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IMPACT OF AUTOMATIC CONTROL: PRESENT AND FUTURE

October 1, 1982

Heidelberg, FRG

This Newsletter may be reproduced in whole or in part. We encourage reprinting in national and local automatic control periodicals. Acknowledgement to IFAC would be appreciated.

Editor: Prof. Dipl.-Ing. Fred Margulies

Layout: Margaret A. Gottfried
published bimonthly

You are cordially invited to attend.

Please send the attached registration and reservation forms to the addresses given.
Copies of the Anniversary Day Announcement can be obtained from the IFAC Secretariat.

FORTHCOMING EVENTS

Title	Date 1982	Place	Deadlines	Further Information
IFAC Workshop on Computer Aided Design of Projects and Development Policies	June 22—24	Ankara, Turkey	—	Dr. Önder Yüksel Electrical Engineering Department, Middle East Technical University Ankara, Turkey
IFAC Workshop on Application of Non-Linear Programming to Optimal Control Problems	June 22—25	Rocquencourt, France	—	J. P. Yvon INRIA, Domaine de Voluceau — Rocquencourt, B. P. 105 F-78153 Le Chesnay Cedex, France
3rd IFAC Symposium on Control of Distributed Parameter Systems	June 29— July 2	Toulouse, France	—	L. Le Letty Symposium IFAC/CDPS CERT-DERA 2, ave. Edouard Belin, BP 4025, F-31055 Toulouse, Cedex, France
IFAC/CISM Workshop on Singular Perturbations in Systems and Control	July 5—8	Udine, Italy	—	P. Serafini c/o CISM P. Garibaldi 18 I-33100 Udine, Italy
IFAC/ESA Symposium on Automatic Control in Space	July 5—9	Noordwijkerhout, NL	—	c/o K.I.V.I. Postbus 30424 NL-2500 GK 'S Gravenhage, Netherlands
IFAC Workshop on Singular Perturbations and Robustness of Control Systems	July 13—16	Lake Ohrid, Yugoslavia	not yet known	Prof. Petkovski Institut za mernu tehniku i upravljanje, Fruskogorska 11, 21000 Novi Sad, Yugoslavia
IFAC Workshop on Modeling and Control of Biotechnical Processes	August 17—19	Helsinki, Finland	—	Prof. J. Virkkunen Control Engineering Lab. Helsinki University of Technology SF 02150 Espoo 15
IFAC Workshop on Management Control Systems — Modeling of Dynamics	September 6—10	Dubrovnik, Yugoslavia	—	Faculty of Organizational Sciences IFAC Workshop Ul. Oslobođenja 1, 11090 Beograd, Yugoslavia
IFAC Symposium on Computer Aided Design of Multivariable Technological Systems	September 15—17	W. Lafayette, Ind., USA	—	Prof. G. Leininger Purdue University IFAC/CAD, School of Mechanical Engineering West Lafayette, Ind. 47907, USA
IFIP/IFAC Int. Symposium on Ship Operation Automation (ISSOA '82)	September 20—22	Genoa, Italy	—	Istituto Internazionale delle Comunicazioni Via Pertinace — Villa Piaggio I-16125 Genoa, Italy
IFAC/IFIP/IFORS/IEA Conference on Analysis, Design and Evaluation of Man-Machine Systems	September 27—29	Baden-Baden, FRG	—	VDI/VDE Gesellschaft Meß- und Regelungstechnik Postfach 1139, D-4000 Düsseldorf 1, FRG
ÖGI/IFAC Conference Industrial Robots: Chances and Problems for our Enterprises	September 28—30	Linz, Austria	—	Prof. Dr. Arno Schulz Institut für Informatik Johannes Kepler Universität A-4040 Linz, Austria
3rd IFAC/IFIP Symposium on Software for Computer Control (SOCOCO '82)	October 5—8	Madrid, Spain	—	SOCOCO '82 E.T.S. Ingenieros Industriales, Castellana 84, Madrid 6, Spain
IFAC Workshop on Safety of Computer Control (SAFECOMP '82)	October 11—14	W. Lafayette, Ind., USA	—	Mr. Roy W. Yunker PPG Industries Corp. One Gateway Center Pittsburgh, PA, 15222, USA
4th IFAC/IFIP Symposium on Information Control Problems in Manufacturing Technology	October 26—28	Gaithersburg, Maryland, USA	—	M. Auman, Secretary IVth IFAC/IFIP Symposium, National Bureau of Standards Building 220, Room A 123 Washington DC 20234, USA
IFAC Symposium on Components and Instruments for Distributed Control Systems	December 9—11	Paris, France	—	Dr. Z. Binder Laboratoire d'Automatique de Grenoble — ENSIEG, B. P. 46, F-38402 St. Martin-d'Hères, France
INRIA/IFAC 5th International Conference on Analysis and Optimization of Systems	December 14—17	Sophia Antipolis, France	—	INRIA — Service des Relations Extérieures, Domaine de Voluceau, Rocquencourt B. P. 105, F-78153 Le Chesnay (France)

FORTHCOMING EVENTS (ctd.)

Title	Date 1983	Place	Deadlines	Further Information
IFAC/IFIP Symposium on Real Time Digital Control Applications	January 15—21	Guadalajara City, Mexico	—	Dr. Roberto Canales Ruiz, Chairman of IPC Dept. of Automation, Instituto de Ingenieria, UNAM Apdo Postal 70-472 Delegacion Coyoacan 04510 Mexico, D.F.
IFAC Symposium on Systems Approach to Appropriate Technology Transfer	March 22—24	Laxenburg, Austria	—	IFAC — Symposium "Appropriate Technology Transfer" ÖPWZ, Renngasse 5 1014 Vienna, Austria
4th IFAC/IFIP/IFORS Int. Conference on Control in Transportation Systems	April 20—22	Baden-Baden, FRG	—	VDI/VDE Gesellschaft Meß- und Regelungstechnik Postfach 1139, D-4000 Düsseldorf 1, FRG
IMACS/IFAC Int'l Symposium Simulation in Engineering Sciences	May 9—11	Nantes, France	Abstracts: May 15, 1982	A.F.C.E.T. IMACS Symposium 1983 156, Bd. Péreire 75017 Paris, France
5th IFAC Workshop Distributed Computer Control Systems	May 18—20	Johannesburg, South Africa	not yet known	Prof. M. G. Rodd University of the Witwatersrand 1 Jan Smuts Avenue, Johannesburg, South Africa
IFAC/IFIP Conference Training for Tomorrow: Educational Aspects of Computerized Automation	June 7—10	Leiden, NL	Abstracts: October 1, 1982	Mr. L. Immink c/o Twente University of Technology Dept. C.T., P. O. Box 217 NL-7500 AE Enschede, The Netherlands
4th IFAC/IFORS Conference The Modelling and Control of National Economies	June 17—19	Washington D.C., USA	Abstracts: May 15, 1982	Dr. M. Canzoneri 4th IFAC/IFORS Conf. Board of Governors, Federal Reserve Washington DC 20551, USA

Budapest: Getting Ready for IFAC '84

The January issue of our "Newsletter" contained information on the 9th World Congress of IFAC to take place in Budapest in 1984. Unfortunately two different dates were given. Though only one of them was wrong, this may have caused some confusion for which we feel very sorry.

The correct date for the IFAC Congress in Budapest is

July 2—6, 1984

We hope our readers will put their diaries right and will accept our apologies.

F. M.

9TH WORLD CONGRESS OF THE INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL



BUDAPEST, HUNGARY, 2—6 JULY, 1984
A BRIDGE BETWEEN CONTROL SCIENCES AND TECHNOLOGY

Sister's Congresses

Two of IFAC's four sister organisations, cooperating within FIACC (Five International Associations Coordinating Committee) are to hold their triennial congress shortly: IMEKO, the International Measurement Confederation, and IMACS, the International Association for Mathematics and Computers in Simulation. We take pleasure in providing to our readers some relevant information.

Technological and Methodological Advances in Measurement

(9th IMEKO World Congress, May 24—28, 1982, Berlin-West)

Modern technological development, especially that of highly integrated switch-circuits and microcomputers has a great influence on measuring systems and all their sub-systems. New measuring procedures can be adopted today which would have been impossible to think of a few years ago because of their expenditure. On the other hand do novel equipments require new measuring methods. The aim of this congress is to show the interplay between technology and methods in the whole area of modern technique of measurement. For that purpose a varied and interesting program will be offered comprising theory and practice in equal parts plus a host of new information.

The detailed program and the registration data can be obtained from

VDI/VDE-Gesellschaft
Meß- und Regelungstechnik
Postfach 1139
D-4000 Düsseldorf 1, FRG

Systems Simulation and Scientific Computation

(10th IMACS World Congress, August 8—13, 1982, Montreal)

700 papers, presented by authors of more than 30 countries, will be part of the scientific program. Also included in the program are a series of keynote lectures presented by leading authorities in their respective fields.

Forming an integral part of the congress will be several symposia on specialised topics such as — Modeling and Simulation of Energy Systems — Modeling and Simulation of Biological Systems — Parallel Computation — Computer Methods for Ordinary and Partial Differential Equations — Computer Arithmetics — Evaluation of Computer Systems Performance — Discrete Systems Simulation — Applications of Scientific Computation in the Engineering Sciences.

Information about registration and about the congress program may be obtained by writing to:

Prof. S. Sankar, Concordia University,
Dept. Mechanical Engineering
1455 de Maisonneuve Blvd. W.,
Montreal, Quebec H3G 1M8, Canada

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Working Party on Engineering Industries and Automation

In view of the key position of the Engineering Industries in all economic fields, and in view of the importance of automation for economic development, the ECE-Commission has established this Working Party as a permanent body. Its task is, amongst other things, to collect, process and disseminate statistical and other information on a comparable basis, to assess the developments in the diffusion of automation and their technosocio-economic effects on the various branches of the economy, to study selected technical and economic problems and to make recommendations on such problems. In order to fulfill its mandate the Working Party may convene ad hoc meetings for studies and hold seminars or organize study tours or decide on any appropriate method for carrying out its agreed program.

IFAC has been invited to participate in these activities. Prof. M. Mansour and Dr. M. Cuénod attended the second meeting of the Working Party held in Geneva (Switzerland) in February 1982.

In this meeting the Annual Reviews of Engineering Industries and Automation, prepared by the Secretariat were discussed. It was emphasized that more countries than before are submitting statistical data, thus providing comprehensive material for useful analyses of short-term trends.

Progress was also reported on other studies such as

1. Development of airborne equipment to intensify world food production

2. Techno-economic aspects of the International Division of Labour in the automotive industry
3. Methodology for assessing the techno-economic trends of automation
4. Precision instruments in ECE member countries.

IFAC representatives informed the Working Party on the aims and activities of IFAC and underlined the importance of collaboration and co-ordination of events between IFAC and ECE, particularly the active participation of IFAC experts in ECE seminars and in the preparation of ECE studies and vice versa.

The Working Party's programme for 1982 — 1986 was discussed, including for example: studies on role and place of engineering industries in national and world economies, impact of automation on the economy as a whole and on individual branches in particular, man/machine management systems, how to improve engineering equipment for more effective energy use and preventing pollution.

In addition two seminars will be organised by the Working Party in the near future:

1. Seminar on present use and prospects for precision measuring instruments in engineering industries (Dresden, GDR, 20 — 24 Sept. 1982)
2. Seminar on innovation in biomedical equipment (Budapest, Hungary, 2 — 6 May 1983)

The economical and environmental aspects are important in the studies and seminars of the ECE. There is sufficient overlapping with IFAC activities to make cooperation necessary.

The IFAC Secretariat will be pleased to provide further information to IFAC TCs and NMOs interested in participating in these activities.



Alistair G. J. MacFarlane
Council Member

Alistair G. J. MacFarlane was born in Edinburgh, Scotland in 1931. He received the B.Sc. and D.Sc. degrees from the University of Glasgow in 1953 and 1968; the Ph.D. degree from the University of London in 1964; the M.Sc. degree from the University of Manchester in 1973; and the M.A. and Sc.D. degrees from the University of Cambridge in 1974 and 1979 respectively.

After graduating in electrical engineering from the University of Glasgow, he joined the Metropolitan-Vickers Electrical Company in Manchester in 1953 to complete his post-graduate training in the Radar and Servomechanisms Division. After some years working on a variety of feedback and signal-processing problems he became group leader of the Moving Target Indication and Receiver Laboratories of that company in 1956 — 58. He was then appointed Lecturer in Electrical Engineering in Queen Mary College, University of London, and was promoted to Reader in Electrical Engineering in 1965. In 1966 he moved to the University of Manchester Institute of Science and Technology as Reader in Control Engineering in the newly established Control Systems Centre, becoming Professor of Control Engineering in 1969. Following this he was elected to a Chair of Engineering in the University of Cambridge in 1974 and became Head of the Control and Management Systems Division of the Engineering Department at Cambridge. His research interests are in the fields of feedback theory, dynamical theory, and automatic control. For papers on these topics he was awarded the Institution Premium of the IEE in 1966, the IEE Control and Automation Division Premium in 1970, the ICI prize of the Institute of Measurement and Control in 1975, and an ASME Centennial Medal in 1980.

Dr. MacFarlane is Vice-Master of Selwyn College, Cambridge, a Fellow of the IEE, of the Institute of Measurement and Control, and of the IEEE; and Editor of the International Journal of Control. He is a member of the Council of the Science and Engineering Research Council. He was elected to the Fellowship of Engineering in 1981.

In 1975 he became Vice-Chairman of the IFAC Technical Committee on Theory, in 1981 during the Kyoto Congress he was elected Member of the IFAC Council.

IFAC Membership

We regret to announce that three of our National Member Organisations had to have their membership terminated due to being in arrears with the payment of their membership fee for more than two years.

These Organisations are:

- Algeria (Commissariat National à l'Informatique),
- Greece (Technical Chamber of Greece),
- Iran (Iranian Society of Automatic Control Engineers).

This step became necessary pursuant to Article 7(b) of the IFAC Constitution, providing that "Membership may be terminated by a vote of the General Assembly if a member is two years in arrears with payment of its membership fee". The General Assembly of IFAC, meeting in Kyoto on August 24, 1982, has in fact voted to that effect, if a last attempt by the President would prove unsuccessful. Since none of the organisations mentioned above reacted to the final warning by the President, their membership had to be terminated with effect of December 1981.

If any other competent organisation representing a significant group of professional people in automatic control and systems science in either of these countries would like to join IFAC and proves to fulfill the conditions of our Constitution, the President has expressed his readiness to negotiate with them.

New Book Information

Industrial Systems Engineering and Management in Developing Countries

Proceedings of the International Conference, Asian Institute of Technology, Bangkok, Thailand

Edited by M. T. TABUCANON and P. ADULBHAN, Asian Institute of Technology, Bangkok, Thailand

Contains 60 international contributions offering economic and practical solutions to a wide range of engineering and management problems, emphasising applications in developing countries. For industrial engineers, operations researchers and development planners.

928pp £ 56.00 US\$ 135.00

Orders should be sent to:
Pergamon Press
Headington Hill Hall
Oxford OX3 0BW, Great Britain

PROGRAMME

Friday, October 1, 1982 Heidelberg
Aula der Alten Universität

09,00 a.m. IFAC COUNCIL SPECIAL MEETING

In the Chair: Acad. Prof. T. VAMOS (H),
President of IFAC

Opening
Addresses: Dr. A. von BÜLOW (FRG),
German Federal Minister for Research and Technology
Prof. Dr. G. W. BECKER (FRG),
President Verein Deutscher Ingenieure (VDI)
Dr. D. ERNST (FRG),
Chairman Verband Deutscher Elektrotechniker (VDE)
Prof. Dr. M. THOMA (FRG),
President Elect of IFAC
Dr.-Ing. F. D. ALTHOFF (FRG),
President VDI/VDE-GMR
Mr. R. ZUNDEL (FRG),
Mayor of Heidelberg

Lecture: Dr. H. CHESTNUT (USA),
1st President of IFAC (1957/58)
"25 years of IFAC: From Heidelberg
to Heidelberg 1957 — 1982"

10,30 a.m. Coffee

11,00 a.m. International Colloquium AUTOMATIC CONTROL: PRESENT AND FUTURE

11,00 a.m. Impact on TECHNOLOGY

Speakers: Dr. R. E. LARSON (USA),
President IEEE
Prof. I. KATO (J),
Waseda University, Tokyo
Prof. H. ZEMANEK (A),
Technical University, Vienna

12,30 a.m. Lunch

01,30 p.m. Impact on SOCIETY

Speakers: Acad. V. A. TRAPEZNIKOV (USSR),
Institute of Control Science, Moscow
Prof. H. H. ROSENBROCK D.Sc. FRS (UK),
University of Manchester

02,30 p.m. Impact on ECONOMY

Speakers: Prof. E. PESTEL (FRG),
University of Hannover
Prof. A. JENSEN (DK),
Technical University, Lyngby

03,30 p.m. Impact on DEVELOPING COUNTRIES

Speakers: Prof. WU Jong-Ming (China),
Academia Sinica, Beijing
A. G. EVSTAFIEV (UNIDO),
Division of Industrial Operations, Vienna

04,30 p.m. Coffee

05,00 p.m. PANEL DISCUSSION



Registration for IFAC Int'l Colloquium IMPACT OF AUTOMATIC CONTROL Heidelberg, October 1, 1982

69
89

Please use one form for each participant. Use selfmade copies in case of more participants. Please write in block letters, only one letter in each space. These dates are included in the list of participants. Each participant will get this list at the Symposium Secretariat.

Please leave this open

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Übernachtungspreis incl. Frühstück, Bedienung und Mehrwertsteuer price for accomodation with breakfast, service and added value tax prix pour nuitée avec petit déjeuner, service et T.V.A.	Einzelzimmer single room à 1 lit	Doppelzimmer room with 2 beds à 2 lits	Dreibettzimmer room with 3 beds à 3 lits	Besondere Wünsche special requests desirs particuliers (Bad - bath - bain Garage etc.)
Hotels hotels hôtels	DM 100,—/160,— pro Person DM 70,—/100,— pro Person DM 40,—/ 70,— pro Person			
Gasthöfe inns auberges	DM 30,—/ 40,— pro Person			
Fremdenheime boardinghouses pensions de famille	DM 30,—/ 40,— pro Person			

If booking cannot be made in the requested price range, please reserve in the next available higher or lower category. In case the reservation is not available in Heidelberg I would accept a room in a hotel in the nearer surroundings. This reservation is obligatory. I will arrive by private car: yes/no.



GENERAL INFORMATION

Location:

Aula der Alten Universität
 Ruprecht-Karls-Universität Heidelberg
 Grabengasse 1
 D-6900 Heidelberg
 Federal Republic of Germany

Registration and Hotel Reservation:

For registration and hotel reservation, please use the attached forms and return them to the addresses given. Early reservation is recommended.

After receipt of your registration, your participant's card will be mailed to you or kept at the Colloquium Secretariat for personal collection.

Registration Fee (including lunch): DM 80,—

Please forward your cheque or your postal order marked "VDI/VDE GMR IFAC Colloquium 338207" bearing your name, together with your registration form to VDI/VDE GMR.

Bank transfers should be made payable to:

Deutsche Bank, D-4000 Düsseldorf, FRG
 (BLZ 300 700 10), Account Nr. 54/92020

Conference Language:

English (no simultaneous translation provided)

Transport Information:

Next international airport: Frankfurt/Main.
 Trains to Heidelberg every hour.
 Travelling time approx. one hour.

Registration for IFAC Int'l Colloquium
 IMPACT OF AUTOMATIC CONTROL
 Heidelberg, October 1 1982

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 Postfach 1139

D-4000 Düsseldorf 1
 Federal Republic of Germany

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