



# NEWSLETTER

No. 5 November, 1976

**International Federation  
of Automatic Control**

Published by Pergamon Press Ltd. Oxford  
for the IFAC Secretariat  
EKONO, P.O. Box 27,  
SF-00131 Helsinki  
Finland

Editor:  
Prof. M. Kümmel,  
Dept. of Chem. Eng.  
Technical University of Denmark  
2800, Lyngby, Denmark

## **The Sixth International Symposium BIOCYBERNETICS (Leipzig, DDR, 12 - 16 September 1977).**

The symposium is organized in cooperation with IFAC by the Scientific - Technological Society for Instrumentation and Automation Equipment in the Chamber of Technology of the GDR (WGMA).

### **Program**

1. Control with the organism
  - 1.1 sensomotor control mechanisms
    - 1.1.1 control of movement (general)
    - 1.1.2 control by optical inputs
    - 1.1.3 control by vestibular inputs
  - 1.2 autonomous control of organ functions (homeostasis)
    - 1.2.1 supply systems (blood, cardiovascular, respiratory and alimentary system).
    - 1.2.2 homeostatic systems (thermoregulation, regulation of fluid -, electrolyte - and acid - base - balance, regulation of metabolism etc.).
    - 1.2.3 other control functions of the autonomous nervous and the homonal system
  - 1.3. control of growth, regeneration etc.
  - 1.4 control of immune processes
  - 1.5 control of cell metabolism (basic biochemical control systems).
2. Control: organisms - organisms (Communicational systems)
  - 2.1 communication between organisms (biocommunication)
  - 2.2 behavioural mechanisms and regulation
  - 2.3 psychosociological regulations
3. Control: organisms - environment (ecosystems)
  - 3.1 modeling of ecosystems
  - 3.2 natural processes of control, adaptation and development in ecosystems
  - 3.3 control of natural and artificial ecosystems; stationary behaviour and development processes, especially for water, agricultural and forestry economy, landscape care, regional planning and maritime research.

Preferred are papers, which make clearly recognizable the application of system-theoretic cybernetic methods. This concerns experimental and theoretic methods of modeling (identification) as well as of optimization and control.

The conferences languages are English, Russian, and German. The deadline for submission of abstracts (1 to 2 typewritten pages) for papers is October 31, 1976.

### **Further information from**

Wissenschaftlich-Technische Gesellschaft  
für Mess- und Automatisierungstechnik  
in der Kammer der Technik der DDR  
DDR—1086 Berlin, PF 1315

## **IFAC Symposium on Information - Control Problems in Manufacturing Technology (Tokyo, Japan. 17 - 20 October 1977) .**

### **Topics**

The Symposium will cover the following topics:

1. Information-control issues associated with material processing such as numerical control of machine tools
2. Information-control issues associated with material handling such as robotics
3. Information-control issues associated with assembly and inspection
4. Information processing such as CAD, pattern recognition and artificial intelligence in manufacturing processes
5. Micro-economic modeling of manufacturing processes

Submission of abstracts, 31 December 1976

Notification of acceptance, 15 March 1977

Submission of papers, 15 May 1977

First announcement and call for papers available from

The Secretariat of IFAC Manufacturing  
Technology Symposium  
c/o The Society of Instrument and Control Engineers  
39 Shiba Kotohira-cho  
Minato-ku  
Tokyo, Japan

**7th Triennial World Congress (Helsinki, Finland, 12 - 16 June 1978).**

**Important dates and deadlines**

Submission of manuscripts and abstracts: May 1, 1977  
 Notification of acceptance: October 31, 1977  
 Submission of final manuscripts and abstracts: December 31, 1977

**Mail manuscripts to your National Member Organization, if none, to**

IFAC 78 Secretariat,  
 POB 192,  
 SF-00101 Helsinki, Finland

Telex: 121845 ahaka sf  
 Please address all correspondence to the IFAC 78 Secretariat.

**IFAC Publication**

**Proceedings of the IFAC-IFIP Workshop on Real-Time Programming (Budapest, March 1974) can be ordered from:**

"Kultura" Hungarian Trading Company  
 for Books and Newspapers  
 H 1389 Budapest 62.,  
 Hungary

price: US \$ 20

**NEWS FROM IFAC ORGANIZATION**

List of IFAC Officers and Officials:

**Executive Council**

Mr. U. A. Luoto, President Finland  
 Prof. Y. Sawaragi, 1st Vice President Japan  
 Prof. T. Vámos, 2nd Vice-President Hungary  
 Dr. J. C. Lozier, Past President U.S.A.  
 Dr. M. Cuénod, Treasurer Switzerland  
 Prof. O. J. Aven U.S.S.R.  
 Prof. P. Eykhoff Netherlands  
 Prof. G. Ferraté Pascual Spain  
 Prof. M. Nalecz Poland  
 Prof. G. Quazza Italy  
 Prof. H. W. Smith Canada  
 Prof. M. Thoma F.R.G.

**Advisory Committee**

Mr. R. G. Lex, Chairman U.S.A.  
 Prof. H. Kwakernaak, V.-Ch. Netherlands  
 Prof. P. Salminen, V.-Ch. Finland  
 Mr. M. A. Kaaz F.R.G.  
 Prof. K. Reinisch G.D.R.  
 Prof. V. Strejc Czechoslovakia  
 Prof. M. Terao Japan

**Policy Committee**

Prof. A. Niemi, Chairman Finland  
 Dr. H. Akashi, V.-Ch. Japan  
 Dr. J. Gertler, V.-Ch. Hungary  
 Mr. W. E. Miller U.S.A.  
 Prof. J. H. Westcott U.K.  
 Mrs. L. Schröder, Hon. Mem. F.R.G.

**Public Affairs Committee**

Dr. J. A. Aseltine, Chairman U.S.A.  
 Dr. H. Apter, V.-Ch. France  
 Dr. I. M. Makarov, V.-Ch. U.S.S.R.

**Applications**

Prof. R. Isermann, Chairman F.R.G.  
 Mr. D. R. Bristol, V.-Ch. U.S.A.  
 Mr. A. E. Hakala, V.-Ch. Finland  
 Prof. N. S. Raibman, V.-Ch. U.S.S.R.  
 Prof. T. Takamatsu, V.-Ch. Japan

**Biomedical Engineering**

Prof. H. R. Weed, Chairman U.S.A.  
 Dr. H. Drischel, V.-Ch. G.D.R.  
 Prof. A. Petrovski, V.-Ch. U.S.S.R.  
 Prof. P. Rabischong, V.-Ch. France

**Components and Instruments**

Mr. A. E. Nisenfeld, Chairman U.S.A.  
 Prof. M. A. Boyarchenkov, V.-Ch. U.S.S.R.  
 Prof. L. Finkelstein, V.-Ch. U.K.

**Computers**

Mr. J. D. N. van Wyk, Chairman South Africa  
 Mr. C. M. Doolittle, V.-Ch. U.S.A.  
 Dr. B. Tamm, V.-Ch. U.S.S.R.

**Economic and Management Systems**

Prof. Ir.J.M.L. Janssen, Chairman Netherlands  
 Prof. M. Athans, V.-Ch. U.S.A.  
 Mr. J. Kivinen, V.-Ch. Finland  
 Prof. A. Straszak, V.-Ch. Poland

**Education**

Prof. V. V. Petrov, Chairman U.S.S.R.  
 Dr. P. M. Larsen, V.-Ch. Denmark  
 Mr. G. N. Saridis, V.-Ch. U.S.A.

**Manufacturing Technology**

Mr. J. L. Nevins, Chairman U.S.A.  
 Dr. Y. Oshima, V.-Ch. Japan  
 Prof. R. Tomović, V.-Ch. Yugoslavia  
 Dr. E. A. Yakubaitis, V.-Ch. U.S.S.R.

**Mathematics of Control**

Prof. V. S. Pugachev, Chairman U.S.S.R.  
 Mr. H. J. Kelley, V.-Ch. U.S.A.

**Social Effects of Automation**

Dipl. Ing. F. Margulies, Chairman Austria  
 Prof. N. S. Raibman, V.-Ch. U.S.S.R.  
 Mr. P. A. Sprague, V.-Ch. U.S.A.  
 Mr. R. M. J. Withers, V.-Ch. U.K.

**Space**

Dr. W. Haeussermann, Chairman U.S.A.  
 Mrs. E. Gottzein, V.-Ch. F.R.G.  
 Mr. M. Pèlegri, V.-Ch. France  
 Acad. B. N. Petrov, V.-Ch. U.S.S.R.

**Systems Engineering**

Mr. R. Chaussard, Chairman France  
 Prof. I. Lefkowitz, V.-Ch. U.S.A.  
 Mr. T. Terano, V.-Ch. Japan  
 Acad. A. A. Voronov, V.-Ch. U.S.S.R.

**Terminology and Standards**

Dr. J. Beneš, Chairman Czechoslovakia  
 Prof. O. A. Solheim, V.-Ch. Norway  
 Prof. Dr. J. Virkkunen, V.-Ch. Finland

**Theory**

Prof. A. J. Fossard, Chairman France  
 Prof. J. J. Åström, V.-Ch. Sweden  
 Prof. A. Halme, V.-Ch. Finland  
 Prof. A. G. J. MacFarlane, V.-Ch. U.K.

**Honorary Editors**

Prof. J. F. Coales U.K.  
 Prof. S. Kahne U.S.A.

**Editor *Automatica***

Mr. G. S. Axelby U.S.A.

**Editor *Newsletter***

Prof. M. Kümmel Denmark

**Honorary Secretary**

Mr. S. Aarnio Finland

**Deputy Secretary**

Mrs. S. Saari Finland

**Editorial Board**

J.F. Coales (Chairman) U.K., U.A. Luoto, Finland, P. Eykhoff Netherlands, J. Gertler Hungary, S. Kahne U.S.A., I.R. Maxwell U.K., G.F. Richards U.K., R.E. Strange (Managing Editor) U.K.

**Non-IFAC Events**

**IFIP Congress 77 (International Federation for Information Processing, Toronto, Canada. 8—12 August 1977)**

**Program Areas**

- Applications in management and administration
- Applications in science and engineering
- Computer aided design
- Computer networks
- Information processing and education
- Theoretical foundations of information processing
- Computer hardware—Developments in technology and their influence on computer system design
- Computer software—Programs and procedures which facilitate the development, operation and evolution of application systems

Further information from:

IFIP Congress 77 Organizing Committee  
 Address:  
 Canadian Information Processing Society  
 212 King Street West Ste. 214, Toronto,  
 Ontario, Canada M5H 1K5