



For immediate release

Dynamics and Controls in Physiological Systems

The IFAC sponsored Symposium on Dynamics and Controls in Physiological Systems, co-sponsored by the International Union of Physiological Sciences, the International Federation for Information Processing, and the International Federation of Operational Research Societies as well as by the American Society of Mechanical Engineers and the American Physiological Society, will take place from August 22 to 24, 1973 on the River Campus of the University of Rochester, Rochester, New York, just as the immediately preceding 24th Annual Fall Meeting of the American Physiological Society (APS) to start on August 19, 1973. The one registration fee (\$ 20.00 per person, \$ 10.00 for students) enables the registrants to attend both meetings.

At the Symposium, papers will be presented on topics such as:

- Biochemical Processes; Visual Processing and Eye Movement; Aspects of the Heart; Glucose Metabolism; Thermoregulation
- Pharmacokinetics; Auditory and Vestibular Response; Aspects of Cardiovascular Regulation; Endocrinology and Metabolism
- Membrane Transport; Muscle, Mechanical and Chemical; Some Local Cardiovascular Regulations; Neurons and Neuron Populations
- Dynamics of the Microvascular Level; Respiratory System, Selected Aspects; Kidney; Single Units and CNS Complexes
- Growth: Also Nutrition and Body Weight; Respiratory System, Overall Regulation; Water Systems; Nervous System and Behavior.

Events of the APS Fall Meeting cover a refresher course in Environmental Physiology (Respiration: Altitude and Air Pollution; Osmoregulation: Salinity and Heavy Metals; Temperature Regulation: Hot and Cold Environments and Thermal Pollution) on August 20, two consecutive symposia on "Convective and Diffusion Gas Transport in the Lung" and on "Molecular Mechanisms of the Sodium-Potassium Pump" on August 21, the Bowditch Lecture "Motor Aspects of the Cerebellum Control" as well as, throughout the week, scientific sessions, the business meeting, and visits to the University Medical Center.

Registration / Accommodation Forms are obtainable from:

University Conference Office,
University of Rochester,
Rochester, New York 14627

which will also supply more programme details upon request. The completed Forms should be returned to the above address by August 10, 1973.

The bound volume of proceedings of the IFAC Symposium (\$ 8.00 in addition to the registration fee as above) should be pre-ordered as indicated on the Registration Form. Pre-payment is requested and the pre-paid copies will be distributed at the Symposium Registration Desk. A discussion volume will be made available after the Symposium.

Automatic Control for Agriculture

An IFAC Symposium on that subject, sponsored by the IFAC Technical Committee on Applications and co-sponsored by the International Federation for Information Processing (IFIP), will be held under the auspices and on the campus of the University of Saskatchewan, Saskatoon, Canada, from June 18 to 20, 1974.

The objective of the Symposium is to determine the state of the art in the application of automatic control to agricultural processes. Papers are solicited on the application of automatic control and instrumentation to the agricultural industry in the following areas:

- Harvesting of cereal, forage, vegetable and fruit crops
- Guidance of tractors and other self-propelled equipment
- Tillage and seeding
- Irrigation
- Farmstead mechanization
- Livestock production
- Food processing.

Potential authors are requested to send a 200 to 300 word abstract in the English language to the General Chairman of the Symposium Organizing Committee

Dr. G. C. Zoerb,
Agricultural Engineering Dept.,
University of Saskatchewan,
Saskatoon, Canada,

not later than July 15, 1973. Full papers will have to be submitted by February 1, 1974.

Although the papers may be written in one of the four official IFAC languages (English, French, German, Russian), the Organizing Committee hopes that English will be used.

Enquiries should be directed to the above address.



Multivariable Technological Systems

Sponsored by the IFAC Technical Committees on Applications and on Theory, the third in a series of IFAC symposia on the subject matter will be held at Manchester (in the Owens Park residential and conference complex of the University of Manchester), Great Britain, from September 16 to 18, 1974. Under the aegis of the United Kingdom Automation Council, British National Member Organization of IFAC, the symposium is being organized by The Institute of Measurement and Control, London.

The principle theme of the conference will be the development and application of design techniques for the feedback control of multivariable technical systems. Directly related and other subsidiary themes:

- The construction of models for a wide range of engineering multivariable systems
- Techniques of identifying and validating such models
- Comparisons of different types of design technique applied to industrial problems
- Use of computer-aided-design techniques for multivariable feedback system design
- Applications of multivariable feedback control to a wide range of industrial processes
- Multilevel and Hierarchical control
- Adaptive control
- Application of design techniques for large systems
- Man-machine problems in multivariable systems.

Industrial applications are especially sought in the fields of the control of:

- process industries
- prime movers
- electrical power plant
- aircraft and helicopters
- electrical drives
- surface transportation systems
- communication and information processing systems
- ship systems
- energy distribution systems.

Prospective contributors are invited to submit abstracts in English (of approximately 250 words length) of papers offered in any of these areas by September 30, 1973 to

The Secretary,
3rd IFAC Symposium on
Multivariable Technological Systems,
Institute of Measurement and Control,
20 Peel Street,
London W 8, England.

Final versions of accepted papers, to be prepared by the authors on special forms for offset litho reproduction, will be required by March 31, 1974.

A general criterion which will be applied to theoretical papers is that they must be associated with the development of design techniques, or deal with some other specific aspect of multivariable technological systems with an immediate or near-future possibility of application. A general criterion for applications papers (which are especially desired) is that they have some clearly-defined multivariable aspect.

All correspondence and enquiries as well as requests for copies of the printed First Announcement and Call for Papers should be directed to the address given above.

Stochastic Control

A symposium on Stochastic Control, sponsored by the IFAC Technical Committees on Theory and on Applications, will be held in Budapest, Hungary, September 25 to 27, 1974. National Organizers are:

Hungarian Academy of Sciences, Bolyai Mathematical Society, Hungarian John von Neumann Computer Society, Scientific Society of Measurement and Control, Computer and Automation Institute of the Hungarian Academy of Sciences.

The purpose of the symposium is to discuss the status of stochastic control theory and its applications. Papers dealing with new theoretical results of specific relevance to automatic control as well as with applications are solicited in the following areas:

- Governed Markov and Markov type processes, optimal stopping
- Prediction of the behaviour of a control system
- Advances in the Kalman-Bucy theory and the innovations approach
- Stochastic differential equations and their stability problems
- Advances in optimal stochastic systems
- Stochastic approximation; Stochastic programming; Optimal search
- Stochastic differential games
- Self-organizing, learning and adaption
- Stochastic automata (structural and behavioural problems)
- Advances in fuzzy systems approaches
- Information theoretic methods, in information processing
- Approximation and realization; Computational aspects.

Abstracts in English (30 to 40 lines) should reach the National Organizing Committee (address see below) by December 1, 1973. Authors will be notified of the provisional acceptance by February 1, 1974. Deadline for submission of full papers, preferably in English: March 15, 1974.

The address of the National Organizing Committee to which all correspondence should be directed is:

Conference Bureau,
Computer and Automation Institute
of the Hungarian Academy of Sciences,
H-1502 Budapest 112, P.O.B. 63, Hungary.

Discrete Systems

This is a provisional announcement of an IFAC Symposium on Discrete Systems planned to be held under the sponsorship of the IFAC Technical Committee on Theory in Riga, USSR, September 1974.

Proposed subjects include:

- Discrete system analysis and synthesis including problems of structural optimization
- Automation of discrete system design
- Discrete system structural reliability
- Cellular arrays
- Probabilistic automata and collective behaviour of automata
- Diagnostics of discrete systems.

Authors who wish to offer a paper should submit an abstract (500 - 600 words, English or Russian language, in five copies) to the

Institute of Electronics and Computing Technique,
Academy of Sciences,
Latvian S.S.R.,
14, Akademijas St.,
Riga - 226 006, U.S.S.R.

by the end of June 1973. An abstract should include the title of the paper, a short formulation of the problem (problem statement), a description of the method employed, the results (desirably with specific examples), the author's name, scientific degrees, position, home address and/or business affiliation.

Simultaneously with the notification of paper acceptance (scheduled for October 1973), authors will receive details concerning the preparation and representation of the full papers.

All correspondence should be sent to the address mentioned above.

Control in Power Electronics and Electrical Drives

The National Member Organization of IFAC in the Federal Republic of Germany - the VDI/VDE-Gesellschaft für Mess- und Regelungstechnik of the Verein Deutscher Ingenieure VDI and of the Verband Deutscher Elektrotechniker VDE - will be organizing an IFAC Symposium on Control in Power Electronics and Electrical Drives with the IFAC Technical Committees on Applications and on Components and Instruments as sponsors. The symposium will be held in Düsseldorf from October 7 to 9, 1974.

Papers are solicited in the following areas and prospective authors are requested to classify offered papers accordingly:

- Theory of control systems employing electronic power convertors
- Controlled electronic power convertors
- Converter-fed a.c. and d.c. motor drives
- Applications of controlled drives
- Applications in traction and electric ground transportation including future-oriented projects
- Applications in special fields of static power conversion (e.g. HVDC, inductive heating, electrolysis, particle accelerators).

Abstracts of the papers in the English language (20 to 30 lines) should reach the

VDI/VDE-Gesellschaft für Mess- und
Regelungstechnik,
P.O.Box 1139,
D-4000 Düsseldorf 1,
Fed. Rep. of Germany

not later than October 31, 1973 for pre-selection. After the notification of abstracts acceptance by mid-December 1973, authors should submit their full papers (in either English or German, max. 15 pages incl. illustrations, ready for offset reproduction) by February 28, 1974 for final paper selection.

There will be simultaneous translation (English and German) planned for the Symposium.

All correspondence should be directed to the address given above.

It might be of interest to the readers that, after the IFAC Symposium, the 6th International Congress with Exhibition for Instrumentation and Automation (INTERKAMA) will start on October 10 in Düsseldorf and last until October 16, 1974. Information can be obtained from the Düsseldorfer Messegesellschaft mbH, NOWEA, P.O.Box 10203, D-4000 Düsseldorf 30, Fed. Rep. of Germany.

Non-IFAC Events

- 7th CONGRESS AICA '73 on HYBRID COMPUTATION (Association internationale pour le calcul analogique - International Association for Analogue Computation); Prague, Czechoslovakia, August 27 to 31, 1973. Main topics of the programme: (1) Programming methods, languages and devices, (2) Basic Methods of Hybrid Computation, (3) Application of Analogue and Hybrid Computers, (4) Design and Elements of Hybrid Systems. About 180 specialized reports will be presented as well as five survey lectures delivered by outstanding experts in various fields of analogue and hybrid computation. Registration forms and further details available from: Secretariat of the 7th AICA Congress, The House of Technology, nám. Gorkého 23, Prague 1, Czechoslovakia.

- International Summer Seminar on DESIGN AUTOMATION OF ELECTRONIC SYSTEMS, Dubrovnik, Yugoslavia, August 27 - 31, 1973, organized by the Center for Advanced Studies, Belgrade, Yugoslavia. The objective of the seminar is to present recent advances in the area of design automation of electronic systems and will deal with three basic topics: (1) Computer aided circuit design, (2) Automated interconnection design, (3) Simulation of digital systems and automated logic synthesis. Enquiries: *Mr. M. Jelačić*, Center for Advanced Studies, Kneza Miloša 9/IV (Tel. 333-957), ETAN, P.O.Box 356, 11000 Belgrade, Yugoslavia.

- International Seminar on SIMULATION AND SPACE, Toulouse, France, September 10 to 14, 1973, under the sponsorship of the Institut de Recherche d'Informatique et d'Automatique, and organized by the Centre d'Etudes et de Recherches de l'Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, Toulouse. Sessions on: Control Systems Hybrid Simulation; Contamination and Outgassing; Acquisition Systems Data Processing; Thermo-Optical Materials, and other topics. Conference languages: French and English, simultaneous translation will be provided. Registration forms and further details obtainable from O.N.E.R.A./C.E.R.T., P.O.Box 4025, 31055 Toulouse Cedex, France.

During the same period and also in Toulouse will be held an

- International Conference on POINT MAPPING AND ITS APPLICATIONS sponsored by the Centre National de la Recherche Scientifique and organized by the Laboratoire d'Automatique et d'Analyse des Systèmes, Toulouse, France, September 10 to 14, 1973. The purpose of the Conference is to inform on the results concerning the properties of recurrence relationship, finite difference equations, iteration, as well as of the results relative to the application of these properties in some areas of Mathematics, Automatic Control, Mechanics and Physics. Conference languages: French and English, simultaneous translation will be provided. Registration forms which should be returned by June 30, 1973 are available from: L.A.A.S. - C.N.R.S., P.O.Box 4036, 31055 Toulouse Cedex, France.

- Second "FORMATOR" Symposium on Mathematical Methods for Analysis of Large Systems, Prague, Czechoslovakia, June 18 to 21, 1974; organized by The Czechoslovak Academy of Sciences, Institute of Information Theory and Automation. Papers are solicited in the following areas: (1) Information bases of feedback control of Complexes, (2) Thresholds of resolution and the use of epsilon-entropy, (3) Homogeneous structures in topological relation to the structure of Complex Systems, (4) Markovian models of feedback Control of Complexes, (5) Decomposition and hierarchical stratification for the Control of Large Systems. Abstracts (200 - 300 words) should reach the Organizing Committee by December 1, 1973. Preprints of abstracts will be made available before the symposium, proceedings (in English) afterwards. All correspondence should be addressed to: Formator Symposium - Organizing Committee, Institute of Information Theory and Automation, Vršehradská 49, 128 48 Praha 2, Czechoslovakia.

- IFIP CONGRESS '74 - 6th Congress and Exhibition of the International Federation for Information Processing planned to be held in Stockholm, Sweden, during the week of August 5 - 10, 1974. The scientific programme will consist of three types of presentation: Invited papers, submitted papers, panel discussions. Major subject areas: (1) Computer Hardware and Architecture, (2) Software, (3) Mathematical Aspects of Information Processing, (4) Technological and Scientific Applications, (5) Applications in the Social Sciences and the Humanities, (6) Systems for Management and Administration. Authors who intend to submit a paper in one of the aforementioned fields should apply for a copy of the printed Call for Papers obtainable from: Dr. Herbert Freeman, Chairman, Programme Committee IFIP Congress 74, c/o AFIPS, 210 Summit Avenue, Montvale, New Jersey 07645, USA. Deadline for the submission of papers is November 15, 1973.

Publications

DECOMPOSITION OF LARGE-SCALE PROBLEMS - Proceedings of a Conference, Cambridge, U.K., July 1972, presenting the theory and applications of decomposition techniques for large-scale problems from many disciplines. The latest developments in this area are described and a number of survey papers review the current state of the art in decomposition. Although the book is primarily intended for those who are interested in engineering and mathematical programming, it might also be useful to those in the social sciences.

Edited by *D. M. Himmelblau*, University of Texas, Austin, USA. 1973, 572 pages; price Dfl. 90.00. Published by North-Holland/Elsevier, POB 1270, Amsterdam, The Netherlands.

SYSTEMS APPROACH AND THE CITY - This book is based on the proceedings of the Fifth Systems Symposium at Case Western Reserve University. It aims at providing both a broad comprehensive and balanced presentation of various urban problems where the systems approach has been useful or is of potential value, and points out further fruitful areas of research.

Edited by *M. D. Mesarovic* and *A. Reisman*, Case Western Reserve University, Cleveland, Ohio, USA. 1972, 481 pages, 38 tables, 85 illus., 196 lit. refs.; price Dfl. 80.00. Published by North-Holland/Elsevier, POB 1270, Amsterdam, The Netherlands.

DIFFERENTIAL GAMES AND RELATED TOPICS - Proceedings of the International Summer School on Mathematical Models of Action and Reaction, held in Varenna, Italy, June 15 - 27, 1970.

The book consists of four parts: 1. Theory of differential games; 2. Special mathematical problems; 3. Computational problems; 4. Applications.

Edited by *H. W. Kuhn*, Princeton University, New Jersey, USA and *G. P. Szegö*, University of Cagliari, Italy. 1971, 489 pages, illustrated. Price Dfl. 80.00. Published by North-Holland/Elsevier, POB 1270, Amsterdam, The Netherlands.

THE HISTORY OF THE INSTITUTION OF ENGINEERS AUSTRALIA - This book, written by *Arthur Hardie Corbett* at the invitation of the Council of the Institution, describes the development of The Institution of Engineers, Australia (National Member Organization of IFAC) from its foundation in 1919 until its 50th anniversary in 1969. It is available from The Institution of Engineers, Australia, Science House, 157 Gloucester Street, Sydney, N.S.W., at \$ 10.