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Editor: Gusztáv Hencsey
Layout: Margaret A. Gottfried
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On April 10 and 11, M. Thoma, President of IFAC, and B. Tamm, B. D. Anderson and W. E. Miller, Vice-Presidents, held a meeting at the IFAC Secretariat in order to prepare the next Council and Related Meetings to take place in Boston in June. M. Mansour, IFAC Treasurer and G. Hencsey, IFAC Secretary also took part in this informal meeting.

On behalf of the Austrian Federal Ministry of Science and Technology, Dr. N. Rozsenich welcomed the participants on the premises of the Ministry. Questions of cooperation between the Austrian Government, the Austrian NMO and IFAC were discussed.

Participants at the informal meeting were invited by M. Thoma for a dinner where N. Rozsenich, W. Brantner, Head of the Austrian NMO, and T. Lee, Director of IIASA were also present. In his toast, M. Thoma expressed his appreciation of the cooperation between IFAC and the Austrian authorities, the Austrian NMO and IIASA.

At this occasion, F. Margulies, former Secretary of IFAC, was presented with a diploma for his long-standing excellent services to IFAC.

EMSCOM Triennial Program

The IFAC Economic and Management Systems Committee (Chairman: Y. Kaya, University of Tokyo) is concerned in general with modelling, analysis, control and management of large systems in which self-organizing behaviour can be present, from the points of view of economics, finance, organization, resource allocation and decisions. The development of dynamic planning and management processes and the interactions between the various systems involved will be of particular relevance in the face of external changes. The primary areas of application are macroeconomic national, regional, sectoral or global modelling and control problems. The second area is management planning and control in industrial and public organizations, with scheduling, investments, operations and manufacturing. The third area is hardware, software and orgware integration in relation to management information systems, innovation, man-machine interactions and general effects. Finally, to sustain these developments, the Committee is involved in software tools, forecasting, estimation and control methods to the extent of their application and use in the above areas only.

Existing WG

Currently only the working group on Modeling and Control of National and Regional Economies chaired by Professor C. L. Sandblom of Concordia University, Canada, is connected with EMSCOM.

The scope of this working group is as follows: It serves as a focal point for specific EMSCOM activities in the areas of macroeconomics, national and regional planning, economic assessment of energy and other basic commodities, and related control algorithms and tools. Such specific activities are currently inflation of specified events assigned to this working group by the committee and the compilation of lists of available software packages for control of economic models.

Comments on the present pattern of EMSCOM activities

Together with the advancement of technologies in almost all areas of engineering the necessity of exploring novel approaches to technology related social issues has been enhanced. EMSCOM, which serves the study on economic and management systems plays thus an ever more important role in expanding IFAC activities. It is however hard to tell whether EMSCOM with only the working group on dynamics and control of national and regional economies is active enough to cover the entire range of the existing scope of the committee. At least one new working group has to be organized which will serve to explore the economics and/or management related interdisciplinary study areas.

Plans over the next three years

First of all there are plans to make a survey of possible and desirable activities within the committee by sending questionnaires to the committee members. As the working group in the management area has come to an end, we are looking for new activities within the same field. A few proposals have also been made in the area of economic and management aspects of energy systems.

4th IFAC/IFORS Symposium Large Scale Systems: Theory and Applications August 26—29, 1986, Zurich, Switzerland

Topics

(A) Theory

1. Modelling and Simulation
2. Model Reduction and Simplification
3. Decomposition
4. Stability
5. Decentralized Control and Estimation
6. Hierarchical Control
7. Decision Making, Multi-Criteria
8. CAD and Expert Systems for Large Scale Systems

(B) Applications

9. Production Planning, Production, and Manufacturing Systems
10. Management Systems
11. Socioeconomic Systems
12. Energy Systems, Electric Power Systems
13. Water and Agricultural Systems
14. Transportation Systems
15. Communication Systems, Information Systems
16. Large Scale Flexible Structures
17. Implementation Aspects using Distributed Computing and Control
18. Other Complex Systems

Abstracts

Five (5) copies in English (300—400 words) should be received by

Professor M. Mansour
IFAC/IFORS Symposium
ETH-Zentrum
CH-8092 Zurich
Switzerland

not later than September 1, 1985.

United Nations, Economic Commission for Europe (ECE) Working Party on Engineering Industries and Automation 5th session, 27 February — 1 March 1985, Geneva

Under the auspices of the Economic and Social Council the ECE is already engaged in many activities pertaining to automation. The programme of the (mentioned) Working Party relates to the activities of some Technical Committees of IFAC.

O. G. Ladanyi attended the session on behalf of IFAC and gave details of forthcoming events for 1985 and 1986, announcing the Proceedings of the 9th Triennial World Congress and informing about the Workshop on Systems Engineering Approaches in Control Engineering in Noordwijkerhout, Netherlands, March 1984.

The study "Production and Use of Industrial Robots" had been issued in the form of a sales publication. It was felt that the study is

11th IMACS World Congress System Simulation and Scientific Computation August 5—9, 1985 Oslo, Norway

The International Association for Mathematics and Computers in Simulation, (IMACS), our sister federation in FIACC (the Five International Associations Coordinating Committee) will hold its 11th World Congress August 5—9, 1985. The Scientific Program Committee is chaired by B. Wahlström of the Technical Research Centre of Finland, the Chairman of the National Organizing Committee is R. Henriksen of the Norwegian Institute of Technology. The venue of the Congress will be the University of Oslo.

The aim of the Congress is to cover all aspects of simulation and scientific computation in theory and applications, and to promote the exchange of knowledge and experience between different research groups in this multidisciplinary field.

General topics in which sessions are intended to be held include systems modeling and simulation, model identification and validation, numerical methods for differential and integral equations, simulation of large scale systems, simulation of discrete systems, control and optimization theory and applications, simulation tools, parallel computation, special computers and software for simulation and scientific computation, and applications of simulation in analysis and design of technical and nontechnical systems (in e.g. engineering, computers and computer networks, economics, resource allocation, biomedicine, biology, ecology etc.).

For further details please refer to:
Dr. Rolf Henriksen
The Norwegian Institute of Technology
Division of Engineering Cybernetic
N-7034 Trondheim-NTH
Norway

valuable as a reference work and of great interest to the general public. Statistical data contained in the study are to be modified every year.

Concerning recent trends in flexible manufacturing the ECE Secretariat presented notes containing a first draft of a study. The importance was stressed of reviewing the negative aspects of FMS, as it involves such a large investment, including information on experiences where the introduction of FMS had not achieved the desired results.

The Working Party decided to finalize the study and to issue it as a sales document as early as possible in 1985.

Dr. O. G. Ladanyi



FORTHCOMING EVENTS

(cont.) FORTHCOMING EVENTS (cont.)

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Title	1985	Place	Deadlines	Further Information
7th IFAC/IFORS Symposium Identification and System Parameter Estimation	July 3—7	York, UK	—	Prof. H. A. Barker University College of Swansea Dept. of Electrical and Electronic Engineering Singleton Park Swansea SA2 8PP, UK
IFAC Symposium Automation for Mineral Resource Development	July 9—11	Brisbane, AUS	—	Prof. Alban J. Lynch Julius Kruttschnitt Mineral Research Centre University of Queensland Isles Road, Indooroopilly, QLD 4068 Australia
IFAC Symposium Planning and Operation of Electric Energy Systems	July 22—25	Rio de Janeiro, BR	—	T. E. DiLiaccio Consultant 651 Radford Drive Cleveland, OH 44143 USA
3rd IFAC/IFIP Symposium Computer Aided Design in Control and Engineering Systems	July 31— Aug. 2	Copenhagen, DK	—	Prof. P. M. Larsen Electric Power Engineering Building 325 DK 2800 Lyngby, Denmark
IFAC/IFORS Conference Control Science and Technology for Development	August 20—22	Beijing, PRC	—	Prof. Yan Xiaojun Research Institute of Automation for Machine-Building Industry De Sheng Men Wai Beijing, China
2nd IMACS/IFAC/WGMA International Symposium Systems Analysis and Simulation	Aug. 26—31	Berlin GDR	—	Organizing Committee 2nd Intern. Symposium on Systems Analysis and Simulation Central Institute of Cybernetics and Information Processes of the Academy of Sciences of the GDR P.O.B. 1298 DDR-1086 Berlin
2nd IFAC/IFIP/IFORS/IEA Conference Analysis, Design and Evaluation of Man-Machine Systems	Sept. 10—12	Varese, I	—	Prof. Dr. Ing. Gunnar Johannsen Laboratory for Man-Machine Systems (FB 15) University of Kassel (GhK) P.O. Box 10 13 80, D-3500 Kassel, FRG
7th IFAC/IFIP/IMACS Symposium Digital Computer Application to Process Control	Sept. 17—20	Vienna, A	—	Dr. P. Kopacek O P W Z Postfach 131 1014 Vienna, Austria
4th IFAC Workshop Safety of Computer Control Systems (SAFECOMP '85)	Oct. 1—3	Como I	—	Dr. E. DeAgostino Senior Research Engineer ENEA — Dip. Reattori Termici, CRE-Casaccia Via Anguillarese 301 I-00060 Rome, Italy
IFAC/IFORS Symposium Systems Analysis Applied Water and Related Land Resources	Oct. 2—4	Lisbon, Portugal	—	Prof. Luis Valadares Tavares APDIO Av. Rovisco Pais 1000 Lisbon, Portugal
13th IFAC/IFIP Workshop Real Time Programming	Oct. 7—8	West Lafayette, Ind., USA	—	Prof. T. J. Williams Purdue Laboratory for Applied Industrial Control 334 Potter Center, Purdue Univ., West Lafayette, Ind. 47907, USA
IFAC Workshop Adaptive Control in Chemical Processes	Oct. 21—22	Frankfurt FRG	—	H. Wiefels VDI/VDE GMR P.O. Box 1139 D-4000 Düsseldorf 1, FRG

FORTHCOMING EVENTS (ctd.)

Title	1985	Place	Deadlines	Further Information
IFAC Symposium Robot Control	Nov. 6—8	Barcelona, E	—	Secretariat of SYROCO '85 Institute de Cibernètica Diagonal, 647 E-080828 Barcelona, Spain
IFAC Workshop Automatic Control in Petroleum, Petrochemical and Desalination Industries	Nov. 18—20	Kuwait	—	Dr. Jaafar Assiri c/o Dr. Samir Kotob TED/ASD Kuwait Institute for Scientific Research P.O. Box 24885, Safat, Kuwait
IFAC Symposium Modelling and Control of Biotechnological Processes	Dec. 11—13	Noordwijker- hout, NL	—	Prof. Dr. A. Johnson Lab. voor Fysische Technologie Prins Bernhardlaan G 2628 BW Delft The Netherlands

Title	1986	Place	Deadlines	Further Information
IFAC Workshop Reliability of Instrumentation Systems for Safeguarding and Control	April 22—24	The Hague, NL	July 31, 1985	Mr. J. P. Jansen Shell Intl. Petroleum Mij. Carel von Bylandtlaan 30 2596 HR Den Haag, NL
5th IFAC/IFIP/IMACS/IFORS Symposium Information Control Problems in Manufacturing Technology	April 22—25	Yerevan, SU	—	Organizing Committee of the 5th Symposium ICPMT 65, Profsojuznaja Str. Moscow, 117342, USSR
2nd IFAC Symposium Stochastic Control	May	Vilnius, SU	June 15, 1985	USSR National Committee on Automatic Control 65, Profsojuznaja Str. Moscow, 117342, USSR
IFAC Workshop Methods for the Management of Software Projects	May 14—16	FRG	—	H. Wiefels VDI/VDR GMR POB 1139 D-4000 Düsseldorf 1, FRG
4th IFAC/IFIP Symposium Software for Computer Control (SOCOCO)	May 20—23	Graz, A	Sept. 1, 1985	SOCOCO '86 att. Ms. R. Hammer, IIG Schießstattgasse 4a A-8010 Graz, Austria
14th IFAC/IFIP Workshop Real Time Programming	May 25—27	Balaton, H	—	Prof. J. Szlanko Central Institute for Physics POB 49 H-1525 Budapest, Hungary
IFAC Workshop Use of Technology incl. Systems Cooperation for International Conflict Resolution	+ May 27—29	Cleveland OH, USA	—	Dr. Harold Chestnut SWIIS Foundation Inc. 1226 Waverly Place Schenectady, N.Y. 12308, USA
IFAC Workshop Digital Image Processing in Industrial Applications	June 10—12	Helsinki, SF	—	Mr. Martin Ollus Technical Research Centre of Finland Otakaari 5 I SF-02150 Espoo, Finland
IMEKO/IFAC Symposium Intelligent Measurement	+ June 10—14	Jena, GDR	*	Prof. D. Hofmann Friedrich-Schiller University Section Technology GDR-6900 Jena
5th IFAC/IFORS/IIASA Conference Modeling and Control of National Economies	June 17—20	Budapest, H	—	Dr. Margit Ziermann Institute of Economic Planning Roosevelt tér 7—8 H-1051 Budapest V, Hungary
4th IFAC Symposium Control of Distributed Parameter Systems	June 30 July 3	Pasadena, USA	Sept. 1, 1985	Mr. G. Rodriguez Jet Propulsion Laboratory 3800 Oak Grove Drive Pasadena, CA 91109, USA
5th IFAC/IFIP/IFORS International Conference Control in Transportation Systems	July 8—11	Vienna, A	—	ÖPWZ, Mr. W. Stejskal POB 131 A-1014 Vienna, Austria

+ not yet officially approved

* deadline not yet known

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FORTHCOMING EVENTS (ctd.)

Title	1986	Place	Deadlines	Further Information
IFAC Workshop Adaptive Signal Processing	July	Lund, S	*	Prof. K. J. Aström Dept. of Automatic Control Lund Institute of Technology Sweden
IFAC Symposium Microcomputer Application in Control	July 22—25	Istanbul, TR	*	Prof. E. Adali P. K. 175 Levent-Istanbul, Turkey
IFAC Workshop State Space Modelling of Hydrological Systems	July (1 day)	Budapest, H	*	Dr. A. Szöllösi-Nagy VITUKI Pf. 27, H-1453 Budapest Hungary
IFAC Workshop Modelling, Decisions and Games with Applications to Social Phenomena	August 11—15	Beijing, PRC	*	Prof. Zhang Si-Ying Dept. of Automatic Control Northeast Inst. of Technology Shenyang, Liaoning Province, PRC
IFAC Symposium Automation in Aquaculture	August 18—20	Trondheim, N	*	Prof. J. G. Balchen Norwegian Inst. of Technology N-7034 Trondheim NTH, Norway
5th IFAC Symposium Automation in Mining, Mineral and Metal Processing	August 24—28	Tokio, J	*	Prof. Y. Yoshitani Technological University of Nagaoka Dept. of Control Engineering Kamitomioka Nagaoka 949-54, Japan
4th IFAC/IFORS Symposium Large Scale Systems: Theory and Applications	August 26—29	Zurich, CH	Sept. 1, 1985	Prof. M. Mansour IFAC/IFORS Symposium ETH Zentrum CH-8092 Zurich, Switzerland
IFAC/IFIP/IFORS Symposium Economics and Artificial Intelligence	September 2—4	Aix-en- Provence		Ms. E. Fayola & Ms. C. Frachon AFCET 156 Bd. Péreire F-75017 Paris, France
2nd IFAC Workshop Modelling and Control of Electric Power Plants	September 16—18	Philadelphia PA, USA	*	Dr. H. G. Kwatny, Prof. of Systems Engineering Drexel University Dept. of Mechan. Engg. & Mechanics Philadelphia, PA 19104, USA

+ not yet officially approved

* deadline not yet known

IFAC Workshop on Artificial Intelligence in Economics and Management

12—14 March, 1985, Zurich, Switzerland

L. F. Pau (Switzerland)

The Workshop was sponsored by three IFAC Technical Committees, i.e.

Economic and Management Systems
as main sponsor
Social Effects of Automation and
Theory

and organized by the IFAC NMO of Switzerland, SGA/ASSPA. Co-Sponsors or collaborating societies were: IFORS, IFIP, Mathematical Programming Society, IEEE Computer Society, IEEE Region 8, ACM, International Association for Pattern Recognition, European Coordinating Committee for Artificial Intelligence. In addition it was supported by the Battelle Memorial Institute and the Union Bank of Switzerland.

The International Program Committee comprised 24 representatives from 12 different countries. 92 papers or case studies were submitted from which 42 were chosen for

presentation. The 135 participants came from 22 different countries, including 22 students from 6 countries and a total of 36 participants from Switzerland. The Workshop was structured in 13 sessions. It was the first opportunity for researchers in artificial intelligence (AI), economics, management, political or social sciences to present and discuss their AI related work and the results hereof.

Previously, much of this work had not been reported, or only in a scattered fashion. Many lively discussions and exchanges were carried out with other participants interested in assessing the real state and usefulness of artificial intelligence in different fields. Panels were conducted on:

- AI in decision support systems
- AI education and training
- Research in AI for economic and management applications

- AI for banking, finance
- AI in policy analysis.

The sessions were exceptionally well attended, despite a relatively large number of no-shows from accepted authors (about 20%).

Significant conclusions were drawn in terms of:

- immediate actual or potential uses of AI;
- the importance of research to tackle basic problems;
- the role of training and education of users and future researchers;
- fear of overly large expectations;
- specific issues pertaining to economic and management problems.

It is planned to publish Proceedings which will be available by fall 1985.

ARGENTINA

AADECA is the Argentine National Member Organization of IFAC. The origin of AADECA goes back to 1967 when a group of Argentine engineers got together to discuss how to contribute to better knowledge and distribution of automatic control science and technology, its applications and the impact on society. AADECA is headed by a Board of Directors, comprising a President and eleven Directors. The Executive Council of AADECA meets weekly, the Directive Council monthly, while the members of the Association hold their Ordinary Assembly once a year.

At present the Directive Council consists of the following members:

President	Aurelio T. Casucci
1st. Vice-President	Jorge Rosseló
2nd. Vice-President	Jonas Paiuk
Secretary	Eduardo R. Rondelli
Vice-Secretary	Héctor A. Maceri
Treasurer	Zoltan L. Barkasz
Vice-Treasurer	Victor F. Marinescu
Members	Santiago Fregosi Rubén A. López Ricardo Agostinelli Osvaldo H. Capino
Auditors	Daniel A. Cosarinsky Jorge P. González

AADECA organizes National Symposia in a special field every two years. At such events, Argentine specialists and those of some neighbouring countries present their work to an average of 200 participants.

Together with the Symposia, the Association organizes exhibitions of instruments and control systems which are visited by approximately 2500 qualified specialists in four days. Furthermore, the Association periodically organizes courses and conferences under the patronage of universities and professional companies and distributes among its members information of interest.

AADECA's library comprises books and magazines on all relevant fields as well as papers presented at IFAC World Congresses and at other meetings in USA, Europe and neighbouring countries.

AADECA has close relationships with the IFAC NMOs of Brazil and Chile, comprising cooperation and scientific exchange arrangements in different fields.

The preparations for the 2nd Latino-American Congress on Automatic Control, scheduled to take place in Buenos Aires, October 13-17, 1986, which is being organized by AADECA are in full swing. The Organization Committee also includes members of the NMOs of Brazil and Chile. On this occasion, the traditional exhibition of instruments and control systems will also take place.

AADECA's address is:

Venezuela 634 — 9° Piso Of. 39
1095 — Capital Federal
Argentina
Tel.: 30-0284
TX: 17349 CASBA AR

The Journal of IFAC the International Federation of Automatic Control

Papers from the 100th Issue - July 1985

Modelling, Estimation and Control in the Relief of Post-Operative Pain
(O. L. R. Jacobs, R. E. S. Bullingham, P. Lammer, H. J. McQuay, G. O. Sullivan, M. P. Reasbeck)

A Stochastic Rudder Control Law for Ship Path-Following Autopilots
(A. R. Neto, J. J. da Cruz)

Adaptive Control Based on Explicit Criterion Minimization
(E. Trulsson, L. Ljung)

Decentralized Adaptive Control of Interconnected Systems with Reduced-Order Models
(P. Ioannou, P. Kokotovic)

Adaptive Controllers for Discrete-Time Systems with Arbitrary Zeros: An Overview
(M. M'Saad, R. Ortega, I. D. Landau)

An Approach to Stable Indirect-Adaptive Control
(G. Kreisselmeier)

Robustness with Simultaneous Pole and Zero Movement Across the Jw-Axis
(I. Postlethwaite, Y. K. Foo)

Selecting the Best Linear Transfer Function Model
(T. G. Freeman)

Production Planning and Scheduling for an Integrated Container Company
(R. W. Haessler)

Brief Papers:

Adaptive Control with Nonlinear Filtering
(A. Halme, J. Selkainaho, J. Soininen)

A Discrete Time Algorithm for Nuclear Reactor Spatial Control
(M. Berka, D. B. Cherchas)

Robust Control Performance of Time Varying Human Controller Models
(L. D. Metz, B. Cyr)

Learning Models for Decentralized Decision Making
(R. M. Wheeler, Jr., K. S. Narendra)

On the Use of Reduced-Order Models in Output Feedback Design of Discrete Systems
(M. S. Mahmoud, M. G. Singh)

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Prof. Hajime Akashi
Member IFAC Council

Prof. Akashi was born in Tokyo in March, 1921, and educated mainly at Kyoto University, Department of Engineering, where he took his doctor's degree of Engineering in 1960. From 1955-61 he was Associate Professor and Professor at Ritsumeikan University and from 1961-68 Professor at Doshisha University. In 1968 he was appointed Professor at Kyoto University, Dept. of Precision Mechanics, where he stayed until his retirement in 1984. On this occasion he received the title of Professor Emeritus of Kyoto University. Currently he is Professor at Setsunan University, Dept. of Mechanical Engineering. He has also held appointments as Visiting Professor at the University of Kansas, USA, Dept. of Mechanics and Aerospace Engineering.

Prof. Akashi's research interests are mainly in control engineering, systems control theory and multivariable control theory. He is the author of two books on control engineering (in Japanese) and of many papers, published in international journals. He is a member of JAACE, the Japan Association of Automatic Control Engineers, where he was Vice-President for several years; the Society of Instrument and Control Engineers; the Japan Society of Mechanical Engineers and IEEE, where he became a Senior Member in 1984. Furthermore, he is an associate editor of the International Series on Systems and Control and member of the Honorary Editorial Advisory Board for Systems and Control Encyclopedia (both published by Pergamon Press). He also was Chairman of the IPC for the 8th IFAC World Congress in Kyoto in August, 1981, and editor of the Congress Proceedings.

Prof. Akashi has for many years been serving IFAC in different capacities, e.g. as Vice Chairman of the Advisory Committee and, later, as Vice Chairman of IFAC's Technical Board. At the last meeting of the General Assembly in Budapest, July 1984, he was elected ordinary member of the IFAC Council.