Fourth IFAC Congress Warsaw 1969

Registration Date: April 15!

Programme details are now being released by the Organizing Committee of the Fourth Congress of IFAC to be held in Warsaw from June 16 to 21, 1969. A booklet entitled "Information No. 2" together with registration forms is distributed on a large scale to the National Member Organizations of IFAC as well as to individuals who have returned the completed Preliminary Registration Form attached to the preceding booklet called "First Information".

The deadline for registrations announced in the IFAC Bulletin No. 49 has been extended to April 15, 1969. Congress Registration fees received prior to that date amount to US $50, after that date the fee will amount to US $60. The rates for authors of accepted papers are US $40 before and US $50 after the deadline and accompanying persons will be charged US $10 and US $12 respectively.

Receipt of a set of summaries of papers in English, French, German or Russian according to choice as well as a set of the survey papers (general reports) presented at plenary sessions will be covered by the registration fee. The previous announcement in IFAC Bulletin No. 49 is amended in that an English version of the survey papers will be available.

The receipt of preprints of technical papers is not included in the registration fee. Participants desiring to purchase either a full set of preprints or individual volumes of technical sessions are asked to make the relevant specification in the registration forms.

About 300 technical papers have been accepted for presentation and will be dealt with in parallel sessions. For the purpose of taking part in the ensuing discussions, congress participants will be provided with forms to write their contributions.

Nine invited survey papers will be presented at plenary sessions. Furthermore, a number of Round Table Discussions are planned.

Simultaneous translation into English, French, German and Russian will be provided during the plenary sessions. At the technical sessions there will be simultaneous translation into English and Russian only.

Provision has been made for visits of plants and institutes to take place in the week of the Congress, one or the other post-congress tour lasting several days.

Any further details may be seen from the "Information No. 2" or obtained from:

N. O. T.,
Organizing Committee of IFAC IV
P. O. B., 903
Warsaw 1/Poland

or from the IFAC Secretary at Düsseldorf

IFAC Symposium on Automatic Control in Space

Additional information on the third IFAC Symposium on Automatic Control in Space, Toulouse (France), March 2 to 6, 1970, relates to the subject areas in which papers are solicited, namely:

1. Guidance of launchers and boosters during the launching phase of space vehicles
2. Control and command of the attitude of space vehicles
3. Control and command of the space vehicle orbit
4. Rendez-vous problems
5. The hardware of space vehicles
6. On-board computers for navigation and scientific instrumentation used inside the space vehicle and their programming
7. Information processing on board or at ground stations; with particular reference to communication satellites, meteorological satellites...
8. Environmental control and associated automatic systems
9. Guidance of space vehicles and information processing during flight towards a distant planet
10. Problems of man-machine interaction in space
11. Problems of locomotion of man in space (namely outside the capsule)
12. Automatic control of transport vehicles on planet's surface; the programme for the automatic control of sample collection
13. Navigation, control, orientation and stabilization of submarine vehicles
14. How automatic control can solve certain problems of man in space or under the sea
15. How automatic control has been used for underwater research
16. How automatic control has been used for research under the surface of the earth.


Participants will receive abstracts and preprints prior to the symposium.

A 1st Information Bulletin with more details is available from the

Symposium Secretary,
LAAS du CNRS,
B. P. 4036,
F-31 Toulouse 04/France.
IFAC Symposium
on Digital Computers for Traffic Control

Under the auspices of the Association Française pour
la Cybernétique Economique et Technique (AF CET)
- French National Member Organization of IFAC —
- an international symposium on the Use of Digital
Computers for Traffic Control and Regulation will
be held at the Palais de Congrès, Versailles
(France), from 1st to 5th June 1970. It will be
sponsored by the IFAC Technical Committee on
Applications with planned co-sponsorship of the
IFAC Technical Committee on Systems Engineering.
The subject area covers the entirety of computers
used for traffic control and regulation in every field
(railway, road, naval, air traffic etc.)

AFCET urgently requests that the Authors make their
application before May 15, 1969 sending in abstract
in three copies (not over one typed page). Papers
presented by National Associations belonging to IFAC
or IFIP will be examined by the International Selection
Committee. The final texts must be received,
with all illustrations, before December 15, 1969.

Further information is available from:

AFCET, Section AP
Centre Dauphine,
Place du Maréchal de Lattre de Tassigny
Paris 16e, France

Symposium in Spain

Sponsored by the Spanish National Member Organi-
zation of IFAC, a national symposium on Auto-
mation in Industry will be held in Sitges from
November 5 to 7, 1969. It will be devoted to the
following areas:
- Theory - Automatic Control - Process regulation
- Computers - Special technologies.

Further details can be obtained from:
Comité Organizador del Symposium
"La Automática en la Industria",
Via Layetana 38,
Barcelona (3)/Spain.

Second Symposium on Identification
and Process Parameter Estimation

The Czechoslovak Academy of Sciences, Institute for
Information Theory and Automation, is organizing
the 2nd Symposium on Identification and Process
Parameter Estimation, sponsored by the IFAC
Theory Committee.

Following the first Symposium which was held in
Prague in June 1967, this second Symposium is also
to be held in Prague from June 15 to 20, 1970.

Papers are invited in following areas:
- General problems of model building and
  identification in automatic control systems
- Deterministic methods for systems
  identification
- Statistical methods for process parameter
  estimation
- State estimation
- Accuracy of identification
- Adaptive control and identification in
closed loops
- Applications and practical experience
- Special instruments for identification of
  systems and signals.

Offers of papers together with abstracts in English
(200 - 300 words) should be received by the Organizing
Committee not later than by September 15, 1969.
The address is:

Organizing Committee - IFAC Symposium,
Institute of Information Theory
and Automation,
Výčrastská 49,
Praha 2 - Czechoslovakia

France

The Association Française pour la Cybernétique
Economique et Technique (AF CET) was established
last fall through a fusion of three French scientific
societies, namely:

Association Française de Régulation et d'Automati-
sisme (AFRA),
Association Française d'Informatique et de
Recherche Opérationelle (AFIRO),
Association Française d'Instrumentation et de
Contrôle (AFIC),

having been the Member Organizations of IFAC,
IFIP and IMEKO respectively. Through its cor-
responding sections, AFCET is now the representa-
tive body in the three international federations con-
cerned. Owing to this reorganization the name and
the address of the French National Member Organiza-
tion of IFAC is as follows:

Association Française pour la Cybernétique Eco-
nomique et Technique (AFCET),
Centre Universitaire Dauphine, Place du Maréchal
de Lattre de Tassigny, Paris 16e/France.

United Kingdom

The Secretariat of the United Kingdom Automation
Council (UKAC) - British National Member Organiza-
tion of IFAC - has been provided by The Institu-
tion of Electric Engineers, Savoy Place, London,
with Mr. F. Jervis Smith, CEng, FIEE, as Hono-
rary Secretary of UKAC since its inception in 1958.
In view of the retirement of Mr. Smith as Honorary
Secretary of UKAC, Mr. W. F. S. Woodford, OBE,
FCCS, Secretary of the Institution of Production
Engineers was elected as the next Honorary Secre-
tary and the Secretariat of UKAC has passed to the
Institution of Production Engineers, 10 Chester-
field Street, London W1.
IFAC Journal Automatica

The subscription rates for the IFAC Journal Automatica announced in No. 50 of the IFAC Information Bulletin are repeated as follows: multiple reader institutions annual rate £16 or $40.00, Two years (10% discount) £28 16s. or $72.00. In addition there is a specially reduced rate for the individual members of the 33 National Member Organizations of IFAC, namely £3 10.0. or $9. This same rate also applies to other individuals whose libraries are subscribers.

An extract from the contents list of the first four issues of "Automatica" is given on page 4 of this Bulletin.

New Control Journal in Spain

Started in May 1968 was a new control engineering journal published in Spain. Entitled "Regulación y Mando Automático", the journal appears bimonthly and is circulated to some 3000 engineers and technical managers in Spain. Heading its Editorial Board is Professor Jaime Herranz of the Escuela Técnica Superior de Ingenieros Industriales de Barcelona. For further details contact:

Jorge Puig
Compañía Española de Editoriales Tecnológicas Internacionales, S.A.,
Rosellón 300 2º 1ª izquierda
Barcelona (9) - Spain

New Symposium Publications

IFAC Symposium on System Dynamics and Automatic Control in Basic Industries
Sydney, Australia, August 1968.
Preprints are still available and may be purchased from
The Institution of Engineers Australia, 157 Gloucester Street, Sydney, N. S. W. Australia 2000, at $4.00 (US $4.40) per set.
The next issue of the Electrical Engineering Transactions, published by The Institution of Engineers, Australia, will include all Symposium papers with discussions and authors' replies. This issue will be in 2 parts available about June 1969, and will be priced at $4.00 (US $4.40).

IFAC Symposium on Fluidics
Full proceedings available in Spring at £8 (US $10) either through the
British Hydromechanics Research Association, Cranfield, Bedford, England, or directly from the publisher
Peter Peregrinus Ltd., P.O. B. 8, Southgate House, Southgate, Stevenage, Hertfordshire, England.

IFAC Symposium on Multivariable Control Systems
Düsseldorf, Germany, October 1968.
A special volume containing the introductions and the summarising report as well as the survey reports on the topics of the various sessions and the contributions to the discussions (as far as submitted in writing) has now been published. This "Discussion Volume" of 232 pages which also includes the name and the address of all session chairman, vice-chairman and authors, will be sent free of charge to all participants of the Symposium as well as to those having received preprint volumes after the Symposium.
The full set of Proceedings including three volumes of preprints and the Discussion Volume is now available for sale at DM 120,-- = $30.-- (mailing cost included). Orders should be sent to
VDI-VERLAG GmbH
Postfach 1139,
D 4000 Düsseldorf 1
Germany

Corrigendum

IFAC SYMPOSIUM ON AUTOMATIC CONTROL IN LIME, CEMENT AND CONNECTEC INDUSTRIES, Brussels, Belgium, September 1968.
In Bulletin 50, page 2, under the item "New Symposium Publications" we had announced the Proceeding of the abovementioned Symposium. Unfortunately the conversion of the price of F. H. 1,200,-- into foreign currency was not correct. It should be $ 24,-- and £ 10/-.--.
The Proceedings will be mailed on receipt of payment.
NO. 1 JANUARY 1969
The IFAC Journal — A New Automatica (Editorial) G.S. Axelby
IFAC Symposium in Israel A. Niemi
Applications of Dynamic Programming to the Control of Water Resource Systems R.E. Larson
W.G. Keckler
Optimal Control of a Storage Reservoir during a Flood Season O. Levin
International Symposium on Pulse-Rate and Pulse-Number Systems J. Hatvany
Fitting Control Mathematics to Control Hardware: An Aspect of the 1968 IFAC Pulse-Symposium B.H. Gaines
R.A. Shemer
The DDA Integrator as the Iterative Module of a Variable Process Computer J. Hatvany
A Digital Transfer Function Analyzer Based on Pulse Rate Techniques C.S. Elesden
A.J. Ley
The Closed Loop Step Motor — An Ideal Actuator for Process Control T.R. Fredrikson
Performance of a Digital Two-Term Controller T.H. Thomas
M.P.G. Hughes
A Complex Controller Using Digital-Operational Techniques L. Ladanyi
Selecting State Variables to Minimize Eigenvalue Sensitivity of Multivariable Systems R.A. Singer
A Survey of Stability of Stochastic Systems F. Kotin
Optimum Stochastic Control W.M. Wonham

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Editorial — Improving IFAC Symposia G.S. Axelby
A Look at the IFAC/IFIP Toronto Symposium on Digital Control of Large Industrial Systems H.A. Spang III
Quality Control of Large Limestone Quarries and Kilns W. Schaffer
The 1968 IFAC Cleveland Symposium on Optimal Systems Planning T.J. Williams
H. Chestnut
L. Kirchmayer I. Lefkowitz
R.W. House J.N. Warfield
What is System Planning?
Optimal Forecasting for Computer Control of Water Resource Systems J. Toyoda
N. Tortum Y. Inoue
Dynamic Control of a Two-Stand Cold Mill H.W. Smith
Essential Parameters on Sensitivity Analysis D.F. Wilkie
Sensitivity Aspects of Linear Digital Control Systems S.J. Kahne
L. A. Christie
A Survey of Temperature Control in Electrically-Heated Homes W.K. Roots
I. Wilenitz

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H. Kwakernaak
P. Kokotovic
Sensitivity of Linear Systems to Large Parameter Variations L. Clark
N.H. McClamrock J.K. Aggarwal
An Expansion for Evaluating Sensitivity to a Random Parameter L. Shaw
F. Chalon
Sensitivity of Linear Systems with Respect to Random Disturbances R. Maslov
A. Petrovski
Optimal Low-Sensitivity Linear Feedback Systems H. Kwakernaak
The Invariance Conditions in Variable Structure Systems B. Drazenovic
Structural Uncontrollability of Sensitivity Coefficient G. Guardabassi
S. Rinaldi
A. Locatelli
Sensitivity Problems Related to Certain Bifurcations in Nonlinear Recurrence Relations I. Gumowski
C. Mira
Control and Optimization of a Large Ammonia Plant with a Digital Computer M.J. Shah
A. Weissenfeifer
A Design Technique for the Incomplete State Feedback Problem in Multivariable Control Systems E.J. Davison
R.W. Goldberg
The #Transformation for Solving Linear Programming Problems V. Chichinadze
The Use of a Method of Perturbation in the Synthesis of Closed-Loop Optimal Control Laws for Non-Linear Systems J. Baldwin
J.H. Sims Williams
The Current Status of Vestibular System Models L. Young

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Paradoxical Inhibition: A negative Feedback Principle F.A. Roberge
The IFAC Düsseldorf Symposium on Multivariable Control Systems P.C. Parks
The Lund Dependent Multivariable Control System in a Boiler H. Unbehauen
The Design of a Control System for a Medium-Length Hot Strip Mill L.D. Gifford
J.R. Leigh
Absolute Stability of Dynamic Systems Containing Nonlinear Functions of Several State Variables S. Partovi
N.E. Nahi A.H. Jazwinski
Adaptive Filtering R.P. Wischner J.A. Tabacalynski
Nonlinear Multivariable Systems M. Althans
Optimal Control of Multivariable Periodic Processes M. Fjeld
J. Kjorstad T. Stephansen
Inequalities for the Performance of Suboptimal Uncertain Systems H.S. Witsenhausen
On the Removal of Ill-Conditioning Effects in the Computation of Optimal Controls E. Polak