

**I F A C**  
**INTERNATIONAL FEDERATION**  
**OF AUTOMATIC CONTROL**

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## TO ALL NATIONAL MEMBER ORGANIZATIONS OF IFAC

All the information contained in the present Bulletin has been submitted either by the national member organizations of IFAC or by the Executive Council of the Federation.

Therefore, if you wish that any information on Automatic Control in your country, such as past and coming events, books, published or to be published, specialized reviews, addresses of specialized engineering institutions etc., to be mentioned in the Bulletin, please send it to the Editor:

Prof. Ing. Dr. Victor Broida  
2nd Vice-President of IFAC  
13, rue de la France-Mutualiste  
Boulogne - sur - Seine (Seine)  
F r a n c e

In this way you can contribute to the international exchange of information in the field of Automatic Control, which is one of the main aims of IFAC.

If you are not familiar with the English language, you may use one of the other three official languages of IFAC, namely: French, German or Russian.

We thank you most sincerely in advance for your co-operation.

## I - IFAC NEWS

### A short history

On September 11th, 1957, the International Federation of Automatic Control (IFAC) was created in Paris. The idea of creating such a Federation which arose at the Automatic Control Congress held in Heidelberg on September 27th, 1956, was thus carried into effect less than a year later by a Provisional Committee consisting of V. Broida (France) Chairman, G. Ruppel (Germany) Secretary, J.F. Coales (United Kingdom), O. Grebe (Germany), A.M. Letov (USSR), P. Nowacki (Poland) and R. Oldenburger (USA).

The Automatic Control Societies of Austria, Belgium, China, France, Germany, Hungary, Italy, Japan, Netherlands, Norway, Poland, Roumania, Sweden, Switzerland, Turkey, United Kingdom, USA, USSR and Yugoslavia were represented at the Constitutive Assembly. Automatic Control Societies of several other countries showed their interest in the creation of IFAC and approved its aims.

The swift progress in creating IFAC is especially significant since for several countries it was first necessary to organize their own automatic control engineers on a national basis.

At the Constitutive Assembly, the Constitution was submitted to the meeting and was adopted with some alterations.

According to this Constitution, the field of activity of the Federation covers the theory and the applications of Automatic Control including automatic control of physical systems and servomechanisms as well as instrumentation, automatic data processing and computers so long as the latter form a part of automatic control systems.

Exchange of news and experience between member organizations will promote the development of the science of automatic control amongst nations. For this purpose, international congresses will be organized and special committees will handle given tasks in the field of automatic control. Any country can participate in IFAC through a single scientific organization or through a national committee working in the field of automatic control.

The official languages of IFAC are English, French, German and Russian, the legal language being English.

The Constitution provides for a General Assembly of the member organizations which elects the Executive Council. Presently, the Executive Council consists of the following members:

- President: H. Chestnut (USA)  
 1st Vice-President: A.M. Letov USSR  
 2nd Vice-President: V. Broida (France)  
 Secretary: G. Ruppel (Germany)  
 Treasurer: E. Gerecke (Switzerland)  
 Ordinary Members: M. Ajnbeider (Belgium)  
                   J.F. Coales (United Kingdom)  
                   G. Evangelesi (Italy)  
                   P. Nowacki (Poland)  
                   H.S. Tsien (China)

The Secretary has installed his office at the V D I (Association of German Engineers) in Düsseldorf, Prinz-Georg-Str. 79.

An Advisory Group of experts will act as an advisor to the President on matters in which the specialized committees are concerned.

### Membership

Up to April 15th, 1958, the following 14 national organizations have ratified the Constitution of IFAC, adopted on September 11th, 1957, by the General Assembly held in Paris, and have determined their annual subscription to cover the expenses of the Federation:

- |                                 |   |        |
|---------------------------------|---|--------|
| 1 <sup>o</sup> ) AUSTRIA        | Österreichischer Arbeitsausschuss für Automatisierung, Österreichisches Produktivitäts-Zentrum, Hohenstaufengasse 3, Wien I               | \$ 125 |
| 2 <sup>o</sup> ) CHINA          | Chinese Association of Automation c/o Institute of Automation, Academia Sinica, Peking  | \$ 500 |
| 3 <sup>o</sup> ) CZECHOSLOVAKIA | Laborator pro Automatizaci a Telemechaniku, Ceskoslovenska Akademie Ved, Zidna 28, Praha  | \$ 250 |
| 4 <sup>o</sup> ) DENMARK        | Dansk Ingeniorforening, 29, Vester Farimagsgade, Copenhagen   | \$ 125 |
| 5 <sup>o</sup> ) HUNGARY        | Hungarian National Committee of IFAC, c/o Budapesti Műszaki Egyetem, Villamosgepek Üzemtana Tanszék, Stoczek-u. 2 T.-EP. III.36. Budapest | \$ 125 |
| 6 <sup>o</sup> ) ITALY          | Consiglio Nazionale delle Ricerche, Ufficio relazioni internazionali, Piazzale delle Scienze 7, Roma                                      | \$ 500 |

- 7<sup>0</sup>) JAPAN National Committee of Automatic Control, Science Council of Japan, Ueno Park, Tokio \$ 250
- 8<sup>0</sup>) NORWAY Den Norske Ingeniorforening, Kronprinsensgate 17, Oslo \$ 250
- 9<sup>0</sup>) POLAND Polski Komitet Automatyki, Naczelna Organizacyjca Techniczna, ul. Czackiego 3/5, Warszawa \$ 125
- 10<sup>0</sup>) ROUMANIA Comisia de Automatizare, Academia Republicii Populare Romine, Calea Victoriei 125, Bucarest \$ 250
- 11<sup>0</sup>) SWEDEN Svenska Centralkommitten för internationella ingenjörskongresser, c/o Svenska Teknologforeningen, Brunkebergstorg 20, Stockholm \$ 250
- 12<sup>0</sup>) SWITZERLAND Association Suisse pour l'Automatique, Sternwartstr. 7, Zürich \$ 250
- 13<sup>0</sup>) UNITED STATES OF AMERICA American Automatic Control Council, c/o Mc Graw-Hill Book Co., 330 west 42nd street, New York 36 \$ 1.000
- 14<sup>0</sup>) UNION OF SOCIALIST REPUBLICS Nacionalny Komitet SSSR po Avtomaticheskomu Upravleniu, Kalantshevskaia ulitza 15a, Moskva \$ 1.000

### The 1960 Congress

The first international congress of IFAC will be held in Moscow in 1960. It will start on June 25th and last 10 days.

The papers read will be divided into the following 3 main groups, each of which will comprise several sections:

- 1<sup>o</sup>) Theory of Automatic Control
- 2<sup>o</sup>) Automatic Control components
- 3<sup>o</sup>) Automatic Control applications

It is expected that visits to industrial installations and educational and scientific institutions of USSR will be arranged.

A special pamphlet giving details of the organization of this Congress will be published shortly by IFAC; it will be available to national organizations upon request to the Secretary of IFAC.

### The interest of IFAC in other international congresses

Besides the first international congress of IFAC to be held in Moscow in 1960 and its own future congresses, the Federation will, of course, show interest in all other international congresses concerned either entirely with the field of Automatic Control or with some part of this very wide field.

As a rule, notices of such congresses will be published in the bulletins edited by IFAC with the necessary details to enable readers to send their papers or to apply for participation direct to the organizing committee of the congress.

When such international congresses are co-sponsored by IFAC, authors will be able to submit their papers to the Secretary of IFAC who will ask the corresponding Technical Committee of IFAC, specializing in the particular problems covered by a given paper, to advise on the contents, and, if favourable, to submit it to the congress on behalf of IFAC.

### First International Conference on Information Processing

An International Conference on Information Processing has been included in the draft programme and budget of UNESCO for 1959-60. The conference will be held on June 15th to 20th, 1959, at Paris or Rome and will be sponsored by UNESCO and the following national technical societies that include computer interests:

- France - Association Française de Calcul
- Germany - Deutscher Ausschuss fuer Rechenanlagen (DARA)
- Italy - Consiglio Nazionale delle Ricerche
- Japan - Computing Division of the Science Council of Japan
- United Kingdom - The British Group for Computation and Automatic Control of the British Conference on Automation and Computation
- United States - National Joint Computer Committee
- USSR - Academy of Sciences

Conference subjects will be:

- 1) Methods of digital computing
- 2) Logical design and common symbolic language for machines
- 3) Automatic translation of languages
- 4) Collection, storage and retrieval of information
- 5) Pattern recognition and machine learning

A major exhibition of equipments will be held at the conference.

### Meeting of the Executive Council and the Advisory Group

The Executive Council of IFAC as well as the Advisory Group had a meeting in Zurich on March 12, 13, and 14, 1958, with President H. C h e s t n u t (USA) in the chair.

The formation of Technical Committees was agreed on the basis of suggestions made by the Advisory Group, which was presided over by D.P. E c k m a n (USA). These Technical Committees will be combined into three main IFAC-Committees, namely on:

- 1) Automatic Control Theory
- 2) Components and Measurements
- 3) Application of Automatic Control

All member organizations will be asked to co-operate in the Committees of which the scopes and objects will be subject to further considerations.

A Chairman will be appointed for each of the Committees and the Secretariat will be offered to one of the national member organizations. Furthermore, it was proposed to form Committees on Bibliography, Nomenclature, Symbols and Definitions, and on Educational Questions.

A draft for the scientific programme of the first IFAC Congress for Automatic Control, which is to be held in Moscow from June 25 to July 5, 1960, was submitted by the Vice-President of IFAC, professor A.M. L e t o v, Moscow, and was approved by the Executive Council after discussion.

The manuscripts of papers for the Moscow Congress have to be submitted to the member organizations by summer 1959. Therefore, the member organizations of IFAC will be approached before long asking them to solicit papers for the Congress to be presented by the very best experts of their country.

The Executive Council has taken into consideration to hold an Extraordinary General Assembly of IFAC in autumn 1959.

## II - PAST EVENTS

### Austria

The Österreichischer Arbeitsausschuß für Automatisierung (Austrian Committee for Automation) which represents Austria at IFAC has been founded in 1957 by the Austrian Productivity Centre. Its president is Dr. Heinrich Hochrainer, professor at the Vienna Technical University. The Committee has a membership of 280. Its secretary is Dr. W. Oburger (Wien I, Hohenstaufengasse 3) who intends to publish a periodical with informations on the whole field of automatics. The Committee includes the following groups:

- 1°) Sciences, informations, education
- 2°) Industry producing instruments
- 3°) Industrial applications of automatics
- 4°) Applications in public utilities and administration
- 5°) Social and economic consequences of automation

### Czechoslovakia

Two important meetings on automatic control problems were held in Czechoslovakia in 1957.

The first, devoted to automatization and mechanization of welding in metalworking and transport, was held in Prague, October 2nd to 4th. This meeting was organized by the "Vedecko-technicke spolecnosti pro svarovani".

The second meeting was devoted to general questions of automatization in industry. It was held in Bratislava from December 19th to 21st and organized by the "Ceskoslovenska spolecnost pro sireni politickych a vedeckych znalosti".

## Germany

In 1952, the VDI/VDE-Fachgruppe Regelungstechnik was established as a joint organization of the VDI (Verein Deutscher Ingenieure - Association of German Engineers) and of the VDE (Verband Deutscher Elektrotechniker - German Institution of Electrical Engineers). The Chairman of the Fachgruppe is alternately a representative of the VDI and of the VDE.

The VDI/VDE-Fachgruppe Regelungstechnik was first created in 1938 by Dr. Hermann Schmidt, Berlin, as an Automatic Control Committee of the VDI. It was presided over, after 1945, by professor Wimsch, Berlin, and, from 1954 to 1956, by Dr. O. Grebe, Berlin, and it is at present presided over by Dr. R. Oetker of Karlsruhe.

The following list gives the names of the committees which exist at present:

### Fundamentals of Automatic Control

- 1) - Automatic Control Knowledge
  - 2) - Application of Theoretical Methods
  - 3) - Automatic Control Devices and Techniques
  - 4) - Codes for Acceptance Tests
  - 5) - Data Processing in Control Engineering
- ### Automatic Control Applications
- 6) - Automatic Control of Steam Generators
  - 7) - Automatic Control of Driving Engines
  - 8) - Automatic Control of Electric Power Supply
  - 9) - Automatic Control of Machine Drives
  - 10) - Automatic Control in Chemical Engineering
  - 11) - Automatic Control of Air Conditioning

### General Committees

- 12) - Education in Automatic Control
- 13) - Documentation
- 14) - Patent Problems
- 15) - International Relations

## United Kingdom

### British Conference on Automation and Computation

As a result of exploratory conferences held on March 6th and April 16th, 1957, at the invitation of the Institution of Civil Engineers, the Institution of Mechanical Engineers, and the Institution of Electrical Engineers, proposals were made for setting up a British Conference on Automation and Computation which will be organized in three Groups of Societies having the following fields of interest:

Group A. The engineering applications of automation techniques  
 Convenor: Institution of Mechanical Engineers

Additional sponsors: Institution of Civil Engineers  
 Institution of Chemical Engineers  
 Institution of Electrical Engineers  
 Institution of Production Engineers

Group B. The development and applications of computers, automatic controls, and programming techniques

Convenor: Institution of Electrical Engineers  
 Additional sponsors: Institute of Cost and Works Accountants  
 Institute of Physics  
 Office Management Association  
 Society of Instrument Technology

Group C. The sociological and economic aspects of automation and computation procedures

Convenor: British Institute of Management  
 Additional sponsors: Industrial Welfare Society  
 Institute of Cost and Works Accountants  
 Institute of Personnel Management  
 Institution of Production Engineers

At a meeting held on December 20th, 1957, the Group B (British Group for Computation and Automatic Control) was formally constituted comprising as its members the following 23 societies:

- British Computer Society
- Chartered Institute of Secretaries
- Chemical Society
- Faculty of Actuaries (Scotland)
- Institute of Actuaries
- Institute of Bankers
- Institute of Chartered Accountants in England and Wales
- Institute of Chartered Accountants of Scotland
- Institute of Cost and Works Accountants
- Institute of Fuel
- Institute of Municipal Treasurers and Accountants
- Institute of Petroleum

Institute of Physics  
 Institution of Civil Engineers  
 Institution of Electrical Engineers  
 Institution of Mechanical Engineers  
 Institution of Production Engineers  
 Iron and Steel Institute  
 Office Management Association  
 Royal Aeronautical Society  
 Royal Institute of Public Administration  
 Royal Statistical Society  
 Society of Instrument Technology

Mr. T.E. Goldup (President of the Institution of Electrical Engineers) was elected Chairman of the Group with Messrs. J.F. Coales (Society of Instrument Technology) and E.M. Renals (Institute of Cost and Works Accountants) as Vice-Chairmen.

Mr. J.D. Green (Institute of Chartered Accountants in England and Wales) was elected Honorary Treasurer and Mr. W. Bamford (Institution of Electrical Engineers), Honorary Secretary.

The meeting also reviewed current developments in the international field which fell within the scope of the Group and confirmed the support for the International Federation of Automatic Control (IFAC), constituted in Paris in September 1957 which had been expressed at the Group's preparatory meeting. Details were received of other international associations now in being, in particular those concerned with analogue computation and cybernetics, and it was agreed to watch their progress but to take no other action in their regard, it being hoped that eventually a merger of one or both with IFAC might come about.

On the 20th February, 1958, the Group A (British Group for the Engineering Application of Automation) was formally constituted. At present, the following 21 societies have associated themselves with the Group:

Institution of Mechanical Engineers  
 Institution of Civil Engineers  
 Institution of Electrical Engineers  
 Institution of Chemical Engineers  
 Institution of Production Engineers  
 Incorporated Plant Engineers  
 Institute of Fuel  
 Institute of Marine Engineers  
 Institute of Materials Handling  
 Institute of Metals  
 Institute of Welding  
 Institution of Engineering Inspection  
 Institution of Gas Engineers  
 Institution of Mining Engineers  
 Institution of Municipal Engineers  
 Institution of the Rubber Industry  
 Institution of Structural Engineers

Iron and Steel Institute  
 Plastics Institute  
 Royal Aeronautical Society  
 Society of Instrument Technology

Dr. D.F. Galloway (a member of the Council of the Institution of Mechanical Engineers) was elected Chairman of the Group with Mr. J.S. Brough and Sir Walter Puckey (Past President of the Institution of Production Engineers) as Vice-Chairmen.

Mr. Brian G. Robbins (Secretary of the Institution of Mechanical Engineers) was elected Honorary Secretary of the Group.

At this meeting of the Engineering Applications Group (Group A), it was agreed that a symposium on "Instrumentation and Computation in Process Development and Plant Design" which is being planned jointly by the Institution of Chemical Engineers, the Society of Instrument Technology and the British Computer Society should be held under the aegis of the B.C.A.C., subject to the agreement of Group B. Among other points discussed were the possibility of Group participation in the Fourth International Exposition and Congress on Automation in New York during June 1958, relations with the International Federation of Automatic Control and other international organizations of interest, the publication of a Bulletin and the need for a bibliography.

The new British Conference on Automation and Computation (B.C.A.C.) which is, in effect, a consortium of the collaborated societies, has two main objects:

- 1<sup>o</sup>) To act domestically as a clearing house for the interchange of information about forthcoming papers, lectures and the like.
- 2<sup>o</sup>) In the international field, to act as a channel for the presentation of the British point of view.

A General Committee consisting of the Chairman and two other members of the Executive Committee of each Group has been set up to co-ordinate the activities of the Groups and to supervise certain common services, for example the regular publication of a digest of information concerning the activities of the collaborating societies.

## U.S.A.

### A.S.M.E. (Mechanical Engineers)

The 1957 Annual Meeting of the American Society of Mechanical Engineers took place in New York from December 1st to 6th, 1957.

Several papers on Automatic Control were read, on December 2nd and 3rd in the Instruments and Regulators sessions. Copies of these papers are available at the A.S.M.E. Order Department, 29, West 39th street, New York, USA, at a price of \$ 0.50 each (plus foreign postage).

### A.I.E.E. (Electrical Engineers)

The Winter General Meeting of the American Institute of Electrical Engineers took place in New York from February 2nd to 7th, 1958.

Several sections of this meeting covered problems related to Automatic Control; we can mention amongst them the following sections:

- Recording and Controlling Instrumentation (sessions held on February 3rd under the presidency of Mr. R.C. Langford and on February 4th)
- Industrial Control (sessions held on February 5th under the presidencies of Mr. A.H. Myles and Mr. E.E. Meyer, and on February 7th under the presidency of Mr. J.W. Picking)
- Computers in Control Systems (session held on February 5th under the presidency of Mr. H. Hamer)
- Feedback Control Systems and Computing Devices (sessions held on February 6th under the presidency of Mr. J.G. Ragazzini and on February 7th under the presidencies of Mr. H. Chestnut and Mr. J.G. Truxal)
- Transistors in Feedback Control Systems (session held on February 6th under the presidency of Mr. A.M. Fuchs)

Advance copies of papers read in these sessions can be obtained at a price of \$ 0.80 each (plus foreign postage) from the American Institute of Electrical Engineers, Order Department, 53 west 39th street, New York 18, USA.

### I.R.E. (Radio Engineers)

The National Convention of the Institute of Radio Engineers was held from March 24th to 27th, 1958 in New York.

Several sessions were devoted to topics connected with Automatic Control, namely:

- Automatic Control - General, on March 25th
- Reliability through components, on March 25th
- Statistical applications, on March 26th
- The Canadian automation system of postal operations, on March 26th
- Reliability through systems, on March 26th
- Computers and Control, on March 26th
- Data reduction and recording, on March 27th

Copies of papers read in these sessions have appeared in the March Proceedings of the Institute of Radio Engineers which can be purchased from this Institute, 1 East 79th street, New York 21, USA.

### I.R.C. (Instruments and Regulators)

The 4th Annual Instruments and Regulators Conference was held at the University of Delaware, Newark, Delaware, from April 2nd to April 4th, 1958.

The sessions of April 2nd and April 4th were mainly devoted to automatic optimization whilst the morning session of April 3rd comprised papers on miscellaneous control problems.

Copies of the papers read at this conference are available as follows:

- Papers sponsored by the American Society of Mechanical Engineers - at a price of \$ 0.50 each (plus foreign postage), from the A.S.M.E. Order Department, 29 West 39th street, New York 18.
- Papers sponsored by the Institute of Radio Engineers - direct from this Institute, 1 East 79th street, New York 21.
- Papers sponsored by the Instruments Society of America - direct from this Society, 1319 Allegheny avenue, Pittsburgh 33, Pennsylvania.



### III - COMING EVENTS

#### Belgium

The 31th International Congress of Industrial Chemistry - which will take place in Liège, September 7th to 20th, 1958 - will have a section (section 2 of group 1) especially devoted to chemical engineering and Automatic Control. For this reason the Executive Council of IFAC has accepted the invitation to co-operate in the organization of this Congress and especially in the above mentioned section.

Papers referring to Automatic Control in chemical industry and especially in the fields of

- fractional distillation
- drying
- water treatment
- pH control

will be welcomed from the national organizations co-operating with IFAC.

These papers - the text of which should not exceed 3.500 words and the delivery of which should not exceed 25 minutes (including the ensuing discussion) - should preferably comprise first a short survey of the present state of the problem, then the scientific basis of the subject and, finally, the technical applications of the latter. They should be preceded by an abstract of about 15 lines.

The interested national organizations are requested to send these abstracts and papers in triplicate to the Secretary of IFAC bearing in mind that the Belgian Organizing Committee will have to receive the full texts of the papers before June 15th, 1958.

The 2nd International Congress of Cybernetics will be held in Namur in September 1958. Full particulars can be obtained from:

Association Internationale de Cybernétique  
13, rue Basse - Marcellé

N a m u r (Belgium)

The same Association will sponsor the 1st International Exhibition of Automation to be held in Namur in 1959.

#### France

The International Association of Analog Computation is organizing the "Second International Symposium on Analog Computation" to be held in Strasbourg, September 1st to 6th, 1958. This meeting will comprise four sections, respectively devoted to:

- problems of mathematics and theoretical physics
- analog computation equipment
- special applications and simulators
- relations between analog and digital computers

This Symposium will comprise, on one hand, surveys of the present state of analog computation techniques and, on the other hand, papers concerning more limited problems; abstracts of communications should not exceed 600 words.

All the abstracts, published in English, French and German, will be distributed to the members of the Symposium at their registration in Strasbourg.

Registration cards - entitling the holder to receive a full set of abstracts - will cost not more than 7000 French francs for a Company represented by one of its members or 3500 francs for a private individual. All particulars can be obtained from:

Mr. F.H. Raymond  
Secretary General Delegate of the International  
Association of Analog Computation  
c/o S.E.A.

138, boulevard de Verdun,  
C o u r b e v o i e (Seine) France

#### Germany

The VDI/VDE-Fachgruppe Regelungstechnik is organizing in co-operation with the Association Internationale de Cybernétique, on September 25th and 26th, 1958, in the Haus der Technik in Essen, a symposium devoted to Automatic Control Operation in Living Organisms.

The Committee for the Control of Machine Drives of the VDI/VDE-Fachgruppe Regelungstechnik is organizing on October 15th and 16th, 1958, in the main auditorium of the Technical University of Aachen, a symposium devoted to Automatic Control of Electrical Drives. The following sections are being arranged:

- 1) Open and Closed Loop Control with Programme Motion
- 2) Straight and Rotating Motion
- 3) Positioning Control

- 4) Rolling and Winding Motion
- 5) Motion Control using Computers
- 6) Special Drives and Particular Problems

The programmes of both the above symposiums will be obtainable in summer 1958 from the VDI/VDE-Fachgruppe Regelungstechnik, Prinz-Georg-Str. 79, Düsseldorf.

### Poland

A Conference on Automatic Control will be held in Warsaw on May 20th to 22th by the Institute of Technology of Warsaw (Politechnika Warszawska) and the Polish Academy of Sciences. This conference will comprise the following three sections:

- 1) - Theory of Automatic Control
- 2) - Controllers and Devices
- 3) - Automatic Control in Industry

All particulars can be obtained from: professor P.J. Nowacki, Nowy Swiat 47 m. 29, Warszawa.

### United Kingdom

A General Symposium on "Instrumentation and Computation in Process Development and Plant Design" will be held in the Central Hall, Westminster, London S.W. 1, May 11th to 13th, 1959. The programme will include the following sessions:

- 1<sup>o</sup>) Improving and Efficiency of Existing Processes
- 2<sup>o</sup>) The Design of New Processes
- 3<sup>o</sup>) The Application of On - Line Computers
- 4<sup>o</sup>) Recent Developments in Instruments, On - Line Computers and Computers for Design
- 5<sup>o</sup>) The Use of these Techniques in Large and Small Firms. Outlook for the Future.

The Symposium, which is sponsored by the British Conference on Automation and Computation, is being organized by the Institution of Chemical Engineers, the Society of Instrument Technology and the British Computer Society, in collaboration.

Further particulars can be obtained from the Honorary Secretary, the British Conference on Automation and Computation (Group B), c/o The Institution of Electrical Engineers, Savoy Place, London W.C. 2.

## IV - NEW BOOKS

### Czechoslovakia

The following abbreviations are used for the publishers:

CSAV - Nakladatelství Československa akademie věd, Prague  
 SNTL - Státní nakladatelství technické literatury, Prague  
 SVTL - Slovenske vydavateľstvo technickej literatury, Bratislava  
 VTS - Vedecko-technike spoločnosti, Prague  
 Prace - Vydavateľstvo ROH, Prague

- 1) - Automatic computers. 5th part, 292 pages, 27 crowns, CSAV, Prague, 1957.
- 2) - Studies on automatization in 1956. 462 pages, 33 crowns, CSAV, Prague, 1957.
- 3) - Transaction of the first Prague conference on information theory, statistical decision functions, random processes. (in English) 356 pages, 34 crowns, CSAV, Prague, 1957.
- 4) - Salamon: Mathematics for control engineers, 208 pages, 75 figures, 20,20 crowns, SNTL, Prague, 1957.
- 5) - Bobal and others: Automatic boiler control. 428 pages, 361 figures, 28,50 crowns, SNTL, Prague, 1957.
- 6) - Artobolevskij: Hydraulic, pneumatic and electric mechanisms. (translated from Russian) 708 pages, 236 figures, 21,70 crowns, SNTL, Prague, 1957.
- 7) - Basta: Hydraulic controls in aircraft. I (translated from Russian), 304 pages, 236 figures, 26,50 crowns, SNTL, Prague, 1957.
- 8) - Basta: Hydraulic controls in aircraft. II (translated from Russian), 340 pages, 424 figures, 28 crowns, SNTL, Prague, 1957.
- 9) - Duda: Aircraft devices I. 260 pages, 153 figures, 24,70 crowns, SNTL, Prague, 1957.
- 10) - Duda: Aircraft devices II. 160 pages, 124 figures, 17,15 crowns, SNTL, Prague, 1957.
- 11) - Duda: Aircraft devices III. 260 pages, 182 figures, 24,50 crowns, SNTL, Prague, 1957.
- 12) - Farsky: Mechanisation of chemical industries. 288 pages, 199 figures, 27,50 crowns, SNTL, Prague, 1957.
- 13) - Horak: Electric measurements 392 pages, 458 figures, 25 crowns, SNTL, Prague, 1957.
- 14) - Strnad: Industrial electronics. 340 pages 397 figures, 23,80 crowns, SNTL, Prague, 1957.

15) - Komurla: Measurements and automatic control in chemical industries. 328 pages, 260 figures, 20,20 crowns, SVTL, Bratislava, 1957.

All the above mentioned books are written in czech or slovak language, unless otherwise specified.

The following books will be published shortly:

- 1) - Automatic computers. 6th part. CSAV, Prague 1958.
- 2) - Strejc: The possibilities of practical exploitation of automatic control theory. VTS, Prague, 1958.
- 3) - Fundamentals of automatic control techniques. VTS, Prague, 1958.
- 4) - Kitov: Electronic computers (translated from Russian) SNTL, Prague, 1958.
- 5) - Jarkovsky: Fundamentals of practical calculation of diaphragms, orifices, and venturis. SNTL, Prague, 1958.
- 6) - Nechleba: Theory of indirect speed controllers. SNTL, Prague, 1958.
- 7) - Haskovec and Kotek: Small automatization. SNTL, Prague, 1958.
- 8) - Trnka and Dufek: Electric measuring devices. SNTL, Prague, 1958.
- 9) - Rumf and others: Electronics in telephone techniques (translated from German) SNTL, Prague, 1958.
- 10) - Oppelt: Automatic Control Handbook (translated from German), SNTL, Prague, 1958.
- 11) - Nadler: Oscillographic measurements. SNTL, Prague 1958.
- 12) - Strejc, Salamon, Kotek, and Balda: Fundamentals of automatic control theory. SNTL, Prague, 1958.
- 13) - Strejc, Balda, and Krampera: Industrial applications of automatic control. SNTL, Prague, 1958.
- 14) - Balda, Strejc, and Krampera: Elements of control circuits. SNTL, Prague, 1958.
- 15) - Svaton, Stepanek, and Bosek: Paper industry automatization. SNTL, Prague, 1958.
- 16) - Triska: Electric automatic control in industry. Prace, Prague 1958.

## France

H. Chestnut and R.W. Mayer: Servomechanisms and Automatic Control translated from American into French by R. Garcon). 546 pages, 347 figures, 5800 French francs. Editions Dunod, Paris, 1957. The original book appeared in 2 volumes: 1st vol. 1951, (sixth edition 1956), 2nd vol. 1955. Publisher: John Wiley & Sons Inc., New York, and Chapman & Hall Ltd., London.

This book is mainly concerned with:

- the importance of the feedback principle in the field of automatic controllers and servomechanisms
- the solution of transient problems by the method based on the Laplace transform for the solution of linear differential equations method
- control elements and their transfer functions
- the importance of attenuation in servomechanisms and automatic controllers, the analysis and synthesis of multiple loop and multiple input systems is studied from this viewpoint
- the practical study of system synthesis giving the dynamic and static error coefficients
- the characteristics required to obtain given steady state and transient responses, the nature of these characteristics is given graphically.

## Germany

Automatic Control. Modern theories and their possibilities of utilization. Published on behalf of the VDI/VDE-Fachgruppe Regelungs-technik by Gerd Müller. 483 pages, 898 figures, 48 tables, 88 marks. Edition: R. Oldenbourg, München 1957.

Report on the Congress held in Heidelberg from September 25th to 29th, 1956, organized by the VDI/VDE-Fachgruppe Regelungstechnik with co-operation of the Professional Committee on Control Mathematics of the Society of Applied Mathematics and Mechanics (GAMM).

About 80 experts from Western Europe, America, USSR, Israel, Yugoslavia, and Japan report on new professional results and fields of application. The book gives an incomparable survey of special problems as well as of the general position of Automatic Control and of its constitutive fields in the world.

H.S. Tsien: Technical Cybernetics. Translated from American into German and arranged by Dr. H. Kaltenecker. 292 pages, 152 figures and tables, 42 marks. Berliner Union, Stuttgart, 1957.

In this book, the endeavour is to build the technical side of Cybernetics into a discipline and thereby create a unified basis of the scientific principles of Automatic Control as has already been done for electricity, vibration and other fields. In view of the fundamental character of the book, the examples are not only electrical but also of mechanical and combined systems, such as the control of steam turbines or the guidance of missiles, so that the contents appeal to aerodynamic and hydraulic engineers as well as to electronic engineers. For the same reasons, details of construction and behaviour of control loop elements are not given.

As an engineering science, technical Cybernetics depends on theoretical analysis and requires therefore the use of higher mathematics.

### Poland

P.J. Nowacki, L. Szklarski, and H. Gorecki: Podstawy teorii układow automatycznej regulacji. (Principles of the Theory of Automatic Control Systems) Warsaw, March 1958.

## V - SPECIALIZED REVIEWS

### Czechoslovakia

The review "Automatisace" (Automatisation), published monthly by the "Statni nakladatelstvi technicke literatury" (SNTL) in Prague, is entirely devoted to Automatic Control problems.

The following 5 reviews are partly devoted to the same problems:

- 1) Slaboproudy obzor (Communications Review), monthly, SNTL, Prague
- 2) Electrotechnicky obzor (Electrotechnical Review), monthly, SNTL, Prague
- 3) Acta technica (every 2 months) edited by "Nakladatelstvi Ceskoslovenske Akademie Ved", Prague
- 4) Strojirenistvi (Machinery), SNTL, Prague
- 5) Chemicky Prumysl (Chemical Industry), monthly, SNTL, Prague