS SYSTEMS**

ROOM 3.2

THURSDAY, 26/07/2007 11:05 - 12:35

Comparison of Self-Localization Methods for Soccer Robots

Abdul Bais, Tobias Deutsch, Gregor Novak, WF-007625, Volume 1, Page 443

General framework for human object detection and pose estimation in video sequences

Tamás Vajda, Lorinc Márton, WF-006386, Volume 1, Page 467

Global Vision Based Tracking of Multiple Mobile Robots in Subpixel Precision

Misel Brezak, Ivan Petrovic, WF-005398, Volume 1, Page 473

Location tracker for a mobile robot

Abdul Bais, Robert Sablatnig, Jason Gu, Yahya M. Khawaja, WF-002518, Volume 1, Page 479

T04-5 MEASUREMENT / SENSING APPLICATIONS APPLICATIONS OF INDUSTRIAL INFORMATICS

ROOM 4.1

THURSDAY, 26/07/2007 11:05 - 12:35

Advanced Texture Analysis in Cork Quality Detection

Beatriz Paniagua-Paniagua, Miguel Ángel Vega-Rodríguez, Pablo Bustos-García, Juan Antonio Gómez-Pulido, Juan Manuel Sánchez-Pérez, WF-005886, Volume 1, Page 311

Object Velocity Estimation Based on Asynchronous Data from a Dual-Line Sensor System

Ahmed Nabil Belbachir, Michael Hofstätter, Peter Schön, Nikolaus Donath, Karl M. Reisinger, WF-003484, Volume 1, Page 347

Optical Yarn Hairiness Measurement System

Vitor H. Carvalho, Paulo J. Cardoso, Rosa M. Vasconcelos, Filomena O. Soares, Michael S. Belsley, WF-004669, Volume 1, Page 359

Statistical assessment of global and local cylinder wear

Oscar E. Ruiz, Carlos A. Vanegas, WF-004774, Volume 1, Page 387

T10-3 NETWORKED EMBEDDED SYSTEMS EMBEDDED AND NETWORKED CONTROL IN COLLABORATIVE MANUFACTURING

ROOM 4.2

THURSDAY, 26/07/2007 11:05 - 12:35

Dynamic Flash-memory Allocation for Smartcards: how to cope with limited space (in a short life)

A.J.R. Aendenrooier, S. Huang, WF-001023, Volume 2, Page 835

Dynamic rate and control adaptation in networked control systems

Ana Antunes, Paulo Pedreiras, Luis Almeida, Alexandre Mota, WF-004537, Volume 2, Page 841

W-method for Hierarchical and Communicating Finite State Machines

Florentin Ipate, Logica Banica, WF-001791, Volume 2, Page 891

12:35 - 13:35 Lunch

13:35 - 14:05 Poster Session

I2 INTERACTIVE SESSION 2

INTERACTIVE SESSION

ROOM 0.5

THURSDAY, 26/07/2007 POSTER SESSION 13:35 - 14:05

A Recursive Description of mixed Time- and Event-driven dynamics in Mechatronic Systems

Ales Polic, Ales Hace, Karel Jezernik, WF-002526, Volume 1, Page 293

An Efficient Data Preprocessing Method for Mining Customer Survey Data

Allan N. Zhang, WF-005754, Volume 1, Page 573

An Event-Triggered Smart Sensor Network Architecture

Erico Meneses Leão, Luiz Affonso Guedes, Francisco Vasques, WF-005541, Volume 1, Page 523

Architecture of a Safe Node for a Fieldbus System

Thomas Novak, Thomas Tamandl, WF-005533, Volume 1, Page 101

Fieldbus Interoperability on Ethernet

Farzad Arjmandi, Behzad Moshiri, WF-006157, Volume 1, Page 213

Generation and Application of Precedence Information for the Planning of Assembly and Disassembly Procedures

Iker Aguinaga, Diego Borro, Luis Matey, WF-001201, Volume 1, Page 219

Identify and Classify Pulse Information Based on Extension

Xiaoyuan Zhu, Yongquan Yu, Zhilong Li, Hong Wang, WF-002038, Volume 2, Page 651

Software rejuvenation and replicated rejuvenated services

Rodica Tirtea, Geert Deconinck, WF-004227, Volume 2, Page 767

14:05 - 15:50 Panel Sessions

**T07-1 E-APPLICATIONS
E-APPLICATIONS
ROOM 1.2
THURSDAY, 26/07/2007 14:05 - 15:50**

Case Study: Utilities and Asset Management – Time For a Change

Taivo Kangilaski, WF-005681, Volume 1, Page 579

Design and Development of a Service-Oriented Supply Chain: An IT Perspective

Robin Qiu, Zhigeng Fang, Huizhang Shen, Ming Yu, Jin Dong, WF-002399, Volume 1, Page 585

E-Business and Collaborative Networks: A service-oriented ICT platform for the footwear industry

Claudia-Melania Chituc, Cesar Toscano, Americo Azevedo, WF-005487, Volume 1, Page 591

Ontology based data warehouse modeling and mining of earthquake data: prediction analysis along Eurasian-Australian continental plates

Shastri L. Nimmagadda, Heinz Dreher, WF-002585, Volume 1, Page 597

Production Data Integration in the Vaccine Industry

Nejib Moalla, Abdelaziz Bouras, Yacine Ouzrout, WF-006696, Volume 1, Page 603

**S06-1 DOWNTIMELESS RECONFIGURATION
DOWNTIMELESS RECONFIGURATION
ROOM 3.1
THURSDAY, 26/07/2007 14:05 - 15:50**

A Distributed Energy Management Approach for Autonomous Power Supply Systems

Ingo Hegny, Roland Holzer, Gunnar Grabmair, Alois Zoitl, Franz Auinger, Ewald Wahlmüller, WF-006246, Volume 2, Page 1111

An Execution Environment for Real-Time Constrained Control Software based on IEC 61499

Alois Zoitl, Gunnar Grabmair, Rene Smodic, Thomas Strasser, WF-005568, Volume 2, Page 1117

Downtimeless System Evolution: Current State and Future Trends

Oliver Hummer, Christoph Sünder, Thomas Strasser, Martijn Niels Rooker, Gerold Kerbleder, WF-005851, Volume 2, Page 1123

Future scenarios for application of downtimeless reconfiguration in industrial practice

Thomas Baier, Josef Fritsche, Georg Keintzel, Dietmar Loy, Robert Schranz, Heinrich Steininger, Thomas Strasser, Christoph Sünder, WF-003115, Volume 2, Page 1129

Modelling Real-time Constraints Regarding Reconfiguration Aspects for IEC 61499 Control Applications

Gunnar Grabmair, Alois Zoitl, Thomas Strasser, Roman Froschauer, WF-006661, Volume 2, Page 1135

T05-4 NETWORKED EMBEDDED SYSTEMS ROBOTICS AND AUTONOMOUS SYSTEMS

ROOM 3.2

THURSDAY, 26/07/2007 14:05 - 15:50

Dynamic Filter Based Prediction for Efficient Networked Motion Tracking

Lorinc Marton, Piroska Haller, Laszlo Budai, WF-002119, Volume 1, Page 461

Modeling Controller Area Network Communication

Marko Bago, Nedjeljko Peri, Siniša Marijan, WF-003905, Volume 1, Page 485

Petri net Splitting Operation within Embedded Systems Co-design

Anikó Costa, Luís Gomes, WF-007137, Volume 1, Page 503

The Input-Output Place-Transition Petri Net Class and Associated Tools

Luis Gomes, Joao Paulo Barros, Aniko Costa, Ricardo Nunes, WF-007129, Volume 1, Page 509

T06-2 REAL-TIME NETWORKS INFRASTRUCTURE AND TECHNOLOGY

ROOM 4.1

THURSDAY, 26/07/2007 14:05 - 15:50

Discrete Time Sliding Mode Controller for a Single Connection ATM Network

Andrzej Bartoszewicz, Justyna Zuk, Ireneusz Kmin, WF-003085, Volume 1, Page 535

End-to-End Delays of Event-Triggered Overlay Networks in a Time-Triggered Architecture

Roman Obermaisser, WF-002194, Volume 1, Page 541

Real-Time Communication for Smart Sensor Networks: A CAN Based Solution

António Julio Pires, Erico Meneses Leão, João Paulo Sousa, Luiz Affonso Guedes, Francisco Vasques, WF-005819, Volume 1, Page 553

Stochastic network calculus for end-to-end delays distribution evaluation on an avionics switched Ethernet

Frédéric Ridouard, Jean-Luc Scharbag, Christian Fraboul, WF-006408, Volume 1, Page 559

T10-4 DISTRIBUTED SYSTEMS EMBEDDED AND NETWORKED CONTROL IN COLLABORATIVE MANUFACTURING

ROOM 4.2

THURSDAY, 26/07/2007 14:05 - 15:50

A Generic Approach for the Simulation of Distributed Control Systems using J2EE Technology

Uwe Schmidtman, Thorsten Garrels, Hendrik Juergens, Gerd von Coelln, WF-004855, Volume 2, Page 805

Field Overlay Architecture for Manufacturing Systems

Takeshi Ohno, Akira Kataoka, Akira Noguchi, WF-003808, Volume 2, Page 847

Optimizing Distributed Foundation Fieldbus Process Control with MSP.RTL Tool

Jianping Song, Al Mok, Deji Chen, Mark Nixon, WF-006823, Volume 2, Page 867

Secure Plug and Play Architecture for Field Devices

Nobuo Okabe, Shoichi Sakane, Atsushi Inoue, Hiroshi Esaki, WF-001562, Volume 2, Page 873

15:50 - 16:00 Break

16:00 - 16:20 Closing

Friday, 27th of July – Industrial Day

The first IEEE INDIN Industrial Day is a forum for technology experts, researchers and industrial managers to discuss today's and tomorrow's challenges in academic/industrial cooperation. The motto of this industrial day is "the future of manufacturing".

We ask for your understanding that due to the high number of registrations the Industrial Day is only open to those delegates that have registered to the event in advance via the INDIN website.

Agenda

- 08.30 am** Transfers from Tech Gate Vienna to Siemensstrasse
- 09.00 am** Welcome address
Wolfgang Morrenth, Head of Siemens Austria Automation & Drives (A&D)
Friedrich Pressl, Head of Siemens Industrial Manufacturing, Engineering and Applications (SIMEA)
- 09.05 am** "Megatrends Industry – How Siemens tackles the challenges"
Wolfgang Morrenth
- 09.20 am** "Trendsetting automation for the entire value chain"
Steffen Weber, Siemens A&D HQ - Digital Engineering
- 09:40 am** Coffee Break
- 10:15 am** "Automation versus human resources – finding the right balance in operations"
Johannes Renner, Head of Manufacturing A&D Austria
- 10.45 am** Visit of the Siemens Austria manufacturing site: 2 Slots parallel
 1. Slot: Economic inverter production
 2. Slot: DC-converters: minimizing engineering costs
- 12.15 am** Lunch
- 1.15 pm** "ICT Project Portfolio – Micro/Nano-Systems, Embedded Systems and Future & Emerging Technologies"
Mrs. Gordana Popovic, European Committee
- 1.45 pm** "Smart Assembly Project"
Allan Martel, COO O3neida
- 2.15 pm** Coffee break
- 2.30 pm** Interactive Podium Panel Discussion on:
"Roles of Industrial Informatics in the future manufacturing facilities and in a new world populated by ambient aware and pro-active products"
- 4 pm** Conclusions – Wrap Up of Discussions
Antonio Valentini, CEO O3neida
- 4.15 pm** Closing
Wolfgang Morrenth
- 4.30 pm** Shuttle from Siemensstrasse to Tech Gate Vienna



Social Program

– The INDIN 2007 social events are sponsored by SIEMENS –

Welcome Reception

Ride with a historic tramway to a typical Viennese "Heurigen" (Winery) and get a taste of local cuisine.

Date, Time & Dress code

The welcome reception will be held on **Monday, 22nd of July**. Dress code: **smart casual**.

- 18:30** Meeting "Otto Wagner Pavillon" Karlsplatz
- 18:45** Historic Tramway Departure
- 19:30** Heuriger (Bach-Hengl, Sandgasse 7–9, A-1196 Wien-Grinzing)
- 22:30** Bus transfer back to Karlsplatz

Arrival

The meeting point for the Welcome Reception is at the "**Otto Wagner Pavillon**" at **Karlsplatz**. You can reach this by underground:

Arrival by **U1**: Use exit "U2/U4" at the END of the Station. Then follow green signs "U4".
On the U4 platform, use exit "**Resselpark**"

Arrival by **U2**: Use exit "Akademiestraße", then go in direction "**Resselpark**"

Arrival by **U4**: Use exit "**Resselpark**"

From the "**Resselpark**" exit you will be guided to the historic tramway.



Conference Banquet at “Palais Niederösterreich”

Date, Time & Dress code

Wednesday 25th of July, 18:30 – 24:00

Dress code: **formal**

**Don't forget
your badge!**

Venue

Altes Landhaus
Herrengasse 13
1010 Vienna

URL: <http://www.palais-niederoesterreich.at>

Arrival

Use the underground line **U3** and drive to the station “**Herrengasse**”. For more details please refer to the map:



Industrial Day Dinner – Dine in “Palmenhaus”

The Industrial Day Dinner is open to those delegates that have registered to the Industrial Day via the INDIN website.

Date, Time & Dress code

Thursday 26th of July, 18:30 – 24:00

Dress code: **casual**

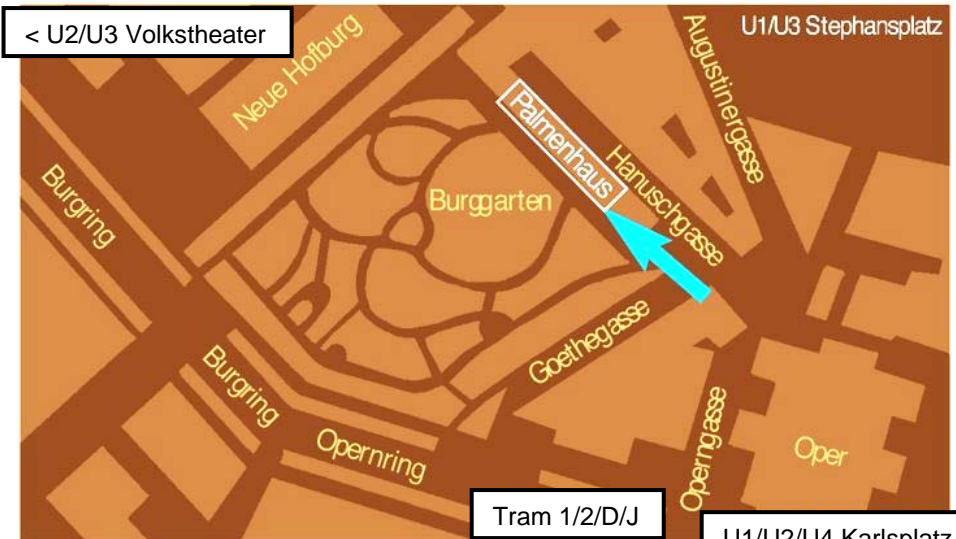
Venue

Burggarten
1010 Vienna

URL: <http://www.palmenhaus.at>

Arrival

Use the underground line **U1, U2** or tram **1,2,D or J** to the stop 'Oper'. For the short walk to the "Palmenhaus" please consider the following map:





Q&A

General help – where can I get that?

Please refer to the INDIN Registration Desk in the entrance area for any general requests.

Helpline Telephone – can I call anyone?

In case you got completely lost or missed one of our shuttle services, you can call the INDIN phone +43 681 104 38 403. Please read this program carefully before calling us to ensure that the information you need is not included in this document.

Internet – how can I access it?

There will be free wireless Internet access available for you at the venue. Please connect to the open WLAN with SSID “TGV x.x”, where x can vary depending on room and floor.

Organisers – how do I identify them?

The organisers wear red badges. You can always address your inquiries to them.

Presentation – when and in what format shall I provide it?

Panel presentations are to be done via PPT or PDF presentations with maximum 20 minutes of time (including questions). Laptop computers and digital projectors for presentation are available; bring your files on a USB thumb drive or CD. Please come forward to the session organisers in the break/coffee break before your session for copying your files on the presentation computer.

Please note that we do not guarantee that video clips included in your presentations will actually work.

Tickets – how do I get access to the INDIN events?

Your badge serves as ticket for all INDIN technical and social events. The badge clearly states all events you have admission to. If you have not been registered for an event you would like to take part, please come to the INDIN registration desk.

INDIN Help Desk

The INDIN organising team offers you the **mobile INDIN Help Desk**, which you can call for organisational issues and requests during the conference.

+43 681 104 38 403

Please read this program carefully before calling us in order to avoid unnecessary questions.

Track Overview

T01 Buildings, Networks and Automation

T02 Security and Safety

T03 Factory Automation

T04 Applications of Industrial Informatics

T05 Robotics and Autonomous Systems

T06 Infrastructure and Technology

T07 E-Applications

T08 Cognitive Science in Industrial Informatics

T09 Service-Oriented Architecture

T10 Embedded and Networked Control in Collaborative Manufacturing

S01 IT and Energy

S02 IT in Manufacturing

S03 Dependable Embedded Systems

S04 Cognitive Automation

S05 Agents Theory and Practice for Industry

S06 Downtimeless Reconfiguration

S07 Execution semantics of IEC 61499 Function Block Applications

S08 Challenges in IT and Energy