



## IFAC/IFIP Symposium at Toronto on Digital Control of Large Industrial Systems

### Preliminary Programme

The purpose of the Symposium to be held at Toronto, June 17 to 19, 1968 is to examine the state of the art in applying digital computers to the control of industrial processes, systems, and machines; and the progress being made in applying theoretical advances to industrial problems.

The emphasis of the Symposium will be on accomplishments rather than on theoretical proposals. Papers have been sought which evaluate, therefore, the technical and economic performance and the reliability of mature installations. Other papers will examine trends in the development of control techniques from an application-oriented viewpoint.

Subject to the final selection of papers the anticipated scope of the technical sessions will be as follows:

#### INDUSTRIAL PROCESSES

Experience with on-line digital control of processes in industries such as: steel manufacture; petrochemicals; pulp and paper; cement; power generation.

#### DIRECT DIGITAL CONTROL

Application experience in a large and diversified company: process identification and test procedures in closing DDC loops; results of theoretical studies of DDC algorithms.

#### SYSTEMS DESIGN

Programming languages; organization of hierarchical computer systems; interface and instrumentation problems.

#### APPLICATIONS OF THEORY

Static and dynamic optimization of a real process using dynamic programming; practical applications of process identification theory; optimization by linear programming.

#### D i s c u s s i o n s

It is planned that technical sessions are followed by informal discussions on application problems in various industries; direct digital control; instrument, interface and display problems; process modelling and identification; process control programming; design theories and application; system implementation problems.

#### G e n e r a l I n f o r m a t i o n

For registrations made before May 1, 1968 the fee will be Canadian \$ 40,- (or US \$ 38,-); after that date the fee will be Canadian \$ 50,- (or US \$ 45,-).

Prospective attendants should apply for the advance programme and registration forms to:

Secretary,  
Division of University Extension,  
University of Toronto,  
84 Queen's Park,  
Toronto 5, Canada.

All technical sessions will be simultaneously translated into English, French, and Russian.

Complete preprints of papers, in English or French (as submitted by the authors), will be available before the Symposium.

## IFAC Symposium at Yerevan on Technical and Biological Problems of Control

Detailed information on this Symposium to be held at Yerevan, Armenia, USSR, from September 24 to 28, 1968 appeared in IFAC Information Bulletin No. 37 of July 12, 1967. Far more papers have been offered than could be accepted and that is why the International Programme Committee decided to exclude the following topics from the provisional programme announced previously:

Reliability and Homogeneous Structures; Heuristic Techniques in Automatic Control; Group Behaviour Models.

A bi-lingual booklet (in English and Russian) with information of a general nature and about the technical programme is now available and may be obtained together with any other information required from:

Organizing Committee of  
the Yerevan Symposium,  
c/o Dr. M.A. Boyarchenkov,  
USSR National Committee of  
Automatic Control,  
Kalanchevskaja ul. 15 a,  
M o s c o w B - 53, USSR.



## Multiple Registration for three Automatic Control Conferences in North America - June 1968

Between June 17 and June 28, 1968, there are three major automatic control symposia in North America, all within easy travelling distance of one another. These are:

June 17-19 IFAC/IFIP Symposium, Toronto, Canada,  
June 20-22 IFAC Systems Symposium, Cleveland, USA,  
June 26-28 American Joint Automatic Control Conference (JACC), Ann Arbor, USA.

In the expectation that some delegates will wish to attend all three symposia, multiple registration for all three conferences will be possible before May 1, 1968 only at a reduced fee of \$ 90.00 (U.S. currency only).

Combined registration forms and any further information may be obtained from

Secretary,  
Division of University Extension,  
University of Toronto,  
84 Queen's Park,  
Toronto 5, Canada.

Reference is also made to the previous IFAC Bulletins No. 35, 43, 44 including notices on the three events mentioned above.

## Symposium Proceedings

The French version of the Proceedings of the IFAC/IFIP Symposium on Digital Computer Applications to Process Control held at Menton, June 5 to 9, 1967 is now available for sale and may be obtained from AFRA, 5 rue de Liège, Paris, France. The proceedings consist of two volumes, one volume containing the 35 papers, the other volume containing the discussions, opening and closing speeches, list of participants, as well as the 10 contributions of the Education Session. The price per volume is 60 ffrs. (US Dollar 12,- ; £ 5.3.0). The English version will be published by ISA probably late spring 1968. A Russian edition is being prepared by the Institute of Automatics and Telemechanics.

## INVESTIGATION ON THE EDUCATION OF CONTROL ENGINEERS

At the Third IFAC Congress held in London 1966 the IFAC Education Committee presented a survey on education of engineers on the university level for automatic control. For the Fourth IFAC Congress, a similar investigation is being planned concerning the education and activity of automatic control engineers on medium level. This

level is being defined by the ability to install technical plants by means of already existing methods and equipment and to maintain their functioning.

Anyone who is interested in the cooperation is invited to request a relevant questionnaire from the Chairman of the IFAC Education Committee, Prof. Dr.-Ing. W. Oppelt, Technische Hochschule, Schlossgraben 1, D 61 Darmstadt, Fed. Rep. Germany.

## Seminar on Large Systems in the Mathematical Biosciences

This is the third seminar in a series of advanced summer courses in engineering cybernetics organized by the Center of Advanced Studies (CAS) and planned to be held at Dubrovnik, Yugoslavia, from August 12 to 24, 1968.

All further information can be obtained from:

CAS Seminars,  
Yugoslav Committee for  
Electronics and Automation,  
P.O. Box 356,  
Belgrade / Yugoslavia.

## European Conference on Numerical Control of Machine-Tools

A CIRP International Conference on Numerical Control of Machine-Tools is to take place on 24 and 25 of April 1968 at Puteaux-Paris, on the occasion of the MACHINE-TOOL BIENNALE. The conference is being organized by the Centre d'Etudes et de Recherches de la Machine-Outil (CERMO) and the Groupement pour l'Avancement de la Mécanique Industrielle (GAMI), under the sponsorship of the International Institution for Production Engineering Research (CIRP).

The conference is to cover a study of the development of numerical control in European manufacturing. The programme includes such topics as: Servo-mechanisms and controls for numerically controlled machine-tools; Machining Centres development; Precision requirements for design, production and utilisation of numerically controlled machines; System 24: A new manufacturing concept; Automatic programming of numerically controlled machine-tools; Numerical control in a large industrial firm; The rôle of the pilot-plant and of the numerical control programming centre.

Survey information may be obtained from: CERMO, 21 rue Pinel, F 75 - Paris 13<sup>e</sup>, France.