

Scientific Events

European Control Conference - ECC' 99 Karlsruhe, Germany, August 31 - September 3 1999

During 31 August - 3 September 1999 the 5th European Control Conference-ECC'99 was held in Karlsruhe, Germany. The honour to prepare and to organise the fifth edition of a scientific event, by now traditional, was with Gesellschaft für Mess und Automatisierungstechnik, benefiting the prestigious sponsorship of several professional associations: European Union Control Association -EUCA, International Federation for Automatic Control-IFAC and IEEE Control Systems Society. Organizers and sponsors proved extremely efficient in making the preparatory phase of the conference and the event "in spe" a real success. The merit for this success goes first and foremost to the three remarkable German university people who chaired the Conference and had the due inspiration, the vigour and the proficiency which such grand events always request. They are Professor P. M. Frank, Dr. H. Steusloff and Dr. M. Schatz, all from the University of Duisburg. Appreciation should go to Dr. H. Steusloff for his devotion and efforts in front of the Organising Committee (composed of 15 persons). For assuming a double and high responsibility and for fully accomplishing it, both Professor Frank and Dr. Steusloff should be thanked. Professor Frank chaired an International Program Committee which a lot of reputed scientists from Europe and the world were members of: J. Ackermann (Germany), D. Atherton (Great Britain), B. Francis (Canada), T. Fukuda (Japan), R. Isermann (Germany), A. Isidori (Italy), H. Kwakernak (The Netherlands), R. Pearson (USA) and others. They had the difficult mission of selecting the papers to be accepted (approximately 900 of about 1,300 submitted papers).

The Conference was as ample as to include:

- Inaugural conference
- Plenary and semi-plenary conferences
- Round tables
- Mini courses
- Industrial program packages

- Sessions of scientific communications
- Exhibition of software products

Remarks on the Conference Program

It is not our intention to minutely present the ECC' 99 Programme but only the most significant activities carried out at the Conference, and emphasize some aspects. The first impression was that that we participate in a great event. Indeed about 1,000 participants from more than 50 countries attended ECC' 99, which sets a record of participation. At the same time we can say that the expectations of the participants were fully met both from an organisational and a scientific point of view.

The opening session

ECC'99 started on the 31st August with an opening session where inaugural speeches were delivered.

Plenary and semi-plenary conferences

The ECC' 99 plenary and semi-plenary

Conferences included presentations made by well reputed specialists in the field of automatic control:

J. Aström (S): *Automatic Control - The Hidden Technology*, M. Blanke (DK): *Fault Tolerant Control Systems*, G. Schmidt (D): *Control Problems in Multi-Modal Telepresence Systems*, D. Seborg (USA): *A Perspective on Advanced Strategies for Process Control*, M. J. Grimble (UK): *Advanced Control for Hot Rolling Mills*, I. Mareels (AUS): *Complex Dynamics in Adaptive Control*, J. Lévine (F): *Are there New Industrial Perspectives in the Control of Mechanical Systems*, B. H. Krogh (USA): *Hybrid Systems: Modelling and Supervisory Control*, S. Campbell (USA): *Nonlinear Descriptor Systems*

Round Tables

On the occasion of ECC '99 two round tables

and an informative session of European Commission were organized:

- *R&D Promotion in Europe - Does it Produce World Class Quality?*
moderated by K. Breithaupt (D)
- *The role of Control in the Information Age*
moderated by A. S. Huber (D)
- *European Commission Information Session: The 5th Framework Programme of the European Commission and Related International Initiatives*

Mini courses

At ECC'99 three mini courses were delivered by reputed specialists in the field of automatic control.

Industrial program packages

Industrial program packages were presented as follows: Automotive Systems, Business Oriented Automation Approach, Control Problems in Space Technology, Rolling in Steel Industry, Intelligent Tuning of Digital Controllers, Industrial Process Modelling, Identification and Supervision, Power and Drives, Smart Sensors, Modelling, Control and Management of Rivers, Hydro-Plants & Water Systems

Scientific Sessions at ECC '99

ECC'99 covered about 100 scientific sessions, some of them being invited sessions, chaired by invited persons. In our opinion the most significant sessions, if taking into account their impact on informatics, were those devoted to: Stability, Hybrid Systems Modelling, Knowledge-based Control Systems and Applications, Optimisation and Tracking of Nonlinear Systems, Fuzzy Algorithms for MIMO Processes, Neural Network Control, Control Problems in Space Technology, Artificial Intelligence for Industrial Process Supervision, Feedback Linearisation, Simulation and Control of Power Plants, Nonlinear Control: Applications, Discrete Time Systems, Computational Intelligence Techniques in Fault Detection and Diagnosis Systems, Audio and Video Processing in Automation and Robotics.

Products exhibition.

The ECC '99 hosted an exhibition of software programs for simulation and simulators, where 8 renowned firms: Adaptics Inc, Additive GmbH, Amira GmbH, dSpace GmbH, Feedback Instruments Ltd., Karlsruhe Research Center (FZK), FOXBORO Deutschland GmbH, Scientific Computers GmbH, showed their software production.

Some Concluding Remarks

The main purpose of ECC' 99 was the integration of the scientific and application results, presented at the Conference, into the different fields of automatic control.

ECC '99 was a success in what regards the vividness of organisation and the observance of the program, the high quality papers presented and the efficient discussions of the participants.

At ECC '99 new theoretical and practical orientations in control systems and information and computer science: new approaches of the problem of control system stability, hybrid system modelling, models of systems with discrete events, knowledge-based control systems, fuzzy control systems, control systems based on artificial neural networks, new methods of nonlinear controller design and nonlinear observers, methods of planning and control of industrial robots, new technologies of simulation of control systems, new technologies in advanced applied informatics, etc. Trends manifest at ECC'99 are worth - noticing from both professionals and decision makers.

ECC'99 was the event where participants have been given the best opportunity for exchanging ideas both formally and informally, which I personally praised at most and I ought to be grateful for.

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