IFAC
INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL

Information Bulletin n°7

June 1960

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Honorary Editor of IFAC

Distributed by the Secretary of IFAC:
79, Prinz-Georg-Str., Düsseldorf (Germany)

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IFAC NEWS

First International Congress of IFAC on Automatic Control

The reader of the IFAC Bulletin, "Avtomatika i Telemechanika", "Control Engineering" and other magazines has had the possibility of following the history and growth of the International Federation of Automatic Control (IFAC) and of knowing what its purpose and methods of work are. The past two-year period of IFAC existence has been the period of its formation. The first Executive Council of IFAC with H a r o l d C h e s t n u t as President has achieved enormous and very useful work which has resulted in strengthening our international scientific organization.

THE PAPERS TO BE PRESENTED AT THE MOSCOW CONGRESS

We are now entering a new period of further development of IFAC utilizing the results of the work done so far. One of the main aspects of IFAC activity, the preparation of international congresses, is developing very fast with the active help of its national member organizations. Out of more than 300 papers submitted by control experts from 20 countries, the USSR National Committee of Automatic Control, acting as the IFAC Papers Committee, has selected 284 papers devoted to various up-to-date scientific and engineering problems of automatization for presentation at the first IFAC Congress. These papers can be divided into three principal sections:

1. Theory
2. Components
3. Applications

1. Theory

This section contains papers dealing with the present state of the theory of continuous and discrete systems, the theory of structures, stochastic and special mathematical problems of automatic control.

A large number of papers submitted by control experts from the USSR, the USA, Japan, Poland, the United Kingdom and other countries are devoted to various problems of optimum and selfadaptive control systems. Some of the papers contain descriptions of experimental methods of research.

2. Components

This section contains papers dealing with the theory and practical work of designing electric, magnetic and pneumatic elements of control systems, programming and computing devices, controlling computers and systems of automatic control. In this section are also papers dealing with special problems of the design of logical and digital elements and transducers and their application in digital computers.

3. Applications

In this section are papers containing descriptions of the design principles and the practical industrial application of automatization in various countries. Problems of automatization in machine-building, metallurgical and chemical industries, in controlling power systems, nuclear reactors, oil-extraction, electric drives and other plants are also discussed in the papers of this section. Much attention is paid to various digital computer techniques and their applications in controlling very complicated technological processes.

Papers to be presented contain very valuable scientific information which to a certain extent describe practical experience and the state of knowledge in the field of automatisation achieved in the 20 countries from which papers have been submitted and create favourable conditions for fruitful scientific discussions of most important problems of the present day automatisation. All the papers submitted were prepared by their authors in conformity with the following motto:

for theory - practical applicability
for components - maximum reliability
for applications - the highest efficiency.

When reading the preprints of the papers to be presented at the Congress, the participants will have the possibility of elucidating all problems of interest to them in scientific discussion with authors and other Congress participants. These discussions will be of great scientific interest; the preliminary study of the papers will render it possible to see the insufficiency of a description, defects in stating a problem or in determining the field of application of various methods of solving theoretical and engineering problems.

Discussion will provide the highest form of scientific contact that arises due to the activity of IFAC.

All the papers to be presented at the Congress have been classified, according to the problems discussed, into 9 subsections on "Theory" (140 papers being read and discussed in the technical sessions); into 5 subsections on "Components" (58 papers being read and discussed in the technical sessions); into 6 subsections on "Applications" (80 papers being read and discussed in the technical sessions).

The schedule of the Congress has been made with the number of parallel technical sessions reaching 10 or 11 at the most. This schedule will enable every participant of the congress to attend those technical sessions which will interest him chiefly and allow him some time for personal contacts.

It is possible that the Congress participants will naturally form three groups, but this may not isolate them one from another. The Congress schedule has been arranged with some free days or half-days during which people attending technical sessions of one section, e.g. "Theory", may attend technical sessions of the other two sections. The same refers to people attending technical sessions on "Components" and "Applications"; they will be able to get acquainted with the latest achievements in the theory of automatic control.

VISITS

The Congress programme includes visits to industrial enterprises, scientific and cultural institutions in Moscow - from June 27 to July 7; in Leningrad and Kiev - from July 3 to July 7. The main topics for the technical visits are the following:

1. Automatic production lines and automatized industrial plants, machine-tools with programming control
2. Automatic and remote control
3. Instrumentation
4. Computer technique, its design and application
5. Automatic control systems, servomechanisms, self-adaptive and other systems.

RESUMING THE DISCUSSIONS BY THE CHAIRMEN

The USSR National Committee of Automatic Control has invited approximately 100 scientists and control engineers to preside over technical sessions. The role of a technical session chairman will be to organize and lead discussion which is very important. The technical session chairmen should not only thoroughly study all the papers to be presented at their technical sessions and make comments, but they should also be in a position to foresee the possible development of the discussions both regarding various aspects of papers presented and possibilities of the development and applications of the ideas described. The chairmen must sum up the discussion in order to be able to submit to the chairmen of the corresponding IFAC Technical Committees short reports concerning the results of each discussion. On receiving such short reports the chairmen of the IFAC Technical Committees together with technical session chairmen should prepare a general report on the work of the three Congress sections including discussions. This general report will be presented at the closing plenary session of the Congress.

SUPPLEMENTARY MEETINGS

There will be held meetings of the following IFAC bodies:

the IFAC Executive Council
the IFAC Advisory and Technical Committees
the IFAC General Assembly

During these meetings the present activity of IFAC will be discussed and the plans for future IFAC activity will be outlined.

Soviet control engineers will receive so many of their foreign colleagues for the first time in the history of their country. Soviet control experts will do their best to make scientific collaboration at the Moscow Congress most useful.

A. M. Letov
President of IFAC

NEWS FROM NATIONAL MEMBERS

France

Bulletin No. 4 of AFRA (Association Française de Régulation et d'Automatisme - French Association of Automatic Control), National Member of IFAC for France, published in October 1959, gives some information on the activity of this organization which we reproduce partly here, partly under the section "Worldwide Automatic Control" of the present Bulletin.

At the date of October 31, 1959, AFRA totalized 207 members amongst which 11 collective benefactor members, 27 collective donor members and 169 individual members.

Mr. Mamy, who has been compelled by his numerous activities to resign his office of first Vice-President, has been elected Honorary President of AFRA. Mr. L. Pun, having resigned as he is presently living far away from Paris, the actual composition of the Council of AFRA is the following: Messrs. Angot, J. Baurand, Cabanes, C. Cardot, M. Chalvet, L. Chevillotte, M. Chevrie, J. Commelin, P. Desmaroux, Dougerolle, J.C. Gille, A. Le Blanc, G. Lehmann, A. Liébaut, G. de Livois, J. Loeb, M. Mamy, J.M. Moulon, P. Naslin, P. Nicolau, R. Prudhomme, F.H. Raymond, M. Roy, M. Serruys, P. Sorin, P. Toinet, M. Véron, J. Viel, J. Vivié, M. Wilfart, U. Zelbstein.

Meanwhile Mr. Max N a m y has been elected president of AFRA.

Switzerland

The third General Assembly of ASSPA (Association Suisse pour l'Automatique - Swiss Association of Automatic Control), National Member of IFAC for Switzerland, was held in Basel on November 12, 1959.

The Executive Council of ASSPA has been enlarged due to the increase of the amount of work by 4 new members: Dipl.-Ing. P.A. Bobillier (Geneva), Dipl.-Ing. H.R. Bühler (Zurich), Dipl.-Ing. B. Junker (Basel) and Dr. R. Zwicky (Baden).

At the end of 1959, ASSPA totalized 1278 members amongst which 759 individual members, 460 delegates of the 92 collective members, 24 correspondent members, 1 honorary member, 13 members of the Executive Council and 21 junior members.

United Kingdom

At the Annual General Meeting of Group B (British Group for Computation and Automatic Control) of the British Conference on Automation and Computation, National Member of IFAC for the United Kingdom, held on December 17, 1959, the Executive Council of the Group was reconstituted for 1960 as follows:

Chairman:	Mr. J.F. Coales
Vice-Chairmen:	Mr. R. Hindle
	Mr. H.W.G. Gearing
Honorary Treasurer:	Mr. S.M. Rix
Honorary Secretary:	Mr. W. Bamford
Members:	Dr. A.D. Booth
	Mr. N. Clarke
	Mr. E.C. Clear Hill
	Mr. W.C.F. Hessenberg
	Mr. N.C. Pollock
	Professor E.J. Richards

The Secretariat of the Group continues to be provided by the Institution of Electrical Engineers.

We have published, two years ago, in Bulletin No. 1 (pages 9 and 10) the list of Societies members of this Group. This list has to be presently amended in the following way:

- The Association of Certified and Corporate Accountants
- The British Computer Society
- The Chartered Institute of Secretaries
- The Institute of Actuaries
- The Institute of Bankers
- The Institute of Cost and Works Accountants
- The Institute of Fuel
- The Institute of Petroleum
- The Institute of Physics
- The Institution of Civil Engineers
- The Institution of Electrical Engineers
- The Institution of Mechanical Engineers
- The Institution of Production Engineers
- The Iron and Steel Institute
- Office Management Association
- Royal Aeronautical Society
- Society of Instrument Technology
- Observer: Department of Scientific and Industrial Research

WORLDWIDE AUTOMATIC CONTROL

International Events

THIRD CONGRESS OF ASICA 1961

(Association Internationale de Calcul Analogique - International Association of Analog Computation)

The 3rd Congress of ASICA will be held from September 4 to 9, 1961 in Belgrade (Yougoslavia) jointly with the General Assembly of this Association. The Organizing Committee will be created by the Yugoslavian Committee on Electronics, Telecommunications, Automatic Control and Nuclear Techniques, the chairman of which is Dr. Rajko Tomovic, vice-president of ASICA.

The official languages of the Congress will be English, French, German and Russian and a simultaneous translation in English, French and Russian is already vizualized.

Technical visits to enterprises in Yougoslavia connected with computers or elements of the latter as well as tourist excursions are provided for.

All correspondence in connection with this Congress should be sent to

ASICA
50 avenue Franklin D. Roosevelt
Brussels (Belgium)

DEVELOPMENT OF IFIPS

(International Federation of Information Processing Societies)

We have announced in our Bulletin No. 6 (pages 13 and 14) the creation of IFIPS and stated that the statutes of this Federation will become effective on the 1st of January 1960 under the condition of being ratified by at least 7 of the 15 national organizations represented at the preparatory meeting held in Paris on June 18, 1959.

Since then, 12 countries (Canada, Denmark, Finland, France, Western Germany, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, USA and USSR) have officially joined IFIPS.

The National Members of IFIPS are listed below with their names and mailing addresses (abbreviated: M.A.)

CANADA — The Computing and Data Processing Society of Canada
M.A.: Prof. C.C. Gotlieb, Computation Centre
University of Toronto, Toronto

DENMARK — The Danish Academy of Technical Sciences
M.A.: Mr. Niels Ivar Bech, Managing Director,
Regnecentralen, Gl. Carlsbergvej 2
Copenhagen, Valby

FINLAND — The Finnish National Committee for Information Processing
M.A.: Prof. Tenti Laasonen
Finland Institute of Technology, Helsinki

FRANCE — Association Française de Calcul
M.A.: J. Carteron
Direction des Etudes et Recherches
de l'Electricité de France,
Service des Etudes mathématiques et de
leurs applications nouvelles,
12, place des Etats-Unis, Paris 16e

WESTERN GERMANY — Deutsche Arbeitsgemeinschaft für Rechenanlagen (DARA)
M.A.: Prof. Dr. A. Walther
Technische Hochschule Darmstadt

NETHERLANDS — Nederlands Rekenmachine Genootschap
M.A.: The Secretary of the Nederlands
Rekenmachine Genootschap
2e Boerhaavestraat 49, Amsterdam (O)

SPAIN — Consejo Superior de investigaciones Cientificas
M.A.: Prof. Dr. José Garcia Santesmases
Director, Instituto de Electricidad
y Automatica, Facultad de Ciencias,
Ciudad Universitaria, Madrid (3)

SWEDEN — Svenska Samfundet för Informationsbehandling
M.A.: The Swedish Society for Information Processing, c/o Matematikmaskinnämnden
Box 6131, Stockholm (6)

SWITZERLAND — The Swiss Association of Automatic Control (ASPA)
M.A.: Mr. Bobillier, c/o I.B.M.
16, rue du Mont-Blanc, Geneva

UNITED KINGDOM — The British Computer Society
M.A.: Dr. M.V. Wilkes, Director
The University Mathematical Laboratory
Corn Exchange Street, Cambridge

U S A — National Joint Computer Committee
M.A.: Prof. Harry H. Goode, Chairman,
Electrical Engineering Department
The University of Michigan
Ann Arbor, Michigan

U S S R — The Academy of Sciences of the USSR
M.A.: Computing Centre of the USSR Academy of Sciences, Academichesky Proezd 28,
Moskau B 312

ACTIVITIES OF C.I.P.C.

(Centre International Provisoire de Calcul - Provisional International Computation Centre)

The C.I.P.C., created in September 1957 on the basis of an agreement between UNESCO and the Italian Institute of Higher Mathematics, is in operation in Rome since January 1958.

Two symposiums have been organized since 1958 by CIPS. The first symposium (June 30 - July 1, 1958) was devoted to problems of d i g i t a l a n a l y s i s , whilst the second (January 20 - 30, 1959) was devoted to d i g i t a l p r o c e s s i n g o f r e a l - c h a r a c t e r i s t i c p a r t i a l - d e r i v a t i v e e q u a t i o n s .

The proceedings of both symposiums can be obtained from: CIPS, Palazzo degli Uffici, Zona dell'Eur., Rome.

This Centre will organize a Symposium on the numerical treatment of ordinary differential, integral and integro-differential equations, to be held at the University of Rome from September 20 to 24, 1960 with the following programme:

S e c t i o n 1 - D i f f e r e n t i a l E q u a t i o n s :

- "Convergence acceleration for iterative difference methods" by F.L. Bauer (Germany)
- "Error estimation in solution of boundary conditions problems" by C. Blanc (Switzerland)
- "On some applications of approximate integration" by F. Ceschino (France)
- "The numerical solution of ordinary differential equations in Chebyshev series" by C. Clenshaw (United Kingdom)
- "On the numerical solution of and on uniqueness theorems for ordinary and hyperbolic differential equations" by J. Diaz (USA)
- "A new method of solution of non-linear second-order differential equations with spread boundary conditions" by A. Douglas (United Kingdom)
- "An application of the distribution theory' by E.Fenyo (Hungary)
- "Numerical problems for the differential equations of Schlicht function theory" by P. Garabedian (USA)
- "Numerical solution of 2-point eigenvalue equations with one boundary at infinity" by D.C. Gilles (United Kingdom)
- "On the general solution of some non-linear differential equations" by M. Goto (Japan)
- "Pointwise convergence of the discrete ordinate method" by H. B. Keller (USA)
- "Recent research in the differential problems domain" by J. Kuntzmann (France)
- "Numerical integration of ordinary differential equations by trigonometric interpolation" by C. Lanczos (Ireland)
- "Analytical solution and numerical singularities of a class of boundary conditions problems" by R. Lattes and J.L. Lions (France)
- "On the exhaustion of remaining Taylor series terms by iteration in boundary conditions problems with ordinary differential equations" by R. Nicolovius (Germany)
- "Error estimate for approximate solutions of ordinary differential equations" by J. Schroder (Germany)

S e c t i o n 2 - I n t e g r a l a n d i n t e g r o - d i f f e r e n t i a l e q u a t i o n s

- "Solution of the Boltzmann-Hilbert integral equation" by Z. Alterman (Israel)
- "Fourier transforms and coefficients of a Taylor or Dirichlet series" by N. Artemiadis (Greece)
- "The numerical solution of non-linear integral equations by non-linear programming" by J. Douglas Jr. (USA)
- "A new method of iteration for the solution of integral and integro-differential equations" by T. Frey (Hungary)
- "On the numerical solution of a singular integral equation of the first kind" by E. Isaacson (USA)
- "On the numerical integration of Volterra integral equations" by M.J. Laudet (France)
- "The solution of integro-differential equations which occur in the theory of atomic scattering" by R.Mac Carroll (United Kingdom)
- "Error majoration in a method of numerical computation of the solution of a system of Volterra linear integral equations" by M. Picone (Italy)
- "Numerical solution of an integro-differential equation related to a problem of heat conduction" by C. Pucci (Italy)
- "The condition of integral equations" by J. Todd (USA)
- "The numerical solution of ordinary linear integral and integro-differential equations" by A. Young (United Kingdom)

S e c t i o n 3 - A p p l i c a t i o n s

- "Some computations in the mechanics of plasmas" by J.Berkowitz (USA)
- "Application of computing techniques to field theory and nuclear physics" by G. Brown (United Kingdom)
- "On the asymptotic behaviour of certain one-dimensional flows" by J.H. Giese (USA)
- "The numerical solution of the differential equations governing the motion of viscous fluid between two rotating discs" by G.N. Lance (United Kingdom)
- "Integral equations of gas dynamics" by R. Sauer (Germany)
- "Error analysis for the numerical solutions of certain differential equations in gas dynamics" by G. Seegmüller (Germany)
- "The Monte-Carlo method for the solution of the Boltzmann equation" by W. Urich (Germany)
- "On the spectrum of a mono-energetic neutron transport operator" by R. Van Norton (USA)

SECOND INTERNATIONAL CONFERENCE ON OPERATIONAL RESEARCH

The International Federation of Operational Research Societies organizes its second international conference in Aix-en-Provence, France, from September 5 to 10, 1960.

All particulars can be obtained from national Societies of Operational Research.

Austria

The recent activities of the ÖAA (Österreichischer Arbeitsausschuss für Automatisierung - Austrian Committee for Automatisation) were partly concerned with small-business and low-cost automatisation allowing the use of simple electric, pneumatic or hydraulic devices in order to achieve an increase of mechanisation or a semi-automatisation of small and medium enterprises. These activities were also concerned with automatisation of office work.

Thirteen lectures were given on the following topics:

- "Automatisation of industrial computing by means of punched-card methods"
- "Input and output elements in data-processing installations"
- "Digital methods in remote-measuring and remote-computing techniques"
- "Modern computer techniques"
- "Programmation and automatisation"
- "Heart frequency control by nerves as a Control problem"
- "Automatized organisation in workshops"
- "Scientific basis, state of art and development prospects of full automatisation in USSR"
- "Automatisation and Control techniques in industry"
- "The use of hydraulic devices in machines and vessels"
- "Automatic machines for galvanisation and metal surface treatments"
- "Thread-rolling machines for thread production and cold shaping"
- "Magnetic-tape components and their use in industry"
- "The future place of electronics in the management control system"

These lectures were given by Austrian, German, Swiss, American and Russian experts.

Two seminars of 2 days each were held by professor Ch. Linsky (USA) on low-cost automatisation, in co-operation with the Economic Developments Institute of Vienna.

In twelve group sessions and lectures in Vienna and other towns, such topics as "Introduction in Automatic Control" and "Hydraulics and Pneumatics as means for low-cost and full automatisation" as well as "Transistors and semi-conductors" were covered.

Two panel sessions allowed discussions on "Autcmatisation in chemical industry" and "Hydraulic storage in machines and vessels".

Four excursions to the Wienerberger Glass Works, to the Austria Enameling Works, to the Halleiner Motor Works and to Vedepha where a display of some partly-automatized works and two film projections gave a glimpse of the state of automatisation in Germany, France, Italy, the United Kingdom and the USA.

France

ACTIVITIES OF AFRA

(Association Française de Régulation et d'Automatisme - French Association of Automatic Control)

In 1959 the following lectures were sponsored by AFRA:

1) In the Society of Industrial Chemistry:

- "Basic scientific data" by J. Loeb
- "The main technical means available to the Engineer" by P. Naslin

2) In Paris:

- "A new construction technique of electric motors: the printed-circuit motor" by F. Raymond
- "Centralized control and recording by means of digital computers in process and power industries" by J. Auricoste
- "Automatic control in American thermal power stations" by M.Wilfart
- "The first harmonic approximation in the study of oscillators" by J. Loeb
- "Technical memories of a journey to USSR" by J.C. Gille and Pelegrin

At the Institute of Materials and Mechanical Construction:

- "Feedback systems with several degrees of freedom. Systems with and without interaction" by P. Naslin
- "Application of digital computers to the centralized control of industrial processes" by J. Auricoste
- "Descriptions of an universal broaching, fraising, boring and tapping machine with digital co-ordinate definition and automatic control by means of a punched tape" by J. Lombard
- "Automatisation of installations or machines by elementary means" by R. Molle (Belgium)

At the Technical Improvements Centre:

- "Non-linear stability in the recent Soviet technical literature" by J.C. Gille
- "Automatic control of gas-heated boilers" by G. de Livois
- "Centralized control of chemical units and oil refineries by means of digital computers" by J. Auricoste and G. Gau
- "The use of transistors in Automatic Control" by Mr. Lejon
- "New trends in automatized management" by U. Zelbstein and V. Gold

At the Society of Radio Engineers:

- "Deconvolution" by J. Loeb

At the Society of French Civil Engineers:

- "The Congress and Exhibition of the Instrument Society of America (Chicago, September 1959)" by J. Loeb

3) In Grenoble:

- "Ways open to research in Automatic Control" by J. Loeb.

4) In Caen:

- "Automatic Control of temperatures" by A. Liébaut
- "Remote control in electric power distribution networks" by C. Cardot

5) In Bordeaux:

- "Automatic Control of gas-heated boilers" by G. de Livois
- "Materials and elements used in Automatic Control" by G.Lehmann
- "Description of an universal machine with automatic control by means of a punched tape" by J. Lombard

6) In Saint-Etienne:

- "Materials and elements used in Automatic Control" by G.Lehmann

INTERNATIONAL EXHIBITION OF RADIO AND ELECTRONIC COMPONENTS

This Exhibition was held in Paris from February 19 to 23, 1960 under the auspices of the National Federation of Electronic Industries and the Syndicate of Radio and Electronic Component Industries.

Germany

The Haus der Technik (Center of Technology) of Essen and the French Cultural Centre of the same town organized, on November 13, 1959 in Essen, a Symposium on automatisation which gave a very interesting opportunity of comparing developments in France and Germany in the field of automatisation.

The VDE-VDI Fachgruppe Elektrisches und Wärmetechnisches Messen (Professional Group for electric and heat measurements) organized a symposium on "Semi-conductor components in measuring techniques" on May 24 and 25, 1960 in Mannheim with the following programme:

- "Introduction" by Prof. Dr.-Ing. F. Moeller
- "Semi-conductors as a material for electric components" by Prof. Dr. H. Welker
- "Semi-conductor diodes for measuring purposes" by Dr.E.Arends
- "Measuring devices and equipment with semi-conductor diodes" by Dipl.-Phys. M. Sangl
- "The transistor as a component of measuring techniques" by Dr.-Ing. Grassl
- "The transistor as a measuring amplifier" by Dipl.-Ing.H.Gottmann
- "The transistor as a relay" by Dr.-Ing. K. Homilius
- "Components for current problems using transistors" by Dr. L. Beug
- "Semi-conductors as thermo-electrical converters" by Dipl.-Ing. D. Gravenhorst
- "Semi-conductors as mechano-electrical converters" by Dipl.-Phys. K.F. Zobel

- "Semi-conductors as optico-electrical converters" by Dipl.-Phys. H. O. Kleiner
- "Basical features and properties of Hall effect generators" by Dr. F. Kuhrt
- "Use of Hall effect generators in measuring techniques" by Dipl.-Ing. E. Schwaibold

Switzerland

THE 7TH SYMPOSIUM OF ASSPA

(Association Suisse pour l'Automatique - Swiss Association of Automatic Control)

The 7th Symposium of ASSPA is held in Meyrin (near Geneva) on May 18 and 19, 1960, in cooperation with CERN (Centre Européen de Recherches Nucléaires - European Centre of Nuclear Research) on the following general topic:

"Electric Control Problems in CERN Particle Accelerators in Geneva"

The following papers are read at this Symposium:

- "Aims and means of CERN (General Introduction)" by Mr.Mac Cab
- "Some problems in building Particle Accelerators" by Prof. Dr. Karl Schmelzer

The 4 following papers are more particularly devoted to the proton Synchrotron of 25 GeV:

- "Control problems with the pulsed power supply of the CERN Magnet. DC and AC Rectifiers for 40 megawatts" by Dr. Fritz Grütter
- "Acceleration-frequency monitoring by a Hall-effect simulator" by Dr.-Ing. Alfredo Susini
- "Automatic tuning of the Acceleration System (HF-Tuning)" by Dipl.-Ing. Tor Lingjärde
- "Self-control of the Acceleration Process by the particle ray (stability problem)" by Dipl.-Ing. Wolfgang Schnell
- "Automatic tuning of the cavity resonators in the 50 MeV linear accelerator" by Peter Bramham
- "Crest voltmeter for short impulses (in the microsecond domain)" by Dr. Max Geiger
- "Automatic stabilization of the field in the inflector bending magnets. Precision 10^{-4}" by Dr. Montague
- "High accuracy stabilization of an electrostatic generator of 150 kV DC" by Mr. Morel
- "Automatic field error correction in the magnets of the proton Synchrotron" by Ir. Simon van de Meer
- "Exploitation of photographs of nuclear events taking place in trajectory chambers" by Dr. Lucien Montanet
- "Methods and devices for semi-automatic evaluation of photographed particle tracks" by Dr. Detmar Wiscott

MEETING DEVOTED TO "AUTOMATISATION AND MEN"

This meeting, organized by the Group of Industrial Engineers of the Geneva Section of the SIA (Societe des Ingenieurs et Architectes - Swiss Society of Engineers and Architects) in co-operation with ASSPA, is held on May 14 and 15, 1960 at Mont-Pélérin.

After an introduction by Dr. E. Choisy, chairman, the following papers will be read and discussed:

- "Some economic aspects of automatisation" by G. Hartmann
- "Social consequences of automatisation" by H. de Bivort
- "Labour reaction to development of automatisation" by E.Giroud
- "Civilisation and automatisation" by R. Racine
- "Demographic evolution and automatisation" by P. Rieben
- "Employers point of view on automatisation" by L. Du Pasquier
- "Point of view of a physician on automatisation" by Dr. M. Tchicaloff

General conclusions by Dr. E. Choisy.

LECTURES ON AUTOMATIC CONTROL

From February to April 1960 the "Interessengemeinschaft der Technischen Angestelltenverbände" (Union of Technical Employees Associations) has organized, every week, lectures on Automatic Control Problems given simultaneously in Berne and in Zurich. The following topics were covered:

- "The science of automatisation" by F. Wyttenbach
- "Qualified labour and automatisation" by F. Wyttenbach
- "Vocational guidance and choice and automatisation" by Dr. Heiniger
- "Hydraulic and pneumatic valves and Control" by Mr. Benz
- "Electromagnets and electric valves as important elements of automatisation" by H. Schraff
- "Automatisation of machine-tools" by F. Wyttenbach and W.Horber
- "Supervision of plant operation by means of modern control" by Messrs. Tappolet and Hägler
- "Punched-card practice" by H. Pieper
- "What is electronics ?" by Professor W. Daenzer
- "The technical employee and automatisation" by F. Wyttenbach
- "Automatisation in data processing" by Dr. Humbel
- "Automatisation abroad" by H. Haechler

These 12 lectures were illustrated by film projections and visits to enterprises.

ACTIVITIES OF THE GENEVA SECTION OF ASSPA

During the winter 1959-1960, the Geneva Section of ASSPA has organized at the Physical Institute of the University weekly lectures which had a large success. These lectures (the whole scope of which will be published shortly) covered the following topics:

Section 1 - A u t o m a t i c C o n t r o l

- "The language and symbols of Automatic Control" by Dr.M.Cuénod
- "Stability criteria used in Automatic Control analysis" by Del Pedro and L. Pun

- "Study of the controlled variable variations and of the control accuracy":
  - "by means of operational calculus" by Dr.M.Cuénod
  - "by means of impulse analysis" by Dr. M. Cuénod
  - "by means of Analog Computer simulation" by G. Piguet

Section 2 - I n d u s t r i a l A u t o m a t i c s

- "Sequential controllers" by V. Piccaud
- "Transfer assembly lines of the Renault Motor Works" by P. Bézier
- "Pneumatic control" by P. Martin
- "Automatisation of concrete production in a large dam yard" by J. Desmeules
- "Digital control of machine tools" by R. Viret
- "Full computation of a feedback positioning system" by P. Willems

Section 3 - A u t o m a t i c D a t a P r o c e s s i n g

- "Digital and Analog Computers, two complementary tools for computation" by P.A. Bobillier and G. Piguet
- "Statistical quality control" by A. Bertschinger
- "Data processing and scientific computation" by P.A.Bobillier
- "Analytical methods for analysing economic problems" by A. Kaufmann
- "Experimental methods for analysing economic problems" by A. Kaufmann
- "Codification and retrieval of information. Automatic documentation" by P.A. Bobillier

Section 4 - A p p l i c a t i o n s o f A u t o m a t i c C o n t r o l

- "Application of Automatic Control to power production" by Dr. M. Cuénod
- "Application of Automatic Control to chemical and transforming industries" by A. Necker
- "Application of Automatic Control to heating and air-conditioning problems" by J. Allemann
- "Two outstanding American achievements in the field of Automatic Control" by D.N.Chorafas

Besides these lectures, a working group was created with the aim of studying sampled-data control systems theory.

United Kingdom

CONFERENCE ON NON-DESTRUCTIVE TESTING IN ELECTRICAL ENGINEERING

The Measurement and Control Section of the Institution of Electrical Engineers, in association with the British National Committee on Non-Destructive Testing is making arrangements for a Conference on Non-Destructive Testing in Electrical Engineering to be held at the Institution from 8th to 10th November 1961. The theme of the Conference will be:

"How best may the Electrical Engineer test the quality and endurance of his materials and structures ?"

Anyone wishing to submit a paper for consideration by the Organizing Committee of the Conference should communicate with:

The Secretary of the Institution of
Electrical Engineers,
Savoy Place, London W.C.2
Telephone: Covent Garden 1871

BRITISH CONVENTION ON AUTOMATIC CONTROL

As the number of papers submitted by British authors for the Moscow Congress exceeded the time and space allocated by the organizers of this congress, arrangements are being made also for a British Convention on this subject to be held in London on September 1960.

The arrangements for this convention are in the hands of:

The Honorary Secretary
Group A, B.C.A.C. (British Conference on Automation and Computation) c/o The Institution of Mechanical Engineers
London

by whom further announcements will be made.

DISCUSSION MEETINGS ON RELIABILITY AND MAINTENANCE OF DIGITAL COMPUTER SYSTEMS: MANAGERIAL AND ENGINEERING ASPECTS.

The above meetings were held on January 20 and 21, 1960 at the Institution of Electrical Engineers under the aegis of the B.C.A.C. The following contributions were made:

1) Reliability of Organizational Structures

- "Operational logging and recording techniques used in Government automatic data-processing installations and provisional deductions from results so far obtained" by J.H.H.Merriman and C.W. Mortby
- "Management and organization problems" by C.P.H. Marks
- "Experience with organizational problems in a business computer installation" by H.E.C. Nash

2) Improving reliability by programming strategy

- "Checking in electronic computation" by L. Fox and J.S.Rollett
- "Programming strategy for protection against Computer and operator errors in business programmes using large files of data contained on magnetic tapes" by P.M. Hunt
- "Programming techniques for protection against computer and operator/user errors" by B.R. Tozer

3) Maintenance and fault-diagnostic techniques

- "Some Engineering factors of importance in relation to reliability of Government automatic data-processing systems" by J.W. Freebody and K.M. Heron
- "Preventive maintenance procedures in a computer" by R.P.Gibson and E.H. Lenaerts
- "Systematic detailed recording of circuit safety margins as an aid to computer maintenance " by J.W.A. Richardson.

4) Experience of system reliability

- "Component reliability" by G.W.A. Dummer
- "The relative importance of reliability and accuracy for different types of systems" by E.P.G. Wright and A.Y.Cooper
- "Experience in the use of marginal-testing techniques in valve and transistor equipment" by J. P. Bunt

5) The Influence of Engineering Design on Reliability

- "Some factors affecting reliability" by A.A.Robinson and R.E. Hodgkinson
- "The influence of computer design on reliability and maintenance" by P.H.U. Maguire
- "Statistics and Electronic units" by Dipl.-Ing. A.Kruithof
- "Computer methods applied to the design of digital circuits for reliability" by G.W. Monk and N.E. Wiseman

6) Factors affecting the reliability of peripheral equipment

- "Reliability of magnetic-tape systems" by D.W. Willis
- "Some techniques used in improving the reliability of input and output equipment" by C.C. Jones
- "Factors affecting the reliability of peripheral equipment" by F.W. Pearson

BRITISH INSTRUMENTS EXHIBITION IN MOSCOW

An Exhibition of British Scientific and Industrial Instruments will be held at the Polytechnical Museum in Moscow between 18 - 29th June, 1960. This Exhibition is being organized by The Scientific Instrument Manufacturers' Association of Great Britain in co-operation with the All Union Chamber of Commerce, Moscow. The Exhibition will be open on Tuesdays, Thursdays and Saturdays, from 14.00 to 21.00 and on Wednesdays, Fridays and Sundays, from 10.00 to 17.00.

41 British firms are showing instruments of many varieties ranging from laboratory equipment to industrial measuring and control instrumentation. A programme of lectures will take place throughout the Exhibition. Sessions will cover Digital Techniques, Spectrophotometry, Non-Destructive Testing and Pressure Measurement, Ultra Pure Water and Ultrasonic Cleaning, Noise and Vibration, Electronic Instruments, Medical Instruments, Analysis of Food Stuffs, and Analytical Instrumentation of various types.

FREE IDEAS, OPINIONS AND SUGGESTIONS

NOTE FROM THE EDITOR

By courtesy of the author, we quote below the English translation of an Editorial published in French and Flemish by Mr. G. de Henau in the January 1960 issue of the review "A" (Automatisme) published by IBRA (Institut Belge de Régulation et d'Automatisme - Belgian Institute of Automatic Control). The opinion of Mr. G. de Henau, an outstanding Belgian expert in automatization of chemical and oil-refining industries, seems to us most valuable since it probably reflects the position not only of the Belgian industry but, probably, of industries in many other countries.

It is, of course, obvious that nobody wishes to contest the use and even the necessity of advanced research and discussion for the development of Automatic Control, as this is actually the main way of achieving progress in this particular field as well as in many other fields. Nevertheless, this kind of activity is necessarily restricted to a relatively small number of experts in each country and, besides this very useful and even necessary work, there subsists a major problem which consists in acquainting the largest possible number of industrial engineers, not only in the course of their actual work in industry for the older ones, with the basic theory and practice of Automatic Control.

This is certainly the only way of bringing them to realize the interest of automatization, especially as decisions in this matter fall frequently within the sphere of influence of older engineers not always trained in school to modern concepts of Automatic Control. How could it be really expected indeed that they would give their enthusiastic adhesion to solutions of problems of which they are not always aware and which they sometimes know only in a quite superficial way?

This concern necessitates, of course, a quite different approach from that of discussing advanced problems in restricted circles of experts or even from that of teaching Automatic Control in modern engineering schools. It excludes the possibility of any "aristocratization" of the knowledge of Automatic Control by more or less restricting the activities of Control experts to the discussion of advanced problems. It necessitates, on the contrary, besides this very useful activity in relatively small groups of experts, a "democratization" of the knowledge of more day-to-day control problems and their solutions and their large and understandable diffusion amongst the highest possible number of industrial engineers who can in fact only in this way become, sooner or later, Control Engineers themselves.

This is why the editorial of Mr. G. de Henau seems to us most significant and this is why we have found some merit in publishing its English translation in the Information Bulletin of IFAC.

Prof. Ing. Dr. Victor Broida, Editor

REMARKS OF MR. G. DE HENAU ON AUTOMATIC CONTROL TRAINING

The Antwerp Section of IBRA together with the "Technologisch Instituut" of the "Koninklijk Vlaamse Ingenieursvereniging" had the privilege of organizing, at the end of 1959, a symposium on Systems Engineering, which succeeded in bringing forward, for a selected audience, what were the methods required by the Belgian industry in the field of automatisation of already existing, as well as of new, installations. It is essential to know first of all, and very thoroughly, the activity to be automatized and, in order to achieve this, it is always necessary to call upon an analysis of the involved phenomena; it is also essential to know the automatic equipment itself and to be able to appreciate its operating features including their cost.

On the other hand, in 1959, we saw prominent personalities struggling with the deplorable state in which we found our technical training, if not our whole educational system. Recommendations have now been formulated and we subscribe to many of them. If this re-organization is to result in engineers being in a position to advise those who control policy, in what field is this more important than in that of automization? We will therefore try to illustrate some of the basic principles. We have previously written that in any analysis of the dynamic behaviour of a production process, thought and discussion in a group of people must usually proceed the application of mathematical methods. This leads us to propound the following axiom, banal in itself but too often neglected, "No-one can be effectively responsible for scientific techniques without first acquiring at college sound common sense, logical training and the ability to express his thoughts".

There is no substitute for speech, with all its inflections, and it must be taught and practised in college and afterwards and consistently improved by reading. We all know how lacking our college courses are at the present time from the point of view of training the intellect of the student and of teaching him the elements of logical reasoning and the power of expression.

We will now consider the need for different types of technicians and engineers for the furtherance of automization. Mechanically, all components must be well-designed, properly operated and well-maintained. Capable instrument engineers are needed for these tasks and, after training in technical schools, we cannot advise them too strongly to undergo a period of instruction with an instrument manufacturer. If quality of production is to be maintained at reasonable cost, the production line must be the best possible with the tools available and must be properly managed. Those technicians and engineers who prefer management to design and who therefore wish to apply their abilities and training on the shop floor, must first of all have a feeling for practical things, must know how and why the various tools and instruments, with which they are concerned, have been designed and, finally, must be able to correct defects in their operation. They must, therefore, be trained to understand and act, rather than to invent. We cannot therefore fully endorse the definition of an engineer as given by the Commission of Investigation of Civil Engineers Training created by F.A.B.I. (Fédération des Associations Belges d'Ingénieurs -

Federation of Belgian Engineers Associations): "The engineer must always be the man who invents or who finds new methods, new organizations and new orientations".

In Belgium, probably the majority of Civil Engineers at all levels of responsibility right up to the management, devote themselves to the operation of production lines. We believe that for these engineers, a thorough practical knowledge of automatic systems, particularly as applied in industrial installations, is necessary. This would generally be part of their course of mechanics but it should be seen that they do not get an unnecessarily theoretical training which they will not need.

Then comes the automatic control expert who, as we have said in Antwerp, must for the chemical industry, with the scientist and the expert in chemical engineering, be the third in the team of architects in charge of planning new installations. In fields other than the chemical industry, this automatic control expert will co-operate with mechanical experts and others in order to make up the most effective team.

This automatic control expert is, by this time, a specialist. After his training, whether as a mechanical, an electrical or a chemical engineer, he will have to attain mastery of his speciality. In our opinion, he will have to achieve this by attending complementary or postgraduate courses, by having longer or shorter periods of instruction and by gathering together his own notes from textbooks and specialized technical reviews. Our engineers who have to design and build new automatic plant will have to follow the same course.

Finally, we must consider the important category of the managers of our companies. It is important, even essential, that these should be able to understand what good automization can contribute to their activities in speed, accuracy, efficiency and productivity. They need not know the details of any one branch of engineering but they must not overlook the principles of automization. If they are ignorant of these principles, they will be late-comers. If they ignore them they will lead their industry to stagnation. They must, therefore, keep themselves well-informed by reading scientific articles, specially prepared for them in the monthly reviews, which reach their desks. On our side, we must ensure that from time to time such suitable articles are published. It is obvious that we must first of all convince the leaders of our industries of the advantages of automization before we can start on the modernization which we advocate.

G. de Hénau

PUBLICATIONS

Belgium

The January 1960 issue of the review "A" (Automatisme) published by IBRA (Institut Belge de Régulation et d'Automatisme - Belgian Institute of Automatic Control) contains besides the above-mentioned editorial by Mr. G. de Hénau, the following articles:

- "Note upon the convergence of a numerical computation procedure of transient phenomena" by J. Charles
- "Application of magnetic amplifiers" by J. d'Adler - Racz
- "Programmed machines" by P. Naslin
- "Intervention of the notions of programme, logic and feedback in industrial automatic systems. Practical examples." by P. Willems

France

NEW BOOKS

- SERVO-MECHANISM PRACTICE (La pratique des servo-mécanismes) by William R. Ahrendt translated by Cl. Cardot. Publ. by Librairie Polytechnique Ch. Béranger, Paris. 356 pages, 274 figures, 66 NF (New Francs).

- "ELECTRONICS AND ITS APPLICATIONS" (L'electronique et ses applications") by E. Gillon, 2nd edition 1960. Publ. by Dunod, Paris, 370 pages, 372 figures, 44.65 NF.

- PHYSICS AND TECHNIQUES OF ELECTRONIC TUBES (Physique et technique des tubes electroniques) by R. Champeix. Publ. by Dunod, Paris.
  Volume 1: Elements of vacuum techniques, 1958
  228 pages, 179 figures, 30.50 NF.
  Volume 2: Theory and construction of tubes, 1960
  428 pages, 300 figures, 56.80 NF.

- DIGITAL COMPUTERS, ELEMENTS AND CIRCUITS (Calculateurs numeriques, elements et circuits) by R.K. Richards, translated into French by H. Soubies-Camy. Publ. by Dunod, Paris, 538 pages, 166 figures.

- INTEGRATED DATA PROCESSING. CREATION OF A SYSTEM FOR PREPARING AND CO-ORDINATING INFORMATIONS. (Exploitation integree des donnees. Etablissement d'un systeme de preparation et de co-ordination des informations). Report presented to the American Management Association, translated by P. Pepe, publ. by Dunod, Paris, 260 pages, 18 N.F.

- PROCEEDINGS OF THE 2ND INTERNATIONAL CONFERENCE OF ANALOG COMPUTATION, STRASBOURG, SEPTEMBER 1958. Publ. by Masson & Co. 120 Boulevard Saint-Germain, Paris (6°), 85 papers, 600 pages, 500 figures, 110 NF.

- REPEATING ANALOG COMPUTERS (Calculateurs analogiques répétitifs") by R a j c o T o m o v i c .
Publ. by Masson & Co., Paris, 186 pages, 94 figures, 30 NF.
- AUTOMATIC CONTROL OF INFORMATION (L'automatisme des informations) by F.H. R a y m o n d . Publ. by Masson & Co., Paris.
188 pages, 51 figures, 16 NF.
- SERVO-MECHANISMS, THEORY AND TECHNOLOGY (Servo-mecanismes, théorie et technologie) by M. B o n a m y .
Publ. by Masson & Co., Paris, 284 pages, 352 figures.
- PROBABILITY AND INFORMATION (Probabilité et information) by A. M. Y a g l o m and I. M. Y a g l o m , translated from Russian into French by W. Mercouroff.
Publ. by Dunod, Paris, 1959, 185 pages, 16 figures.
- ELECTRONIC DIGITAL AND ANALOG COMPUTERS (Machines à calculer électroniques, arithmétiques et analogiques) by M. P é l é g r i n and P. de V a l r o g e r .
Publ. by Dunod, Paris, 1959, 411 pages.
- INDUSTRIAL AUTOMATIZATION (Automatisation Industrielle) by W. H o r n a u e r , translated from German into French by A. Huchet. Publ. by Dunod, Paris, 1959, 236 pages, 172 fig.
- TERMINOLOGY OF ELECTRONIC DATA PROCESSING (Terminologie de l'exploitation electronique des informations). Glossary issued by the Office of the Commissionner of the Equipment Plan and Productivity, Administrative Organization Department.
Publ. by the Official Publications Sales Department,
39 rue de la Convention, Paris, 3.60 NF.
- INTRODUCTION TO OPERATIONAL RESEARCH (Introduction à la recherche opérationnelle) by J. E. M a c C l a s k e y and F. N. T r e g e t h e r e , publ. by Dunod, Paris, 206 pages, 38 figures, 18.50 NF.
- OPERATIONAL RESEARCH, PRACTICAL EXAMPLES AND METHOD (Recherche opérationnelle, cas pratiques et méthode) by J. F. M a c C l o s k e y and J. M. C o p p i n g e r .
Publ. by Dunod, Paris, 248 pages.
- BASIC ENGINEERS HANDBOOK (Manuel de base de l'ingénieur) Volume 1, by S. H. T i d e s t r ö m . Publ. by Dunod, Paris, 648 pages.
- APPLIED METROLOGY (Métrologie Appliquée), 3rd édition, 1959, by M. D e n i s - Papin, J. V a l l o t and A. F o u i l l e.
Publ. by Dunod, Paris, 299 pages, 236 figures.

REVIEWS

Proceedings of the International Association for Analog Computation. Publ. quarterly by Masson & Co., 120 Boulevard Saint-Germain, Paris (6°). Annual subscription rates: 34.50 NF for France and the French Commonwealth, $ 7,05 for other countries.

Germany

NEW BOOKS

- ELECTRONIC ANALOG COMPUTERS (Elektronische Analogrechner) by Dipl.-Ing. Dietrich E r n s t . Publ. by R. Oldenbourg Verlag, München, 315 pages, 227 figures, 38 marks.
- INFORMATION PROCESSING. Proceedings of the International Conference held under the auspices of UNESCO in Paris on 15-20 June, 1959. (Text in English and French with abstracts in German, Spanish and Russian). For more details, see our Bulletin No. 6 (pages 74 and 75) in which this publication was announced. Publ. by R. Oldenbourg-Verlag, München, 600 pages, 84 marks.
- ELEMENTARY INFORMATION THEORY (Elementare Informationstheorie) by Privatdozent Z e m a n e k . Publ. by R. Oldenbourg-Verlag, München 1959. 120 pages, 28 figures, 14.20 marks.
- ELEMENTS OF SWITCHING ALGEBRA (Elemente der Schaltungsalgebra) by Dipl.-Ing. Ulrich W e y h . Publ. by R. Oldenbourg-Verlag, München 1960, 116 pages, 109 figures, 13.80 marks.
- AUTOMATIC FEEDBACK CONTROL SYSTEM SYNTHESIS (Entwurf automatischer Regelsysteme) by Prof. John G. T r u x a l .
Publ. by R. Oldenbourg-Verlag, München, 1960, 726 pages, 595 figures, 64 marks.
- MOTION STABILITY THEORY (Theorie der Stabilität einer Bewegung) by I.G. M a l k i n , translated from Russian into German by Prof. Dr. W. Hahn and Dr. R. Reissig. Publ. by R. Oldenbourg-Verlag, München, in co-operation with Akademie-Verlag, Berlin, 1959, 405 pages, 20 figures, 47 marks.
- A COMBINED CONTROL SYSTEM FOR THE CHEMICAL INDUSTRY (Ein kombiniertes Regelsystem für die Verfahrensindustrie) by Ernst P a v l i k and Bruno M a c h e i . Publ. by R. Oldenbourg-Verlag, München, 1960, 204 pages, 150 figures, 24 marks.
- PROFESSIONAL NOTIONS OF PROGRAMMING TECHNIQUES (Fachbegriffe der Programmierungstechnik) by J. H e i n h o l d .
Publ. by R. Oldenbourg-Verlag, München, 4.40 marks.

Switzerland

We have published in our Bulletin No. 5 (pages 10 to 12) the programme of the Sixth Symposium of ASSPA (Association Suisse pour l'Automatique - Swiss Associations for Automatic Control) held since in Basel from November 10 to 15, 1959.

The Proceedings of this Symposium are published in the January February and March 1960 issues of the monthly review "Nouvelles Techniques" Badenerstrasse 21, Zurich, Switzerland.

The subscription rate of each of these issues is 4.50 Swiss francs. The annual subscription rate (for 12 issues) is 28 Swiss francs for Switzerland and 36 Swiss francs for other countries.

United Kingdom

NEW BOOKS

- SPACE TECHNOLOGY edited by Howard S. S e i f e r t . Part 1: Why space technology ?. Part 2: Flight dynamics. Part 3: Propulsion and Structures. Part 4: Communications, guidance and control. Part 5: Man in space. Part 6: Present and future applications of space technology. Publ. by Chapman & Hall, London 1959 (A John Wiley book). 1188 pages, illustrated, 180 shillings.

- DYNAMICS OF FLIGHT. STABILITY AND CONTROL. by Bernhard E t k i n . Publ. by Chapman & Hall, London 1959 (A John Wiley book), 560 pages, illustrated, 120 shillings.

- BASICS OF MISSILE GUIDANCE AND SPACE TECHNIQUES by Marvin H o b b s . Publ. by Chapman & Hall, London 1960 (A Rider Publication) 63 shillings.

- THEORY OF FEEDBACK CONTROL SYSTEMS by J. J. d' A z z o and C. H. H o u p i s . Publ. by Mac Graw-Hill, 1960, 600 pages, 97 shillings.

- SERVOMECHANISM PRACTICE (2nd edition) by William R. A h r e n dt and C. J. S a v a n t . Publ. by Mac Graw-Hill, 1960, 595 pages, 97 shillings.

- SERVOMECHANISMS FUNDAMENTALS (2nd edition) by Henri L a u e r and L. E. M a t s o n . Publ. by Mac Graw-Hill, 1960, 575 pages, 54 shillings 6 d.

Note on Information Bulletin No. 8

The Information Bulletin No. 8 is expected to be published in August-September 1960. Owing to the period of summer holidays, information to appear in this issue should therefore reach the Editor:

Professor Ing. Dr. Victor Broida
Honorary Editor of IFAC
13, rue de la France-Mutualiste
Boulogne-sur-Seine (Seine), France

not later than on July 15th, 1960.