Programm of the 4th IEEE Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications

IDAACS'2007
The crossing point of Intelligent Data Acquisition & Advanced Computing Systems and East & West Scientists

DORTMUND, GERMANY
September 6-8, 2007

ORGANIZED BY
RESEARCH INSTITUTE OF INTELLIGENT COMPUTER SYSTEMS
and FACULTY OF COMPUTER INFORMATION TECHNOLOGIES,
TERNOPIL NATIONAL ECONOMIC UNIVERSITY

AND
UNIVERSITY OF APPLIED SCIENCES
FACHHOCHSCHULE DORTMUND

SPONSORED BY
Ternopil National Economic University
University of Applied Sciences Dortmund
Deutsche Forschungsgemeinschaft
RWE Systems AG, Dortmund, Germany
IEEE Instrumentation & Measurement Society
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Workshop Co-Chairmen

Anatoly Sachenko,  
Ternopil National Economic University,  
Ternopil, Ukraine  

Peter J. A. Reusch,  
University of Applied Sciences / Fachhochschule Dortmund  
Dortmund, Germany

International Program Committee Co-Chairmen

Richard Duro,  
Universidade da Coruña,  
Ferrol, Spain  

Wiesław Winiecki,  
Warsaw University of Technology, Warsaw, Poland
IDAACS’2007 Workshop Committee

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Andriy Gurzhiy, Ukraine Serhiy Yuriy, Ukraine Eberhard Menzel, Germany

International Advisory Board:
Theodore Laopoulos, Greece, Chair
Robert Hiromoto, USA Fernando Lopez Peña, Spain Domenico Grimaldi, Italy
Anatoly Sachenko, Ukraine Peter Reusch, Germany

Workshop Co-Chairmen:
Anatoly Sachenko, Ukraine Peter Reusch, Germany

International Program Committee Co-Chairmen:
Richard Duro, Spain Wiesław Winiecki, Poland

International Program Committee:
Plamenka Borovska, Bulgaria Nikos Chrisochoides, USA Laszlo Czuni, Hungary
Dominique Dallet, France Jack Dongarra, USA Mihal Dorozhovets, Poland
Mykola Dyvak, Ukraine Halit Eren, Australia Pierre Fiorini, USA
Manuel Grana, Spain Vladimir Golovko, Belarus Lucio Grandinetti, Italy
Uwe Grossmann, Germany Vladimir Haasz, Czech Republic
Akira Imada, Belarus Orest Ivakhiv, Ukraine Masami Iwase, Japan
Vladimir Jotsov, Bulgaria Mikolaj Karpinski, Poland
Ivan Kalchev, Bulgaria Vladimir Haasz, Czech Republic
Zdravko Karakehayov, Bulgaria Nikolai Kolev, Bulgaria
Yury Kolokolov, Russia

Organizing Committee:
Vice-Chairmen: Vasyl Koval, Ukraine, Jorg Broer, Germany, Volodymyr Kochan, Ukraine
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Volodymyr Hrusha, Ukraine Ihor Paliy, Ukraine
Ingrid de Jongste, Germany Martin Plaeger, Germany
Celina Kluba, Germany Torsten Ruben, Germany
Roman Kochan, Ukraine Volodymyr Turchenko, Ukraine
Svitlana Kotys , Ukraine

International Program Committee:
Igor Kotenko, Russia Natalia Kussul, Ukraine Kurosh Madani, France
George Markowsky, USA Vladimir Oleshchuk, Norway
Dana Petcu, Romania

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Celina Kluba, Germany Torsten Ruben, Germany
Roman Kochan, Ukraine Volodymyr Turchenko, Ukraine
Svitlana Kotys , Ukraine
Message from Co-Chairmen

It’s our pleasure to invite all of you to participate in the Fourth IEEE Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS), www.idaacs.net, which will be held in Dortmund, Germany, 6-8 September, 2007.

The IDAACS Workshop is organized by the Research Institute of Intelligent Computer Systems and Faculty of Computer Information Technologies, Ternopil National Economic University in cooperation with the University of Applied Sciences / Fachhochschule Dortmund. It is supported financially by the Ternopil National Economic University, the University of Applied Sciences / Fachhochschule Dortmund, IEEE Instrumentation and Measurement Society (IMS), Deutsche Forschungsgemeinschaft (German Research Foundation), RWE Systems AG, Dortmund, Germany, DSW21, Dortmund, Anna and Hermann Reusch Foundation. Technical cooperation and support is also provided by the IEEE Instrumentation & Measurement/Computation Intelligence Joint Societies Chapter of Ukraine Section, IEEE Ukraine Section, the IEEE Computational Intelligence Society, the IEEE/IMS/Technical Committee on Education for Instrumentation and Measurement, State International Committee of Science and Culture, the National Academy of Sciences of Ukraine, Ministry of Education and Science of Ukraine.

The main goal of the IDAACS’2007 is to provide a forum for high quality reports on the state-of-the-art Theory, Technology and Applications of Intelligent Data Acquisition and Advanced Computer Systems as used in different areas. A family of IDAACS Workshops has already been created. The First IDAACS Workshop was held in Foros, Crimea, Ukraine, on July 1-4, 2001, and there were a total of 70 participants from 18 countries, the proceedings of IDAACS’2001 consisted of 280 pages. The Second IEEE IDAACS was held in Lviv, Ukraine, on September 8-10, 2003, there were 85 participants from 21 countries; the proceedings of IDAACS’2003 consisted of 529 pages. The Third IEEE IDAACS was held in Sofia, Bulgaria, on September 5-7, 2005, and there were a total of 99 participants from 27 countries, the proceedings of IDAACS’2005 consisted of 738 pages.
The Program Committee of IDAACS’2007 has accepted 180 papers by authors coming from 35 countries in Europe, America, Asia and Australia. We would like to sincerely thank all the reviewers of the submitted papers - their names are listed later in the proceedings, their contribution to the quality and success of this Workshop is hereby gratefully acknowledged. As a result of the selection process 95 papers have been chosen and scheduled for oral presentation and 52 papers for poster presentations; they are organized into 19 oral and 9 poster sessions.

A special stream on wireless systems has been introduced to focus on this field, which is becoming more and more important in our life – and needs more and more contributions in research and development.


Like almost no other German city, Dortmund has seen enormous change in recent years. The former “steel city” developed into a modern and cosmopolitan metropolis, acquiring renown all across Europe as an innovative location for technological development. But the biggest city in the Ruhr Valley also scores with a wide range of possibilities in the cultural and sporting sector, with extensive greens and a high quality of life.

Dortmund has entered the third millennium with its own target: building on existing strengths and creating new potential in the process. An aim that is met with evident success: counting 586,000 inhabitants, the city alongside the ancient German trading route (the “Hellweg”) is one of the biggest cities of the Federal Republic of Germany and the economic and cultural centre of Westphalia. Dortmund was founded as „Throtmani” around the year 880. Called “Dorpmunde” throughout the Middle ages, it was one of the richest and most important cities of the Hanseatic League for a long time. Coal, steel and beer guaranteed economic prosperity beyond the middle of the past century. In the course of structural change, however, new branches like IT, micro systems technology, logistics, communications- and media technology have re-shaped Dortmund’s corporate landscape.

Welcome to IDAACS’2007 Conference, make a proper contribution and enjoy the charming city of Dortmund!
## Workshop Timetable

### WEDNESDAY, SEPTEMBER 5th, 2007

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>05:00 PM</td>
<td>Registration (Foyer Hostel Kolpinghaus)</td>
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<tr>
<td>07:00 PM</td>
<td>Welcoming Reception (Hostel Kolpinghaus)</td>
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### THURSDAY, SEPTEMBER 6th, 2007

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08:00 AM – 09:00 AM</td>
<td>Registration (Foyer - Emil-Figge-Strasse 42)</td>
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<tr>
<td>09:00 AM – 10:00 AM</td>
<td>Opening (Room A.E.01 – Room 1- Emil-Figge-Str. 42)</td>
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<tr>
<td>10:00 AM – 10:30 AM</td>
<td>Coffee Break (Ground floor Emil-Figge-Strasse 42)</td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:30 AM – 12:00 PM</td>
<td>Room 1: Session T11: Instrumentation and Data Acquisition Systems Chairs: Theodore Laopoulos, Greece Volodymyr Romanov, Ukraine (6 papers)</td>
</tr>
<tr>
<td></td>
<td>Room 2: Session T41: Artificial Intelligence and Neural Networks Chairs: Richard Duro, Spain Vladimir Golovko, Belarus (5 papers)</td>
</tr>
<tr>
<td></td>
<td>Room 3: Session T61: Data Processing and Analysis Chairs: John Lygouras, Greece Rauf Sadykhov, Belarus (6 papers)</td>
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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>01:00 PM-02:00 PM</td>
<td>Lunch (Rooms E82&amp;E84 - Emil-Figge-Strasse 44)</td>
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<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>02:00 PM – 03:30 PM</td>
<td>Room 1: Session T21: Distributed Systems and Virtual Instrumentation Chairs: Miguel Dias Pereira, Portugal Roman Kochan, Ukraine (6 papers)</td>
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<tr>
<td></td>
<td>Room 2: Session T51: Math Methods in Instrumentation and Computing Chair: George Markowsky, USA (6 papers)</td>
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<tr>
<td></td>
<td>Room 3: Session T91: Cyber and Homeland Security Chairs: Vladimir Oleshchuk, Norway Andrian Piskozub, Ukraine (6 papers)</td>
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<tr>
<td>Time</td>
<td>Session</td>
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<tr>
<td>12:00 PM</td>
<td>Foyer Session TP1: Instrumentation, Data Acquisition and Distributed Systems</td>
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<tr>
<td>03:30 PM</td>
<td>Coffee break (Ground floor Emil-Figge-Strasse 42)</td>
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<tr>
<td>05:30 PM</td>
<td>Workshop Dinner (Lower floor at Hoevels Brewery)</td>
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<tr>
<td>08:00 AM</td>
<td>Registration (Foyer Emil-Figge-Strasse 42)</td>
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<tr>
<td>09:00 AM</td>
<td>Room 1 Session F12: Instrumentation and Data Acquisition Systems</td>
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<td>10:00 AM</td>
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<tr>
<td></td>
<td>Room 2 Session F52: Math Methods in Instrumentation and Computing</td>
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<td>Chairs:</td>
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<td>Chairs:</td>
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<td></td>
<td>Igor Kotenko,</td>
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<tr>
<td></td>
<td>Russia</td>
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<td></td>
<td>Zdravko</td>
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<td>Karakehayov, Denmark</td>
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<tr>
<td>10:00 AM</td>
<td>Coffee break (Ground floor Emil-Figge-Strasse 42)</td>
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<tr>
<td>10:30 AM</td>
<td>Room 1 Session F22: Distributed Systems and Virtual Instrumentation</td>
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<tr>
<td>12:00 PM</td>
<td>Chairs:</td>
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<td>(4 papers)</td>
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<td>Chairs:</td>
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<td></td>
<td>Uwe Grossmann, Germany</td>
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<td>Juergen Sieck, Germany</td>
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<td>(4 papers)</td>
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<tr>
<td>10:30 AM</td>
<td>Room 3 Session F62: Data Processing and Analysis</td>
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<td>Chairs:</td>
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<tr>
<td></td>
<td>(6 papers)</td>
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<tr>
<td>01:00 PM-02:00 PM</td>
<td>Lunch (Rooms E82&amp;E84 Emil-Figge-Strasse 44)</td>
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</tbody>
</table>
| 02:00 PM – 03:30 PM | Room 1  
Session F71: Intelligent Retrieval and Robotic Systems  
Chairs: Carlos G. Puntonet, Spain  
Vasyl Koval, Ukraine  
(6 papers)  
Room 2  
Session F102: Wireless Systems - Special Stream  
Chairs: Evren Eren, Germany, Axel Sikora, Germany  
(3 papers)  
Room 3  
Session F93: Cyber and Homeland Security  
Chairs: Fikret Gürgen, Turkey  
Vadym Mukhin, Ukraine  
(6 papers) |
| 12:00 PM – 01:00 PM | Foyer  
Session FP10: Wireless Systems – Special Stream  
Chairs: Jürgen Kawalek, Germany  
Uschi Gröner, Germany  
(6 papers)  
Foyer  
Session FP5: Math Methods in Instrumentation and Computing  
Chair: Peter Reusch, Germany  
(8 papers)  
Foyer  
Session FP9: Cyber and Homeland Security  
Chair: Mykola Karpinsky, Ukraine  
(3 papers) |
| 03:30 PM – 04:30 PM | The presentation of interest groups and streams for future IDAACS (Room A.E.01 -Room 1- Emil-Figge-Str. 42) |
| 04:30 PM – 07:00 PM | Dortmund City Tour (Starting from Emil-Figge-Str 42) |

**SUNDAY, SEPTEMBER 8th, 2007**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>08:30 AM – 09:00 AM</td>
<td>Registration (Foyer Emil-Figge-Strasse 42)</td>
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</tbody>
</table>
| 09:00 AM – 10:00 AM | Room 1  
Session S31: High Performance Computing Technologies  
Chairs: Dana Petcu, Romania  
Anatoly Sachenko, Ukraine  
(4 papers)  
Room 2  
Session S81: Applications of Information Computing Systems  
Chairs: Dino Schoenberg, Germany  
Oleksandr Sudakov, Ukraine  
(4 papers) |
<p>| 10:00 AM – 10:30 AM | Coffee break (Ground floor Emil-Figge-Strasse 42)                  |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event Description</th>
</tr>
</thead>
</table>
| 10:30 AM –   | Room 1   | Session S42: Artificial Intelligence and Neural Networks  
Chairs:  
Kurosh Madani, France  
Volodymyr Turchenko, Ukraine  
(3 papers) |
| 12:00 PM     | Room 2   | Session S82: Applications of Information Computing Systems  
Chair:  
Wolfgang Tysiak, Germany  
(7 papers) |
| 12:00 PM –   | Foyer    | Session SP3: High Performance Computing Technologies  
Chair:  
Plamenka Borovska, Bulgaria  
(3 papers) |
| 01:00 PM –   | Foyer    | Session SP7: Intelligent Retrieval and Robotic Systems  
Chair:  
Pascal Reusch, Germany  
(5 papers) |
| 02:00 PM –   | Foyer    | Session SP8: Applications of Information Computing Systems  
Chair:  
Sergey Rippa, Ukraine  
(8 papers) |
| 02:00 PM – 03:30 PM | Lunch (Rooms E82&E84 - Emil-Figge-Strasse 44) |
| 02:00 PM – 03:30 PM | Round Table & Closing (Room A.E.01 – Room 1-Emil-Figge-Str. 42) |

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**Bus shuttle - Kolpinghaus-Campus**

- The bus will depart from Kolpinghaus on Thursday at 7:45 a.m.
- The bus will depart from Campus on Thursday at 4:15 p.m.
- The bus will depart from Kolpinghaus on Friday at 8:00 a.m. - no shuttle back because city tour starts from campus
- The bus will depart from Kolpinghaus on Saturday at 8:15 a.m. - no shuttle back
Workshop Technical Program

**WEDNESDAY, SEPTEMBER 5th, 2007**

05:00 PM       Registration

07:00 PM       Welcoming Reception

**THURSDAY, SEPTEMBER 6th, 2007**

08:00 AM – 09:00 AM   Registration

09:00 AM – 10:00 AM   Opening

10:00 AM – 10:30 AM   Coffee Break

10:30 AM – 12:00 PM

**Session T11: Instrumentation and Data Acquisition Systems**

Chairs: Theodore Laopoulos, Aristotle University of Thessaloniki, Greece
Volodymyr Romanov, V.M. Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine, Ukraine

Room:1

1. Intelligent Data Acquisition System for Quartz Crystal Microbalance and Other Resonator-Based Sensors. **Sergey Yurish.** Spain


3. Method of ADC’s Nonlinearity Identification. **Roman Kochan.** Ukraine


5. Supercapacitor data acquisition systems. **Valeriy Martynyuk.** Ukraine

10:30 AM – 12:00 PM
**Session T41: Artificial Intelligence and Neural Networks**

Chairs: Richard Duro, Universidade da Coruña, Spain  
Vladimir Golovko, Brest State Technical University, Belarus

Room: 2

1. Adaptive Hierarchical Forecasting. *Christoph Engels, Wolfgang Konen*. Germany


5. Comparative Analysis of Forecasting Neural Networks in the Application for Epilepsy Detection. *Svetlana Bezobrazova, Vladimir Golovko*. Belarus

10:30 AM – 12:00 PM
**Session T61: Data Processing and Analysis**

Chairs: John Lygouras, Democritus University of Thrace, Greece  
Rauf Sadykhov, Belarusian State University of Informatics and Radioelectronics, Belarus

Room: 3


5. Evaluating a Model for Medium Sized Electricity Consumers. Tamás Makai. Hungary

01:00 PM – 02:00 PM    Lunch

02:00 PM – 03:30 PM

Session T21: Distributed Systems and Virtual Instrumentation
Chairs: Miguel Dias Pereira, ESTSetúbal-LabIM/IPS, Portugal
Roman Kochan, Ternopil National Economic University, Ukraine
Room:1

3. Discrete-time PID Controller Design in Programmable Logical Controllers. Leonas Balasevicius, Asta Kunickaite, Vytis Svažunas Janusevicius. Lithuania
6. FPGA-Based Advanced Real Traffic Light Controller System Design. WM El-Medany, MR Hussain. Bahrain
02:00 PM – 03:30 PM

**Session T51: MathMethods in Instrumentation and Computing**
Chair: George Markowsky, University of Maine, USA
Room:2

2. The ReAl Computer Architecture. *Wolfgang Matthes.* Germany
4. Constructing Large Margin Polytope Classifiers with a Multiclass Classification Algorithm. *Istvan Pilaszy, Tadeusz Dobrowiecki.* Hungary
5. Loop Parallelization Algorithm for Specific Case of Loop-carried Dependence for Hardware Compilation. *Sadykhov R.Kh., Uvarov A.A.* Belarus

02:00 PM – 03:30 PM

**Session T91: Cyber and Homeland Security**
Chairs: Vladimir Oleshchuk, Agder University College, Norway
Andrian Piskozub, National University "Lviv Politechnic", Ukraine
Room:3

1. Arrhythmia Classification Using Serial Fusion of Support Vector Machines and Logistic Regression. *Aslı Uyar, Fikret Gürgen.* Turkey


03:30 PM – 03:45 PM Coffee Break

12:00 PM – 01:00 PM

Session TP1: Instrumentation, Data Acquisition and Distributed Systems

Chair: Volodymyr Kochan, Ternopil National Economic University, Ukraine

Foyer:


2. Centralised diagnostics of electronic and electric equipment in vehicles, engine lighting equipment testing. Petr Jezdik. Czech Republic


5. Transducers with Magnetic Microsensors. Corneli Panait, George Căruntu. Romania


12:00 PM – 01:00 PM

Session TP4: Artificial Intelligence and Neural Networks
Chair: Arunas Lipnickas, Kaunas University of Technology, Lithuania
Foyer:
2. Genetic Algorithm for Antenna Array with Failed and Deviated Elements Optimization. B. Artyushenko. Ukraine
5. Handling Datasets in a Multi-Relational Environment: Cluster Dispersion vs Cluster Purity. Rayner Alfred, Dimitar Kazakov. UK

12:00 PM – 01:00 PM

Session TP6: Data Processing and Analysis
Chair: Yury Kolokolov, Orel State Technical University, Russia
Foyer:
3. Image Contour Analysis in Local Coordinates. O. M. Berezsky, K.M. Berezska, O.P. Adamiv. Ukraine
6. A Remote Mycological Assistant. Ramón Moreno, Manuel Graña, Miguel A. Veganzones. Spain

05:30 PM – 07:00 PM Workshop Dinner

FRIDAY, SEPTEMBER 7th, 2007

08:00 AM – 09:00 AM Registration

09:00 AM – 10:00 AM

Session F12: Instrumentation and Data Acquisition Systems
Chairs: Fernando Lopez Peña, Universidade da Coruña, Spain
         Sergey Yurish, Technical University of Catalonia, Spain
Room: 1
1. A Low Cost Digital Data Acquisition System for Infrasonic Records. José Chilo and Thomas Lindblad. Sweden
2. Object Oriented Concurrent Fault Diagnostic System for 8051 Based Microcontroller System. Dattatraya Vishnu Kodavade, S.D.Apte. India
4. Temperature Measurement System Based on Thermocouple With Controlled Temperature Field. O.Kochan, R. Kochan, O.Bojko, M. Chyrka. Ukraine

09:00 AM – 10:00 AM

Session F52: MathMethods in Instrumentation and Computing
Chairs: Dominique Dallet, Université de Bordeaux, France
         Roman Pasichnyk, Ternopil National Economic University, Ukraine
Room: 2
1. An Iterative Monte Carlo Scheme with Relaxation. Robert E. Hiromoto, USA.

09:00 AM – 10:00 AM

Session F92: Cyber and Homeland Security
Chairs: Igor Kotenko, St.Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, Russia
Zdravko Karakehayov, University of Southern Denmark, Denmark
Room: 3
2. Packet Marking Scheme and Deployment Issues. K. Stefanidis, D. N. Serpanos. Greece

10:00 AM – 10:30 AM Coffee Break

10:30 AM – 12:00 PM

Session F22: Distributed Systems and Virtual Instrumentation
Chairs: Wieslaw Winiecki, Warsaw University of Technology, Poland
Alexander Sovlukov, Institute of Control Sciences, Russia
Room: 1

3. Analysis of the synchronization delay in the path PC-DSO co-operating into the W-DMS. Domenico Grimaldi, Francesco Lamonaca. Italy


10:30 AM – 12:00 PM

Session F101: IKAROS – Wireless Systems - Special Stream

Chairs: Uwe Grossmann, Dortmund University of Applied Sciences, Germany
Jürgen Sieck. University of Applied Sciences (FHTW) Berlin, Germany

Room:2

1. RSSI based WLAN indoor positioning with personal digital assistants. Uwe Grossmann, Markus Schauch, Syuzanna Hakobyan. Germany


4. Wireless museum information systems. Jürgen Sieck, André Fiedler. Germany

10:30 AM – 12:00 PM

Session F62: Data Processing and Analysis

Chairs: Orest Ivakhiv, Lviv Polytechnic National University, Ukraine
Dattatraya Kodavade, D.K.T.E'S Textile & Engineering Institute, India

Room:3

2. Investigation and Simulating of Algorithm of Building of Set of Attainability of Linear Controlled System. Oleksiy Sholokhov. Ukraine

3. Pre-processing of Image Affected by Contemporaneous Alterations for Surface Measurement of the Human Lymphocyte Micro-Nucleus. Domenico Grimaldi, Francesco Lamonaca. Italy

4. Image Recognition Based Analysis and Comparison of Hybrid Intelligent Approaches for Computer Aided Diagnosis. Amine Chohra, Nadia Kanaoui, Kurosh Madani. France


01:00 PM – 02:00 PM Lunch

02:00 PM – 03:30 PM

Session F71: Intelligent Retrieval and Robotic Systems
Chairs: Carlos. G. Puntonet, University of Cadiz, Spain
Vasyl Koval, Ternopil National Economic University, Ukraine
Room:1


2. TSP Performance Prediction Using Data Mining. Paula Cecilia Fritzsche, Dolores Rexachs, Emilio Luque. Spain


5. Data Acquisition and Processing using a Service Oriented Architecture for an Automated Inspection System. Christoph Walter, Erik Schulenburg, Daniel Beier, Norbert Elkmann. Germany

02:00 PM – 03:30 PM

**Session F102: Wireless Systems - Special Stream**

Chairs: Evren Eren. Dortmund University of Applied Sciences, Germany  
Axel Sikora. University of Cooperative Education Loerrach, Germany  

Room: 1

1. WiMAX Security Architecture – Analysis and Assessment. Evren Eren. Germany  

02:00 PM – 03:30 PM

**Session F93: Cyber and Homeland Security**

Chairs: Fikret Gürgen, Boğaziçi University, Turkey  
Vadym Mukhin, National Technical University of Ukraine "Kiev Polytechnic Institute", Ukraine  

Room: 3

3. Concept of Multicriteria Aid of Choice of Threshold Value IN Biometrical Authentication System. Arkadiusz Banasik, Adrian Kapczyński, Maciej Wolny. Poland  
12:00 PM – 01:00 PM

**Session FP10: Wireless Systems - Special Stream**

Chairs: Jürgen Kawalek, University of Applied Sciences Zittau/Görlitz, Germany
Uschi Gröner, Dortmund University of Applied Sciences, Germany

Foyer:
1. Method of Converting Speech Codec Formats between GSM 06.20 and G.729. Ruslan Shevchuk, Ludmila Honchar, Pavlo Bykovyy. Ukraine
2. How to Design an Advanced Pedestrian Navigation System: Field Trial Results. Annegret Stark, Marcel Riebeck, Jürgen Kawalek. Germany
3. Economics of mobile information- and service systems for location and area development. Markus Schauch, Uwe Grossmann. Germany
4. Database Classification of Mobile Devices. Sebastian Gansemer, Uschi Gröner, Manuel Maus. Germany
6. Research handicapes to radio networks in a range of 2.4 GHz. Alexey Lagunov. Russia

12:00 PM – 01:00 PM

**Session FP5: MathMethods in Instrumentation and Computing**

Chair: Peter Reusch, Dortmund University of Applied Sciences, Germany

Foyer:
2. Estimation of the Multifrequency Signal Parameters by Interpolated DFT Method with Maximum Sidelobe Decay. Daniel Belega, Romania and Dominique Dallet, France
3. Algorithm Conception Clarification Based on the SH-Model. Anatoly Sachenko, Mykola Cherkaskyy, Osolinskiy Oleksandr. Ukraine

5. Signals with Probabilistic Descriptions, Functionally Dependent Within a Period, and Their Model. *A.Matsiuk, M. Pryimak*. Ukraine


7. Multibases Processors of Two-dimensional Correlation for Noise Immunity of Transfer Information. *Yaroslav Nykolaychuk, Nazar Krutskevych, Oleg Zastavnyy*. Ukraine


12:00 PM – 01:00 PM

**Session FP9: Cyber and Homeland Security**
Chair: Mykola Karpinsky, University of Bielsko-Biala, Poland
Foyer:
2. An Efficient Architecture of 1024-bits Cryptoprocessor for RSA Cryptosystem Based on Modified Montgomery’s Algorithm. *Hu Zhengbing, Rabah Moh’d Al Shboul, Shirochin V. P.* Ukraine

03:30 PM – 04:30 PM

**The presentation of interest groups and streams for future IDAACS**
Chair: Anatoly Sahcenko, Ternopil National Economic University, Ukraine
Room:1

04:30 PM – 07:00 PM **Dortmund City Tour**
SATURDAY, SEPTEMBER 8th, 2007

08:30 AM – 09:00 AM  Registration

09:00 AM – 10:00 AM

Session S31: High Performance Computing Technologies
Chairs: Dana Petcu, Western University of Timisoara, Romania
Anatoly Sachenko, Ternopil National Economic University, Ukraine
Room: 1
3. Using Object Based Files for High Performance Parallel IO. Jeremy Logan, Phillip M. Dickens. USA

09:00 AM – 10:00 AM

Session S81: Applications of Information Computing Systems
Chairs: Dino Schoenberg, Fachhochschule Dortmund, Germany
Oleksandr Sudakov, National Taras Shevchenko University of Kyiv, Ukraine
Room: 2
1. New Perspectives for the Management of Business Rules based upon Decision Tables. Peter J. A. Reusch, Emine Bozugney, Julia Gdaniec, Pascal Reusch. Germany
2. Improving Team Performance with Intelligent Models: An Application in Financial Trading. Alessandra Orsoni, David Iglesias. UK
3. Integrated Tool Sets for Business Games and Simulation. Peter J. A. Reusch, Emine Bozugney, Pascal Reusch. Germany
4. Estimating and Forecasting a German Term Structure. Wolfgang Tysiak. Germany
10:00 AM – 10:30 AM  **Coffee Break**

10:30 AM – 12:00 PM  **Session S42: Artificial Intelligence and Neural Networks**
  Chairs: Kurosh Madani, Paris XII University, France
  Volodymyr Turchenko, Ternopil National Economic University, Ukraine
  Room:1

10:30 AM – 12:00 PM  **Session S82: Applications of Information Computing Systems**
  Chair: Wolfgang Tysiak, University of Applied Sciences Dortmund, Germany
  Room:2
  1. Practical Knowledge Management with SAP NetWeaver Portal. *Pascal Reusch*. Germany
  2. Economies of Scale through Virtualization of SAP® R/3® Systems
     RWE Systems Computing GmbH. *M. Stephan, J. Hellwig*. Germany
  4. New applications for bistable Displays. *Dino Schönberg, Peter J. A. Reusch*. Germany
  5. Classification of Master Data of Products and Commodities based upon Pattern Matching. *Christian Schlüsener*. Germany
  6. Implementing a Work Support and Training Tool for Control Engineers. *David Hästbacka, Outi Laitinen, Teemu Tommila, Seppo Kuikka*. Finland
7. Knowledge Management in Multilingual e-Commerce Applications. Yefim Kats, James Geller. USA.

12:00 PM – 01:00 PM

**Session SP3: High Performance Computing Technologies**  
Chair: Plamenka Borovska, Technical University of Sofia, Bulgaria  
Foyer:

1. CHPOX: Transparent Checkpointing System for Linux Clusters.  
   Oleksandr Sudakov, Ievgenii Meshcheriakov, Yuriy Boyko. Ukraine
3. Parallelizing Dynamic Models Based on Fuzzy Coupled Map Networks. Horia-Nicolai Teodorescu. Romania

12:00 PM – 01:00 PM

**Session SP7: Intelligent Retrieval and Robotic Systems**  
Chair: Pascal Reusch, Dortmund University of Applied Sciences, Germany  
Foyer:

1. A User Interface of Relevance Feedback for Interactive Information Retrieval Systems. Vitaliy Vitsentiy. Australia
5. Creating of quasioptimal general classifiers based on distance function. V.A. Tayanov, B.P. Rusyn, O.A. Lutsyk, B.O. Kapustiy. Ukraine
12:00 PM – 01:00 PM

**Session SP8: Applications of Information Computing Systems**
Chair: Sergey Rippa, National University of State Tax Service of Ukraine, Ukraine

Foyer:
3. Trust Management in Distributed Systems via SPATE. *Sam Sengupta, Bruno Andriamanalimanana, Greg Martin, Santhiratan Mandyam, Sirisha Sripada, Anand Chakravarthi, Subir Jolly*. USA
8. XHTML+Voice vs. SALT: Two standards for multimodal websites. *Jörg Swade, Peter J. A. Reusch*. Germany

01:00 PM – 02:00 PM    **Lunch**

02:00 PM – 03:30 PM    **Round Table + Closing**
Chair: Robert Hiromoto, University of Idaho, USA
Room: 1
Registration

The Registration Desk is open on

– Wednesday, September 5\textsuperscript{th}, from 05:00 PM to 07:00 PM  
  (in Kolpinghaus)
– Thursday, September 6\textsuperscript{th}, from 08:00 AM to 09:00 AM  
  (in Emil-Figge-Strasse 42)
– Friday, September 7\textsuperscript{th}, from 08:00 AM to 09:00 AM  
  (in Emil-Figge-Strasse 42)
– Saturday, September 8\textsuperscript{th}, from 08:30 AM to 09:00 AM  
  (in Emil-Figge-Strasse 42)

Internet Access

IDAACS’2007 will provide free Internet access for every participant with their own notebook computer. Wireless LAN is available in the Emil-Figge 42 building. Additional Internet access capabilities are provided for connecting to your home servers and remotely reading your messages as well as sending new ones.
How to get to Dortmund

- **By air**

**The Dortmund Airport (DTM):**
It served by Air Berlin, easyjet, Hapag Lloyd, Sunexpress, LGW, Lufthansa, City Air and Czech Airlines, has connections to cities all over Europe. Allow getting to and from Dortmund Airport.

The airport is situated just off the B1/A44 motorway, which leads directly into Dortmund city centre. A non-stop shuttle bus links Dortmund Airport with the city’s central bus station, which is opposite the main railway station. The journey lasts 25 minutes and costs 5€. Shuttle buses also depart every 15 minutes for Holzwickede train station, south of the airport. Travel time is about 5 minutes, and the fare is 1€.

More information about the airport you can find on http://www.dortmund-airport.de

- **By train**

**The Hauptbahnhof (Central Station),** one of Europe’s largest, connects to any German city and is serviced by several kinds of high speed train.

Dortmund's excellent public transport system integrates subway, buses and trams within the larger Ruhrgebiet region.

To find a connection please click here:
http://reiseauskunft.bahn.de/bin/query.exe/en

*For most participants the train from Frankfurt is probably the best choice to come to Dortmund as there is a very fast train connection from the airport in Frankfurt - 2 hours.*

Train connection thru railway line S1 - 6 minutes form central station - S1 direction Düsseldorf - stop at Dortmund-University - underground railway station under Emil-Figge-Str-44.

You may check the train connections on www.bahn.de or
http://www.bahn.de/p/view/mobilitaet/flug/airrail.shtml
http://www.bahn.de/p/view/international/englisch/international_guests.shtml
• **Rent a car**
  Cars can be rented (Autovermietung) with car rental companies easily available at airports and railway stations.

  **Taxis** cost around 25 € for the 25-minute trip.
About Dortmund

Dortmund is a city of 600,000 people, the sixth largest in Germany, whose origins date back to 890 A.D. It is a modern center of business, high technology, education, and culture.

Renovated Art Nouveau facades shape the architectural personality of many residential neighborhoods. These contrast with the downtown business center's sleek municipal and office buildings.

One of the most pleasant surprises about the Dortmund environment is its open natural spaces and extensive greenery. More than half of the city's incorporated area is devoted to gardens, spacious parks, and forests-right within the city limits.

In many ways, Dortmund's international population and blend of old and new introduce the visitor to everyday life in twenty-first century Germany.

Two features of the Dortmund culture, rooted in its industrial past, still shape its postmodern present: soccer and beer.
IDAACS’2007 Venue

Emil-Figge-Str-42: the building with the main hall, foyer for poster presentations, etc.

Emil-Figge-Str-44: meeting rooms, computer lab, and conference office.

The distance between Emil-Figge-Str-42 and Emil-Figge-Str-44 is less than 100 meters
Maps of IDAACS’2007 Venue

Dortmund

Kolpinghaus
Welcome Reception
Thru the entrance of the hostel
- not the restaurant

Brewery Hövels
– Workshop Dinner – Hoher Wall 5-7 – lower level inside