



**International Federation
of Automatic Control**

NEWSLETTER

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IFAC NEWS

During the IFAC Congress in Helsinki the IFAC General Assembly met on June 13. The now past president V. Luoto gave a report for the period 1975–1978 from which the following is extracted:

IFAC Events During the Report Period

As we all know, IFAC activities have continuously been on the increase through the years. Our statistics indicate that as we in the period 1960–1963 had only two events, this figure was six for the subsequent period, then grew to 14, and then to 26. In the period 1975–1978 we had altogether 36 symposia and workshops. The total number of participants can be estimated to have been 7500, and the total number of papers accepted to these events totals about 1400 of which certainly almost all were presented. The registration fees have varied between CHF 200 and CHF 550, and in trying to express the IFAC activities in businesslike terms, we could estimate that the total turnover, or total amount of registration fees paid, certainly exceeds CHF 2,5 million. We could then work out the number of man-days spent in attending the IFAC events to be 30,000 during the report period. Judging on the basis of these figures, we could say that our IFAC is by no means a small "undertaking".

National Member Organization Contacts

Continuing my business analogy, I could say that the IFAC NMO's are the actual "shareholders" or "owners" of our Federation. This analogy goes then further, and the General Assembly becomes the "owners'" council meeting. And, in a way, this is what it actually is, the most important meeting of all the meetings of our Federation. Understanding this helps us to understand the importance of our contacts with the NMO's. So far these have been rather weak, and mostly limited to the occasion of a Congress and the General Assembly in conjunction therewith. This problem has been discussed at various Executive Council meetings during the report period.

The NMO contacts are under further discussion, and I understand that our Incoming President will continue these efforts.

Contacts with the Sister Federations

The IFAC Sister Federations are the International Association for Mathematics and Computers in Simulation, IMACS (formerly AICA), the International Federation for Information Processing, IFIP, the International Federation of Operational Research Societies, IFORS, and the International Measurement Confederation, IMEKO. The traditionally friendly and fruitful cooperation between the Sister Federations has continued in the good smooth way within the framework of the Five International Associations Coordinating Committee, FIACC. The FIACC meetings have taken place once a year in Paris, which frequency is considered adequate for the coordination of the activities of the member bodies.

IFAC – Pergamon Press One-Publisher Agreement

The preparations for the so-called one-publisher scheme had started already well before the IFAC 1975 Congress in Boston/Cambridge where the first approximate selection of the one-publisher was made. Further preparations for the agreement proper took some time, and the actual signing of the agreement with Pergamon Press Limited could be effected in June 1976 only. This signing started the implementation phase of the scheme, and this phase is not really over yet. Therefore, it would be far too early to form opinions on the success of this scheme.

IFAC Constitution

IFAC was founded in September, 1957, so that we are now living the twenty-first year of our Federation. Therefore, it must be quite clear that, with the change of times, the IFAC Constitution is gradually getting out of date. This fact in view, I formed an *ad hoc* Constitution Committee towards the end of last year, for the purpose of studying our present Constitution and proposing amendments for paragraphs that seem to need updating. The Executive Council decided in their meeting in The Hague in June, 1977, that this constitutional amendment process has to be carried out with extreme care and no hurry, and that the NMO's and the General Assembly should be sensitized to this issue as soon

as possible, although the actual amendment of the Constitution has to be left for the 1981 Congress General Assembly to decide upon.

Extract from the Report of the Advisory Committee to the IFAC General Assembly

(Helsinki, Finland, June 13, 1978).

The Advisory Committee coordinates the activities of the 13 Technical Committees of IFAC. It also advises the Executive Council on the need and scope of Special Committees and Technical Committees. In short, it is responsible for the technical health of IFAC. I would like to make it clear at the outset that all credit for what I hope you feel was an excellent technical program in the past three years, accrues to the hard-working Chairman, Vice-Chairmen, and Members of our Technical Committees. We have 440 Members of the Technical Committees — not all as active as we would like — and not all IFAC National Member Organizations represented.

What have been the activities since 1975? We have held 21 Symposia and Conferences for which IFAC has been either the sole or the primary sponsor, in 17 different countries. Subject matter ranged the full spectrum of IFAC interests, from theory, through applications, to social effects. Eight Workshops were held, which was more than had been held during the preceding 15 years since IFAC's founding. This is a testimonial to the effectiveness and utility of this relatively new IFAC activity. Workshops are the most informal and least structured of IFAC meetings. Generally, each attendee is expected to make a contribution either by presenting a paper, or joining actively in the discussion. In addition to these 29 meetings sponsored primarily by IFAC, we joined as cosponsors in another 7 meetings. While sheer numbers do not prove the worth of a technical program, with very few exceptions, reports of the quality of the papers and discussions have held them to be very worthwhile, with true excellence achieved at times.

Looking to the future, we expect to have 8 Symposia and 3 Workshops in 1979. It is still too early to report on 1980.

The Advisory Committee has also recommended to the Executive Council the formation of a new Committee on Developing Countries and a new Working Group on Laboratory Automation, both of which were approved and established.

In summary, I declare the technical health of IFAC to be good, but more exercise by each of you would make it even better.

A New IFAC Committee: Committee on Developing Countries

During the meeting of the IFAC Executive Council on 1978-06-10 a new committee was authorized and formed: Committee on Developing Countries. This event is a clear recognition of an important task that IFAC has to fulfil in the control engineering community. The scope of the new committee reads as follows:

The Developing Countries Committee is concerned with identifying and promoting the fulfilment of the diverse needs of countries seeking increased industrialization. Such needs vary considerably depending upon the existing level of industrialization, and the geographic and socio-economic heritage of a specific country.

The Committee seeks to accomplish its objectives by promoting communication among developing countries through workshops and symposia, by providing reference and educational material describing successful steps toward increased industrialization taken by others, and by making more available to them for their selection appropriate technology from more fully industrialized countries. In the context of this Committee, the term industrialization is intended to pertain primarily to the application of control systems and automation to production processes, agriculture, housing, transportation, trade, and health education services.

The first chairman of this committee is:

Eng. Ibrahim M. Sharkass, Deputy Chairman
General Organisation for Industrialization
6 Khalil Agha St., Garden City,
Cairo, A. R. Egypt.

IFAC Approved Symposia, Conferences, and Co-sponsorships 1979

Title	Date	Place
(1) IFIP/IFAC Working Conference SOTAC 79 Socio-Technical Aspects of Computerization	January 15-19	Budapest, Hungary
(2) IFAC/IFORS Symposium Comparison of Automatics & Operation Research Techniques Applied to Large Systems Analysis and Control	March	Toulouse, France
(3) IFAC Symposium Criteria for Selecting Appropriate Technologies under Different Cultural, Technical and Social Conditions	May 21-22	Bari, Italy
(4) IFAC Workshop High Systems Control in and by Man	April 5-6	Karlsruhe, FRG
(5) 3rd IFAC/IFIP Symposium Ship Automation	November	Tokyo, Japan
(6) 4th IFIP/IFAC Conference Programming Research and Operations Logistics in Advanced Manufacturing (PROLAMAT '79)	May 21-23	Ann Arbor, Michigan, USA
(7) 2nd IFAC/IFIP Symposium Software for Computer Control (SOCOCO 79 PRAGUE)	June 10-16	Prague, Czechoslovakia
(8) 8th IFAC Symposium Automatic Control in Space	July 2-6	Oxford, England

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| (9) IFAC Symposium
Computer Applications in
Large Scale Power
Systems | August
16-18 | New Delhi,
India |
| (10) IFAC Symposium Com-
puter Aided Design of
Control Systems | August
29-31 | Zürich,
Switzerland |
| (11) 5th IFAC Symposium
Identification and
System Parameter
Estimation | Septem-
ber
24-28 | Darmstadt,
FRG |
| (12) 2nd IFAC/IFORS Sym-
posium Optimization
Methods - Applied
Aspects | October
15-18 | Varna,
Bulgaria |
| (13) 2nd IFAC/IFIP Sym-
posium Information
Control Problems in
Manufacturing
Technology | October
22-24 | Stuttgart,
FRG |
| (14) IFAC Workshop Safety
of Computer Control
Systems | May
18-19 | Stuttgart,
FRG |

IFAC Approved Symposia, Conferences, and Co-sponsorships 1980

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|---|-------------------------|------------------------------|
| (1) IFAC/IIASA Symposium
Modelling of Large-Scale
Energy Systems | February | Vienna,
Austria |
| (2) IFAC Symposium (2nd)
Large-Scale Systems
Theory and
Applications | Septem-
ber | Toulouse,
France |
| (3) IFAC/IFIP Conference
Systems Approach and
Computer Applications
for Development | June
10-12 | Shiraz,
Iran |
| (4) 4th IFAC Conference
P.R.P. 4 Automation | June
4-6 | Brussels,
Belgium |
| (5) 3rd IFAC/IFORS Con-
ference Dynamic
Modelling and Control
of National Economies | June | Warsaw,
Poland |
| (6) IFAC/IFIP Symposium
Control Problems and
Devices in Manufac-
turing Technology | October | Budapest,
Hungary |
| (7) 2nd IFAC Symposium
Automatic Control in
Power Generation,
Distribution and
Protection | Septem-
ber
15-18 | Pretoria,
South
Africa |
| (8) IFAC Symposium
Water and Related
Land Resource
Systems | May
28-31 | Cleveland,
Ohio, USA |

IFAC Approved Symposia, Conferences, and Co-sponsorships 1981

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|--------------------------------|-----------------|-----------------|
| (1) 8th IFAC World
Congress | August
24-28 | Kyoto,
Japan |
|--------------------------------|-----------------|-----------------|

IFAC SYMPOSIA

IFAC Symposium Criteria for Selecting Appropriate Technologies under Different Cultural, Technical, and Social Conditions, (Bari, Italy, May 21-22, 1979).

Organized by Italian Federation of Scientific and Technical Associations and Center for Studies in Application of Advanced Technologies

Purpose

There is a large and growing awareness among experts of development, national planning and innovation policy, that technology in its widest sense, is an important factor for the industrialization of developing Countries and that technology can be successful to this aim only if it suits the local economical, cultural, and social conditions.

Too often technology, especially the sophisticated highly automated equipment, usually imported from industrialized countries, raises more problems than it solves, because it creates too strong and aggressive discontinuities in the existing way of living and of thinking. Therefore, the choice of the "appropriate" technology or, better, the adaption of technology to the requirements of a Country is an essential issue for its real and balanced development. Such selection or adaption, however, can only be accomplished by the countries themselves.

IFAC experts want to give assistance by trying to suggest criteria which should be considered in these selection or adapting processes.

The aim of this Symposium is to analyse and define models for the selection of technologies appropriate to the specific conditions of a Country.

Call for Papers

Contributed papers should refer to the following topics:

- definition of "appropriateness" of technology and ways to measure it
- criteria for the choice of technology in agriculture and in various industrial sectors, for different local cultural, technical, and social conditions
- models for technology transfer and for the choice of the appropriate mix of specific policies for the stimulation of innovation, specially in small size companies
- organization of public services for developing and implementing appropriate technologies.

Papers should refer to the theoretical aspects of the above mentioned topics or describe practical "case studies", which clarify and support general models and theories.

Authors are invited to submit an abstract of maximum 1,500 words before the end of October, 1978 to:

IFAC Symposium 1979
c/o FAST
Piazzale Morandi, 2
20121 Milano (Italy)

Time Table

Abstract submission on October 31, 1978
Notification of acceptance on November 30, 1978
Full paper submission on February 28, 1979

Further information available from the above address

Third IFAC/IFIP Symposium, Ship Operation Automation (Tokyo, Japan, November 26–28, 1979).

Purpose

It is the intention of the Symposium to discuss the possible innovation in the various features of the marine transportation, as well as to provide an opportunity to exchange experience among the circles interested in this field. With this in mind, the discussion will be focused on principles and practice for improvement of ship operation economy in the coming future, say, the latter half of 1980's. Emphasis will be placed on the subjects in the interdisciplinary field of automatic control, information processing, shipping and shipbuilding.

Symposium Topics

Where shall we stand around the latter half of 1980's?

- A. On ship Operation and Shipping Management:
 - 1. General, Economic and Safety Views
 - 2. Manning Schedules and Shipboard Installations
 - 3. Port Relief Systems
 - 4. Fleet Control
 - 5. Socio-technical Analysis
 - 6. Training and Education
- B. On Technical Development:
 - 1. Navigation Systems
 - 2. Engine Room Systems
 - 3. Cargo Handling Systems
 - 4. Communication Systems
 - 5. Integrated Shipboard Operation Systems

Time Table

Abstracts due from Potential Authors on December 1, 1978
Authors notified of Abstract Acceptance on February 1, 1979
Author's Final Copy to Editors on July 15, 1979.

Abstracts

Authors are invited to submit abstracts of papers they desire to present within the range of the above topics. Abstracts should be 200–300 words, written in English, and should reach the Office of the Local Organizing Committee not later than December 1, 1978.

Symposium Address

All correspondence should be in English and addressed to the Office of the Local Organizing Committee:

Prof. Y. ILJIMA
Secretary General, ISSOA-79
Tokyo University of Mercantile Marine
2-1 Etchujima, Koto-ku, Tokyo 135, Japan

International Symposium on Systems Optimization and Analysis (Rocquencourt, France, December 11–13, 1978).

Organized by

The Institut de Recherche d'Informatique et d'Automatique under the sponsorship of:

Association Française pour la Cybernétique
Economique et Technique

International Federation of Automatic Control

The symposium will have the following sessions:

- Economical Models
- Identification, Estimation, Filtering
- Adaptive Control
- Numerical Methods in Optimization
- Distributed Systems

Full information available from:

Secrétariat de Journées
Service des Relations Extérieures
IRIA – Domaine de Voluceau
Rocquencourt
78150 – Le Chesnay – France
Téléphone: 954.90.20, poste: 600.

Vth International Conference on Production Research (Amsterdam, The Netherlands, August 13–16, 1979).

Sponsored by IFAC along with a number of international organizations.

The Main Theme of the Conference is:

Use of resources, production technology, and the quality of life.

This Conference will deal with all subjects pertaining to production management and research in the broadest sense. Production systems will be considered from both the technical, economic, psychological, social, ergonomic, and mathematical viewpoints.

Full information available from:

Secretariat:
c/o Holland Organizing Centre
16 Lange Voorhout
2514 EE The Hague, the Netherlands
Telephone: (070) 65.78.50.

IFAC PROCEEDINGS

Systems Analysis Applications to Complex Programs – *Proceedings of the IFAC/IFORS IIASA Workshop* (Bielsko-Biala, Poland, June 1977).

Editors: K. Cichocki, Polish Academy of Sciences, Warsaw, Poland and A. Straszak, Iiasa, Laxenburg, Austria.

Contents: 41 full papers and discussions on the following: Regional and national development programs. Systems analysis in research and development. Environment and resources in development programs. Analysis and control in multilevel systems. Management and goal oriented systems. 354 literature references.

\$ 45.00 £22.50 – Available from Pergamon Press.

Control and Management of Integrated Industrial Complexes – *Proceedings of the Symposium of the International Federation of Automatic Control* (September 6–8, 1977).

Editors: M. Singh and A. Titli, Laboratoire d'Analyse des Systèmes du CNRS, Toulouse, France.

Contents (partial): Theory of organizations. Planning and production scheduling. Coordination theory. Decentralised stochastic control. Power system applications. Diverse applications. Over 400 literature references. \$35.00 £17.50 – Available from Pergamon Press.