



IFAC

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**International Federation
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4th IFAC Congress Warsaw - Subject and Authors Indexes

Following the 4th Congress of IFAC held in Warsaw, Poland, June 1969, there has been a continued sale of the Preprints through N.O.T. (Naczelna Organizacja Techniczna w Polsce, ul. Czakiego 3/5, Warsaw). The Polish congress organizers now have prepared

- a subject index in alphabetical order listing the survey papers and the technical papers presented at the Congress
- an authors index listing the authors in alphabetical order

and IFAC has arranged for the publication of these two indexes.

All those who have purchased the Preprints are entitled to a free copy of the indexes. N.O.T. will, before long, make the distribution of the indexes to everybody concerned.

Automation in P.R.P. Industries

A second international conference in Belgium on Instrumentation and Automation in the Paper, Rubber and Plastics Industries will be held in Brussels, May 24 to 28, 1971 (previous information in IFAC Bulletin Nos. 57 and 62). The purpose of this IFAC conference is to tackle problems of measurement and control techniques occurring in the manufacture of paper, rubber and plastics. In sessions on such topics as Measurement and Control of Speed and Tension, Process Instrumentation, Process and Production Control, Evaluation of Quality, over 70 papers will be presented leaving time for discussion after each of the 13 individual technical sessions. Informal discussion sessions can also be arranged.

Early registrants will have the preprints of all technical papers mailed to them. A proceedings volume to complement the preprints will be published after the conference and contain the general reports as well as the discussions.

Potential participants should apply to the Secretariat

IFAC/P.R.P. Automation 2
Jan van Rijswijklaan 58
B - 2000 Antwerp / Belgium

for registration forms etc. to be returned preferably before April 1, 1971, or by May 1, 1971 at the latest. Registration fee which covers also a copy of the preprints as well as free access to the 2nd International P.R.P. Exhibition held simultaneously, amounts to 3.500 Belgian Francs (US \$ 70) for attendants. The fee for authors of papers is 2.000 B.F. (US \$ 40) and for accompanying ladies 1.250 B.F. (US \$ 25). Payment should be made to: Kredietbank, Schoenmarkt 31, B - 2000 Antwerp, to the Account No. 5384 of the Koninklijke Vlaamse Ingenieursvereniging.

The press will be exempted from paying a registration fee.

Many technical visits have been scheduled, just as a number of social events and a ladies programme.

The Exhibition will give the possibility to look into recent developments in the field of automation, instrumentation and processing apparatus used in the P.R.P. industries.

The publications of the first P.R.P. Automation Conference held in Antwerp, Belgium, October 1966 are still obtainable (750 B.F. (US \$ 15) for the volume containing 60 papers, and 250 B.F. (US \$ 5) for the volume containing the general reports and discussions) from either booksellers or directly from the Secretariat address as mentioned above.

2nd IFAC Symposium on Fluidics

Following the first announcement and call for papers (IFAC Bulletin No. 57), here is some additional information about the second IFAC Symposium on Fluidics. It is sponsored by the IFAC Technical Committee on Components and organized by the Centre for Development of Automation and Computing Technique, Prague, and the Department of Automatic Control, Faculty of Mechanical Engineering of the Technical University of Prague, the venue of the symposium to take place from June 28 to July 2, 1971.

Out of the papers offered, 35 have been selected. Some of the titles with the indication of the country of the author(s) are taken from the scientific programme, viz.

- A Fluidic Controller for Processes with Transportation Lag - Canada;
- The Guided Jet Principle - Czechoslovakia;
- Some Fluidic Concepts Applied to Flow Measurement - France;
- Fluidic Servo Amplifier Operated by PWM Mode - Japan;
- Analysis of the Connection of Two Wall-Attachment Triggers in a Binary Counter - Poland;
- Threshold Logic by Means of Fluidic Elements - Roumania;
- Operating Characteristics of High Performance Vortex Amplifiers - United Kingdom;
- Noise Analysis in Beam-Deflection Type Fluidic Elements - USA;
- On Combined Use Pneumatic and Hydraulic Components in Fluidics - USSR;
- The Equivalent Circuit of Fluidic Line Branching - Fed. Rep. Germany.

Registrants will receive a complete set of preprints (included in the registration fee) before the symposium. The time allotted to authors for oral presentation of their papers will adequately allow participants to contribute to the planned discussion. The conference language will be English.

One half-day of the programme will be devoted to a round-table discussion on „Fluidics information processing, nomenclature, standards and symbols”, and the possibility of visiting research and industrial institutions will be given. The 10th Anniversary of Czechoslovak Fluidics finds expression in an international exhibition open to the attendants of the symposium. The symposium is round off by a social and a ladies programme.

Copies of the printed programme with registration and accommodation forms may be obtained from the

Organizing Committee,
2nd IFAC Symposium on Fluidics,
Technická 4, Prague 6,
Czechoslovakia
(Telex Prague 12158).

The completed forms should reach the Organizing Committee not later than April 10, 1971.

Registration fee for participants: US \$ 40; for authors of papers: US \$ 15; for accompanying ladies: US \$ 15.

After the symposium, the preprints will be complemented by a volume containing a complete record of the discussions with the written discussion contributions, an authors and a subject index as well as a list of participants.

The Operator, Engineer and Management Interface with the Process Control Computer

This is the title of an IFAC Symposium to be held at Purdue University, Lafayette, Indiana, U.S.A., from August 3 to 6, 1971. Initial information was published in IFAC Bulletin No. 58. The papers submitted in response to the call for papers are being processed and, at this stage, it is already possible to give some titles of papers that are certain to be selected for presentation at the symposium, viz.

- A Process Control Language and the Project Engineer,
- A Program System for Power System On-Line Control,
- Flexibility vs. Standardization in Process Control Software,
- On the Methods of Direct Man-Computer Intercommunications in Planning and Operation Control of Power Systems,
- Transparent Interfaces,
- Information Flow and Data Presentation in Refinery Management Systems,
- Rail Yard Automation.

Interest might also be aroused by the planned survey lectures on

- Status and Economies of Computer Control in Industry,
by *J.J. de Jong*.
- Human Engineering and the Design of Operators Consoles,
by *L.A. Duncanson*.
- Present Status of Operator Console Design,
by *C.M. Cundall*.

The scientific programme will include two Round Table Sessions. Suggested subjects are:

- Management Information Systems and Computer Control Hierarchies
- Human Engineering and the Design of Consoles for Operator, Engineer and Management Hierarchies.

Any request for further information should be addressed to:

The Organizing Committee,
Symposium on the Operator, Engineer and Management Interface with the Process Control Computer,
Purdue Laboratories for Applied Industrial Control,
Purdue University,
Lafayette, Indiana 47907 / U.S.A.

Multivariable Technical Control Systems - 2nd IFAC Symposium

Here is some information to update the first announcement and call for papers (in Bulletin No. 58) of the 2nd IFAC Symposium on Multivariable Technical Control Systems to be held in Düsseldorf (Fed. Rep. Germany), October 11-13, 1971. For the symposium with the five topics

- Linear Multivariable Systems Theory
- Optimal Multivariable Control Systems Theory
- Multilevel Technical Systems Theory
- Applications in Process Industries
- Applications in Power Plants and in Power Distribution Systems

approximately 150 papers had been offered out of which about 80 were pre-selected. The final selection by the International Programme Committee is in process.

Invitations for the presentation of survey papers have, so far, been accepted by

A.G.J. MacFarlane, Manchester, UK
M.D. Mesarovic, Cleveland (Ohio), USA
J.E. Rijnsdorp, Enschede, Netherlands
J.P. Waha, Rhode St. Genese, Belgium.

A printed Second Information with registration forms will be available before long.

For enquiries please contact:

VDI/VDE-Fachgruppe Regelungstechnik,
P.O.Box 1139,
D-4000 Duesseldorf 1,
Germany (Fed. Rep.)
Phone: Duesseldorf 6214 226
Telex: 0858 6525.

Automatic Control in Space - Volume 3 (Toulouse 1970)

Following Volume 1 (Stavanger 1965) and Volume 2 (Vienna 1967), the Instrument Society of America (ISA) has also published the proceedings of the 3rd IFAC Symposium on Automatic Control in Space, held in Toulouse/France, March 1970. The Volume 3 (Toulouse 1970) is now available for sale at US \$ 44.00. Orders should be addressed to:

Instrument Society of America (ISA),
400 Stanwix Street,
Pittsburgh, Pa. 15222 / USA

or (for purchasers in Europe) to:

Pertel Ltd.,
Cursitor Str., Chancery Lane,
London E.C. 4 / U.K.

or (for purchasers in Japan) to:

Taisay Koheki Comp. Ltd.,
Higashinakano 1-46-19,
Nakano-ku,
Tokyo / Japan.

IFAC Symposia 1970 in retrospect

Final reports in terms of general information on the outcome of two of the IFAC Symposia held in 1970 have been made available by the respective national organizing committees. Summaries of the reports are given below:

TRAFFIC CONTROL

This first IFAC Symposium on Traffic Control held jointly with the International Federation for Information Processing (IFIP) in Versailles/France, June 1970, was organized by the Association Française pour la Cybernétique Economique et Technique (AFCET), the French member organization of IFAC. Among the almost 600 participants were about 300 from countries other than France. Altogether 35 countries were represented. The opening ceremony was followed by a special lecture delivered by IFAC's first president, *Dr. Harold Chestnut*, USA. His survey gave a general aspect of applications to traffic control by digital computer.

Railway, road and urban, air, river and sea, every possible traffic area was within the scope of the symposium. The subject of directly connected computers (on-line) as well as computers transmitting information and providing assistance to those responsible for the traffic (off-line) was dealt with. The use of computers for simulation was also treated.

54 technical papers were presented and discussed in nine half-day sessions.

Three round-tables attracted an interested assembly who gave rise to a lively discussion.

Attendants of the symposium had the possibility of taking part in technical visits and of seeing the MESUCORA Exhibition held at the same time as the symposium.

The very satisfactory success of the symposium has resulted in a tentative planning of a second one on the same subject in 1974.

Excess copies of the Preprints are available for sale in individual volumes according to the sessions and may be obtained from

AFCET,
Centre Universitaire Dauphine,
Place du Maréchal de Lattre de Tassigny,
Paris 16e / France.

The price per volume is 10 French francs, for the full set of Preprints 90 French francs (plus postage).

SYSTEMS ENGINEERING APPROACH TO COMPUTER CONTROL

Under the aegis of the Science Council of Japan and with the support of both the Japan Society of Instruments and Control Engineers and the Japan Association of Automatic Control Engineers an IFAC Symposium on Systems Engineering Approach to Computer Control, Kyoto, August 1970, was organized by a local Symposium Committee, sponsored by the IFAC Systems Engineering

Committee and cosponsored by the IFAC Applications Committee.

More than 450 participants included over a hundred from abroad. 21 countries were represented.

107 technical papers were dealt with in parallel sessions, three sessions at a time, and with a total of 39 sessions. The topics covered by the papers reached from theory to applications, while some effort on bridging systems theory to system realization implementing computer control was acknowledged. As far as theory was concerned, modelling, optimization, sensitivity and several modern systems theories were discussed. General emphasis was placed on stochastic and statistic treatments. As far as applications was concerned, problems ranging from chemical plants, utility systems and nuclear plants to traffic and guidance were discussed. Reliability and economical aspects were also among the topics.

Informal discussion groups got together and the round table uniting the sensitivity group showed particularly fruitful results.

As part of the IFAC Symposium, a Workshop of COMPUTER CONTROL SYSTEMS FOR PREVENTING AIR POLLUTION was held in Osaka following the symposium. It was a separately handled affair with the presentation and discussion of some papers which gave the Symposium participants the possibility to join. Technical visits in Tokyo and Osaka rounded off the meetings.

The preparation of the proceedings of the IFAC Kyoto Symposium is under way. Publisher is:

Instrument Society of America (ISA)
400 Stanwix Street,
Pittsburgh, Pa. 15222 / USA

Switching and Automata Theory

The Twelfth Annual Symposium on Switching and Automata Theory, sponsored by the Switching and Automata Theory Committee of the IEEE Computer Group and the Department of Computer Science of Michigan State University, will be held in East Lansing, Michigan on October 13, 14 and 15, 1971. Papers describing original research in the general areas of switching theory, automata theory, and the theoretical aspects of computers, computation and programming are being sought. Deadline for offers of papers with six copies of an extended abstract (no word limit): May 3, 1971.

Contact address:

Professor *Frederick C. Hennie*
Project MAC, M.I.T.
545 Technology Square, Rm 420 A
Cambridge, Massachusetts 02139, USA.

Selected Topics in Space Technology

Subsequent to the 4th IFAC Symposium on Automatic Control in Space (Dubrovnik/Yugoslavia, September 6-10, 1971; see Bull. No. 62), the International Centre for Mechanical Sciences (Centre International des Sciences Mécaniques - CISM) is planning to organize jointly with the University of Zagreb a post-graduate course on Selected Topics in Space Technology. It is intended to hold this course also in Dubrovnik, probably from September 13 to 18, 1971.

Enquiries should be addressed to:

Prof. *Luigi Sobrero*
Secretary General of CISM
Palazzo del Torso
Piazza Garibaldi, Udine/Italy.