IFAC NEWSLETTER

International Federation of Automatic Control

Officers p. 3

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

No. 1 January 1979

Published by Pergamon Press Ltd. Oxford
for the IFAC Secretariat
A-2361 Laxenburg
Schlossplatz 12
Austria

IFAC EVENTS

IFAC Workshop: SAFECOMP – Safety of Computer Control Systems (Stuttgart, Fed. Republic of Germany, May 16–18, 1979)

Sponsored by: IFAC
In cooperation with: Purdue Europe
CSNI Committee for Safety of Nuclear Installations of OECD Nuclear Energy Agency
Organized by: VDI/VDE-Gesellschaft Mess- und Regelungstecknik (GMR).

The workshop will provide a forum for discussion of the basic safety problems inherent in the application of computer control. The emphasis will be on software, but relevant hardware aspects will also be included.

Papers presenting results in the following areas are invited:
- specification, design and architecture of safe computer systems
- testing, verifying and licensing of safety related systems
- safety related documentation and project management techniques
- applications and experiences

The language of the workshop will be English. Further information available from

VDI/VDE-GMR, c/o M. A. Kaaz,
Graf-Recke-Str. 84,
P.O. Box 1139,
D-4000 Düsseldorf 1,
Fed. Rep. of Germany

IFAC Symposium on Computer Aided Design of Control Systems (Zürich, Switzerland, August 29–31, 1979)

Sponsored by: IFAC
Organized by: Swiss Federation of Automatic Control

Purpose of the Symposium:
The aim of the Symposium is to present the state-of-the-art of computed aided design techniques as used in research, development, design and manufacturing of control systems and equipment.

Topics: The main topics of the Symposium will be the following:
- design and analysis methods for plants, controllers and control systems
- program packages and programming languages for design purpose
- computer assisted planning
- creativity and computers
- application of computer aided design methods in research, development and instruction
- application areas: power systems, transportation systems, production systems etc.

Symposium address: All correspondence should be addressed as follows:

CAD/IFAC
Institut für Automatik und Industrielle Elektronik
ETH-Zentrum
CH - 8092 Zürich, Switzerland

Registration Fee: The registration fee for authors and participants will be SFr.250,- for registrations paid before July 31, 1979. The late registration fee is 300,-. The registration fee includes one set of preprints.

2nd IFAC Symposium on Large Scale Systems: Theory and Applications (Toulouse, France, June 25–27, 1980)

Sponsored by: IFAC

Purpose of the Symposium:
The aim of the symposium is to present the state-of-the art of Large Scale Systems: Theory and Applications as it has developed since the first symposium in this series which was held in Udine, Italy, in 1976. It is hoped that this symposium will bring about a useful exchange between theoreticians and practitioners.
Topics: The papers will be selected on the following and related topics:

Theory and Methodology
- theory of multilevel systems
- hierarchical control, decentralized control
- stochastic control, non-classical information pat-

terns
- decomposition, order reduction and problem approximation
- stability and other fundamental properties of interconnected systems
- structural (regular and singular) perturbations
- reliability, vulnerability and robustness
- multicriterion optimisation, games theory and decision making
- modelling and simulation of large scale systems

Applications
- power systems
- chemical and metallurgical processes
- traffic and transportation systems
- data and telecommunication networks
- bioengineering, environmental and agricultural systems
- management and socio-economic systems

Abstracts: of papers in English or French (200–300 words) (5 copies) should be received by Professor A. Titli, LAAS-CNRS, 7 av. du Colonel Roche, 31400 Toulouse, France, by 15 February 1979.

Time Schedule:

Abstracts submission	February 15, 1979
Preliminary acceptance	April 15, 1979
Full papers submission	September 15, 1979
Acceptance for full papers subject to corrections	December 15, 1979
Final texts revised	February 15, 1980

All inquiries of an administrative nature should be sent to the Symposium Secretariat:

AFCET - 156, Bd. Péreire - 75016 Paris

First European Symposium on Real-Time Datahandling and Process Control (Berlin (West), Germany, October 23–25, 1979)

Organized by: Purdue Europe
ESONE Committee
European CAMAC Association (ECA)

Sponsored by:
Commission of the European Communities (CEC)
International Electrotechnical Commission (IEC)
International Organization for Standardization (ISO)
Ministry for Research and Technology, Federal Republic of Germany
Senat of Berlin

Scope:
The aims of the Symposium are to promote the development and use of common practices in real-time datahandling and process control, to confront users and designers with existing common techniques and methods and to provide a forum for the exchange of views on improving the interchangeability and interconnection of hardware and software. This will be achieved by:
- reviewing different applications of real-time datahandling and process control
- identifying common practices in both hardware and software
- identifying design principles which facilitate the transfer of technology between fields of application
- reviewing existing common standards and proposals and discuss their relevance and benefit to European realtime datahandling and process control applications
- considering long term requirements

The presentations on the selected topics of the Symposium will underline the importance of efforts towards standardization and will facilitate the assessment of future needs.

Invited speakers will introduce the main topics by surveys.

Further information is available from

REAL-TIME DATA 79
Congress Organization Company
-Kongress-Zentrale-
John-Foster-Dulles-Allee 10
D-1000 Berlin 21

New IFAC Committee

A new IFAC committee and its scope was published in IFAC Newsletter no. 6, 1978. Due to space limitations the chairman's opening address to the Committee on Developing Countries was not included. It is presented below to emphasize the importance IFAC place on this committee.

"I thank you for your presence to the 1st meeting of the IFAC new born Technical Committee on Developing Countries. The new Committee has been decided for realization after considering the necessity of sacrificing a Technical Committee for Development.

Dr. Henry Apter, the chairman of the Developing Countries Group, his deputies and colleagues, have had an active part in the last five years. They have drawn the attention of the concerned personnel and organization to the importance of the scientific approach in the problems of development as well as the special nature of the problems accompanying industrialization programs in different fields of development. The Cairo conference on "Systems Approach for Development" constitutes the start of a continuous dialogue between the developed and developing countries, also between the developing countries themselves.

Talking about the proposed activities I would like to mention our thoughts about those activities:
- Gathering the IFAC and non-IFAC developing countries to define, study and analyze problems oriented to systems and controls; then discuss them with the IFAC developed countries in a series of international or regional meetings.
- Discussing and tabulating control problems in production processes and possible approach for solution.
- Simulating national surveys for industrial control systems and gathering data about types of control systems used in industry. Such surveys with the associated operating and maintenance problems

will constitute a data base that serve in

1. Exchange of information and experience in selection, operating and development of industrial control systems.
2. Proper estimation of instrumentation needs for new planned plants.
3. Estimating types of instruments or systems used with great numbers to plan local manufacturing and programmed maintenance.
4. Encouraging foreign manufacturers to install training and maintenance centers for their products.
5. This will cover the problems of control, instruments and systems which enables analysis and studies of these problems in a following step.

- Studying and proposing strategies to approach problems identified in the above mentioned step. This will offer assistance in the implementation of the complete solution in some different cases covering varieties of control problems.
- Stimulating assistance of different levels in installing information systems in the basic industrial centres.
- Make diagnostic studies for the actual problems which constitute basic obstacles for fulfilling the plans of development and offers the appropriate procedure and system for application, mainly those related to improper management systems.
- Make thorough studies for the term "Appropriated Technologies Suiting the Developing Countries" and start in tabulating different examples on techno-economic basis.
- Arrangement of education and transfer of technology, continuing education, through:
  a. Bilateral links between scientific and technological institution of advanced countries and other institutions in developing countries.
  b. Bilateral and multilateral technical assistance programmes assisted by the concerned organizations of the United Nations.
- Assisting the scientific institutions in developing countries to arrange its own plans in the theme of the mother committee and keeping other members informed about the progress in fulfilling such plans.
- Supporting regional activities for the IFAC and non-IFAC developing countries to organize non-IFAC meetings to discuss the relevant subjects.
- Organizing and sponsoring IFAC meetings to study, discuss relevant topics exposing problems and possible solutions. We are looking forward for the next events in Iran, Italy and possibly in Morocco, besides the Committee regular meetings.

I should stress that non-IFAC nations are welcome to participate in the committee as observers in the IFAC related activities and as active members in the non-IFAC activities.

You should kindly consider that any comments and proposals shall be considered thoroughly, if proven its value and in the theme of the IFAC shall be added to our scope of work.

May I declare with great pleasure and welcome, the first member joining on Committee as honorary member Dr. Henry Apter.

I shall be glad to receive your comments and ideas about the activities of the Committee.

Finally, I would like to express my deep gratitude for Dr. Luoto, IFAC President, and his colleagues for their unlimited support.

Thanking you all once more for your participation."

Eng. Ibrahim M. Sharkass,
The General Organization for Industrialization
6 Khalil Agha St., Garden City,
Cairo, A. R. Egypt.

IFAC OFFICERS & OFFICIALS

IFAC is an organization with many persons serving in many committees. To help all in the control field who want to contact various officers in the federation below is listed their addresses.

IFAC Executive Council

President	Prof. Y. Sawaragi Dept. of Applied Mathematics and Physics Faculty of Engineering Kyoto University Sakyo-ku, Kyoto 606, Japan
1st Vice-President	Prof. T. Vámos Computer and Automation Institute Hungarian Academy of Sciences P.O. Box 63 H-1502 Budapest 112, Hungary
2nd Vice-President	Prof. M. Thoma Institut für Regelungstechnik Technische Universität Hannover Appelstrasse 11 D-3000 Hannover 1, FRG
Past President	Mr. U. Luoto EKONO Oy P.O. Box 27 SF-00131 Helsinki, Finland
Treasurer	Dr. M. Cuénod 7 place Claparède CH-1205 Geneva, Switzerland
Ordinary Members	Prof. O. Aven USSR National Committee of Automatic Control Profsojuznaja 81 Moscow, GSP-312, USSR
	Mr. R. Chaussard E.D.F. 6, quai Watier F-7800 Chatou, France
	Prof. P. Eykhoff University of Technology Eindhoven, The Netherlands
	Mr. W. E. Miller General Electric Company 1501 Roanoke Blvd. Salem, VA. 24153, USA
	Prof. K. Reinisch Technische Hochschule Ilmenau DDR-63 Ilmenau-Ehrenberg, German Democratic Republic
	Prof. H. W. Smith Department of Electrical Engineering University of Toronto Toronto M5S 1A4, Canada

IFAC Policy Committee

Chairman	Academician B. N. Petrov USSR National Committee of Automatic Control

Profsojuznaja 81
Moscow, GSP-312, USSR

Vice-Chairmen

Dr. J. Gertler
Computer and Automation Institute
Hungarian Academy of Sciences
P.O. Box 63
H-1502 Budapest 112, Hungary

Mr. R. G. Lex
Leeds & Northrup Company
Sumneytown Pike
North Wales, PA 19454, USA

IFAC Advisory Committee

Chairman

Prof. A. Niemi
Helsinki University of Technology
Otakaari 5 A
SF-02150 Espoo 15, Finland

Vice-Chairmen

Prof. H. Akashi
Dept. of Precision Mechanics
Faculty of Engineering
Kyoto University
Kyoto 606, Japan

Prof. K. J. Aström
Lund Institute of Technology
Dept. of Automatic Control
P. O. Box 725
S-22 07 Lund 7, Sweden

Prof. H. Kwakernaak
Dept. of Applied Mathematics
Twente University of Technology
P. O. Box 217
7500 AE Enschede, The Netherlands

IFAC Public Affairs Committee

Chairman

Dr. Ing. H. Apter
Hübwiesenstrasse 42
CH-8954 Geroldswil
Switzerland

Vice-Chairmen

Prof. ir. J. M. L. Janssen
Technische Hogeschool Twente
Afdeling der bedrijfskunde
P. O. Box 217
7500 AE Enschede
The Netherlands

Prof. A. Straszak
Systems Research Institute
Polish Academy of Science
u. Newelska 6
01-447 Warsaw, Poland

Prof. R. Tomović
ETAN
Kneza Miloša 9/IV
P. O. Box 356
1100 Beograd
Yugoslavia

IFAC Technical Committee Chairmen

APPLICATIONS
Mr. D. R. Bristol
Manager Automatic Control and Instrumentation
Kaiser Aluminum & Chemical Corporation
300 Lakeside Drive
Oakland, CA 94643, USA

BIOMEDICAL ENGINEERING
Prof. M. Nałęcz
Institute of Biocybernetics and Biomedical Engineering
Polish Academy of Sciences
KRN 55
Warsaw, Poland

COMPONENTS & INSTRUMENTS
Prof. Dr. H. J. Leśkiewicz
Institute of Industrial Automatic Control
of the Warsaw Technical University
Chodkiewicza 8
02-525 Warsaw, Poland

COMPUTERS
Mr. C. M. Doolittle
IBM Corporation
Data Processing Division
1133 Westchester Avenue
White Plains, New York 10604, USA

SPECIAL COMMITTEE ON DEVELOPING COUNTRIES
Eng. I. Sharkass
General Organization for Industrialization
6 Khalil Agha Street
Garden City, Cairo, Egypt

ECONOMIC & MANAGEMENT SYSTEMS
Dr. J. Kivinen
Huhtamäki Oy
P. O. Box 406
SF-20101 Turku 10, Finland

EDUCATION
Prof. P. M. Larsen
Electric Power Engineering Department
Building 325
Technical University of Denmark
DK-2800 Lyngby, Denmark

MANUFACTURING TECHNOLOGY
Prof. Dr. Y. Oshima
Institute of Industrial Science
University of Tokyo
22-1 Roppongi 7-chome
Minato-ku
Tokyo 106, Japan

MATHEMATICS OF CONTROL
Dr. H. J. Kelley
215E Randolph Bldg.
Aerospace Engineering Dept.
Virginia Polytechnic Institute
Blacksburg, Va. 24060, USA

SOCIAL EFFECTS OF AUTOMATION
Prof. Ir. J. E. Rijnsdorp
Department of Chemical Engineering
Twente University of Technology
Postbus 217
7500 AE Enschede, The Netherlands

SPACE
Frau Dipl.-Math. E. Gottzein
Messerschmitt-Bölkow-Blohm GmbH
Unternehmensbereich Raumfahrt, RT21
Postfach 801169
D-800 München 80
Federal Republic of Germany

SYSTEMS ENGINEERING
Prof. I. Lefkowitz
Dept. of Systems Engineering
Crawford 607
Case Western Reserve University
University Circle
Cleveland, Ohio 44106, USA

TERMINOLOGY & STANDARDS
Dr. J. Beneš
Institute of Information Theory and Automation
Pod vodárenskou věží 4
182 08 Praha 8, Czechoslovakia

THEORY
Prof. Y. Z. Tsypkin
Institute of Control Sciences
USSR Academy of Sciences
Profsojuznaja, 81
Moscow, GSP-312, USSR

IFAC Honorary Editors

Prof. J. E. Coales
4 Latham Road
Cambridge, CB2 2EQ, United Kingdom

Prof. S. Kahne
Department of Systems Engineering
Case Western Reserve University
Cleveland, Ohio 44106, USA