

Announcements

CONFERENCE-EXHIBITION ON THE DEVELOPMENT & APPLICATIONS OF NEW AUTOMOTIVE TECHNOLOGIES – AUTOTECHNOLOGIES '85

(Monte Carlo, January 29–February 2, 1985)

AUTOTECHNOLOGIES is organised in Monte-Carlo under the High Patronage of H.S.H. the Prince of Monaco, with the support of the Government of the Principality, under the auspices of the French Society of Automobile Engineers (S.I.A.), and with the collaboration of the Automobile Club of Monaco, by the Management Committee. The event is an international forum on the development and applications of new automotive technologies, including a conference, an exhibition and the Charles Deutsch Prize.

The first AUTOTECHNOLOGIES Conference, held in January 1983, was a great success with very high quality papers presented. The Charles Deutsch Prize was awarded to the late Professor Sven Olof Kronogard, President of United Turbine (Sweden) for his work on the integrated gas turbine and transmission system. The contributions of Dr. Ing. Andrea Titolo, Head of the Department of Advanced Research at Fiat Auto (Italy), on variable timing for the internal combustion engine and of Mr. Michael May, Consultant Engineer of Air S.A. (Switzerland), on the fast response, self-optimising, spark ignited internal combustion engine, were also worthy of special note.

The conference is an international meeting place for executives of the automobile industry, for whom the development and application of new techniques are essential to the evolution and even the survival of their industry; it will facilitate the diffusion of this knowledge among the decision makers, the experts and the press.

Topics

The conference and exhibition will cover the following topics:

- New product developments and trends, such as “new concepts vehicles”.
- The application of new materials.
- Alternative fuels.
- Alternative power plants.
- Trends in automotive electronics.
- Power boosting, supercharging and turbocharging.
- Transmission.
- Aerodynamic trends.
- Tyres, suspension and brakes.
- Components.
- Quality and Reliability.
- Developments in the motor sport field, including technology feedback into mass produced cars and components.
- Technological and economical interactions in the automotive industry.

Working languages

The working languages of the Conference will be English and French, with simultaneous translation facilities available. The abstracts and papers will be in French or English.

Venue

AUTOTECHNOLOGIES 85 will take place in the Monte Carlo Convention Centre and Auditorium. It is one of Monte Carlo's newest and most exciting buildings, built on land

reclaimed from the sea. It is, of course, provided with the most sophisticated facilities and equipment with every convenience and comfort for the delegates.

In January, as well as the rest of the year, the Principality enjoys a mild climate and sunny weather. The average temperature is 16.3°C (61.3°F).

AUTOTECHNOLOGIES '86

AUTOTECHNOLOGIES '86 and future conferences will be held in Monaco yearly in January, to coincide with the Monte Carlo Rally. AUTOTECHNOLOGIES is the unique European Annual Forum devoted to the technical innovations in the Automobile Industry.

Enquiries to: AUTOTECHNOLOGIES Secretariat, 42, Lloyd Park Avenue, Croydon, CRO 5SB, Great Britain. Tél.: 44(1)680 8659/686 7026, Telex: 28905 MONOREF 2592.

CONFERENCE ON HARDWARE AND SOFTWARE COMPONENTS AND ARCHITECTURES FOR THE 5TH GENERATION

(March 5–7, 1985; Paris, France)

In most industrial countries, there are currently ambitious R & D projects. They aim at preparing new generations of hardware and software tools with sizable qualitative and quantitative technological jumps over today's tools. Typical of such projects are the Japanese Fifth Generation project, a precursor, the ESPRIT project of the Commission of European Communities, the ALVEY Program in UK, the MCC and SRC in the USA, etc.

The 6th Conference of the AFCET Computer Society is meant to provide a wide panorama of current research related to novel architectures and components for both hardware and software approaches.

The program committee solicits both survey papers showing the state-of-the-art and papers presenting specific R & D projects related to the general scope of the Conference.

While not exclusive, the following list of topics is considered:

1. *Software architectures and components for new computer generations*
 - * knowledge representation and management
 - * A.I. carry-overs to programming
 - * A.I. languages, functional and logic programming
 - * natural language processing and understanding (spoken or written) dialog systems
 - * image understanding
 - * inference systems, automatic demonstration
 - * adaptive systems
 - * logics and artificial intelligence
2. *Hardware architectures and components for new computer generations*
 - * data-flow machines, distributed systems, functional distribution
 - * language-oriented machines (functional, relational and object-oriented languages)
 - * relational machines
 - * supercomputers and artificial intelligence

3. *Peripheral equipment and ancillary software systems for new computer generations*

- * editors (sound, speech, image, symbols)

An exhibition of commercial products and research prototypes will be held concurrently with the conference: it will be organized by the AGENCE DE L'INFORMATIQUE

Enquiries to: AFCET-156, Boulevard Péreire-F. 75017 Paris, France (Tel: (1) 766 24 19 telex: 290 163 Code 235).

1985 EASTERN SIMULATION CONFERENCES

Williamsburg Hospitality House, Williamsburg, Virginia (USA)
March 25–29, 1985

The Society for Computer Simulation is sponsoring a new world-wide multi-conference on a variety of simulation-related topics, to be held in Williamsburg, Virginia, March 24–29, 1985. There will be four conferences in parallel:

- * Simulators
- * The Simulation Profession
- * Simulation in ADA
- * Artificial Intelligence and Simulation

The "Simulators" conference is a follow-on from the 1984 conference held in Norfolk, Virginia, where almost 300 attendees heard presentations on simulators as applied to aircraft, missiles, power plants, medical, petro/chemical, refining, maritime, and many other applications.

"The Simulation Profession" is a new type of conference. It is being planned for those engineers, scientists, educators and managers who now see their activities in the field of simulation as a separate discipline. Topics will include education, training, careers, communications, management, marketing, equipment and programming requirements for the future, and vendor-user relationships. "The simulationist as a small businessman" will be a highlight.

"Simulation in ADA will provide a forum for information on developing, validating, and using simulation models written in ADA.

"Artificial Intelligence and Simulation" will focus on this rapidly emerging discipline in the simulation area. Topics will include expert systems, natural languages, robotics and vision, in applications for government, industry and educational institutions.

Each conference will be conducted in parallel, with its own special keynote and plenary speakers, technical and position paper, and panel discussions. Those who register for one conference may attend any sessions they wish in all four. Several Professional Development Seminars are being planned to cover programming, computer equipment and management topics.

As with the "Simulators" conference, technical and educational exhibits will be included as a key portion of the conferences, employing a "tabletop" motif. A concluding highlight for the conferences will be tours of NASA's extensive simulation facilities at the Langley Research Center, Hampton, Virginia. Headquarters for the 1985 Eastern Simulation Conferences is The Williamsburg Hospitality House.

Enquiries to: Charles A. Pratt, Executive Director, SCS, P.O. Box 2228, La Jolla, CA 92038 (USA); (619) 459-3888. Application for exhibit space should be requested of S. Whitney Downer, 834 Spar Ave., Beachwood, NJ 08722 (USA); (201) 349-8016.

INTERNATIONAL CONFERENCE ON SOFTWARE FOR MANUFACTURING INDUSTRIES (DISCRETE MANUFACTURING) (PROLAMAT 1985)

(June 11–13, 1985; Paris, France)

PROLAMAT 85 is the sixth in a series of triennial meetings of IFIP (International Federation for Information Processing) and

IFAC (International Federation of Automatic Control). It has become the recognized forum for the presentation of new developments in computer software for discrete manufacturing.

Papers are invited dealing with advances and new results and applications in Software aspects and computing methods and techniques for the design and planning in discrete manufacturing (from machining to assembly).

Discrete manufacturing includes manufacturing of all products except those made by continuous processes. Discrete manufacturing therefore includes the production of mechanical parts and systems, of electrical parts, of furniture, of clothes, etc.

1. *Themes*

- * Design and implementation of CAD/CAM systems
- * Computer-Aided Design
- * Computer-Aided Process and Production Planning and Optimization
- * Robotics and Automated Manufacturing Systems
- * Artificial Intelligence in CAD/CAM

2. *Associated event*

An industrial exhibition on production automation will take place during the week of PROLAMAT

Enquiries to: AFCET, as above.

HUMAN FACTORS IN THE FACTORY AND OFFICE OF THE FUTURE (HUMAN-2)

(June 11–13, 1985, Stuttgart, West Germany)

The first conference in this series, HUMAN-1, which took place in London in April 1984, was an eye-opener for many in revealing the extent to which companies had begun to concern themselves with the "people" aspect of high technology manufacturing. These companies were very diverse in the scale of their operations and the nature of their business, but almost all were successful commercially.

Interesting also was the amount of documentation and research being undertaken; and the fact that this was not "ivory tower" research in isolation but research based solidly on numerous industrial cases, which led to meaningful conclusions and lessons for all those concerned with manufacturing and related industries.

Ferranti, IBM, Volvo, Westland Helicopters, Guinness were only a few of the organisations involved in HUMAN-1.

1. *Human-2*

HUMAN-2 will take up where HUMAN-1 left off, concentrating heavily on the relationship of man and high technology in today's industrial world and highlighting new case studies; but it will expand its field of interest to encompass the effects of automation in the office, where a micro or mini computer is now as frequently to be found as a typewriter. Adjustments to new technologies have been as difficult for office staff as for workers on the shop floor and this trend will continue as governments worldwide endeavour to promote Information Technologies.

HUMAN-2 takes place in Stuttgart, West Germany, and is organised jointly by the Fraunhofer Institut fuer Arbeitswirtschaft und Organisation (IAO), Stuttgart, leading experts in this field in West Germany and IFS (Conferences) Ltd, UK. Contributions are now invited from organisations and individuals with experience and knowledge in this and related subject areas.

If you are unable to offer a paper but are interested in attending the conference, please indicate this on the form and send it, with your name and address, to ensure that you receive further announcements.

2. Suggested topics

- * Social and economic effects of new technologies
- * Implications for industrial relations (conflicts of interest: unions, entrepreneurs, vendors, users)
- * Effects of new technologies on the job market
- * Effects on the structure of wages and salaries
- * Man/machine interface
- * Training and qualification
- * Changes in working environment
- * Management and new technologies
- * Physical and mental effects of automation
- * Ergonomics, especially software ergonomics
- * Safety at work
- * Structure of work; workloads
- * Conditions of work
- * Organisation of work: organisation of management
- * Shaping of technology (e.g. interfaces, chaining networks) with respect to the quality of working life
- * Questions of acceptance
- * Personnel planning
- * Strategies for the introduction of new technologies
- * Private and public economic effects
- * Human factors in equipment design and office planning

Enquiries to: IFS (Conferences) Ltd., 35–39 High Street, Kempston, Bedford, MK42 7BT, England. (Tel: 0234-853605; Telex 825 489).

Xth IFAC SYMPOSIUM ON AUTOMATIC CONTROL IN SPACE

(Toulouse, France; June 25–29, 1985).

Sponsored by

International Federation of Automatic Control Technical Committee on Space

Co-sponsored by

A.F.C.E.T. (Association Française pour la Cybernétique Economique et Technique)

Organized by

C.E.R.T. (Centre d'Etudes et de Recherches de Toulouse) a division of O.N.E.R.A. (Office National d'Etudes et de Recherches Aéropatiales)

Purpose

This Symposium will consist of presenting formal papers during the week, followed by questions and discussions. In addition, a Round Table of 1 1/2 hours will offer the opportunity for participants to share their experiences and exchange their ideas.

Topics

Stabilization of large structures through selection of sensors, actuators; appropriate use of passive damping, and control laws; space robotics and teleoperators including rendez-vous, docking and automatic assembly; shuttle launch operations; control and guidance of low-cost boosters; control of tethered satellites; specialized control requirements of science, navigation, communication, weather and other mission-oriented satellites; standardization and spacecraft attitude control; distributed control; control problems in active optics in space.

Enquiries to: C.E.R.T., 2, Av. Edouard-Belin, B.P. 4025, 31055 Toulouse, Cedex, France.

CONFERENCE ON (CONTROL-85)

(July 9–11, 1985; Cambridge, U.K.)

The Conference will cover a broad range of topics relating to present trends in the theory and practice of automatic control. A balance will be sought so that the various aspects of this wide subject are properly represented with emphasis being placed on current industrial applications of theoretical procedures which have emerged in the last decade or so. The scope of the

conference will be wide, to permit the interchange of information between academics and industrialists in the control field.

The following topics will be covered:

- Computer-aided control system design
- Nonlinear feedback systems
- Robust control systems design
- Self-tuning and adaptive control
- Large scale systems
- Optimisation
- Numerical methods in system design
- Offshore and underwater applications
- Digital and computer control system,
- Distributed control
- Instrumentation/control in the process industry
- Power systems applications
- Nuclear Industry
- Robotics
- Automotive/mechanical applications
- Aerospace
- Environmental systems

1. Working language

The working language of the Conference is English which will be used for all printed material, presentations and discussion. Simultaneous translation will not be provided.

2. Tutorials

It is planned to arrange tutorial sessions during the Conference. Details of the topics to be discussed will be included in the provisional programme which will be sent to those who complete and return the attached reply-form.

Enquiries to: Conference services department, IEE, Savoy Place, London WC2R 0BL, U.K. (Telephone: 01-240 1871 (ext 222) Telex: 261176 IEE LDNG).

INTERNATIONAL CONFERENCE ON VERY LARGE DATA BASES

VLDB (Stockholm, Sweden; August 21–23, 1985)

VLDB Conferences are intended to identify and encourage research, development and applications of database systems. Their objectives are the promotion of an understanding of current research, the furthering of exchanges of information and experience gained in the design, construction and use of databases, and the provision of a forum for the discussion of future research and development.

The eleventh VLDB Conference will emphasize the contribution of database technology to evolving areas like artificial intelligence, software engineering, CAD/CAM, graphics, office information systems and the new challenges that the interaction with those areas presents to the field of database management.

Topics

- Engineering Databases
- Office Information Systems
- Knowledge Based Data Management
- Distributed Databases
- Concurrency Control
- Intelligent User Interfaces
- Design Methodology and Tools
- Hardware Architectures
- Data Models
- Database Theory
- Performance
- Query Optimization

Enquiries to: Lars Söderlund, Dept. of Computer Science, University of Stockholm, S-106 91, Stockholm, Sweden.

**1985 INTERNATIONAL CONFERENCE ON
ADVANCED ROBOTICS ('85 ICAR)**

(September 9–10, 1985; Tokyo, Japan)

and

**1985 INTERNATIONAL INDUSTRIAL ROBOT
EXHIBITION**

(September 12–16, 1985; Tokyo, Japan).

1. *Call for papers*

It is our pleasure to announce to you the Second International Conference on Advanced Robotics (ICAR), which will be held in Tokyo on September 9–10, 1985.

This conference is a sequel to the first conference held in Tokyo in September, 1983. The objective of this conference is to provide a place for presentations and discussions on basic research as well as application research in the newly developed application fields of advanced robotics, namely intelligent robots, mobile robots and sensory control robots, which are undergoing rapid advancement in many countries throughout the world. It also aims at providing an opportunity of exchanging state-of-the-art information on various national projects in each country, large-scale research and development projects, cases of international cooperation, and other items of interest. We believe that these objectives will serve to greatly contribute to strengthening the industrial constitution, vitalizing industrial economy as well as helping the humanization of working life, all of which are mutually required by all nations. A national project of "R & D on Advanced Robot Technology" in Japan is one example.

We invite papers which are appropriate to the items summarized in the suggested topics not only from robotic specialists but also many people from various professional fields. We also hope to see people representing various nations participate in this conference, discuss and promote worldwide mutual understanding, and further diffuse the research results.

We believe the time, as well as the site of the 2nd ICAR, is very suitable for an understanding of the advancement in not only robotics but also the scientific technology as well, as for nurturing future developments.

Following the 2nd ICAR, the 15th International Symposium on Industrial Robots (ISIR) will be held from September 11 to 13, 1985 at the same place and the '85 International Industrial Robot Exhibition from September 12–16, 1985 in Tokyo. In addition, TSUKUBA EXPO '85, an international exposition on science and technology, will be held from March, 1985 until September 16, 1985 in Tsukuba, in outskirts of Tokyo. Also, a post-conference tour is being planned for the participants. We are very pleased to host this international event and invite you to submit a paper to the committee. The following material is provided for your reference.

2. *Suggested topics for papers*

a. Overviews on Advanced Robotics

National projects
International collaboration
Other R & D activities

b. Robots for the Unstructured Environment

System design and implementation
Man-robot interface
Teleoperation
Telecommunication

c. Intelligent Manipulation and Locomotion

World model representation
Knowledge data based systems
Problem solving
Robot languages
Spatial planning
Trajectory generation
Task description

d. Sensory systems

Image understanding
Design of sensors and sensor systems
Algorithms for sensing data acquisition
End effector sensors

e. Mechanics of Manipulator

Arms, wrists, hands, and fingers
Actuators
Kinematics
Dynamics and control

f. Mechanics of Locomotive Robots

Design and structure
Kinematics
Dynamics and control

Any enquiries relating to the Symposium should be sent to: Mr. A. Yasutake, Organizing Secretary, '85 ICAR, Japan Industrial Robot Association, Kikai Shinko Kaikan Bldg., 3-5-8, Shiba-Koen, Minato-ku, Tokyo, 105 Japan.

**SIXTH INTERNATIONAL CONFERENCE ON
AUTOMATIC WAREHOUSING - ICAW 6**

(Stockholm, Sweden; October 15–17, 1985)

'... the warehouse has changed and will continue to change. It will be increasingly dynamic, not static, and it will require the best available management talent. Furthermore, the contribution of the warehouse to the performance of the total system will be much better understood and will result in increased attention from upper management'. This was how John White, Director of the Material Handling Research Center, Georgia, summarised his paper as Chairman of the 5th ICAW.

The 6th International Conference on Automated Warehousing will continue the investigation into new ideas and developments in machinery and controls and the management of transportation. The success of any automated warehousing system depends largely on its ability to function without breakdown or delay. The Conference will consider actual operating experiences of downtime, maintenance, control systems and economics.

6th ICAW returns to Europe after meetings in the USA and Japan. In the past the ICAW Conferences have each attracted some 250 delegates from around 20 countries. It is hoped that once again delegates will join in a truly international exchange of expertise at the 6th ICAW.

Suggested Topics

- * Control systems: design software support
- * Hardware: rack structures conveyor systems
- * Automated Warehouse design: use of simulation
level of automation
- * Justification of automated storage: financial
management
social
- * Automated identification and order picking
- * New developments in equipment
- * Case studies

Enquiries to: IFS as above.

**AFCET AUTOMATION CONGRESS - "THE TOOLS
FOR TOMORROW"**

(October 23–26, 1985; Toulouse, France).

The AFCET-AUTOMATIQUE, one of the societies of the French Computer Association (Association Française pour la Cybernétique Economique et Technique) is organizing its biennial conference in Industrial Electronics, Control and Instrumentation, with emphasis on the application of advanced theory and models to new fields.

The Conference, entitled **THE TOOLS FOR TOMORROW** will be held in Toulouse (France) on October 23–26, 1985, simultaneously with SITEF exhibition, which is devoted to the future technologies.

The main purpose of this conference is to provide a platform for scientific and technological exchange of information to enhance the dissemination of knowledge on relevant topics through communications of high quality papers.

The topics within the scope of the conference are:

1. *Methods*

- optimization, modelization, identification
- control structures
- control architecture and operational security
- expert systems and artificial intelligence
- industrial local area network
- instrumentation, sensors
- human factor engineering
- education and training

2. *Applications*

- energetic systems, continuous process
- computer integrated manufacturing (productics)
- aeronautics and space
- biotechnology, medical and biological engineering
- communication network

Papers written in French or English language will be accepted.

Enquiries to: AFCET, as above.

FIFTH INTERNATIONAL CONFERENCE ON ROBOTVISION AND SENSORY CONTROLS

RoViSeC 5 (Amsterdam, The Netherlands, October 29–31, 1985)

The RoViSeC Conferences are now well established as an important forum for the fields of Robot Vision and Sensory Controls. The Conferences are truly international: previous conferences have been held in the UK, Germany and the United States. This year RoViSeC moves to The Netherlands, the home of much innovative engineering.

The technology of robot sensory control is expanding rapidly with robot vision becoming more and more advanced. The aim of the RoViSeC 5 Conference is to explore the capabilities of robot vision and sensory systems for use in the efficient, productive and profitable factories of the future.

RoViSeC 5 will provide a platform for both the end user and the developer. Production engineers from manufacturing industry will explain their own requirements, and describe how they have achieved results. Equipment manufacturers will demonstrate the advances that have been made over the last few years and illustrate the scope of future innovations. Research scientists will describe their current work and indicate the path

of future developments. The presence of all sides of the technology from so many countries represents a great deal of experience, from which everyone can benefit.

Delegates will meet in Amsterdam, under the chairmanship of Professor Zimmerman of the University of Technology at Delft, to discuss the present technology and its applications and to explore the future of this exciting and vital field. On this occasion the Conference is being sponsored by three major Dutch societies: The Royal Institution of Engineers in the Netherlands (KIVI), the Dutch Society of Informatics (NGI) and the Society of Production Engineering. We anticipate that yet again another facet will be added to this important international event.

Enquiries to: IFS, as above.

NINETEENTH INTERNATIONAL SYMPOSIUM & EXPOSITION ON ROBOTS

(November, 1988; Sydney, S.S.W., Australia)

These events will form part of Australia's national Bicentennial celebrations. It will be the first time an International Symposium on Industrial Robots has been held outside of the USA, Western Europe or Japan.

More than 1000 delegates from home and overseas will attend the November Symposium at Sydney's Hilton Hotel and thousands of people will have the opportunity to explore the world of robot technology at the Exposition in Centrepoint.

The Australian Bicentennial Authority, the organisation coordinating the national celebrations, has endorsed the Symposium and Exposition and congratulated the Association and its co-sponsor, the Institution of Engineers (Australia), on their initiative in staging an event of such great public appeal for the year-long commemoration.

Papers presented at the Symposium will discuss the complex applications and implications of robot technology in modern society and the Exposition will provide a fascinating range of practical demonstrations of robots at work in industry, the home and educational institutions.

Dr Michael Kassler, convenor of the Association's steering committee, says: 'Robots are already at work in industry and perform a number of tasks such as welding, spray painting and transferring objects from one machine, or place, to another.'

'They have even been used, on an experimental basis in Australia, to shear sheep. We anticipate that by the later part of this decade robots equipped with visual sensors will be used for automatic assembly in industry' Dr Kassler said.

Enquiries to: Ellen McArthur, Information Officer, The Australian Bicentennial Authority, GPO Box AUS 1988 Sydney 2001 Australia (Tel. (02) 236 1988) or Dr Michael Kassler, The Australian Robot Association, 9 Queens Ave, McMahons Pt, Sydney 2060 Australia (Tel. (02) 922 5026).