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# International Federation of Automatic Control

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# Newsletter

*Season's Greetings to our  
Friends all over the World*

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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.

## IFAC Council Meeting — Heidelberg, October 1982

(Highlights on decisions and intentions)

"Semper Aperta" reads the inscription at the gate of Heidelberg's Old University, indicating that this Temple of Science is to be "always open" to teachers and to students, to searchers and to researchers, to knowledge, to ideas and to beliefs.

Like many other slogans this too should not be taken at face value, since doors are locked physically outside office hours and were locked ideologically several times in the ups and downs of German history. The old "Student's Prison", now kept as a museum, bears witness to individuals who, in former

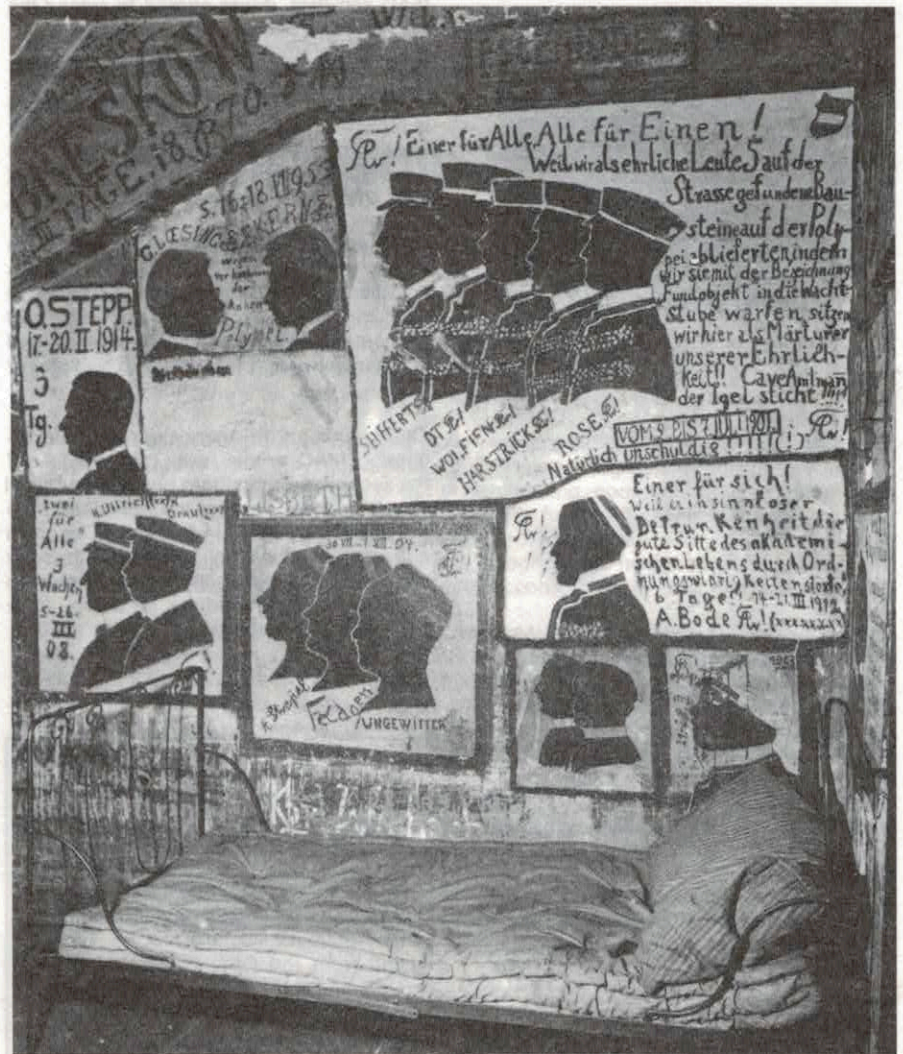
times, were locked in for offences against the University's strict rules of discipline and conduct.

Yet it was a very appropriate slogan for the meeting of the IFAC Council, the supreme executive body of IFAC, who among other issues, had on its agenda the problem of

### Free Access of Scientists to IFAC Events

This problem had come up when in some cases visa applications submitted by people

(ctd. p. 2)



Wall Paintings in the former Student's Prison at Heidelberg University

Editor: Prof. Dipl.-Ing. Fred Margulies  
Layout: Margaret A. Gottfried  
published bimonthly



IFAC Council (ctd. from p. 1)

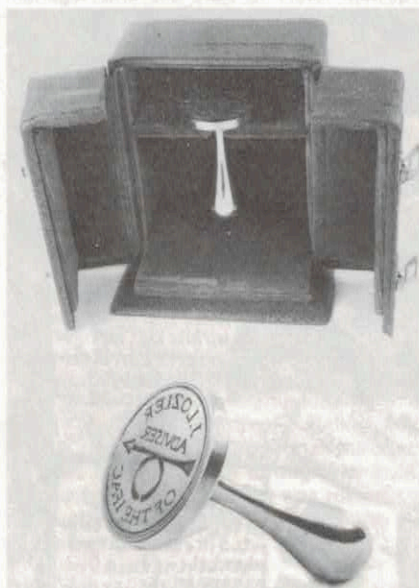
intending to attend an IFAC technical meeting had been rejected by the authorities of the country where this meeting was to take place. While we cannot deny or change the fact that some IFAC member countries discriminate against citizens of other IFAC member countries and while it is considered unrealistic to expect or demand government declarations that they would refrain from such discrimination in the event of an IFAC meeting, the Council agreed to repeat the following statement:

"In accordance with the IFAC Constitution, IFAC technical meetings can only be held in countries to which free access of any bonafide person from any member country can be generally expected or, at least, can be arranged (on a personal basis) by the National Member Organisation."

Dealing with

#### IFAC Awards

the Council was reminded that with the new Constitution a new kind of IFAC Officers had been introduced, i.e. IFAC Advisers. As token of appreciation of their services for IFAC and as visible sign of their office to which they had been appointed by the President for lifetime, he handed to each of them a pretty case containing the "Advisor's Seal", as shown below.



Another award, the *Giorgio Quazza Medal*, will again be given to one distinguished control engineer at the time of the next World Congress (July 1984, Budapest).

The Council nominated John F. Coales, K. J. Åström and Janos Gertler to act as Selection Committee. All NMOs and TCs are cordially invited to submit their suggestions by March 1983 to the IFAC Secretariat.

With the Budapest Congress in 1984 the three years term of office for IFAC Officers will terminate. The President therefore has appointed the new

#### Nominations Committee

with W. E. Miller as chairman, B. Tamm and R. Isermann as members. The Council

endorsed these appointments and also unanimously approved of the nomination of Prof. M. Najim (Morocco) as Chairman of DECOM, the Developing Countries Committee. Prof. M. Najim succeeds Lt. Gen. J. S. Bawa (India), who resigned in March 1982 for personal reasons. A note of thanks and appreciation for his services was offered by the Council. Dr. Yan Xiao-Jun (China) will take Prof. Najim's office as Vice-Chairman of DECOM.

The Nomination Committee will also consider applications by NMOs to hold the 12th IFAC World Congress (due 1993), the Council having accepted to hold the 10th Congress in Munich in 1987 and the 11th in Tallinn (Estonia, USSR) in 1990.

The Council further dealt with

#### Financial Matters

accepting with appreciation the Treasurer's Report and approving of his proposal for the Budget 1983. Satisfaction was expressed that all NMOs (with one exception) had paid their membership fees for 1981 and only a few are in arrear for 1982. Brasil has paid her fees for the last three years and thus settled her account. In view of the difficult economic situation the Council called all NMOs to pay their fees at the earliest and on all officers to help finding new member organisations.

In view of the importance of the link with individuals and organisations interested in IFAC activities, it was agreed to extend the

#### IFAC Newsletter

to have two six-page issues per year. Action is however required to have a regular check on the mailing list and to economise on expenses by keeping only people on the list who show their interest in this publication.

On the President's initiative attempts are being made to improve public relation activities of IFAC. The Council acknowledged the importance of such activities and welcomed possibilities to obtain advice and assistance from professionals on a voluntary basis.

Other items on the agenda dealt with forthcoming IFAC events, with the activities of the Technical Committees and the Technical Board, with the work of the Secretariat, the preparation of the 1984 Budapest Congress and with publication activities. Anybody interested in obtaining the complete minutes of that meeting should ask for a copy from the IFAC Secretariat.

#### Appreciation

The IFAC Secretariat has received congratulations and presents on the occasion of IFAC's 25th birthday, e.g. from the IFORS Secretariat (Hella Welling), from the Estonian Committee of Automatic Control (Boris Tamm) and from the Czechoslovak National Committee for IFAC (Juraj Bizik). On behalf of IFAC the Secretariat gratefully appreciates these expressions of dedication to the great IFAC Family.

## New Books

### System Identification Tutorials

Editor: R. ISERMANN, Technische Hochschule Darmstadt, Germany (BRD)

A concise introduction to the fundamentals of identification methods. Carefully prepared by internationally known experts in the field these tutorials introduce newcomers and non-specialists to some of the basic methods and procedures used for system identification. Pitched at an intermediate level emphasis has been placed on didactic aspects with particular relevance to practical applications. Discusses computer program packages and includes worked examples. For students of control engineering.

(Special offer to IFAC members only):  
88pp £ 3.00 \$ 7.00

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

### Operational Research '81

*Proceedings of the Ninth IFORS International Conference on Operational Research, Hamburg, Germany, July 20 - 24, 1981.*

Edited by J. P. BRANS, Free University, Brussels, Belgium

This book offers a selection of about 70 papers presented at the 9th IFORS International Conference on Operational Research. The work begins with both the opening and closing papers which discuss the future of Operational Research and its connection with System Analysis.

The subsequent chapters cover the classical as well as the more recent fields of OR. In particular the following topics are treated: OR in organizations; OR in the developing countries; OR in the world; OR in the public sector; decision analysis and multiple objective programming; mathematical programming; locational problems and transport; production management; graphs and networks; energy; finance; simulation and modelling; games; queues and Markov processes; OR applications; mathematical techniques; engineering; informatics and optimization.

984 pages Paperback US\$ 106.50

Orders should be sent to:  
North-Holland Publishing Company  
P. O. Box 211  
Amsterdam  
The Netherlands

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Breite Gasse 14, A-1070 Wien



# FORTHCOMING EVENTS

This list has been brought up to date in accordance with decisions taken by the meeting of the Technical Board on September 28/29, 1982 in Baden-Baden.

| Title  | 1983            | Place                               | Deadlines                          | Further Information   |
|--|-----------------|-------------------------------------|------------------------------------|---|
| IFAC Symposium on Systems Approach to Appropriate Technology Transfer                      | March 21—23     | Vienna, Austria                     | —                                  | IFAC — Symposium "Appropriate Technology Transfer" ÖPWZ, Rengasse 5 1014 Vienna, Austria  |
| 12th IFAC/IFIP/Workshop on Real Time Programming   | March 29—31     | Hatfield, UK                        | —                                  | Real Time Programming Organizing Committee, Dr. G. M. Bull, School of Information Sciences The Hatfield Polytechnic, P. O. Box 109 Hatfield, Herts, AL10 9AB, England |
| 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                      | —                                  | A.F.C.E.T. IMACS Symposium 1983 156, Bd. Péreire 75017 Paris, France  |
| 5th IFAC Workshop Distributed Computer Control Systems                                     | May 18—20       | Sabi-Sabi Game Reserve South Africa | Jan. 15, 1983                      | Prof. M. G. Rodd University of the Witwatersrand 1 Jan Smuts Avenue, Johannesburg, South Africa   |
| IFAC Workshop Management Control Systems Modelling of Dynamics                             | May             | Dubrovnik, YU                       | not yet known                      | Dr. Rajkov Faculty of Organizational Sciences/IFAC Workshop Ul. Osobodjenja 1 11090 Beograd, Yugoslavia   |
| AFCET/IFAC/IFIP Symposium New Techniques and Ergonomics                                    | May 31 — June 2 | Valenciennes, F                     | —                                  | University of Valenciennes Le Mont Houy 59326 Valenciennes, Cedex France  |
| IFAC/IFIP Conference Training for Tomorrow: Educational Aspects of Computerized Automation | June 7—10       | Leiden, NL                          | —                                  | 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                | —                                  | Dr. M. Canzoneri 4th IFAC/IFORS Conf. Board of Governors, Federal Reserve Washington DC 20551, USA  |
| IFAC Workshop Applications of Nonlinear Programming to Optimization and Control            | June 20—21      | San Francisco, USA                  | Abstracts: Feb. 1, 1983 (6 copies) | Prof. H. E. Rauch Lockheed 52-56/205 3251 Hanover Street Palo Alto CA 94304, USA  |
| IFAC Workshop Adaptive Systems in Control and Signal Processing                            | June 20—22      | San Francisco, USA                  | —                                  | Mr. D. M. Auslander University of California Mechanical Eng. Dept. Berkeley, CA 94720, USA  |
| 3rd IFAC/IFORS Symposium Large Scale Systems: Theory and Applications                      | July 11—15      | Warsaw, Poland                      | —                                  | Dr. Z. Nahorski 3rd IFAC/IFORS LSSTA Systems Research Institute Polish Academy of Sciences ul. Newelska 6, 01-447 Warsaw, Poland                                      |
| IFAC/IFIP/IFORS Symposium Fuzzy Information, Knowledge Representation and Decision         | July 19—21      | Marseille, France                   | not yet known                      | Prof. M. Roux Laboratoire de Biomathématique Faculté de Médecine 27, Blvd. Jeon-Moulin F-13385 Marseille, Cedex 5, France   |
| 4th IFAC Symposium Mining, Mineral and Metal Processing                                    | August 22—25    | Helsinki, SF                        | —                                  | IFAC 4th MMM Symposium 1983 Secretariat P. O. Box 192 SF-101 Helsinki 10, Finland   |



# FORTHCOMING EVENTS (ctd.)

| Title   | 1983            | Place                        | Deadlines           | Further Information   |
|---|-----------------|------------------------------|---------------------|---|
| IFAC Workshop<br>Simulation and Validation<br>Techniques to establish<br>Control System Performance | August<br>22—26 | Stanford,<br>Univ.,<br>USA   | Jan. 14<br>1983     | Prof. D. B. DeBra<br>Dept. Aero & Astro<br>Stanford University<br>Stanford CA 94305, USA  |
| 3rd IFAC Symposium<br>Control in Power Electronics<br>and Electrical Drives                         | Sept.<br>12—14  | Lausanne,<br>CH              | October 31,<br>1982 | Prof. H. Bühler<br>Ecole Polytechnique Fédérale de Lausanne<br>Laboratoire d'électronique industrielle<br>16, ch. de Bellerive<br>CH-1007 Lausanne, Switzerland |
| IFAC Workshop<br>Supplemental Ways of<br>Improving International<br>Stability (SWIIS)               | Sept.<br>13—15  | Laxenburg,<br>A              | —                   | ÖPWZ, „SWIIS 1983“<br>P. O. Box 131<br>Hohenstaufengasse 3<br>A-1014 Vienna, Austria  |
| 3rd IFAC Workshop<br>Safety of Computer Control<br>Systems SAFECOMP 83                              | Sept.<br>20—22  | Cambridge,<br>UK             | —                   | Miss R. da Gama<br>Computing and Control Division, IEE<br>Savoy Place<br>London WC2R OBL, UK  |
| IFAC Workshop<br>Modelling and Control<br>of Electric Power Plants                                  | Sept.<br>22—23  | Milan,<br>(or Como)<br>Italy | —                   | Prof. C. Maffezzoni<br>Politecnico di Milano<br>Senior Researcher at ENEL<br>Via Valv. Peroni, 77<br>I-20133 Milano, Italy                                      |
| CIGRE/IFAC Symposium<br>Control Applications for<br>Power System Security                           | Sept.<br>26—28  | Florence,<br>Italy           | —                   | CIGRE/IFAC Symposium<br>Central Office of CIGRE<br>112 bd Haussmann<br>F-75008 Paris  |
| IFAC Symposium<br>Automatic Control in<br>Chemical Processing and<br>Extraction Metallurgy          | Sept.<br>26—30  | Pretoria,<br>South Africa    | —                   | The Symposium Secretariat<br>IFAC Symposium S. 282<br>Council for Scientific and Industrial Research<br>P. O. Box 395<br>Pretoria 0001<br>Rep. of South Africa  |

## Report on ICSU General Assembly

At the request of President Vamos, Prof. John F. Coales, Advisor of IFAC, attended the 19th General Assembly of ICSU, the International Council of Scientific Unions, in Cambridge, 13 — 17 September 1982. According to his report there were no items on the agenda in which IFAC was directly involved but there were some which may well be of future interest as shown below:

### 1. Admission of the Chinese Association for Science and Technology

After some difficulties a formula was devised for the admission of CAST (Chinese Association of Science and Technology) without expulsion or immediate change of status of the Taiwan Academy of Science.

### 2. Free Circulation of Scientists

The Standing Committee for the Free Circulation of Scientists reported and is clearly very active and often effective in resolving visa difficulties of scientists attending international meetings. IFAC might well use the good offices of this committee, should visa difficulties in connection with IFAC Congresses ever arise.

### 3. World Data Centres

The data collected by the World Data Centres during the past 25 years contain

the results of observations from a world network of stations in a wide range of scientific disciplines. These data were the source of many important discoveries in the fields of planetary geophysics and solar-terrestrial physics; the General Assembly recommends that scientists within the ICSU family who have not availed themselves of the services offered by the World Data Centre system establish contacts with the system and with the ICSU Panel of World Data Centres.

### 4. Effects of a nuclear war

Recognizing the need for public understanding of the possible consequences of the nuclear arms race and the scientific competence that can be mobilized by ICSU to make an assessment of the biological, medical and physical effects of the large-scale use of nuclear weapons, the General Assembly urges the Executive Board to appoint a special committee to study these effects and to prepare a report for wide dissemination that would be an unemotional, non-political, authoritative and readily understandable statement of the effects of nuclear war, even a limited one, on human beings and other parts of the biosphere.

appreciated being an associate of ICSU because IFAC's work now embraced so many areas of mathematical and scientific research covered by the Scientific Unions in membership of ICSU. He explained that our title is now a misnomer resulting from history and that we are now involved in the analysis, synthesis and control of all types of systems both small and large and are now starting to investigate problems of world stability. He also told the meeting that we are active in developing countries through DECOM, which sponsors conferences there.

At the end of the General Assembly the following officers were elected:

|                       |                                  |
|-----------------------|----------------------------------|
| President             | : Prof. D. A. Bekoe<br>(Ghana)   |
| First Vice-President: | Sir John Kendrew<br>(UK)         |
| Vice-President        | : Acad. G. K. Skryabin<br>(USSR) |
| Secretary General     | : Prof. L. Ernster<br>(Sweden)   |
| Treasurer             | : Prof. T. F. Malone<br>(USA)    |





BUDAPEST, HUNGARY, 2 — 6 JULY, 1984

A BRIDGE BETWEEN CONTROL SCIENCES  
AND TECHNOLOGY

A mere 19 months are separating us from the opening date of IFAC Congress '84 in Budapest. The Hungarian Organising Committee has been fully on the job ever since the Kyoto Congress came to a close and now the International Program Committee has shifted to "full speed ahead" for its part of it.

Meeting at Baden-Baden (FRG) on September 30, the scope and structure of the Technical Program was discussed and began to take shape.

The Congress will feature Plenary Sessions, Paper Sessions, Case Studies and Discussion Sessions.

The aim of the *Plenary Sessions* is to give the participants an overview of the state of the art in the major fields of automatic control. Plenary lectures are planned on the following subjects:

- Control theory revisited
- Control and instrumentation in the process industries
- Flexible automation
- Control in and for biological systems
- Control in economy and society.

It is intended to invite outstanding experts to deliver the plenary lectures.

The *Paper Sessions* are to provide a cross-section of recent results in automatic control in the broadest sense, including papers dealing with the theory, applications and implications of automatic control in technical, biological, economic and social/human systems. Most of the Paper Sessions will be arranged into Colloquia. Each Colloquium deals with a selected subject area and is organized by the respective Technical Committee of IFAC. The list of Colloquium titles and the responsible Technical Committees will be published in the CALL FOR PAPERS, which will be distributed by January 1983.

A significant part of the Congress program will be devoted to *Case Studies* and *Discussion Sessions*, the latter featuring panel and/or general discussions.

Special attention will be paid to industrial representation: practical problems collected beforehand from world-wide industrial

## Shaping the 1984 IFAC World Congress

sources will be discussed by expert panels during the Congress and the results summarized in a plenary report.

### Publications

The material of the Paper Sessions will be printed in the Congress Preprints, to be made available to the Congress participants prior to the meeting. A special volume of the Preprints will contain the plenary papers and case studies.

The Congress Proceedings, the hard-bound permanent records of the Congress available for general circulation, will contain all the material included in the Preprints plus a summary of the Discussion Sessions. The Proceedings will be published after the Congress by the IFAC Publisher, Pergamon Press Ltd.

### Draft papers

To promote the presentation of the newest developments, the selection of Congress contributions will be based on draft (preliminary) papers. These draft papers must contain all the substantial concepts and results of the work to be reported. However, they do not have to be in a final,

polished form. Also, results of some parts of the work still in progress (like simulation data, operational experience) may be missing but reference must be made to the fact that these will be included in the final version.

The total length of draft papers, including illustrations, should not exceed 15 type-written pages (up to 35 lines each).

### Time Table

*5 copies of the draft papers must be received by the Congress Secretariat*

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

Phone: (361) 253-442  
Telex: 22-5066 akibp h  
Cable: IFAC Budapest

not later than July 1, 1983

Authors will be notified of acceptance/rejection by November 20, 1983

Final papers must reach the Congress Secretariat by February 15, 1984

## Relationship with IIASA

### Resolution of the IFAC Council

The IFAC Council, meeting in Heidelberg on October 3, 1982, has received with great interest an address on "Prospects of Intensified IIASA-IFAC Cooperation", delivered by Dr. M. Dixon on behalf of Prof. C. S. Holling, Director of IIASA, the International Institute for Applied Systems Analysis.

We have learned with great concern of the serious difficulties confronting IIASA, an organization we highly appreciate for its outstanding scientific activities and for its important role in bringing about understanding, cooperation and friendship between scientists of so many countries. IFAC is further connected to IIASA by a considerable number of officers who also hold office or work with IIASA. And last not least we enjoy the benefit of a close geographical neighbourhood between the IFAC Secretariat and IIASA, both being accommodated in Laxenburg (Austria).

The IFAC Council wishes to put on record its intention and desire to extend and develop scientific, organizational, technical and personal relationship with IIASA and to make every effort to help IIASA in keeping the flag flying. As one important step in this direction we invite all IFAC NMOs to bring their influence to bear on their national government, on their national Academy of Science and on any other institution they might think fit, asking them to give IIASA every support possible.

Such support might take the form of assignments for scientists to work with IIASA, of financial contributions to certain research projects or of more countries joining IIASA via their National Academy of Science.

We are confident that IFAC NMOs and officers share the concern of the Council and will do their utmost to show their appreciation and support.

Heidelberg,  
October 3, 1982



## Workshop on Singular Perturbations and Robustness of Control Systems

P. V. Kokotovic

More than seventy participants attended six sessions and a round table discussion on the shores of scenic lake Ohrid in Macedonia, Yugoslavia, from July 13 through 16, 1982. The session topics of this second workshop\*) were chosen by the IFAC Working Group on Asymptotic Analysis and Singular Perturbations, (which is part of the TC on Mathematics of Control). Its chairman is writing this report.

Singular perturbations, multi-time-scale analysis, and robustness of control algorithms with respect to errors in model order were the unifying themes for a wide diversity of issues discussed. Relationships between heretofore independent approaches have been discerned, such as between high gain feedback systems and Markov chains with weak interactions. Almost invariant subspaces seem to be a meeting place of asymptotic and geometric methods. New time scale formulations appeared for nonlinear and stochastic problems. For a glimpse of this richness of content see the titles of the six sessions listed below.

The organization by Dr. J. Medanic, Pupin Institute, Belgrade, and Dj. Petkovski, University of Novi Sad, was excellent. The hospitality and cooperation of the general manager and the staff of Hotel Metropol were beyond the call of duty. Representatives of the Republic of Macedonia welcomed the workshop with the expectation that new technologies will help the development of this southernmost part of Yugoslavia.

The only criticism expressed was that the time for presentations (20 min.) was too short, in part due to a whole day boat excursion to medieval monasteries and a picnic. Ohrid frescoes, trout and lamb, accompanied by Macedonian folk dancers, reversed this criticism into a suggestion that more time be given to such events. Not even disturbance decoupled authors could resist Macedonian rhythm. Feedback analysts, experts on circle criteria and invariant manifolds, were all caught in the limit cycle of a Balkan kolo. On return a reduced order form of the dance was led by the captain through the boat's narrow passages. The boat was robust and the workshop resumed with a paper on vibrational control.

Two TV crews were present from whom Yugoslav audiences learned about singular perturbations and robust control. The rest of us will learn more from the Proceedings to be published by Pergamon Press under the editorship of Dr. L. Grujic, Faculty of Mechanical Engineering, P. O. Box 174, 11001 Belgrade, Yugoslavia.

A week before the Ohrid Workshop a tutorial seminar on singular perturbations was held in Udine, Italy. It was organized by CISM, Udine, and chaired by Dr. Mark Ardema of NASA, Ames, who is now editing a volume of the seminar lecture notes to be published by Springer-Verlag (a short report has been published in Newsletter No. 5/Oct. 1982).

\*) Proceedings of the first workshop of this group, held in 1978, are available from Dr. J. P. Quadrat, INRIA, Domaine de Voluceau — Rocquencourt, 78150 Le Chesnay, France.

Dr. Ardema also chaired the International Program Committee of the Ohrid Workshop.

The six sessions mentioned above, were:

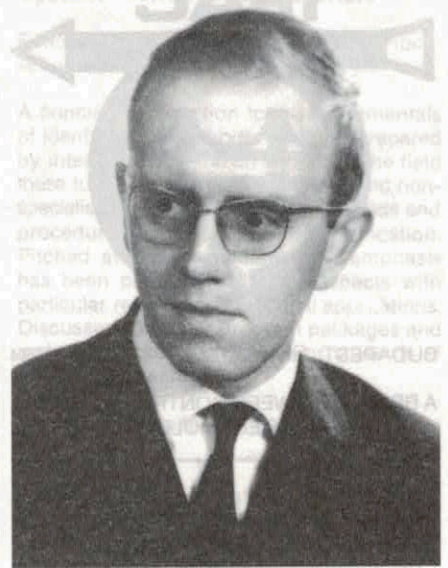
- Session I: Behavior in Infinity  
Coordinators: Young, Willems, Utkin
- Session II: Optimal Control  
Coordinators: Sannuti, Dmitriev, Fossard
- Session III: Bases and New Problems  
Coordinators: O'Reilly, Vasileva, O'Malley
- Session IV: Robustness  
Coordinators: Suzuki, Zames, Desoer
- Session V: Filtering and Stochastic Control  
Coordinators: Haddad, Blankenship, Quadrat
- Session VI:  
Modeling and Large Scale Systems  
Coordinators: Khalil, Grujic, Basar

### Summary

#### IFAC Workshop on Modelling and Control of Biotechnical Processes (Helsinki, Finland, August 1982)

- 1.) At the seven sessions of the workshop 36 papers were presented and the following themes were discussed:
  - instrumentation and sensors,
  - modelling problems,
  - product optimization,
  - control problems of waste water treatment,
  - computer and microcomputer applications,
  - control design.After the formal presentation of reports five panel discussions were held with the session speakers. These discussions were of considerable value.
- 2.) Technical excursions were organized to a modern waste water plant and a Pekilo plant after the workshop. A visit was arranged to the Biotechnical Laboratory of Technical Research Centre of Finland (VTT) during the workshop.
- 3.) The workshop reached the conclusion that the major problems are
  - the lack of reliable sensors,
  - poor knowledge of process dynamics and lack of suitable process models,
  - experience of full scale process control is still lacking; scale-up is a real problem in practice,
  - batch processes are difficult to supervise and control,
  - experience from continuous processes is difficult to apply to batch processes,
  - there exists a gap between control engineers and bioengineers; closer cooperation is needed between these groups.It was agreed that IFAC should organize a full-scale symposium on "Modelling and Control of biotechnical processes" after three years.
- 4.) For additional information please contact Prof. Jouko Virkkunen  
Helsinki University of Technology  
Control Engineering Laboratory  
Otakaari 5 A  
SF-02150 ESPOO 15, Finland

## WHO IS WHO IN IFAC



Prof. Achiel van Cauwenberghe  
Chairman  
of the IFAC Applications Committee

Professor van Cauwenberghe was born on April 9, 1935 in Ghent (Belgium). He is married and has two children. He took both his Master's Degrees in Chemical and Electrical Engineering in Ghent in 1958 and 1961 respectively, and another Master's Degree in Engineering from Princeton University, USA in 1962. A Special Doctorate he acquired in Applied Science in Ghent in 1965. He started his academic career as research assistant at the University of Ghent in 1959, became assistant professor in 1961, associate professor in 1967 and finally full professor in 1969, when he was also made director of the Automatic Control Laboratory at the Ghent University. Prof. van Cauwenberghe is now Dean of the Faculty of Applied Sciences at the same university and responsible for teaching and research in automatic control systems theory. His special fields of activity are: process control (chemical, metallurgical, paper and nuclear power), identification and adaptive control, simulation of dynamic systems and distributed computer control (microcomputers).

Prof. van Cauwenberghe is member of several Belgian, American and international Engineering Societies, amongst others the BIRA, the Belgian NMO of IFAC, whose president he was from 1975 to 1981. At present he is president of the IBRA/BIRA Federation. He is chairman of the executive council of Journal A, the Benelux Journal of Automatic Control and has been its chief editor since 1980; he is also associate editor of Automatica, the IFAC journal.

In IFAC Prof. van Cauwenberghe has been a member of the TC on computers since 1974 and served as vice-chairman of the Applications Committee from 1978 to 1981 to become its chairman for the period 1981—1984. He acted as chairman of both the 3rd and 4th IFAC Conferences on Instrumentation and Automation in the Paper, Rubber and Plastics Industries, which took place in Brussels, May 1976 and Ghent, June 1980.