

## Announcements

### INTERNATIONAL SYMPOSIUM ON APPLIED AUTOMATION

Hotel Méridien, Nice (France); May 23–25, 1984

The symposium is concerned with progress and prospects of digital techniques applied to automation of industrial processes; it is organised by the SOCIÉTÉ DES ELECTRICIENS ET DES ELECTRONICIENS (S.E.E.), whose aims is to promote science and technology by spreading knowledge, bringing together research teams, instructors, industrial engineers, and specialists from all countries. Patrons include AFRI, IEEE, etc.

The theme chosen for the symposium stresses the following development factors:

- the growing interdependence of controls, automation and data processing,
- the development of communication buses,
- the growing use of microprocessors,
- new requirements linked with technical and economic factors, and progress in maintenance techniques, safety precautions and ergonomics of systems.

#### Themes of the symposium

Proposals for papers should develop in particular the following themes:

- Digitalisation of control devices and elements:** design, integration means and methods in industrial systems,
- digital control of processes:** modelling, optimization, control laws, multivariable control,
- functional organisation of control systems:** structure, processing dialogue and communication means. Distribution of software and data, integration of production management functions,
- safety, reliability, testing** of the systems and processes (application software and hardware),
- application software:** specification, creation, maintenance, programming methods, languages,
- man-machine dialogue,**
- application** illustrating one or more of the above-mentioned themes and showing methodology used and results obtained (in all industrial fields, including nuclear power, space and aeronautic projects. . .).

#### Official Languages

French and English are the two official languages of the symposium. There will be simultaneous translation.

#### Presenting the Papers

The authors must submit a synopsis **BEFORE 30 NOVEMBER 1983**; these must be sent to the symposium secretary:

**S.E.E.-48, rue de la Procession  
75743 PARIS CEDEX 15-FRANCE**

They must be two-page synopsis (in French or English) of an original unpublished article—3 copies must be submitted.

The following information should be given:

- the title of the paper,

—the first name and surname of the author,

—his job and a short biography,

—the name, address and telephone number etc. of the company or organisation he works for.

Authors whose papers are accepted, will be informed of this before the end of the year.

The papers must be submitted to the symposium secretary **BEFORE 1 MARCH 1984**. The complete text, in French or English must be submitted, with a 100 word synopsis in both languages at the beginning, it should be typed on a special form with a specific layout; forms and layout instructions will be sent to the authors.

These texts are reprinted just as they are when received and a copy of the complete collection will be given to each participant.

*Enquiries to:* S.E.E., 48, rue de la Procession, 75743 Paris Cedex 15, France.

### FIFTH CISM-IFTOMM SYMPOSIUM ON THE THEORY AND PRACTICE OF ROBOTS AND MANIPULATORS RO.MAN.SY '84

Udine (Italy); June, 1984

The sponsors of this symposium are the International Centre for Mechanical Sciences – CISM and the International Federation for the Theory of Machines and Mechanisms – IFTOMM. These organizations have a common interest in furthering the mechanical sciences as applied to the theory of machines.

In this connection they have organized this Fifth Symposium to bring together the world's leading experts on the theory and practice of Robots and Manipulators technology. In order to encourage extensive interchanges between all participants, the attendance will be limited. As a focal point for the exchange of knowledge and experience, a limited number of high caliber papers solicited.

These papers will be preprinted and will be available at the Symposium. It is anticipated that they will be later published in a book form.

The Symposium will welcome discussion on any topics which are included in one of the categories listed below.

#### Topics

In connection with this Symposium the terms Robots and Manipulators are intended to include also such areas as locomotion systems (predipulators and walking machines) and exoskeletal and prosthetic devices. Within this broad framework the topics for this Symposium are the following aspects of Robots and Manipulators:

1. Mechanics
2. Control of Motion
3. Sensing and Machine Intelligence
4. Synthesis and Design
5. Man-Machine systems
6. Computer Enhanced Teleoperation
7. Biomechanics of Motion
8. Applications and Performance Evaluation

Those desiring to participate in the Symposium must contact a member of the organizing Committee, CISM or the National

IFTToMM organization, for application procedures and conference rules.

Attendance is by invitation only. In order to be considered applications for attendance and abstracts must be submitted before **March 31, 1984**.

#### *Proceedings of previous Symposia*

The Proceedings of the First, Second and Third CISM-IFTToMM Symposia on Theory and Practice of Robots and Manipulators are available in the final form.

The proceedings of the First Symposium (2 volumes) may be obtained from Springer Verlag, Vienna. Those of the Second and Third Symposia may be purchased from Elsevier, Scientific Publishing Company (Amsterdam), PWN (Polish Scientific Publishers, Warsaw) or scientific bookshops.

The Proceedings of the Fourth Symposium are now being printed.

*Enquiries to:* Professor G. Bianchi, C.I.S.M., Pia 22A Garibaldi 18, 33100 Udine, Italy

### **THIRD INTERNATIONAL CONFERENCE ON FLEXIBLE MANUFACTURING SYSTEMS—FMS 3**

(17th IPA-Arbeitstagung: Flexible Fertigungssysteme) and MOTEK 18A Exhibition; 11–13 September 1984, Boeblingen, Stuttgart, West Germany

FMS 1 and 2 introduced the concepts of FMS to some and reaffirmed their benefits to the growing number already in the know. FMS-3 is probably the first of the series to be based on a more firmly established and widely accepted concept of Flexible Manufacturing Systems. The Conference therefore wishes to highlight the latest advances while justifying the decisions of those who have chosen FMS or are about to do so.

FMS-3 will be held at the same time and place as MOTEK '84, the 3rd exhibition for assembly automation, handling equipment and other advanced manufacturing technologies. This combination of FMS-3 and MOTEK '84 will make an exceptional event, providing a unique opportunity for anyone involved in manufacturing to benefit from the technology and knowhow gathered together in one place from international sources.

Over 100 papers from the world's leading industrial nations were offered for FMS-2, among them papers from Fanuc Ltd, Japan; Ingersoll Engineers, UK; Messerschmidt-Bolkow-Blohm GmbH, W. Germany; Kearney & Trecker Inc, USA; BT Handling, Sweden; Comau SpA, Italy; BL Technology Ltd, UK; Phillips, Netherlands; ASEA, USA; Toyoda Machine Works Ltd, Japan; Unimation (Europe) Ltd, UK and many others. The range of countries represented at FMS-2—from China to the USA—was impressive, as was the quality of the papers received.

#### *Submission of abstracts*

You are invited to submit an abstract of about 100 words for consideration by the Organising Committee. Accepted papers will be presented by the author from 11–13 September 1984 in Boeblingen, West Germany. Suggested topics include the following, but potential authors are invited to suggest other relevant topics.

case studies and applications	product design for FMS
management aspects	equipment design
planning for FMS	computer control systems
systems design	software for FMS
FMS elements	social implications
research and development	new areas for FMS
economic justification	training for FMS
reliability and safety	
automated quality control	

#### *Abstract submission instructions*

Please use plain, white A4 paper and ensure that your abstract is printed or typed. You should post your abstract to the relevant address before February 1st, 1984. Overseas, please use airmail.

*Prospective authors should send their abstracts direct to:* The Conference Organiser—FMS-3, IFS (Conferences) Ltd, 35–39 High Street, Kempston, Bedford MK42 7BT, U.K. Tel: (0234) 853605 Telex: 825489

*Authors from Germany may choose to send their abstract to IPA; these should be directed to:* 17th IPA Arbeitstagung, Fraunhofer-Institut für Produktionstechnik und Automatisierung (IPA), Eierstr. 46, D7000 Stuttgart, West Germany Tel: (0711) 60 20 64, Telex: 7255 166 IPA D

All papers should be submitted in ENGLISH and will be reviewed by the paper selection committee. German authors submitting papers to IPA should also include a copy of their manuscript in GERMAN.

Instructions as to the preparation of papers will be sent to authors once their abstract has been accepted.

Completed manuscripts in camera-ready form must be submitted by **July 1st, 1984 at the latest**, for final review by the committee. Failure to meet this deadline risks exclusion from the published proceedings.

Final papers should be 2,000 to 4,000 words in length with a maximum of 10 illustrations. Presentation time for each paper will be 30 minutes, including time for discussion. The use of clear, professional produced visual aids is strongly recommended. The official conference language is English, but simultaneous translation will be provided in German. Papers must be free from commercialism and from damaging comparisons with competitive methods, processes or products.

### **FOURTEENTH INTERNATIONAL SYMPOSIUM ON INDUSTRIAL ROBOTS-ISIR AND TRADE FAIR**

Swedish Trade Fair, Gothenburg (Sweden); October 2–5, 1984. The 1st International symposium on Industrial Robots-ISIR was arranged as early as 1970 for a small but exclusive group of specialists. This minor arrangement has now developed into a really large international symposium with a trade fair. Each year specialists, end-users and suppliers from all over the world gather together to see the very latest technological features, to study new industrial equipment and to discuss experience acquired in connection with new forms of utilization.

- In 1982 ISIR was held in Paris and attracted 750 participants from 33 countries.
- In 1983 ISIR is being arranged in Chicago for 2000 participants and 150 exhibitors.
- In 1984 Gothenburg will be hosting the event. The symposium is to be held in the Congress Centre of the Swedish Trade Fair and is to be organized by the largest trade association in Sweden—MEKAN and the Swedish Trade Council. Parallel with the symposium, the trade fair Robot 84 is being held in the adjoining exhibition halls.

#### *The Symposium*

ISIR is now being held for the very first time in Sweden—the country with the greatest concentration of robots in the world with respect to population. This means that the participants will have many opportunities to study industrial robot automation at advanced levels, as well as all types of handling, supply and storage equipment. Before and after the symposium, visits for purposes of study are being made to the leading manufacturers and utilizers of robots in Sweden.

*The Trade Fair*

The robot and automation industry has a market that is growing extremely quickly. At the moment, particular interest is being concentrated on spreading this technology to small and medium-sized companies. A concentrated campaign during a limited period is focusing interest on the robot theme and thereby providing greater impact than other forms of information. As an exhibitor at ROBOT 84 in Gothenburg, you will have unique possibilities

- to present your products to an international expert public
- to establish international contacts
- to consolidate your international market position.

*Scientific corner*

We will arrange a special corner for researchers. Research teams can exhibit free of charge.

*Parallel*

With ROBOT 84 there is SCANAUTOMATIC 84—an international trade fair concerned with other means of automation using hydraulics, pneumatics, industrial electronics and computer technology. Both these events are being arranged under the same roof and in adjoining exhibition halls. Together they provide an extremely interesting combination of products:

- Industrial robots
- Auxiliary equipment
- Handling equipment
- Hydraulics
- Pneumatics
- Industrial electronics
- Industrial computer technology

*Exhibition Committee*

The members of the EXHIBITION COMMITTEE are:

Mats Annborn,  
 AB Bygg- & Transportekonomi  
 Olle Claesson,  
 SMT Machine Company AB  
 Lennart Djupmark,  
 Chairman ISIR 14th  
 Karl M Haugan,  
 Atlas Copco Tools AB  
 Rolf Johansson, Volvo Car  
 Lennart Karåker, Ehn & Land AB  
 Bo Lagerlöf, ESAB  
 Bengt Göran Nilsson, ASEA,  
 Chairman, exhibition committee

*Venue*

The 14th ISIR and ROBOT 84 are being held in the exhibition halls of the Swedish Trade Fair in Gothenburg. The Swedish Trade Fair Congress Centre with modern premises for up to 900 people is located adjacent to the exhibition halls. Furthermore, the Swedish Trade Fair is located in the centre of Gothenburg within easy walking distance of most of the downtown hotels.

There is plenty of space for parking round the Trade Fair including a parking deck close by.

*Enquiries to:* Svenska Mässan Stiftelse, Box 5222, 402 24 Gothenburg, Sweden (Tel. 0 31/20 00 00; telex 20 600)

## **SECOND SYMPOSIUM ON EMPIRICAL FOUNDATIONS OF INFORMATION AND SOFTWARE SCIENCES (EFISS)**

October 3–5, 1984, in Atlanta, GA. (U.S.A.)

*Call for papers*

The purpose of the meeting is to explore subjects and methods of scientific inquiry which are of common interest to informa-

tion and software sciences, and to identify directions of research that will benefit from the mutual interaction of the two fields. The main theme of the symposium will be; *The Value of Information In Prescriptive Contexts.*

Specific examples of relevant focal topics are: **value of comments in enhancement of computer program understanding and use, value of programmed informative statements in assisting and guiding users of on-line interactive systems, optimal structures of thesauri and other lexical aids for information retrieval, optimal tradeoffs between informative and prescriptive statements for efficient command or task implementation.**

Contributed papers will be considered also on other aspects of empirical foundations of information and software sciences such as methods of experimental design; measurement theory and techniques; empirical laws and theories of information and software sciences, their validation and verification; experimental databases; and software properties and their evaluation and measurement.

All submitted papers will be refereed. Those selected will be scheduled for presentation and published in the proceedings of the symposium.

Abstracts of papers (at least 150 words long) are due by February 15, 1984. Authors will be notified of their acceptance by March 15, 1984. The deadline for submission of full papers is July 1, 1984.

Time allowed for presentation of contributed papers will be approximately 25–30 minutes.

*All inquiries and other correspondence regarding the symposium should be addressed to: Prof. Pranas Zunde, EFISS Symposium Organizing Committee, School of Information and Computer Science, Georgia Institute of Technology, Atlanta, GA, 30332, U.S.A.*

## **FOURTH INTERNATIONAL CONFERENCE ON ROBOT VISION & SENSORY CONTROLS**

(London, U.K., October 9–11, 1984)—RoViSeC4

Right from the outset in 1981 RoViSeC has provided industrial engineers and scientists with a unique platform to explore the expanding and important subjects of robot vision and sensory controls.

Increasingly this technology, which advances the frontiers of advanced industrial techniques, is helping to solve real application problems surrounding product improvement, productivity, product cost, quality and reliability.

RoViSeC embraces the whole spectrum of sensing and measurement, including the technologies of machine vision, pattern recognition and artificial intelligence, tactile and other sensing, speech recognition and voice synthesis, sensor based robots and of course software and computer related hardware. All aspects of the latest research are included while retaining an essentially practical outlook.

*The Conference*

The fourth in this series on Robot Vision and Sensory Controls returns to the UK after being staged successfully in West Germany and the United States. At RoViSeC 3 over 100 papers were received from 15 different countries as far apart as China, the USA and Yugoslavia.

*Machine intelligence exhibition*

The **Machine Intelligence Show** will run concurrently with RoViSeC4. It will be the world's first exhibition devoted to artificial intelligence and will provide practical insight in implementing the intelligent factory of the future.

Machine intelligence systems are the brains of 'smart machines'; they are crucial to the decision-making processes of industrial automation and they will become more important as part of the intelligent factory of the future.

The technology of machine intelligence ranges from the simple tasks of decision-making, to the more complex areas of machine and computer vision, pattern recognition, tactile sensing, man-machine interfacing through speech recognition and voice synthesis, sensor-based robots, ultrasonics and laser light, image processing, holography, software and machine intelligence languages, unmanned vehicles and automated materials handling, inspection and computer control of machines through in-process communication.

#### Call for papers

The planning committee now invites authors to submit titles and abstracts for papers appropriate to the subject. Papers dealing with industrial case studies will be particularly welcome and a suggested, but nonexclusive, list of topics is as follows:

pattern recognition  
robot vision  
image analysis  
multi-sensor systems  
optical, laser, tactile and other sensor developments  
guidance systems (for robots, vehicles, industrial processes)  
intelligent robots  
inspection and measurement  
process control  
speech technology  
standards for sensing and measuring equipment  
vision hardware  
weld guidance systems  
vision in assembly  
visual servoing  
sensor design  
force sensing  
active compliance  
vision data processing  
justifying vision systems  
illumination  
optics design  
software

#### General information

If you would like to submit the abstract (about 100 words) of a proposed paper please use the author's form provided. This should be sent to the Conference Organiser by **1 February 1984** and should provide sufficient information to allow assessment of the scope of the paper.

The following information is provided for the benefit of potential authors:

All submitted papers should be in **ENGLISH** and will be reviewed by the paper selection committee. Instructions as to the preparation of papers will be sent to authors once their abstract has been accepted. Completed manuscripts in camera ready form must be submitted by **31 June 1984**. Final papers should be 2,000 to 4,000 words in length with a maximum of 10 illustrations. Presentation time for each paper will be 30 minutes including time for discussion. The use of visual aids is strongly recommended. The official conference language is English.

*Enquiries to:* The Conference Organiser—RoViSeC 4/M.I.S. I.F.S. (Conferences) Ltd, 35–39 High Street, Kempston, Bedford, Mk 42 7BT, U.K. (Tel. 0234–853605 Telex 825489)

#### FIRST ANNOUNCEMENT AND CALL FOR PAPERS

Sixth International Congress of the World Organisation of General Systems and Cybernetics

Organised by the Collège de Systémique of AFCET (Association Française pour la Cybérnetique, Economique et Technique)

September 10–14, 1984, Paris (France)

This triennial congress is sponsored by many international and national bodies. The Congress Committee consists of the following members: Elie Bernard-Weil (CNEMATER, Hôpital de la Pitié, Paris; Pierre Davous (Euroquip, Vaucresson); Alain Dussauchoy (Université Lyon I, Lyon); Jean-Louis Le Moigre (GRASCE, Université d'Aix-Marseille, Aix-en-Provence); Bernard Paulré (Université Paris IX, Paris); Robert Vallée (Université Paris-Nord, Paris); Bernard Walliser (Ecole Nationale des Ponts et Chaussées, Paris). There are also two co-opted members representing the WOGSC, viz. T. C. Helvey (Director for External Affairs of the WOGSC; Norbert Wiener Gold Medallist, USA) and J. Rose (Director-General of the WOGSC, UK).

#### Aims and themes

The aim of this interdisciplinary congress, which follows the previous five congresses (London, 1969; Oxford, 1972; Bucharest, 1975; Amsterdam, 1978; Mexico City, 1981) is to present contemporary aspects of Cybernetics and Systems and to examine various developments in these and allied fields.

The following are the proposed themes and topics for the congress: Foundations, Epistemology, Analogy, Modelisation, General Methods of Systems, History of Cybernetics and Systems Science Ideas; Information, Organisation, Morphogenesis, Self-reference, Autonomy; Dynamic Systems, Complex Systems, Fuzzy Sets; Physico-Chemical Systems; Engineering Systems, Automation, Simulation, Robotics, Artificial Intelligence, Learning; Biological Systems, Neurocybernetics, Autogenesis, Physiology, Systemic Therapy, Ethology, Ecology; Human and Social Systems, Anthropology, Economics, Development, Management, Education.

**It is to be noted that no topic relevant to cybernetics and systems in the widest sense or type of approach is excluded.**

Papers will be accepted on the basis of submitted abstracts (two copies), containing between 500 and 1,000 words, in French or English. Each abstract should show the following details: Title of paper (full and abridged), name(s) of author(s) and relevant address(es). The abstracts (in due course, the final papers) should be sent to:

Sixth International (WOGSC) Congress Comité de Lecture AFCET, 156 boulevard Péreire, F.75017 Paris, France (Tel. 1-766-24-19; telex 290 163 Eurtel Code 235)

Deadline for the receipt of final papers—March 15, 1984.

#### Addenda

1. The official languages of the Congress are French and English. Simultaneous translation facilities will be available (from French into English, and vice versa) during the plenary sessions.
2. The Sixth Congress is held a week before the SICOB CONVENTION in Paris.
3. Please direct all enquiries to AFCET, as above.