Würzburg, with its numerous theaters, open-air concerts and wine festivals, is a tourist's delight. Located on the banks of river Main, vineyards, castles, medieval cities and baroque palaces characterize this region. Must-do's in Würzburg include a walk in the gardens adjacent to the Residence Palace, a baroque UNESCO World Cultural Heritage Site built by the famous architect Balthasar Neumann, a stroll across the ‘Alte Mainbrücke’ and a walk up to the Marienberg fortress enjoying a panoramic view of the entire city.

Location and Approach

The international airports in Frankfurt and Nürnberg are within close range (about 90 min by train). With direct access to three major German highways, the A3, A7 and A81, Würzburg is easily reached by road as well.

Conference Location

The IFAC symposium will be held at the Informatics building, Turing-Hörsaal, located at Hubland campus of University of Würzburg and can be quickly be reached by public transport from the city center.

Conference Highlights

Industrial Round Table

A panel of distinguished industrial researchers will discuss “The Future of Computers in Automatic Control”.

Noted participants include:
- Prof. Dr. Gerhäuser, Director Fraunhofer IIS, home of mp3-standard
- Dr.-Ing. Eberhard Kroth, Managing Director Reis Group Holding
- Dr. Spohr, Director Wittenstein Motion Control
- Christoph Winterhalter, Director ABB Research Center

Session Topics

- Telematic Applications
- Robotics and Control Architectures
- Control Design Methodologies
- Case Studies, Knowledge based Systems and Vehicle Control
- Design of Embedded System Architectures
- Traffic Control
- Embedded System Applications
- Control System Applications
- Modeling in Automation Engineering
- Intelligent Transport Systems (ITS)
- Design, Analysis and Synthesis of Discrete Event Systems
- Promoting Innovation in Industrial Informatics and Embedded Systems through Networking
- Design and Implementation of Embedded Computer Systems
- Robot Vehicles
- Networking of Embedded Systems
- Sensors and Control for Manipulation Applications
- Promoting Innovation in Industrial Informatics and Embedded Systems through Networking
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- Robot Vehicles
- Networking of Embedded Systems
- Sensors and Control for Manipulation Applications

Plenary Lectures

The following lectures will be offered by leading researchers.
- Prof. Dr. Dariu Gavrila (Daimler AG, Germany): Smart Cars for Safe Driving
- Stefan Svensson (ABB, Sweden): The Role of Communication in Industrial Control
- Dr. Milos Svoboda (Siemens AG, Germany): Safety and Security in Industrial Environments

Publications

Selected papers will be invited for special issues of IFAC-related journals "Control Engineering Practice" and "Space Technology". All papers will be published on IFAC-Online.
The conference focuses on theories, applications and developments in control related research fields, covering three major topics: computers for control, computational intelligence in control and control via communication networks. Computers for control considers a broad range of computer-based control systems, spanning from system architectures, inter-computer communications, man-machine interfaces for real-time distributed computer control systems to programmable logic controllers, Fieldbus and standards-based platforms and environments, etc.

Computational intelligence in control focuses on all aspects of knowledge-based, fuzzy, neuro-fuzzy and neural (both artificial and biologically plausible) systems and evolutionary algorithms relevant to control, both theoretical and application driven.

Control via communication networks encourages topics of computerized and telecommunication-based automation systems, providing services to remote equipment. This addresses systems integrating methods of remote control, cooperative communication for remote applications, and remote sensor data acquisition.

Topics include but not restricted to the list below:
- Computer/system architectures for control
- Fieldbus and standards-based platforms & environments
- Logical design, physical design and implementation
- Programmable logic controllers (PLC’s)
- Inter-computer communications, Local-area networks
- Cooperative communication for remote applications
- Man-machine interfaces for distributed control systems
- Modeling, identification, stability analysis & adaptation
- Forecasting, learning and evolutionary algorithms
- Brain-computer interfacing
- Bioinformatics
- Evaluation and definition of performances objectives

- Predictable time and behavior under failure conditions
- Reliability and maintainability
- Remote control methods, in particular networked control, supervisory control and distributed control
- Remote sensor data acquisition
- Telematics applications, Remote industrial automation
- Tele-medicine
- Automotive control
- Space exploration, planetary rovers
- Specific application areas, e.g. traffic control
- Embedded systems applications, industrial projects, case studies

Welcome Address (excerpts)

"In the IFAC’s Coordinating Committee on Computers, Cognition and Communication in control, the need emerged to organize a conference focusing on all aspects of embedded systems that are of particular interest to control systems implementation…The idea of CESCIT is to organize a joint conference with carefully selected, but broad and non-limiting topics that pertain to computer control...with the addition of emerging new topics, we hope that CESCIT will provide a forum for exchanging knowledge, communication and cross-fertilisation of ideas among professionals and scientists from research, academia and industry...CESCIT is aiming at becoming a triennial event, organized in each year following the IFAC's World Congress..."  --Prof. Matjaž Colnarič

"It is our pleasure and honour to invite you to the IFAC CES CIT conference in Würzburg. This location offers a perfect mix of rich historical heritage and high-tech innovations...I am looking forward to meeting you in Würzburg in April 2012 to share with you the technical highlights of the conference, as well as the cultural treasures of this region."  --Prof. Klaus Schilling.