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LATEST NEWS
ABOUT THE THIRD IFAC CONGRESS
to be held in London, 20 - 25 June 1966

Nearly two thousand experts of automatic control, more than half of them from overseas, are expected to attend the Third IFAC Congress. Hundreds of those attending the Congress are coming from leading firms all over the world, many of which have made block bookings for their employees, and applications for registration forms are still being received daily at the Institution of Electrical Engineers, London.

Over 300 papers will be presented by speakers from 34 nations. The Duke of Edinburgh, who is Patron of the IFAC Congress, is giving the opening address to the delegates to the IFAC Congress in Central Hall, Westminster on June 20th. The next speaker will be Academician V.A. Trapeznikov, First Deputy Chairman of the USSR Council of Ministers Committee on Science and Technology and Director of the Institute of Automation and Telemechanics of the Academy of Sciences of the USSR.

The Prime Minister will be speaking to the Delegates at the Congress Banquet at the Hilton Hotel on June 23rd, and Mr. Frank Cousins, the Minister of Technology, will be giving the closing address on Saturday, 25th June.

The whole of the organisation of the Congress, which is the largest occasion of its kind ever staged anywhere in the world, has been undertaken by the Institutions of the Electrical and Mechanical Engineers, with support from Industry, on behalf of the United Kingdom Automation Council, whose Chairman, Professor J.F. Coales, Professor of Engineering at Cambridge University, is President of the Congress.

IFAC SYMPOSIUM JUNE 1967 IN PRAGUE CSSR
THE PROBLEMS OF IDENTIFICATION IN
AUTOMATIC CONTROL SYSTEMS

This Symposium will be organized by the Institute of Information Theory and Automation of the Czechoslovak Academy of Sciences under the auspices of the International Federation of Automatic Control IFAC.

Scientific and Technical Programme

Papers presented at the Symposium will deal with the following topics:

1. General problems of the identification of dynamic systems (general problems of the mathematical description of dynamic properties of linear and non-linear objects, new approaches to the problem of identification, approximations of dynamic characteristics, etc.).
2. Calculations of the dynamic characteristics of physical systems by means of mathematical-physical analysis (new results of the theoretical analysis of dynamic objects, results of experiments verifying theories known to date).
3. Statistical methods of the experimental identification of continuous and discrete systems (correlation and regression analyses, identification of multiparameter systems and systems with feed-back and inner noise, statistical estimation of unknown parameters, practical experience gained from the application of statistical methods).
4. Methods of experimental identification, based on the evaluation of responses to determined input signals (frequency methods, approximations of frequency characteristics, evaluation of responses to non-periodic input signals).
5. Determination of the dynamic characteristics of the systems by means of adaptive models (permanent and one-at-a-time identification, problems of the optimum strategy of adaptation, new principles and schemes of adaptive models).
6. Special instruments for the identification of systems and signals (new designs of correlators, generators of non-periodic signals, generators of stochastic signals, special apparatus for the statistical evaluation of measured signals etc.).

Papers and contributions will be distributed to participants as preprints in advance.

It is requested to submit all manuscripts of papers and contributions in English. For reading their papers the authors may use English or Russian according to their own choice. Discussions will be interpreted from Russian into English and vice versa only, if necessary.

Enquiries: Organizing Committee of the IFAC Symposium,
Czechoslovak Academy of Sciences,
Institute of Information Theory and Automation,
Výšehradská 49, Prague 2, CSSR.

THE 4th INTERNATIONAL MEASUREMENT CONGRESS IMEKO

This Congress will be held in Warsaw, Poland, on 3 to 8 July 1967, with the following programme:

1. New methods of measurement, research on basic and derived standards
 - a) New measuring principles applied to dynamic measurements, high noise level signals, measurement data evaluation, correlation analysis, etc.
 - b) Novel basic and derived standards in new fields of measurement, such as noise standards, electro-magnetic power measurement, laser radiation, plasma temperature, extreme values of physical magnitudes, etc.
2. Instrument design, manufacturing technology and economics
 - a) Theory and practice of instrument design: technical optimization of design, the role of new materials in instrument design, human engineering (ergonomics), etc.
 - b) New achievements in instrument manufacturing: new machinery and testing equipment, new fabrication procedures, performance evaluation, quality control and certification, etc.
 - c) The economics of instruments and instrumentation: economic optimization of design, introduction of research results into manufacture, the economics of high quality in instrument manufacture, the economical aspects of industrial applications.
3. Instrument application techniques, aspects of industrial applications and public services
 - a) Papers are invited describing radically new applications of known scientific instruments in basic and applied research which may be of considerable interest to research workers using similar instruments in other fields of science.
 - b) Typical subjects falling within the scope of instrument application techniques in industry are: new solutions to problems of applying instruments in space measurement, flow measurements of slurries of very viscous fluids, temperature measurement in oxygen-blown steel-making furnaces and other difficult measuring situations, new procedures for on-stream inspection and testing of product quality as required in the metallurgical industry and component manufacture, including applications in automated systems.
 - c) Instrument application techniques in public services: applied instrumentation in fields such as the city water, gas and heating supply system, sewage and water sanitation, air pollution, etc.

In order to assure the most up-to-date material, the General Committee has set the final date for submission to July 15, 1966. The submitted synopsis will be carefully grouped and

reviewed by competent bodies of IMEKO and its Member Organizations. Authors will be notified about the acceptance of their papers in December, 1966. Simultaneously, detailed instructions concerning the preparation of the full text of the lectures will be forwarded. Deadline for submission of these will be March 1, 1967, i.e. only four months before the Congress.

Papers presented at the Congress shall be published in full or in part - as previously - in ACTA IMEKO 1967.

INTERNATIONAL SYMPOSIUM ON EXTERNAL CONTROL
OF HUMAN EXTREMITIES

This Symposium will be held at Dubrovnik, Yugoslavia, from 29th August to 2nd September 1966 with the following program:

Some Engineering and Physiological Problems of External Control

Introductory speaker: Prof. J.B. Reswick.

Topics to be discussed: Comparative kinematic study of normal subjects and patients with powered assistance - Control characteristics of pneumatic, electric and hydraulic actuation of prostheses and orthotic devices - Dynamics of extremities exposed to external stimulation and optimal functional control - Wireless transmission of muscle stimulation - Physiological and technical problems related to the controlled stimulation of paralyzed muscles.

Prehension Studies

Introductory speaker: Dr. W.T. Liberson.

Topics to be discussed: Prehension study of the use of electrophysiological splint - Hand prosthesis controlled by myoelectric control signals. Problem of signal pickup and use. Pressure sensitive feedback - Mechano-optical strain transducer of touch and prehension - Improved model of Belgrade Hand - Canadian Hand.

End-Point Control

Introductory speaker: Prof. R.G. Boiten.

Topics to be discussed: Dynamics of upper extremities at normal movement - Structural design of total arm - Mathematical models, control goals and control systems - Supervisory control of mechanical hand by means of computer - Pattern recognition techniques applied to electromyographic control of upper extremity prosthesis - Control of arm muscles by means of external functional stimulation.

Locomotion

Introductory speaker: Prof. R. Tomović.

Topics to be discussed: Dynamic gait studies applied to the design of prosthetic appliances - Stability problems of locomotion - Finite state approach to the study of locomotion and to the design of locomotion automata - Application of locomotion theory to remote control - Biomedical and electrophysiological studies of gaits - External functional stimulation of lower extremities.

For further details please write to:

P.O.Box 356, Belgrade, Yugoslavia,
or telephone Belgrade 27 - 903.

SYMPOSIUM ON AUTOMATION - BUCHAREST

The Academy of the Socialist Republic of Roumania, Commission for Automation, announces a Symposium on Automation which will take place between the 6th and 8th October, 1966. Authors willing to present papers on any of the subjects covered by the Symposium are requested to send a complete copy of the paper by the 1st of July, 1966.

Papers at the Conference will be presented under the following headings:

General Theory of linear, nonlinear, sequential, optimal, numerical systems. Criteria for evaluating the system's behaviour.

Component Elements: numerical, analogical elements, elements for static switching, characteristics of elements in automatic systems.

Industrial Applications: dynamics of industrial processes; utilization of computers for guiding industrial processes; applications of adaptive and optimal systems.

Utilization of Computers in transport, management, finance etc. Technical and economic aspects of computers use.

Telemechanics: general theory, equipment, applications.

Enquiries: Academia Republicii Socialiste Romania,
Comisia de Automatizare,
str. Gutenberg, Nr. 3 bis Raionul V.I. Lenin,
Bucuresti, Roumania.

SHORT MEETING REMINDERS

September 26 - 29, 1966. Residential Conference on Integrated Process Control Applications in Industry, Manchester, England. Enquiries: The Institution of Electrical Engineers, Savoy Place, London, W.C.2.

October 24 - 27, 1966. International Instrument Automation Conference and Exhibition, New York. Enquiries: Instrument Society of America, 530 William Penn Place, Pittsburgh, Pa.

November 19 - 25, 1966. 9th Convention and Exhibition of Automation and Instrumentation, B.I.A.S. - Biennale Automazione Strumentazione, Milan.

April 1967. Mesucora International Congress, Paris. (With the Mesucora Exhibition, the International Exhibition on Measurement, Control, Regulation, Automation.) Enquiries: Mesucora Association, 37 Avenue de Breteuil, Paris 7e, France.

August 28 - September 2, 1967. 5th Congress of the International Association for Analog Computation AICA, Lausanne, Switzerland. Enquiries: Secretariat of the Swiss Federation of Automatic Control, Wasserwerkstrasse 53, Zürich, Switzerland.

October 9 - 15, 1968. Interkama 1968. Düsseldorf, Germany.

1968. Fourth Congress of the International Federation for Information Processing, Edinburgh. Enquiries: British Computer Society, Finsbury Pavement, London, E.C.2., England.

PROCEEDINGS OF IFAC CONGRESSES AND SYMPOSIA

First IFAC Congress, Moscow, June 1960. Automatic and Remote Control. Butterworth, 88 Kingsway, London W.C.2, England. 4 volumes £45. (1 volume £12).

1. Second IFAC Congress, Basle, August 1963. Automatic and Remote Control. Butterworth, 88 Kingsway, London W.C.2, England / Oldenbourg Verlag, 145 Rosenheimer Strasse, München, Germany. 2 volumes £30.8.0. (Vol. 1: Theory £20; Vol. 2: Applications and Components £22).

2. IFAC Symposium, Rome, April 1962. Optimizing and Adaptive Control. Instrument Society of America, 530 William Penn Place, Pittsburgh, 19, Pa., USA. \$10.50 (\$12.50 outside USA).

3. IFAC Symposium, Moscow, September 1962. Theory of Finite and Stochastic Automata. Nauka, Podсосenski Pereñlok 21, Moscow K-63, USSR. 2 volumes 1 rouble 94 kopeks per volume. (In original languages). English translation of the Russian papers available from Burroughs Corporation, Paoli, Pa., USA. \$17.50.

IFAC Symposium, Dubrovnik, August 1964. Sensitivity Method in Control Theory. Pergamon Press, Oxford, England. £4.4.0.

IFAC/IFIP Symposium, Stockholm, September 1964. Digital Computer Applications to Process Control. Plenum Press (ISA), 227 West 17th Street, New York, N.Y., USA. \$17.50.

IFAC Symposium, Stavanger, June 1965. Peaceful Uses of Automation in Outer Space. Plenum Press (ISA), 227 West 17th St., New York, N.Y., USA. \$17.50.

IFAC Symposium, Tokyo, August 1965. Systems Engineering for Control System Design. IFAC Tokyo Symposium Committee, Tokyo Central P.O.Box 1057, Tokyo, Japan. About \$15.30. (To appear shortly).

4. IFAC Symposium, Teddington, September 1965. Theory of Self-adaptive Control Systems. Plenum Press (ISA), 227 West 17th Street, New York, N.Y., USA. (To appear shortly).

IFAC/IFIP Symposium, Munich, October 1965. Microminiaturization in Automatic Control Equipment and in Digital Computers. Oldenbourg Verlag, München, Germany. DM 100. (To appear shortly).

Proceedings of the British Automation Conference 1965

Group A. Automation and Society. Group B. Automation and Production. Group C. Automation and the Market. Group D. Automation and Management. 4 keynote addresses by the Rt.Hon. Lord Robens, Professor J.F. Coales, Dr. E. Eastwood and Mr. D.L. Nicolson, as well as 16 group papers. Published by the Institution of Production Engineers, 10, Chesterfield Street, Mayfair, London, W.1., England. Price: £5.5s.0d.

Interkama 1965

5. Proceedings of the International Congress with Exhibit on Measuring Techniques and Automatic Control held at Düsseldorf, Germany, from 13th to 19th October, 1965. München, R. Oldenbourg-Verlag, Berlin, VDE-Verlag, and Düsseldorf, VDI-Verlag, 1966. 400 pp. Price: 68 DM.