

Notes on notions around operational research

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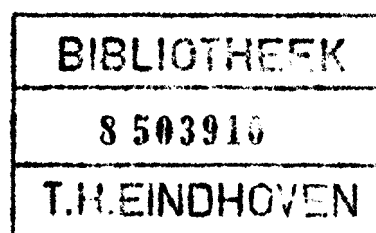
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NOTES ON NOTIONS AROUND
OPERATIONAL RESEARCH

C.B. Tilanus

Report ARW 03 THE BDK/ORS/85/04



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Eindhoven University of Technology
Eindhoven, Netherlands
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NOTES ON NOTIONS AROUND OPERATIONAL RESEARCH

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Abstract

In order to get a better grasp of the importance of notions adjacent to, or overlapping with, Operational Research, British, American and international organizations and university education programs are surveyed using a list of ten key concepts. It appears that professional organizations, of engineers, etc., are more nationally oriented, whereas scientific organizations are more internationally oriented. Further evidence is obtained that "nature and the real world are not organized as science and the universities are".

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1. Introduction

An investigation was made of existing associations and university programs in operational research and related fields. The search was limited to English-speaking, British, American and international institutions. The following list of key concepts was used:

(1) operations/ operational research, (2) management science, (3) industrial engineering, (4) systems analysis, (5) decision science, (6) cybernetics, (7) automatic control, (8) information processing, (9) econometrics, (10) scientific management.

The meaning of the key concepts was taken for granted. Not only because all of them have a given image, but also because a name and, likewise, a definition may be more an intention than a reality. Hall [5, 6] revealed this phenomenon for the management sciences.

Scientific and professional fields resemble firms in several respects. Their size distribution is skew; they flourish or dwindle; they attract or lose people; they conquer and merge, or separate and start from scratch; true to the theory of monopolistic competition, they dissimulate their similarities and differentiate their products. For instance, Ackoff in his famous twin articles on the future of OR [1, 2] tells us that he called the subject of his new graduate program: "Social Systems Sciences" or S3, because he could not conceive of a profession, a discipline or a society using such an awkward name, and wanted to preclude such use.

Questions raised are:

- What are the "market shares" of operational research and related fields?
- Are there differences between the scientific, academic world and the "real world" of business and industry?
- What is the relation between generalistic, interdisciplinary, main fields and specialistic, monodisciplinary, subfields?

First, attention is focused on organizations in Britain, in the U.S., and international (Section 2). Next, university educational programs are reviewed (Section 3). Some questions are answered in the conclusions (Section 4).

2. Organization

The prime sources were the Directory of British Associations [7], the Encyclopedia of Associations - a guide to U.S. national and international organizations [15], and the Yearbook of International Organizations [14]. The associations and other organizations found of interest are compiled in Appendixes 1, 2 and 3.

The British directory [7] lacked an index; the keywords that were applied tracked down only two associations from the alphabetically ordered list (see Appendix 1).

The American guide [15] gives membership figures which may include individuals, firms, institutions, or other associations and should be considered an approximation. Nevertheless, Table 1 indicates the wide range of organizational sizes. Several observations can be made. (Code numbers between brackets refer to [15] and Appendix 2.) By far the largest organizations, are professional societies of engineers and managers (4458, 4793, 4772, 1898, 1921). The Association for Computing Machinery (4728), with its strange name, is the largest of 29 organizations classified under Information Processing (4722-4750). The Econometric Society (5082) is classified under Statistics (5078-5089). The American Society for Cybernetics (4439) does not thrive and the American Institute for Decision Sciences (AIDS) (5281) has come to suffer from the Acquired Immune Deficiency Syndrome. Some specialized associations covering subfields of more general associations are of the same order of magnitude as the latter; examples are the American Production and Inventory Control Society (1899), the Planning Executives Institute (1923), the International Material Management Society (4782), the American Institute of Maintenance (1885) and the Project Management Institute (1925), as compared with the Operations Research Society of America (4883) and The Institute of Management Sciences (1912). The keyword "scientific management", which reminds one of F.W. Taylor and time and motion studies, has been encountered only once, in the former name of the World Council of Management (1905).

The International Yearbook [14] includes the five Sister Federations that are coordinated by the Five International Associations Coordinating Committee (FIACC) (A3893y), see Table 2. (Code numbers refer to [14] and Appendix 3.) The number of countries in which an international association is represented gives only a weak indication of its size and

importance. Nevertheless, it is significant that among the five Sister Federations, IFIP (C1828y) and IFAC (C1862) are represented in 40 or more countries, whereas IFORS (C1966), IMACS (B1174) and IMEKO (C2250) are represented in 33 or less countries. It has been pointed out in [13, Table 10], that IFORS had no members in the communist (or socialist, as they call themselves) countries, whereas the other four Sister Federations were well established in East-Europe. It is worth noting that "Cybernetics" and "Systems" play a greater part on the international scene (C1187, C1778, C4167, C4518, D1797, D5599, F5154, F5730, F5804, G5426), than within Britain and America. On the other hand, the engineering professions are hardly organized internationally (D3924).

Table 1. American organizations by membership sizes

Code number*	Organization	Membership
4458	Institute of Electrical and Electronics Engineers (IEEE)	180,000
4793	American Society of Mechanical Engineers (ASME)	80,000
1898	American Management Associations (AMA)	70,000
1921	National Management Association (NMA)	60,000
4772	Society of Manufacturing Engineers (SME)	50,000
4728	Association for Computing Machinery (ACM)	40,000
4499	American Institute of Industrial Engineers (AIIE)	31,000
1899	American Production and Inventory Control Society (APICS)	28,000
4785	American Mathematical Society (AMS)	18,681
4791	Mathematical Association of America (MAA)	18,500
5078	American Statistical Association (ASA)	13,000
1903	Association for Systems Management (ASM)	10,000
4883	Operations Research Society of America (ORSA)	7,000
1912	The Institute of Management Sciences (TIMS)	6,500
5082	Econometric Society (ES)	6,000
4765	Society of Logistics Engineers (SOLE)	5,800
5281	American Institute for Decision Sciences (AIDS)	4,500
4792	Society for Industrial and Applied Mathematics (SIAM)	4,400
4723	American Society for Information Science (ASIS)	4,000
1923	Planning Executives Institute (PEI)	3,700
4782	International Material Management Society (IMMS)	3,500
4286	Numerical Control Society (NCS)	3,300
1885	American Institute of Maintenance (AIM)	2,244
1925	Project Management Institute (PMI)	2,000
5098	Society for General Systems Research (SGSR)	1,000
4439	American Society for Cybernetics (ASC)	200
4790	Industrial Mathematics Society (IMS)	120

Source: [15]

* Refers to [15] and Appendix 2.

Table 2. International organizations

Code number*	Organization	Membership
A3893y	Five International Associations Coordinating Committee (FIACC)	5 Sister Federations**
B1174	International Association for Mathematics and Computers in Simulation (IMACS)	individuals and scientific and industrial institutions in 33 countries
C1187	International Association for Cybernetics (AIC)	individuals and industrial firms in 42 countries
C1778	World Organization of General Systems and Cybernetics (WOGSC)	societies in 44 countries
C1862	International Federation of Automatic Control (IFAC)	scientific or professional engineering organizations in 40 countries
C1828y	International Federation for Information Processing (IFIP)	societies in 42 countries
C1966	International Federation of Operational Research Societies (IFORS)	societies in 33 countries
C2250	International Measurement Confederation (IMEKO)	scientific and technical societies in 27 countries
C4167	Society for General Systems Research (SGSR)	individuals and institutions in 39 countries
C4518	International Institute for Applied Systems Analysis (IIASA)	organizations in 17 countries

Source: [14]

* Refers to [14] and Appendix 3.

** These are, in the order as they occur in this table: IMACS, IFAC, IFIP, IFORS, and IMEKO.

3. Education

The prime sources were the handbook of higher education in the United Kingdom [8], Peterson's guides to graduate study in the United States [10, 11], and the Gourman report giving ratings of graduate and professional programs [4]. The list of keywords was also applied to the indexes of three books on management development [3, 9, 12].

Unfortunately, quantitative methods are hardly made explicit in management development programs, as "OR techniques fill the ordinary manager with a fear of mystique or a feeling of inadequacy" [12, p.326].

In the British handbook of higher education [8], among the "Main Subject Headings", one is "Operational Research". From Table 3 we conclude that only operational research, management sciences and econometrics are taught at a significant number of the existing 46 British universities, under the headings of our keywords.

The situation in America is different again. Peterson's guides [e.g., 10, 11] provide information on postbaccalaureate degree programs in 241 academic fields offered by more than 1300 accredited institutions in the U.S. and Canada. "Operations Research" and "Industrial and Management Engineering" figure as academic fields, but the other keywords are not encountered in the list of fields.

To cope with sheer numbers, we turn to the Gourman Report [4]. This gives ratings of graduate programs in 60 distinct academic fields, among whom "Industrial Engineering" and "Operations Research" are distinguished. Table 4 gives the numbers of institutions with scores in the 4.0-5.0 range (strong to very strong) for some of the fields. We conclude that from among our list of keywords, Operations Research and Industrial Engineering are well established in the American academic world. Their ratings are given in Appendix 4.

Table 3. Numbers of British universities teaching key subjects

Subject	Number of universities	
	First degrees	Post-graduate courses
Operational research	15	15
Management science(s)/Studies	20	12
Industrial engineering	1	2
Systems analysis	-	1
Decision science	-	-
Cybernetics	1	-
Automatic control	-	1
Information processing	-	-
Econometrics	11	5
Scientific management	-	-

Source: [8]

Table 4. Number of American institutions with strong to very strong graduate programs in some academic fields

Academic field	Number of institutions with strong to very strong graduate programs
Computer science	51
Mathematics	48
Business (MBA)	47
Economics	46
Industrial engineering	28
Statistics	25
Operations research	14
Applied mathematics	11

Source: [4]

4. Conclusions

About ten concepts adjacent to, or overlapping with, Operational Research were reviewed. Their expansion was assessed, both in the real world and in academia, both within Britain and the United States, and internationally.

Professional organizations are strong nationally. Within the U.S., there are large associations of engineers, general managers, and more specialized management functionaries like information managers, production and inventory planners, material, maintenance, and project managers.

Scientific organizations are strong internationally. This holds for the five cooperating federations: IFAC, IFIP, IFORS, IMACS and IMEKO, and also for organizations using the words "cybernetics" or "systems" in their names.

University programs in Britain especially recognize Operational Research, Management Sciences and Econometrics. In the U.S., Industrial Engineering and Operations Research are at a level with Statistics and Applied Mathematics.

The importance of these concepts in the world of publishing has not been considered. One may suppose that there is a strong positive correlation between books and journals published in a field and its expansion in academic and scientific institutions. The correlation between publications and professional organizations ought to be weaker.

ACKNOWLEDGMENT

The help is acknowledged from staff members of: British Council, Amsterdam; Eindhoven University of Technology, Library, Eindhoven; Netherlands American Commission for Educational Exchange (NACEE), Amsterdam.

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BRITISH. ASSOCIATIONS

British Computer Society. (BCS) 1957.

- 13 Mansfield Street, London W1M 0BP. 01-637 0471.
tx 262284 ref 1828. (hq)

Sec Gen: D W Harding.

Br 42

O *P

- Gp ACM Chapter; Advanced programming; Algol; APL users; Auditing by computer; British Computer Association of the Blind; British Pattern Recognition Association; Business information systems; Cobol; Computer aided design; Computer Arts Society; Computer information; Coral 66; Data transmission; Data base communications; Display; Fortran; Group for the disabled; Group for computers & employment; Computers in psychology (BPS); Human aspects of computer usage; Law; Logic design; Mathematical programming; Measurement of computer performance; Medical - Northern, London, Scotland; Microform; PL/I; Software engineering; Study group on computers in survey analysis; UK Simulation Council; Word processing & office information; Developing countries; Expert systems; Formal aspects of computing science; Information retrieval; Local government microprocessors; Process control; Realtime & algorithmic languages.
- Conf (biennial) - Mtgs - ET - Exam - SG - Inf - Library (with IEE - 01-240 1871).
 - < ACM; IFIP; ECI; Nat Computer Users Forum.
 - M 25,000 i, 236 f, 60 schools.
 - † Computing - 52; ftm.
Computer Bulletin - 4; ftm, £10 yr nm.
Computer Jnl - 4; ftm, £35 yr nm.

Operational Research Society. (ORSoc) 1954.

6th floor, Neville House, Waterloo Street, Birmingham
B2 5TX. 021-643 0236. (hq)

Sec: R A Showell.

Br Birmingham, Newcastle upon Tyne, Manchester, Glasgow,
Cardiff, Bristol, York, London.

O *L, *Q

Gp Banking & finance; Construction industries; Educational systems; Forecasting; Health & Welfare Services; Inventory & production control; Methodology process of OR; Simulation discussion; Mathematical programming; OR & social organisation; System dynamics; Transport.

- Conf - Mtgs - SG - Inf - Library.

M 3,400 i, 85 f & org.

- † Operational Research Quarterly - 4; ftm.
NL - 12. LM - 1; ftm.
Careers booklet. AR.
(NR - 7)

Operations Research Society of Ireland. (ORSI)

IRL 31 Pembroke Road, Ballsbridge, Dublin 4. t 684031.

A B B R E V I A T I O N S

1 - IN MAIN ALPHABETICAL DIRECTORY

Validity indicators: ■ entry based on questionnaire or other documents returned by organisation
 (NR - 7) following an entry indicates that the organisation did not return a
 questionnaire or revision document for this edition
 IRL Irish entry - see Introduction 3c
 § organisation outside normal scope of DBA, but included for the
 convenience of users
 ** present address unknown

Address

t	telephone number	hsb	honorary secretary's business address
tx	telex number	hsp	honorary secretary's private address
asa	firm of accountants or solicitors acting as secretaries	regd off	registered office
hq	organisation's permanent headquarters	sb	secretary's business address
Br	Branch(es)	sp	secretary's private address
		Gp	Group(s)

Name of secretary or chief executive, with designation of office held:

Chmn	Chairman	Hon Treas	Honorary treasurer
Dir	Director	Mgr	Manager
Exec	Executive	Org Sec	Organising secretary
Gen Sec	General secretary	Pres	President
Hon Sec	Honorary secretary	Sec	Secretary

O Type of organisation & sphere of interest; indicated by one or more of the following letters, with an amplification or explanation only when necessary; if an organisation's interests are obvious from its name, only the starred letter is given -

- *A Art societies
- *B Breed societies controlling the registration of pedigree livestock
- *C Chambers of commerce & industry or chambers of trade
- *E Educational associations
- *H Horticultural & agricultural societies
- *K Campaigns seeking to achieve a once-for-all purpose; and pressure groups
- *L Learned, scientific & technical societies
- *M Co-ordinating bodies
- *P Professional associations, institutes, &c
- *Q Research associations
- *R Religious organisations
- *S Sports organisations
- *T Trade, employers' & other associations furthering business interests
- *U Trade unions & other employees' associations primarily negotiating pay & conditions of service
- *W Welfare organisations & charities
- *X International friendship
- *Y Youth organisations
- *Z Political organisations

M Membership data i = individuals f = firms org = organisations

● Activities

Comp	Competitions
Conf	Conference - annual unless otherwise stated
Empl	Negotiation of pay & conditions of employment
ET	Education &/or training for professional or other qualifications
Exam	Examinations for professional or other qualifications
Exhib	Exhibitions & shows
Expt	Export promotion
Inf	Information service available for all serious enquirers
Inf (m)	Information service available only to members
Mtgs	Regular meetings
Res	Scientific or other systematic research
SG	Study groups
Stat	Collection of statistics
VE	Visits & excursions

< Affiliations to other organisations

† Publications

AR	Annual report
ftm	free to members - i.e. included in subscription
Jnl	Journal
LM	List of members
m	members
NL	News letter
nm	non-members
Ybk	Year book
yr	per annum

X Former name or names of organisation if changed during past 5 years (preceded by date of change)

"CCB" "Councils, Committees & Boards" (see Introduction - 6)

NATIONAL ORGANIZATIONS OF THE U.S.

Section 1 — TRADE, BUSINESS AND COMMERCIAL ORGANIZATIONS

★1885★

AMERICAN INSTITUTE OF MAINTENANCE (AIM)

P.O. Box 2068 Phone: (213) 244-1176
 Glendale, CA 91209 Charles F. Wheeler, Jr., Sec.
 Founded: 1958. Members: 2244. Staff: 4. Individuals and organizations active in cleaning maintenance and management. Has developed home study educational courses and publications to promote self-improvement and efficient work methods. Maintains library of books, booklets and articles on building maintenance. Publications: Cleaning Management, monthly; also publishes maintenance supervision course and four educational booklets.

★1891★

INTERNATIONAL MAINTENANCE INSTITUTE (IMI)

P.O. Box 26695 Phone: (713) 649-6973
 Houston, TX 77207 John E. Schrott, Bd.Chm.
 Founded: 1961. Members: 1400. Local Groups: 16. Persons directly engaged in maintenance in a key position (superintendent, supervisor, foreman, manager, etc.) for chemical refineries, manufacturing firms, government agencies, institutions and other organizations; associate members are persons indirectly engaged in maintenance in sales, service, consulting, or publications capacities. Assembles and disseminates maintenance information related to modern cost-saving methods, processes, and equipment. Local chapters sponsor lectures and discussions on such topics as preventive maintenance, electrical specification and maintenance, purchasing procedures, painting, heating, and grounds maintenance. Publications: IMI Newsletter, bimonthly. Convention/ Meeting: annual.

1894★

ADMINISTRATIVE MANAGEMENT SOCIETY (AMS)

World Headquarters Phone: (215) 659-4300
 Willow Grove, PA 19090 John R. Herb, Acting Exec.Dir.
 Founded: 1919. Members: 13,000. Staff: 25. Local Groups: 150. Office administrators, supervisors, personnel men, educators, equipment manufacturers and utility company executives. Promotes application of scientific methods to commerce and industry for the purpose of increasing productivity, lowering costs, and improving quality; assists educational institutions in developing training programs and courses of study; encourages and participates in research; promotes sound employee and employer relationships; maintains library of 2500 volumes. Presents Merit Awards, sponsors professional accreditation for certified administrative manager. Divisions: Personnel; Systems and XX6T Information. Publications: (1) Generalist, monthly; (2) Impact: Information Technology, monthly; (3) Management World, monthly; (4) AMS Yearbook; (5) Mid-Management Salary Guide, annual; (6) Office Salary Surveys, annual; (7) Office Employee Turnover, biennial; also publishes reports. Formerly: National Association of Office Managers; (1964) National Office Management Association. Convention/ Meeting: annual - always May. 1980 Milwaukee, WI; 1981 Phoenix, AZ; 1982 San Francisco, CA; 1983 Toronto, ON, Canada.

★1895★

AMA/INTERNATIONAL (Management)

135 W. 50th St. Phone: (212) 586-8100
 New York, NY 10020 F. G. Harmon, Pres.
 Founded: 1956. Staff: 125. Overseas division of American Management Associations. To develop management education services overseas and to serve as an international organization extending and adapting AMA techniques and services in the international business community. Conducts over 500 meetings a year; Executive Compensation Service; in-company film programs. Management center locations: Brussels, Belgium; Sao Paulo, Brazil; Mexico City, Mexico; Montreal, PQ and Toronto, ON, Canada. Formerly: International Management Association.

★1896★

AMERICAN ASSOCIATION OF INDUSTRIAL MANAGEMENT (AAIM)

7425 Old York Rd. Phone: (215) 635-5900
 Philadelphia, PA 19126 Christy Carr, Gen.Mgr.
 Founded: 1899. Members: 180. Staff: 10. Companies in electrical, automotive, textile, chemical, paper and insurance fields; banks; colleges and universities; town and city governments; hospitals. Conducts activities in the industrial relations and industrial management fields; gives advice and/or assistance in all aspects of labor relations, training, industrial relations

research, management and supervisory education, job and salary rating and communications. Publications: (1) Consumer Price (Cost of Living) Index, monthly; (2) The Executive Manager, monthly; (3) Signs of the Times, monthly. Formerly: (1965) National Metal Trades Association.

★1897★

AMERICAN INSTITUTE OF MANAGEMENT (AIM)

607 Boylston St. Phone: (617) 536-2503
 Boston, MA 02116 Will J. Lessard, Mng.Dir.
 Founded: 1948. Members: 2500. Research and educational organization of executives interested in management efficiency and methods of appraising management performance. Awards citations to companies for management excellence. Conducts work study courses for members. Maintains library of data on and publications of about 7,000 companies. Publications: (1) Associates Council Newsletter (for younger MBA's), monthly; (2) Executives Council Newsletter (for mid-management personnel), monthly; (3) President's Council Newsletter (for top-management personnel), monthly. Convention/ Meeting: holds numerous conferences, irregular.

★1898★

AMERICAN MANAGEMENT ASSOCIATIONS (AMA)

135 W. 50th St. Phone: (212) 586-8100
 New York, NY 10020 James L. Hayes, Pres. & Chief Exec.
 Founded: 1923. Members: 70,000. Staff: 900. Managers in industry, commerce, government; charitable and non-commercial organizations; university teachers of management; administrators. "To provide quality programs, products and services to the managerial process." AMA's educational programs serve every level of management in all parts of the world through meetings, practical instruction primarily by other practicing managers, books, periodicals and special reports, plus research into basic and advanced principles of management. Conducts conferences, seminars, courses, briefings and workshops on management topics spanning 12 divisional areas of interest. Surveys and reports on current organizational problems and practices. Awards annual Henry Laurence Gantt Medal for distinguished achievement in management as a service to the community. Maintains "Correspondent Association" agreements around the world. Operates management centers and offices in North America and, through AMA/International, in Europe and South America. Maintains extensive library, book store and Management Information Service including films, cassettes, tapes and records covering all areas of management expertise. Corporate Divisions: AMA International; AMACOM (publishing); Center for Management Development (seminars); Center for Planning and Implementation (long-range team planning); Extension Institute (study-at-home programs); In-Company Development and Training; National Association of Corporate Directors (for board members); National Center for Career Life Planning (career life and pre-, post-retirement programs); Presidents Association (for chief executive officers); Professional Institute (public sector); Society for Advancement of Management (senior and college chapters internationally). Seminar Divisions: Finance; General and Administrative Services; General Management; Human Resources; Information Systems and Technology; Insurance and Employee Benefits; International; Manufacturing; Marketing; Packaging; Purchasing, Transportation and Physical Distribution; Research and Development. Publications: (1) Comflash, monthly; (2) Directors, monthly; (3) Health Services Manager, monthly; (4) Management Digest, monthly; (5) Management Review, monthly; (6) SAM News International, monthly; (7) Supervisory Management, monthly; (8) The President, monthly; (9) Personnel, bimonthly; (10) Compensation Review, quarterly; (11) Organizational Dynamics, quarterly; (12) SAM Advanced Management Journal, quarterly; (13) Management Development Guide, semiannual; also publishes management briefings, survey reports and both domestic and international Executive Compensation Service wage and salary reports. Absorbed: (1924) National Association of Sales Managers; (1973) American Foundation for Management Research. Formerly: (1923) National Personnel Association. Formed by Merger of: National Association of Corporation Schools and National Association of Employment Managers. Convention/ Meeting: - always September, New York City. Also holds Human Resources, Insurance and Employee Benefits Conference and Packaging Conference, biennial, in conjunction with International Packaging Week.

★1899★

AMERICAN PRODUCTION AND INVENTORY CONTROL SOCIETY (Management) (APICS)

Watergate Bldg., Suite 504
 2600 Virginia Ave., N.W. Phone: (202) 333-1660
 Washington, DC 20037 Henry F. Sander, CAE, Exec.Dir.
 Founded: 1957. Members: 28,000. Staff: 10. Local Groups: 165. Professional society of production and inventory control management personnel. Committees: Curricula and Certification; Educational Doctrines; Language and Techniques. Publications: (1) APICS News, monthly; (2) Production and Inventory Management, quarterly; also publishes APICS Bibliography, APICS Dictionary and APICS Production and Inventory Control Training Aids. Convention/ Meeting: annual - always October. 1980 Los Angeles, CA; 1981 Boston MA; 1982 Chicago, IL; 1983 New Orleans, LA.

1903*

ASSOCIATION FOR SYSTEMS MANAGEMENT (ASM)

187 Bagley Rd. Phone: (216) 243-6900
Cleveland, OH 44138 Richard L. Irwin, CAE, Exec. Dir.
Founded: 1947. Members: 10,000. Staff: 15. Local Groups: 135.
International professional organization of administrative executives and
specialists in management information systems work serving business,
commerce, education, government and the military, and concerned with
communications, electronics, equipment, forms control, human relations,
automation, procedure writing and systems applications. Offers one, two and
three-day seminars and conferences and five-day courses in all phases of
administrative systems and management. Maintains library of 700-800
titles on administrative systems and business management. **Departments:**
Communications; Data Processing; Management Information Systems;
Automation Planning; Written Communications. **Publications:** (1) Journal of
Systems Management, monthly; (2) Ideas for Management, annual; also
publishes monographs, statistical reports and a college textbook. **Formerly:**
68) Systems and Procedures Association. **Convention/ Meeting:** annual -
30 May 11-14, New Orleans, LA; 1981 May 10-13, Las Vegas, NV.

1905*

WORLD COUNCIL OF MANAGEMENT (CIOS)

Nederlandse Vereniging Voor Management
Alkemadelaan 700
The Hague, Netherlands A. Bouwens, Acting Sec.
Founded: 1926. Members: 40. National organizations representative of the
management movement in their countries. Promotes understanding of the
principles and the practice of the methods of the art and science of managing,
in order to improve standards of living in all nations. Coordinates work of
member groups. Awards: CIOS Gold Medal. **Publications:** Newsletter,
monthly; also publishes manual. **Formerly:** (1975) International Council for
Scientific Management. **Convention/ Meeting:** triennial congress.

1911*

INSTITUTE OF MANAGEMENT CONSULTANTS (IMC)

19 W. 44th St., Suite 810-811 Phone: (212) 921-2885
New York, NY 10036 John F. Hartshorne, Exec. Dir.
Founded: 1968. Members: 850. Staff: 4. Individual management
consultants who work alone or in consulting firms that meet the Institute's
requirements. Examines qualifications of consultants who apply and issues
certificates to those meeting standards of practice, education and experience.
The Institute sponsors conferences, seminars and research on various aspects
of management consulting. **Publications:** Newsletter, irregular. **Convention/
Meeting:** annual.

1912*

THE INSTITUTE OF MANAGEMENT SCIENCES (TIMS)

146 Westminster St. Phone: (401) 274-2525
Providence, RI 02903 M. R. DeMelim, Exec. Dir.
Founded: 1953. Members: 6500. Staff: 6. Local Groups: 57. Professional
society for scientists and management in business, labor, government,
teaching, and research. Aim is to advance scientific knowledge and improve
management practices; members contribute to or learn about important
findings in management technology, electronics, applied mathematics,
psychology, economics, and other sciences. Sponsors competition for papers
on successful applications of management science. **Colleges:** Applied
Probability; Energy and Natural Resources Management; Information Systems;
Logistics; Management Control Systems; Management Philosophy;
Management Psychology; Management of Technological Change; Marketing;
Measurements in Management; On-Line Decision Systems; Organization;
Planning; Practice of Management Sciences; Public Program and Processes;
Research and Development Management; Societal Problems; Simulation and
Gaming. **Publications:** (1) Management Science, monthly; (2) OR/MS Today
(newsletter), bimonthly; (3) Interfaces, quarterly; (4) Mathematics of
Operations Research, quarterly; (5) Roster and Bylaws, biennial; also publishes
Proceedings of Symposia on Planning and special issues on education, ecology,
urban issues, game theory and gaming, and marketing management models.
Convention/ Meeting: semiannual - 1980 May 4-7, Washington, DC and
Nov. 10-12, Houston, TX; 1981 May 3-6, Toronto, ON, Canada and Oct. 17-
21, Colorado Springs, CO; 1982 Apr. 18-21, Detroit, MI.

1914*

INTERNATIONAL ACADEMY OF MANAGEMENT

C/O NIVE
Nederlandse Vereniging Voor Management
Van Alkemadelaan 700
The Hague, Netherlands Dr. Harold Koontz, Chancellor
Founded: 1958. Members: 180. Regional Groups: 4. Membership is
composed of leaders in management from six continents and twenty-three
countries. To provide the members of CIOS with a consultative organ at the
international level for fundamental research in evolving and advancing theories
of practical and philosophical management; to provide a body to safeguard the
objectivity and precision of the art and science of managing and the disciplined
integration of new/progressive managerial trends; to exert intellectual
stimulus to all interested in management; to structure CIOS so that qualified
individual members may contribute. Fellows are elected annually on the basis
of their achievements in the art and science of management, particularly in an
international context. Presents fellowship; maintains research programs.
Committees: Special Projects. **Affiliated with:** CIOS - World Council of
Management. **Convention/ Meeting:** triennial - 1981 Lima, Peru.

1915*

INTERNATIONAL MANAGEMENT COUNCIL (IMC)

291 Broadway Phone: (212) 374-2159
New York, NY 10007 Albert J. Benglen, Exec. Dir.
Founded: 1935. Members: 13,000. Staff: 3. Regional Groups: 7. Local
Groups: 135. Supervisors and managers in all fields. "To help supervisory
managers develop as leaders in their industries and in their communities."
Committees: Chapter Standards; Education; Financial Development;
Leadership Development; Public Relations. **Groups:** Case Solution; Conference
Leadership; Management Development. **Affiliated with:** Young Men's Christian
Association (sponsor). **Formerly:** (1948) National Council of Foremen's Clubs
(1971) National Council of Industrial Management Clubs. **Convention/
Meeting:** annual - 1980 May 28-31, Norfolk, VA.

1916*

INTERNET-INTERNATIONAL (Management) (IMSA)

C/O Gottlieb Duttweiler Institute
Ruschlikon
CH-8803 Zurich, Switzerland M. Braune-Krickau, Sec.
Founded: 1971. Members: 7. National project management associations
united for international coordination of their activities. Acts as focus of
international activities for the exchange of management systems knowledge
and promoting the advancement of seven project management methods
systems and techniques for practical applications. Encourages the
development of and cooperates with national organizations with common
interests and offers mechanism for individual participation for those countries
that do not yet have an established national society. **Publications:** Proceedings
of Seminars and Congresses. **Formerly:** International Management Systems
Association. **Also Known As:** INTERNET. **Convention/ Meeting:** biennial -
1980 June, Zurich, Switzerland; 1981 September, Copenhagen, Denmark.

1917*

JAPAN TECHNO-ECONOMICS SOCIETY (Management) (JATES)

Masuda Building
4-5 Idabaski 2 Chome
Chiyoda-Ku
Tokyo, Japan Shoichi Moriyama, Exec. Dir.
Founded: 1966. Members: 2876. Staff: 20. Regional Groups: 2. Individuals
(2760) and corporations (216) united to: study and explore the prospect of
technological innovations and provide a vision of the future society; study new
management techniques and develop their application to business
management; promote the establishment of Japan's own methods of research
and development management; foster men of talent to be leaders of
management in the new age; offer a forum for exchange of information and for
cooperation to specialists from various fields; promote international exchange
of views and achievements. Sponsors international seminars and symposia;
international Future Industry Survey Team; panel discussions; and Tokyo office
of the Club of Rome. Maintains library. **Divisions:** Accounting; General Affairs;
International; Operations; Planning; Research. **Publications:** Technology and
Economy, monthly; also publishes numerous reports. **Affiliated with:**
Industrial Research Institute. **Convention/ Meeting:** annual; also holds annual
International Symposium.

1921
NATIONAL MANAGEMENT ASSOCIATION (NMA)

2210 Arbor Blvd. Phone: (513) 294-0421
Dayton, OH 45439 Ronald E. Leigh, Exec. V. Pres.
Founded: 1925. Members: 60,000. Staff: 27. Regional Groups: 6. Local Groups: 240. Business and industrial management personnel; membership comes from supervisory level, with the remainder from middle management and above. To develop and recognize management as a profession and to promote the free enterprise system. Prepares chapter programs on basic management, management policy and practice, communications, human behavior, industrial relations, economics, political education, and liberal education. Presents Executive of Year award at annual conventions. Committees: Free Enterprise; Industry/Government Activities; Management Certification; Management Development; Productivity. Publications: (1) Manage, bimonthly; (2) National Speakers' Directory. Affiliated with: National Association of Manufacturers. Formerly: (1956) National Association of Foremen. Convention/ Meeting: annual - always October. 1980 Orlando, FL; 1981 California; 1982 Massachusetts.

1923
PLANNING EXECUTIVES INSTITUTE (Management) (PEI)

5500 College Corner Pike Phone: (513) 523-4185
Oxford, OH 45056 James D. Thomson, Exec. Dir.
Founded: 1951. Members: 3700. Staff: 9. Regional Groups: 6. Local Groups: 51. Professional society of corporate planners, budget directors, controllers, accountants, bankers, professors, and others dealing with planning. Committees: Awards; Education; Research. Publications: Managerial Planning, bimonthly; also publishes numerous research monographs. Formed by Merger of: (1951) Budget Executives Forum; National Association of Budget Officials. Formerly: (1963) National Society for Business Budgeting; (1969) Budget Executives Institute. Convention/ Meeting: annual - always May. 1980 Phoenix, AZ; 1981 Milwaukee, WI; 1982 Cincinnati, OH; 1983 Atlanta, GA.

1925
PROJECT MANAGEMENT INSTITUTE (PMI)

P.O. Box 43 Phone: (215) 622-1796
Drexel Hill, PA 19026 James R. Snyder, Exec. Dir.
Founded: 1969. Members: 2000. Staff: 2. Regional Groups: 8. Members are persons engaged in efforts to meld or coordinate various disciplines so as to accomplish any desired project aim. Objectives of the Institute are: to foster recognition of the need for professionalism in project management; to provide a forum for the free exchange of project management problems, solutions and applications; to coordinate industrial and academic research efforts; to develop common terminology and techniques to improve communications; to provide interface between users and suppliers of hardware

and software systems; to provide guidelines for instruction and career development in the field of project management. Conducts programs on standards, inter-society liaison, educational liaison and guidance, research direction and awareness, and career guidance education. Committees: Professional Activities; Professional Liaison; Publications; Research. Publications: PMI Quarterly; also publishes proceedings of seminars and papers presented at past seminars and special research reports. Absorbed: CPM Consultants Division (of SAM), which was formerly Society of CPM Consultants. Convention/ Meeting: annual seminar/symposium - usually October. 1980 Phoenix, AZ; 1981 Boston, MA; 1982 Toronto, ON, Canada; 1983 Houston, TX.

1926
SOCIETY FOR ADVANCEMENT OF MANAGEMENT (Of The American Management Associations) (SAM)

135 W. 50th St. Phone: (212) 586-8100
New York, NY 10020 Robert L. Dimit, Exec. Dir.
Founded: 1912. Members: 8,000. Local Groups: 180. A division of American Management Associations. Professional organization of management executives in industry commerce, government and education. Fields of interest include management education, international management, administration, budgeting, collective bargaining, distribution, incentives, materials handling, quality control, training, etc. Sponsors numerous conferences, study groups and seminars; conducts special programs on economics, material handling, distribution, industrial relations and operation of small businesses. Presents many awards for various aspects of management. Divisions: University. Publications: (1) News International, monthly; (2) Advanced Management Journal, quarterly; (3) Annual Directory of Officers. Formed by Merger of: (1936) Taylor Society and Society of Industrial Engineers. Absorbed: (1946) Industrial Methods Society. Convention/ Meeting: annual - always May. 1980 Chicago, IL; 1981 New York City.

Section 4 — SCIENTIFIC, ENGINEERING AND TECHNICAL ORGANIZATIONS

4284
AMERICAN AUTOMATIC CONTROL COUNCIL (AACC)

C/O Mr. M. A. Keyes
Bailey Meter Co.
29801 Euclid Ave. Phone: (216) 943-5500
Wickliffe, OH 44092 M. A. Keyes, Sec.
Founded: 1957. Members: 8. Federation of 8 professional, scientific and engineering societies, in which a division or group is actively engaged in control engineering; covers the field of automatic control (including control of manufacturing processes, computer control, process control, navigation and guidance). Presents Eckman Award and JACC Award. Committees: Automation Research Councils; Biomedical Engineering; Components and Terminology; Education; International Relations; Manufacturing Technology Social Effects of Automation; Space; Systems Engineering; Theory. Affiliated with: International Federation of Automatic Control. Convention/ Meeting: annual Joint Automatic Control Conference.

4285
INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL (IFAC)

C/O Prof. Y. Sawaragi
Dept. Applied Mathematics & Physics
Faculty Of Engineering
Kyoto University
Kyoto 606, Japan Prof. Y. Sawaragi, Pres.
Founded: 1957. Members: 40. Staff: 2. National organizations representing the engineering and scientific societies of their individual countries. Purpose to promote the science and technology of automatic control in the broadest sense in all systems whether engineering, physical, biological, social or economic in both theory and application, and to study the impact of automatic control on society. Seeks to promote the science of automatic control through the interchange and circulation of information on automatic control activities; cooperation with national and other international organizations; international congresses; and other means such as publications. Committees: Advisory Applications; Biomedical Engineering; Components and Instruments; Computers; Developing Countries; Economic and Management Systems; Education; Manufacturing Technology; Mathematics of Control; Policy; Public Affairs; Social Effects of Automation; Space; Systems Engineering; Terminology and Standards; Theory. Publications: (1) Automatica, bimonthly; (2) Newsletter, irregular; (3) Proceedings (of conferences, congresses, etc., irregular; also publishes Multilingual Dictionary of Automatic Control Terminology and other monographs. Convention/ Meeting: triennial world congress - 1981 Aug. 24-28, Kyoto, Japan.

4286
NUMERICAL CONTROL SOCIETY (Automatic Control) (NCS)

1800 Pickwick Ave. Phone: (312) 724-7700
Glenview, IL 60025 Ronald C. Hunt, Exec. Dir.
Founded: 1962. Members: 3300. Staff: 7. Regional Groups: 36. Engineers as well as n/c users from management and educational institutions with responsibility for the application of numerical control techniques. To disseminate information on numerical control of machine tools, control systems; to recommend methods of economic evaluation of n/c; to recommend standards; to develop potential applications of n/c techniques. Holds technical and management seminars. Presents annual awards. Committees: Education/Training; Software. Publications: (1) NC Scene (newsletter), monthly; (2) Journal, bimonthly; (3) Conference Proceedings, annual; (4) Who's Who in NC, annual; also publishes seminar proceedings, books, and special reports. Convention/ Meeting: annual technical conference - 1980 Hartford, CT; 1981 Dallas, TX; 1982 Detroit, MI; 1983 Cincinnati, OH.

4439
AMERICAN SOCIETY FOR CYBERNETICS (ASC)

College Of Education
University Of Maryland
College Park, MD 20742 Phone: (301) 454-5760
Barry Clemson, Pres.
Founded: 1964. Members: 200. Local Groups: 3. Persons with professional standing or interest in the field of cybernetics. To foster projects in theoretical, technical, and applied cybernetics by means of multidisciplinary scientific conferences and research programs; to publish and disseminate proceedings of its conferences and results of cybernetic studies and investigations; to encourage teaching and study of cybernetics in academic and scientific research organizations; to foster public understanding of cybernetics, its benefits and implications. Sponsors symposiums and workshops. Awards Wiener Gold Medal for most significant paper, and Wiener Sterling Medal for excellence in cybernetics. Councils: Scientific Research Publications: (1) Cybernetics Forum, quarterly; (2) Journal of Cybernetic and Information Science, quarterly; (3) Conference Proceedings, annual. Convention/ Meeting: irregular.

★4458★

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

345 E. 47th St.

Phone: (212) 644-7910

New York, NY 10017

R. M. Emberson, Exec. Dir.

Founded: 1963. **Members:** 180,000. **Staff:** 250. **Regions:** 10. **Sections:** 233. **Subsections:** 47. **Local Groups:** 526. Engineers and scientists in electrical engineering, electronics, and allied fields; membership includes 25,000 students. Holds numerous meetings and special technical conferences. Conducts lecture courses at the local level on topics of current engineering and scientific interest. Assists student groups. Awards medals, prizes, and scholarships for outstanding technical achievement. Supports Engineering Societies Library in New York City jointly with other groups. **Boards:** Awards; Conference; Educational Activities; Publications; Regional Activities; Technical Activities; U.S. Activities Board. **Councils:** Oceanic Engineering; Solid-State Circuits. **Societies:** Acoustics, Speech and Signal Processing; Aerospace and Electronic Systems; Antennas and Propagation; Broadcast, Cable and Consumer Electronics; Circuit and Systems; Communications; Components, Hybrids and Manufacturing Technology; Computer; Control Systems; Education; Electrical Insulation; Electromagnetic Compatibility; Electron Devices; Engineering Management; Engineering in Medicine and Biology; Geoscience Electronics; Industrial Electronics and Control Instrumentation; Industry Applications; Information Theory; Instrumentation and Measurement; Magnetics; Microwave Theory and Techniques; nuclear and Plasma Sciences; Power Engineering; Professional Communications; Quantum Electronics and Applications; Reliability; Sonics and Ultrasonics; Systems, Man and Cybernetics; Vehicular Technology. **Publications:** (1) Proceedings, monthly; (2) Spectrum, monthly; (3) Journal of Solid-State Circuits, bimonthly; (4) Journal of Oceanic Engineering, quarterly; (5) Directory, biennial; (6) Standards, irregular; each of the 30 IEEE societies publishes its own journal. **Formed by Merger of:** American Institute of Electrical Engineers (founded 1884) and Institute of Radio Engineers (founded 1912). **Convention/ Meeting:** intermittent technical shows, conferences and symposiums.

★4499★

AMERICAN INSTITUTE OF INDUSTRIAL ENGINEERS (Engineering)

(AIIE)

25 Technology Park/Atlanta

Phone: (404) 449-0460

Norcross, GA 30092

David L. Belden, Exec. Dir.

Founded: 1948. **Members:** 31,000. **Staff:** 33. **Senior chapters:** 206. **Student chapters and clubs:** 105. Professional society of industrial engineers (26,000) and student members (5000). Concerned with the design, improvement, and installation of integrated systems of people, materials, equipment and energy. Draws upon specialized knowledge and skill in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design, to specify, predict, and evaluate the results to be obtained from such systems. Promotes professional registration of industrial engineers. Conducts technical research; holds conferences and seminars; presents annual awards. **Publications:** (1)

Industrial Engineering, monthly; (2) The Engineering Economist, quarterly; (3) Transactions - Industrial Engineering Research and Development, quarterly; also publishes special studies and reports. **Convention/ Meeting:** annual - always May. 1980 Atlanta, GA; 1981 Detroit, MI; 1982 New Orleans, LA.

★4722★

AMERICAN FEDERATION OF INFORMATION PROCESSING SOCIETIES (AFIPS)

210 Summit Ave.

Phone: (201) 391-9810

Montvale, NJ 07645

Robert W. Rector, Exec. Dir.

Founded: 1961. Federation of: Association of Computing Machinery; Institute of Electrical and Electronics Engineers Computer Society; Society for Computer Simulation; American Society for Information Science; Association for Computational Linguistics; Society for Information Display; American Statistical Association; Society for Industrial and Applied Mathematics; American Institute of Aeronautics and Astronautics; Instrument Society of America; Association for Educational Data Systems; Data Processing Management Association; Institute of Internal Auditors Inc. To serve as a national voice for the computing field; to advance knowledge of the information processing sciences. U.S. member of the International Federation for Information Processing. Presents annual award for contributions to information processing; maintains small library. **Committees:** Admissions; Awards; Education; History of Computing; National Computer Conference Board; Professional Standards & Practices; Public Information; Social Implication; Special Committee on EFTS; Special Committee on Right to Privacy; Statistical Research; Washington Activities. **Publications:** (1) Washington Report, monthly; (2) Proceedings, annual; also publishes books. **Formerly:** National Joint Computer Committee. **Convention/ Meeting:** annual National Computer Conference. 1980 May 19-22, Anaheim, CA; 1981 May 4-7, Chicago, IL; 1982 June 7-10, New York City; 1983 May 16-19, Anaheim, CA.

★4723★

AMERICAN SOCIETY FOR INFORMATION SCIENCE (Information Processing) (ASIS)

1010 16th St., N.W.

Phone: (202) 659-3644

Washington, DC 20036

Samuel B. Beatty, Exec. Dir.

Founded: 1937. **Members:** 4000. **Staff:** 5. **Local Groups:** 26. **Student**

groups: 21. **Special Interest Groups:** 22. Information specialists, scientists, librarians, administrators, social scientists and others interested in the use, organization, storage, retrieval, evaluation and dissemination of recorded specialized information. Seeks to improve the information transfer process through research, development, application and education. Provides a forum for the discussion, publication, and critical analysis of work dealing with the theory, practice, research, and development of elements involved in communication of information. Members are engaged in a variety of activities and specialties, including classification and coding systems, automatic and associative indexing, machine translation of languages, special librarianship and library systems analysis and copyright issues. Sponsors National Auxiliary Publications Service (NAPS), which provides reproduction services and a central depository for all types of information (operated for ASIS by Microfiche Publications). Maintains a Placement Service and 24-hour Jobline. Presents awards. **Committees:** Awards and Honors; Education; International Relations; Inter-Society Cooperation; Public Affairs; Publications; Standards. **Special Interest Groups:** Arts and Humanities; Automated Language Processing; Behavioral and Social Sciences; Biological and Chemical Information Systems; Classification Research; Community Information Services; Computerized Retrieval Services; Costs, Budgeting, and Economics; Education for Information Science; Foundations of Information Science; Information Analysis Centers; Information Publishers; Information Services to Education; Law and Information Technology; Library Automation and Networks; Management of Information Activities; Medical Records; Non-Print Media; Numeric Data Bases; Public/Private Interface; Reprographic Technology; Technology and Society; User On-Line Interaction. **Publications:** (1) Bulletin, bimonthly; (2) Journal, bimonthly; (3) Annual Review of Information Science and Technology; (4) Handbook and Directory, annual; (5) Proceedings, annual; (6) Computer-Readable Bibliographic Data Bases, biennial; also publishes monographs. **Affiliated with:** American Federation of Information Processing Societies; American Library Association; American National Standards Institute; International Federation for Documentation; National Federation of Abstracting and Indexing Services. **Formerly:** (1968) American Documentation Institute. **Convention/ Meeting:** annual - always October. 1980 Anaheim, CA; 1981 Washington, DC; 1982 Columbus, OH; 1983 Dallas, TX.

★4724★

ASLIB (Information Processing)

3 Belgrave Sq.

London SW1X 8PL, England

Basil Saunders, Dir.-Gen.

Founded: 1924. **Members:** 2150. **Staff:** 60. **Regional Groups:** 3. Corporate members (1850) are private and nationalized industry, research establishments, universities and colleges, technical institutions, government departments, public and national libraries and documentation centers. Individual members (300) are students and employees of corporate members. ASLIB is a grant-aided research association specializing in problems relating to information collection, retrieval and dissemination. Offers members a comprehensive referral and inquiry service designed to supply information on any subject and in any depth; provides advice and training on any aspect of information handling and use. Annually offers nearly 40 short specialty training courses for information personnel. Conducts research into all aspects of information handling. Maintains extensive library. **Committees:** Education; International Relations; Publications; Research. **Subject Groups:** Biological; Chemical; Computers/Data Processing; Economics and Business Information; Electronics; Engineering; Information; Social Sciences; Transport and Planning. **Technique Groups:** Audio Visual; Computer Application; Coordinate Indexing; Technical Translation. **Publications:** (1) Booklist, monthly; (2) Information, monthly; (3) Proceedings, monthly; (4) Audio-Visual Librarian, quarterly; (5) Forthcoming International Scientific and Technical Conferences, quarterly; (6) Journal of Documentation, quarterly; (7) Program, quarterly; (8) Technical Translation Bulletin, 3/year; (9) Index to Theses, semiannual; (10) Annual Report; (11) Membership List, annual; (12) Directory, quinquennial; also publishes books, reports, and various occasional publications. **Convention/ Meeting:** annual conference - always September. 1980 Sheffield, England.

★4725★

ASSOCIATED INFORMATION MANAGERS (Information Processing) (AIM)

316 Pennsylvania Ave., S.E., Suite 502

Phone: (202) 544-1969

Washington, DC 20003

Helen M. Strauch, Program Coord.

Founded: 1978. **Members:** 500 (470 U.S., 30 foreign). **Staff:** 1. **Regional Groups:** 5. Information managers in libraries, data processing, records management, office management and information science. Seeks to improve information manager credibility and visibility; provide career guidance and mobility and educational opportunities to increase and improve management of information. Programs include Career Exchange Clearinghouse, regional meetings and seminars, training programs and government liaison. Provides current awareness service and microfiche collection to members only, as well as bibliographies. Maintains speakers bureau; compiles statistics. **Committees:** Education; Member Communications; Public Relations; Regional Meetings. **Publications:** (1) AIM Network, biweekly; (2) AIM Membership Directory, annual; also publishes resource kit. **Affiliated with:** Information Industry Association. **Formerly:** (1979) Program for Information Managers.

Convention/ Meeting: annual National Information Conference and Exposition - always spring, Washington, DC.

4726
ASSOCIATION OF COMPUTER PROGRAMMERS AND ANALYSTS
(Information Processing) (ACPA)

P.O. Box 95 Phone: (301) 422-7877
Kensington, MD 20795 Mary Katharine Green, Chm. Of Bd.
Founded: 1970. Members: 1000. Regional Groups: 7. Local Groups: 12.
Computer programmers and analysts; companies employing computer professionals. Seeks to set high qualification and other standards within the computer profession. Compiles statistics; sponsors conferences, workshops and seminars on the national, regional and local level. Persons who have made an "extraordinary contribution" to the profession are named Fellows by the Association. Sponsors ACPA Founders Award. Plans to maintain library on data processing subjects. Committees: Certification; Privacy; Professional Education; Seminars; Special Interest Group on Career Counseling; Standards. Publications: (1) Thruput, monthly; (2) Annual Proceedings; (3) edp Scope, irregular; also publishes technical papers. Convention/ Meeting: annual.

4727
ASSOCIATION FOR COMPUTERS AND THE HUMANITIES (Information Processing) (ACH)

Queens College - CUNY Phone: (212) 520-7407
Fushing, NY 11367 Joseph Raben, Pres.
Founded: 1978. Scholars interested in developing computer applications in the study of language, literature, history, music, archaeology, philosophy, political science and related social sciences. Acts as a forum to discuss methods of computerization. Helps to coordinate the activities of major research centers in North America, Europe and Japan. Committees: Bibliography; Research Activities. Publications: (1) Newsletter, quarterly; (2) Bibliography, annual; also issues survey of research activities and includes conference papers in Computers and the Humanities (journal). Convention/ Meeting: biennial International Conference on Computers and the Humanities (ICCH). Also holds national meeting.

4728
ASSOCIATION FOR COMPUTING MACHINERY (Information Processing) (ACM)

1133 Ave. Of The Americas Phone: (212) 265-6300
New York, NY 10036 Sidney Weinstein, Exec.Dir.
Founded: 1947. Members: 40,000. Staff: 50. Local Groups: 300.
Mathematicians, engineers, physical scientists, business system specialists, analysts, and social scientists interested in computing and data processing. To advance the sciences and arts of information processing, including, but not restricted to, the study, design, development, construction and application of modern technology, computing techniques and appropriate language for general information processing, storage, retrieval, transmission/communication and processing of data of all kinds, and for the automatic control and simulation of processes. Maintains 31 special interest groups. Presents awards for distinguished service and outstanding work in computing field. Committees: Education; External Activities; Publications: (1) Communications of the ACM, monthly; (2) Computing Reviews, monthly; (3) Computer Surveys, quarterly; (4) Journal of the Association for Computing Machinery, quarterly; (5) Transactions on Database Systems, quarterly; (6) Transactions on Mathematical Software, quarterly; (7) Transactions on Programming Languages and Systems, quarterly; (8) Conference Proceedings, annual; (9) Guide to Computing Literature, annual; also publishes directories, monographs, curriculum recommendations and periodic special interest groups newsletters. Convention/ Meeting: annual - 1980 Oct. 27-29, Nashville, TN; 1981 Nov. 9-11, Los Angeles CA; 1982 Oct. 25-27, Dallas, TX; 1983 Oct. 24-26, New York City.

4729
ASSOCIATION OF INFORMATION AND DISSEMINATION CENTERS
(Information Processing) (ASIDIC)

P.O. Box 8105 Phone: (404) 542-3106
Athens, GA 30603 J. Ron Smith, Pres.
Founded: 1968. Members: 130. Information centers representing industry, government, and educational institutions in the United States and other countries. Member centers offer current awareness (selective dissemination of information) and/or retrospective searches processed by computer for data bases from a variety of sources. Promotes applied technology of information storage and retrieval as related to large data bases containing bibliographic, textual, and factual information; recommends standards for data elements, formats and codes; promotes research and development for more efficient use of varied data bases. Sponsors meetings, seminars and workshops. Provides a forum for communication between information users and data base suppliers, many of whom are associate members of ASIDIC. Committees: Center-Supplier Relations; Cooperative Data Management; Standards. Publications: Newsletter, quarterly. Formerly: (1976) Association of Scientific Information Dissemination Centers. Convention/ Meeting: semiannual - spring and fall. 1980 Washington, DC and Atlanta, GA.

4730
ASSOCIATION FOR LITERARY AND LINGUISTIC COMPUTING
(Information Processing) (ALLC)

Literary And Linguistic Computing Centre
Sidgwick Site
Cambridge CB3 9DA, England Dr. John L. Dawson, Sec.
Founded: 1973. Members: 444. Local Groups: 30. Individuals who are graduates in languages and/or computing (400); universities which process languages by computer and companies which provide language processing services or which market related products and equipment (44). Seeks to further literary and linguistic research by computer and to provide a means of communication for all those concerned with such research. Sponsors symposia and conferences in literary and linguistic computing. Holds seminars on computing techniques, primarily for linguists and librarians. Maintains small library of research papers and books and texts in machine readable form. Operates 18 specialist groups. Publications: Bulletin, 3/year. Convention/ Meeting: annual - always December. 1980 Copenhagen, Denmark; 1981 Oxford, England. Also holds biennial symposium - 1981 Mar. 28-Apr. 3, Cambridge, England.

4731
ASSOCIATION OF MINICOMPUTER USERS (Information Processing) (AMU)

Two Frederick St. Phone: (617) 879-5955
Framingham, MA 01701 Raymond P. Wenig, Exec.Dir.
Founded: 1978. Members: 500. Staff: 1. Firms and individuals who use or are interested in using small computer systems for internal applications. Offers six seminars per year. Maintains library of 800 volumes; compiles statistics. Committees: Small Computer; Standards; Vendor Relations. Divisions: Business Applications; Governmental; Industrial; Microcomputer Users. Publications: (1) Mini-Beacon (newsletter), bimonthly; (2) Membership Directory, annual. Convention/ Meeting: annual conference.

4732
ASSOCIATION OF SMALL COMPUTER USERS (Information Processing) (ASCU)

75 Manhattan Dr. Phone: (303) 499-1722
Boulder, CO 80303 Mr. Hillel Segal, Pres.
Founded: 1978. Members: 2000. Staff: 4. Users and prospective users of small computers for business or scientific applications. Objectives are to provide an unbiased source of user-oriented information on mini- and micro-computers, and to provide standard comparisons of small systems. Publications: (1) Benchmark Reports, monthly; (2) Newsletter, bimonthly. Absorbed: (1978) Minicomputer Industry National Interchange. Affiliated with: Association of Time-Sharing Users.

4733
ASSOCIATION OF TIME-SHARING USERS (Information Processing) (ATSU)

75 Manhattan Dr. Phone: (303) 499-1722
Boulder, CO 80303 Hillel Segal, Pres.
Founded: 1974. Members: 1500. Staff: 4. Local Groups: 20. Users and prospective users of computer time-sharing systems (1100); persons associated with time-sharing companies and other individuals involved in the sale of time-sharing services, equipment, and software (400). Purpose is to evaluate, compare, and disseminate information about inter-active computing products and services. Sponsors special interest groups to investigate and exchange information on current problems and specialized applications. Conducts industry surveys. Publications: Newsletter, bimonthly; also publishes series of directories. Formerly: (1975) Association of Computer Time-Sharing Users.

4734
COMPUTER AND AUTOMATED SYSTEMS ASSOCIATION OF SME
(Information Processing) (CASA/SME)

One SME Drive, Box 930 Phone: (313) 271-1500
Dearborn, MI 48128 Bernard M. Sallot, Exec.Dir.
Founded: 1975. Members: 3500. Staff: 5. Sponsored by Society of Manufacturing Engineers. Individuals involved with computer systems and automation as related to manufacturing technology. Attempts to provide professionals with a single vehicle which brings together the fields of manufacturing utilizing computer systems automation technologies; to provide liaison among industry, government, education and the SME Technical Council to keep abreast of the total resource distribution of computer systems and automation within the scope of the Association. Offers access to computer and automation systems technologies within functional areas of manufacturing and within integrated application groupings. Holds national seminars on systems integration. Committees: Dissemination and Transfer; Environment; Equipment Justification; Incentives for Development; Resources and Priorities. Councils: Application Disciplines; Application Justification; CAD/CAM; DNC/CNC; Energy Management; Integrated Plant; Inventory Control; Plant Data Communications; Productivity; Standards and Terminology. Divisions: Design/Manufacturing Interface; Equipment and Programming; Facilities and Maintenance; Production Systems; Techniques. Publications:

Newsletter, quarterly. Formerly: (1978) Computer and Automated Systems Association. Convention/ Meeting: annual Computer Aided Design/Computer Aided Manufacturing Conference and Exposition.

★4735★

COMPUTER SECURITY INSTITUTE (Information Processing)
A for-profit organization located in Hudson, MA "dedicated to helping its members safeguard their valuable E.D.P. resources."

★4736★

CONFERENCE ON DATA SYSTEMS LANGUAGES (Information Processing) (CODASYL)

P.O. Box 1808

Washington, DC 20013

John L. Jones, Chm.

Founded: 1959. Individuals and institutions who contribute effort and funds towards designing and developing techniques and languages to assist in data systems analysis, design and implementation. Committees: COBOL; Common Operating System Control Language (COSCL); Data Description Language (DDL); End User Facilities (EUF); FORTRAN Data Manipulation Language; Systems. Publishes Journals of Development.

★4737★

DIGITAL EQUIPMENT COMPUTER USERS SOCIETY (Information Processing) (DECUS)

One Iron Way

Marboro, MA 01752

Phone: (617) 481-9511

William C. Picott, III, Exec.Dir.

Founded: 1961. Members: 35,000. Establish standards and provide channels to facilitate the exchange of computer programs among members, and provide feedback to the manufacturer on equipment and programming needs. Publications: (1) Decuscope, quarterly; (2) Program Library Catalog, annual; (3) Meeting Proceedings, irregular. Convention/ Meeting: 10/year.

ECOLOGY FORUM (Information Processing)

See Index

ENVIRONMENTAL DATA SERVICE (Information Processing)

See Index

★4738★

INDEPENDENT COMPUTER CONSULTANTS ASSOCIATION (Information Processing) (ICCA)

P.O. Box 27412

St. Louis, MO 63141

Phone: (314) 567-9708

Steven A. Epner, Pres.

Founded: 1976. Members: 280. Staff: 1. Regional Groups: 10. Supports individuals, partnerships and corporations providing computer-related products and services. Promotes professionalism within the industry; increases awareness in the general business community of the products and services available and provides members with group benefits. Support services include: standard form contracts, financial advisory service, business advisory services. Committees: Ethics; Standards and Procedures. Publications: (1) The Independent, quarterly; (2) Conference Proceedings, annual; (3) Directory, annual. Convention/ Meeting: annual - 1980 April (location undecided).

★4739★

INSTITUTE FOR CERTIFICATION OF COMPUTER PROFESSIONALS (Information Processing) (ICCP)

35 E. Wacker Dr.

Chicago, IL 60601

Phone: (312) 782-9437

Founded: 1973. Members: 8. Staff: 2. Associations of computer professionals. Objectives are the development of computer examinations which are of high quality and directed toward all levels of management and which are designed to encourage competence and professionalism. Has developed code of ethics and good practice to which those taking the exams promise to adhere. Gives awards for top scores on the examinations; compiles statistics. Committees: Public Information. Publications: Newsletter, quarterly. Convention/ Meeting: semiannual.

★4740★

INTERNATIONAL ASSOCIATION FOR MATHEMATICS AND COMPUTERS IN SIMULATION (Information Processing) (IMACS-AICA)

H 496 Ave. Molere

B-1060 Brussels, Belgium

Prof. R. Vichnevetsky, Chm.Mgmt.Comm.

Founded: 1955. Members: 400. Professors and engineers specializing in analog, digital and hybrid computation; industrial firms, scientific associations, and government agencies. Facilitates exchange of scientific information among specialists, builders and users interested in mathematics and computers in simulation; organizes international meetings and exhibits. Committees: Direction; Redaction; Scientific. Divisions: General Assembly. Publications: (1) Mathematics and Computers in Simulation, quarterly; (2) Newsletter, quarterly; (3) Proceedings, quarterly; also issues other scientific publications and a directory. Formerly: (1976) International Association for Analogue Computation. Convention/ Meeting: triennial - 1982 August, Boston, MA.

★4741★

INTERNATIONAL FEDERATION FOR INFORMATION PROCESSING (IFIP)

IFIP Secretariat

3 Rue Du Marche

CH-1204 Geneva, Switzerland

Prof. P. A. Bobillier, Pres.

Founded: 1960. Members: 37. Multinational federation of professional-technical societies (or groups of such societies) actively engaged in the field of information processing, including mathematical and engineering aspects. Publishes numerous bibliographies, bulletins, conference proceedings and reports. Committees: Computer Applications in Technology; Data Communication; Digital Systems Design; Education; Information Processing in Health Care and Biomedical Research; Information Systems; Programming; Relationship between Computers and Society; System Modeling and Optimization. Formerly: International Federation of Information Processing Societies. Convention/ Meeting: triennial congress - 1980 October, Tokyo, Japan and Melbourne, Australia.

★4742★

INTERNATIONAL WORD PROCESSING ASSOCIATION (Information Processing) (IWP)

Maryland Rd.

Willow Grove, PA 19090

Phone: (215) 657-3220

Lorraine Lear, Dir.

Founded: 1972. Members: 6500. Staff: 12. Individuals interested or actively participating in the development and use of improved word processing methods and systems. Word processing describes "new, sophisticated techniques to transform the written, oral or recorded word into type or printed form for distribution." The concept is also described as "word origination, production and distribution." IWP is primarily oriented toward internal text-based information systems within companies and deals with application of automation to the transfer of ideas to paper or electronic storage through use of dictation equipment, computerized high-speed typewriters and related hardware. Encourages exchange of ideas and experiences among members and the general business community. Conducts annual salary survey. Committees: Standards. Publications: (1) Viewpoint, monthly; (2) Words, bimonthly; (3) Directory, annual; also publishes Word Processing Glossary, periodicals and a book. Convention/ Meeting: 3/year - 1980 Feb. 26-28, New York, NY, June 16-18, San Francisco, CA and Sept. 30-Oct. 3, Philadelphia, PA.

★4743★

SMITHSONIAN SCIENCE INFORMATION EXCHANGE (Information Processing) (SSIE)

1730 M St., N.W., Rm. 300

Washington, DC 20036

Phone: (202) 381-5514

Dr. David F. Hersey, Pres.

Founded: 1949. A non-profit corporation of the Smithsonian Institution, established for the expressed purpose of dissemination of information concerning research in progress. Collects, indexes, stores, and disseminates information on current scientific projects in all life and physical sciences. Information is supplied by over 1300 different funding organizations such as federal, state, local governments; non-profit associations and foundations; colleges and universities; foreign research organizations; and individual investigators who wish to register their research. The exchange is concerned only with research actually in progress; it does not receive progress reports, abstracts, or other forms of published research results. A Notice of Research Project is prepared on each current project. This document contains the name of the supporting organization, names and departments of principal and associated investigators, performing organization name and address, project title, a 200-word summary of the work to be performed, and, in some cases, project funding. Services are available on a fee basis to all interested persons, and include compilations of notices of research projects appropriate to a specific or general subject, location, investigator, or a combination of similar data elements; administrative tabulations of project titles, numbers and amounts of support by year in a given field or a given geographic area; selective dissemination of information on-line searching; and specialized data collection services. Publications: SSIE Science Newsletter, 10/year. Formerly: (1949) Medical Sciences Information Exchange; (1953) Bio-Sciences Information Exchange; (1970) Science Information Exchange, Smithsonian Institution.

★4744★

SOCIETY FOR COMPUTER SIMULATION (Information Processing) (SCS)

P.O. Box 2228

Lafolla, CA 92038

Phone: (714) 459-3888

C. G. Stockton, Exec.Dir.

Founded: 1952. Members: 1500. Regional Groups: 9. Persons professionally engaged in simulation, particularly through the use of computers and similar devices which employ mathematical or physical analogies. Sponsors computer and simulation conferences and symposia; regional councils hold three to six meetings per year. Committees: Business Simulation Practices; College and University Education; Continuous System Simulation Languages; Library; Model Credibility; Numerical Methods; Software for Hybrid Computers; Standards; Summer Computer Simulation Conference; Systems Ecology; Technical Meetings. Publications: (1) Simulation, monthly; (2) Proceedings, semiannual. Affiliated with: American Federation of Information Processing

Societies; International Association for Mathematics and Computers in Simulation; International Federation for Information Processing. Also Known As: Simulation Councils, Inc. (name used for legal and business purposes). Convention/ Meeting: annual - 1980 Aug. 24-28, Seattle, WA; 1981 Washington, DC.

4745
SOCIETY FOR INFORMATION DISPLAY (Information Processing)
(SID)

554 N. Sepulveda Blvd. Phone: (213) 472-3550
Los Angeles, CA 90049 June Friend, Off. Mgr.
Founded: 1962. Members: 2287. Local Groups: 12. Scientists and engineers, students, other individuals, and business firms dealing with display problems. To encourage scientific, literary, and education advancement of information display and its allied arts and sciences, including the disciplines of display theory, display device and systems development, and the psychological and physiological effects of display systems on the human senses. Plans to establish central repository for information and to develop definitions and standards in this field. Committees: Academic; Archives; Definition and Standards; Honors and Awards; Inter-Society. Publications: (1) Information Display, monthly; (2) Proceedings of the SID, quarterly. Convention/ Meeting: annual - 1980 Apr. 28-May 2, San Diego, CA; 1981 New York City; 1982 Los Angeles, CA.

4746
SPECIAL INTEREST GROUP ON INFORMATION RETRIEVAL
(Information Processing) (SIGIR)

1133 Avenue Of The Americas P. Bruce Berra, Chm.
New York, NY 10036
Founded: 1966. Members: 2000. Sub-group of the Association for Computing Machinery (ACM) comprised of computer professionals interested in information storage and retrieval. Conducts research; sponsors educational programs. Publications: Forum, quarterly. Convention/ Meeting: semiannual conference - 1980 England; 1981 Washington, DC.

4747
TEXAS INSTRUMENTS MINICOMPUTER INFORMATION EXCHANGE
(Information Processing) (TI-MIX)

P.O. Box 2909 Phone: (512) 250-7157
M/S 2200 Austin, TX 78769
Founded: 1973. Members: 4000. Regional Groups: 8. Owners or leasees of Texas Instruments (TI) minicomputer systems; others with an active interest in these systems or related equipment. To promote among users of TI minicomputers, and between users and TI, the exchange of information pertaining to these systems and related equipment. Members have the opportunity to constructively influence the design and development of these systems. Maintains library. Committees: Systems. Publications: (1) TI-MIX News, monthly; (2) TI-MIXER, quarterly; also publishes catalog. Convention/ Meeting: annual Symposium - 1980 March, Dallas, TX. Also holds regional meetings.

4748
URBAN AND REGIONAL INFORMATION SYSTEMS ASSOCIATION
(Information Processing) (URISA)

C/O Municipal Finance Officers Assn. Phone: (312) 977-9700
180 N. Michigan Ave. Dorothy Bomberger, Pres.
Chicago, IL 60601
Founded: 1964. Members: 1500. Staff: 1. Regional Groups: 20. Individuals interested in all phases of information systems (systems analysis, planning, graphics, evaluation, geographic base files, geocoding, systems design, systems implementation, data base management, operation analysis, public information, public administration, highway and traffic information, communication, information systems modeling). Dedicated to the advancement of information capabilities relating to urban areas. Is developing research and education programs. Publications: (1) Newsletter, bimonthly; (2) Annual Conference Proceedings; also publishes Directory, professional papers, monographs and other reports. Convention/ Meeting: annual - always August. 1980 Toronto, ON, Canada or New Orleans, LA; 1981 Toronto, ON, Canada or New Orleans, LA.

4749
USE INC. (Information Processing)

Box 461 Phone: (301) 699-9336
Bladensburg, MD 20710 Terrence Moenich, Sec.
Founded: 1975. Members: 350. Regional Groups: 8. International organizations relying on large scale computers. Promotes free interchange of ideas and information concerning system utilization; provides opportunities for fellowship and understanding among users; provides a forum where users may present constructive product development recommendations for the mutual benefit of the users and computer manufacturers; acts as an interface with other similarly motivated organizations and the computer industry in general. Committees: Applications Development; Performance and Evaluation; TIP/ Recovery; User Communications. Publications: (1) Newsletter, monthly; (2)

Administrative Minutes, quarterly; (3) Conference Software Notes, semiannual; (4) Technical Papers, semiannual; also publishes Reference Manual and Task Force Reports. Also Known As: Univac Scientific Exchange. Convention/ Meeting: semiannual conference - 1980 Mar. 10-14, Salt Lake City, UT and Oct. 6-10, Cleveland, OH.

4750
WORD PROCESSING SOCIETY, INC. (Information Processing) (WPSI)
P.O. Box 92553 Phone: (414) 276-8835
Milwaukee, WI 53202 Mildred Gau, Pres.

Founded: 1972. Members: 450. Individuals concerned with word processing as a profession. Purposes are: to provide mutual assistance; to develop word processing systems for industry; to encourage word processing educational programs within school systems; and to publicize word processing. Conducts seminars for teachers, business students, and word processing specialists. Offers specialized seminars for schools, trade associations and conventions. Conducts surveys; bestows awards. Committees: Education; Reciprocity. Publications: (1) The Word, monthly; (2) Directory, annual; also publishes glossary. Convention/ Meeting: annual Expo-Sium - 1980 Mar. 26-28, Lake Geneva, WI; 1981 Apr. 1-3, Milwaukee, WI.

4765
SOCIETY OF LOGISTICS ENGINEERS (SOLE)

322 S. Memorial Pkwy., Suite 2 Phone: (205) 883-9960
Montgomery, AL 35801 John C. Goodrum, Exec. Dir.
Founded: 1966. Members: 5800. Staff: 4. Regional Groups: 18. Individual management and technical practitioners in the field of logistics; includes scientists, engineers, educators, managers and other specialists in commerce, aerospace and other industries, government and the military. Covers every logistics specialty, including maintainability, systems and equipment maintenance, maintenance support equipment, human factors, training and training equipment, spare parts, overhaul and repair, handbooks, field site activation and operation, field engineering, facilities, packaging, materials handling and transportation. (Logistics is defined as the art and science of management engineering and technical activities concerned with requirements, design, and supplying and maintaining resources to support objectives, plans and operations). Sponsors the Logistics Education Foundation, a non-profit corporation. Bestows awards; sponsors placement service; offers specialized education programs; maintains speakers bureau. Publications: (1) Soletter, monthly; (2) Spectrum, quarterly; (3) Annals, semiannual; (4) Membership Directory, annual. Convention/ Meeting: annual - always August. 1980 Brentwood, CA; 1981 Seattle, WA; 1982 Boston, MA.

4772
SOCIETY OF MANUFACTURING ENGINEERS (SME)

P.O. Box 930 Phone: (313) 271-1500
Dearborn, MI 48128 R. William Taylor, Exec. V. Pres.
Founded: 1932. Members: 50,000. Senior Chapters: 225. Student Chapters: 80. Professional society of manufacturing engineers and management executives concerned with manufacturing techniques. To advance the science of manufacturing through the continuing education of manufacturing engineers and management. Administers research and educational grants; conducts national seminars, tool and manufacturing expositions, chapter education courses and programmed learning courses. Maintains extensive library. Sponsors eight national awards. Committees: Administrative Council; Education; Honor Awards; Publications; Regional Chairmen Council; Research and Educational Grants; Technical Council. Divisions: Assembly; Casting, Molding, and Metallurgical Processing; Engineering Materials; Finishing and Coating; Inspection and Quality Control; Manufacturing Management; Manufacturing/Numerical Control Systems; Material Forming; Material Removal; Tool Engineering. Publications: (1) Manufacturing Engineering, monthly; (2) SME Newsletter, quarterly; (3) Manufacturing Engineering Transactions, annual; (4) Technical Division Newsletters, irregular. Formerly: (1960) American Society of Tool Engineers; (1969) American Society of Tool and Manufacturing Engineers. Convention/ Meeting: annual - always April or May. 1980 Cleveland, OH; 1981 Detroit, MI; 1982 Philadelphia, PA. Also holds tool expositions and area conferences throughout the year.

4782
INTERNATIONAL MATERIAL MANAGEMENT SOCIETY (IMMS)

3310 Bardaville Dr. Phone: (517) 321-6713
Lansing, MI 48906 Richard C. Stankey, Exec. Dir.
Founded: 1949. Members: 3500. Staff: 4. Regional Groups: 9. Local Groups: 46. Professional society of engineers, educators and executives to advance the theory and practice of material management and material handling systems in manufacturing distribution, warehousing, transportation, and military operations. Sponsors regional conferences. Sponsors research; provides lesson outlines, teaching aids and speakers to colleges and universities for material handling courses. Committees: IMMS-MHI Technical Conference Steering Committee; Project on Standardization of Color Codes for Plant Layout Analysis; Standards Committees USASI MH-1 through MH-10; Standards Safety Committees; Technical Information Service. Publications: (1) Journal, monthly (as part of Modern Materials Handling Magazine); (2) Newsletter, bimonthly; (3) Pacesetter, quarterly; (4) Roster, annual. Formerly: (1966) American Material Handling Society. Convention

★4785★

AMERICAN MATHEMATICAL SOCIETY (Mathematics) (AMS)
P.O. Box 6248 Phone: (401) 272-9500
Providence, RI 02940 Dr. William J. LeVeque, Exec. Dir.
Founded: 1888. Members: 18,681. Staff: 113. Professional society of mathematicians and educators. Promotes the interests of mathematical scholarship and research. Holds conferences, institutes, seminars, and symposia to further mathematical research; awards prizes. Publications: (1) Current Mathematical Publications, biweekly; (2) Mathematical Reviews (abstracts and reviews), monthly; (3) Mathematics of the USSR-Sbornik, monthly; (4) Proceedings of the AMS, monthly; (5) Transactions of the AMS, monthly; (6) Notices of the AMS, 8/year; (7) Bulletin of the AMS, bimonthly; (8) Mathematics of the USSR - Izvestija, bimonthly; (9) Soviet Mathematics - Doklady, bimonthly; (10) Mathematics of Computation, quarterly; also publishes Translations of Mathematical Monographs, AMS Translations - Series 1: AMS Translations - Series 2; Transactions of the Moscow Mathematical Society; Proceedings of the Steklov Institute of Mathematics; Selected Translations in Mathematical Statistics and Probability; Russian-English Dictionary in the Mathematical Sciences; Romanian-English Dictionary and Grammar for the Mathematical Sciences; Selected Papers of Richard Von Mises; SIAM-AMS Proceedings; Proceedings of Symposia in Pure Mathematics; Memoirs; Mathematical Surveys; Colloquium Publications; Norbert Wiener Memorial; Lectures in Applied Mathematics. Formerly: (1894) New York Mathematical Society. Convention/ Meeting: annual - always January. 1981 San Francisco, CA.

★4786★

ASSOCIATION FOR SYMBOLIC LOGIC (Mathematics) (ASL)
P.O. Box 6248 Phone: (401) 272-9500
Providence, RI 02904 Louise Hay, Sec.
Founded: 1936. Members: 1400. Professional society of mathematicians and philosophers interested in formal or mathematical logic and related fields. Publications: Journal of Symbolic Logic, quarterly. Convention/ Meeting: annual - 1981 Jan. 7-11, San Francisco, CA.

★4787★

ASSOCIATION FOR WOMEN IN MATHEMATICS
C/O Women's Research Center
Wellesley College
828 Washington St. Phone: (617) 235-0320
Wellesley, MA 02181 Judith Roitman, Pres.
Founded: 1971. Mathematicians employed by universities, government and private industry and students. "To improve the status of women in the mathematical profession; to make students aware of opportunities for women in the field." Membership is open to all mathematicians, regardless of sex. Sponsors speakers bureau. Publishes Newsletter and career booklets for women. Formerly: (1973) Association of Women Mathematicians. Convention/ Meeting: semiannual.

★4788★

CONFERENCE BOARD OF THE MATHEMATICAL SCIENCES (Mathematics) (CBMS)
1500 Massachusetts Ave., N.W. Phone: (202) 293-1170
Washington, DC 20005 Truman A. Botts, Exec. Dir.
Founded: 1960. Members: 12. Professional societies incorporated to provide "a two-way channel of communication between the mathematical community and the Washington scene, and to serve as a focus for projects of broad concern to the mathematical sciences." Constituent members are: American Mathematical Society; Association for Symbolic Logic; Institute of Mathematical Statistics; Mathematical Association of America; National Council of Teachers of Mathematics; and Society for Industrial and Applied Mathematics. Affiliate members are: American Statistical Association; Association for Computing Machinery; Association for Women in Mathematics; Institute of Management Sciences; Operations Research Society of America; and Society of Actuaries. Committees: Affirmative Action; History; National Awards; Regional Research Conferences; School-College Communication; Science Education. Publications: Newsletter, quarterly; also publishes books, surveys and studies. Convention/ Meeting: semiannual council meeting.

★4789★

THE CONSTANT SOCIETY (Mathematics) (TCS)
P.O. Box 5513
4244 University Way, N.E. T. S. Davis, Contact Person
Seattle, WA 98105
Founded: 1975. Members: 40. Society is dedicated to the study of mathematical constants. To further knowledge in every direction. Publications: Newsletter, bimonthly. Formerly: The Pi, EX, I Society. Convention/ Meeting: bimonthly - always Seattle, WA.

★4790★

INDUSTRIAL MATHEMATICS SOCIETY (IMS)
P.O. Box 159 Phone: (313) 771-0403
Roseville, MI 48066 Dr. Robert Schmidt, Editor
Founded: 1949. Members: 120. Mathematicians, scientists, engineers and economists. To extend the understanding and application of mathematics in industry. Supports study group on mathematics of gear design. Areas of interest include engineering mechanics, power generation, computers, statistics, automatic control, operations analysis, biomechanics. Publications: Industrial Mathematics, semiannual.

★4791★

MATHEMATICAL ASSOCIATION OF AMERICA (Mathematics) (MAA)
1529 18th St., N.W. Phone: (202) 387-5200
Washington, DC 20036 Alfred B. Wilcox, Exec. Dir.
Founded: 1915. Members: 18,500. Staff: 13. State Groups: 29. College teachers of mathematics; also individuals using mathematics as tool in business or profession. Presents annual award for distinguished service to mathematics; also presents Chauvenet Prize, L. R. Ford and George Polya awards annually for distinguished expository writing in mathematics. Committees: Educational Media; Undergraduate Program in Mathematics; Visiting Lecturers and Consultants. Publications: (1) American Mathematical Monthly, 10/year; (2) Mathematics Magazine, 5/year; (3) Two-Year College Mathematics Journal, 5/year; (4) Membership List, annual; also publishes monographs, studies, papers and guides. Convention/ Meeting: annual - always January. 1981 San Francisco, CA.

★4792★

SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS (SIAM)
33 S. 17th St. Phone: (215) 564-2929
Philadelphia, PA 19103 I. E. Block, Mng. Dir.
Founded: 1952. Members: 4400. Staff: 18. Local Groups: 9. Mathematicians, engineers, computer scientists, businessmen, physical scientists, bioscientists, educators, social scientists and others utilizing mathematics for the solution of problems. Purpose: to further the application of mathematics to new methods and techniques useful to industry by providing vehicles for exchange of information between the mathematical, industrial and scientific communities. Founded Institute for Mathematics and Society (SIMS) in 1973 to foster research in application of mathematics toward solution of problems in the social sciences. Sponsors visiting lecture program. Presents several annual prizes and awards. Committees: Education; Human Rights of Mathematical Scientists; Program; Publications; (SIAM Committee on) Mathematics in the Life Sciences. Publications: (1) Journal on Applied Mathematics, 8/year; (2) Journal on Control, bimonthly; (3) Journal on Mathematical Analysis, bimonthly; (4) Journal on Numerical Analysis, bimonthly; (5) Newsletter, bimonthly; (6) Journal on Computing, quarterly; (7) Review, quarterly; (8) Theory of Probability and Its Applications - English Translation, quarterly; (9) Membership List, annual; also publishes Conference Board of the Mathematical Sciences Series and SIAM Studies in Applied Mathematics. Convention/ Meeting: semiannual - 1980 June, Washington, DC or Boston, MA and fall, Houston, TX; 1981 spring, Troy, NY.

★4793★

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (Mechanics) (ASME)
345 E. 47th St. Phone: (212) 644-7722
New York, NY 10017 Dr. Rogers B. Finch, Exec. Dir. & Sec.
Founded: 1880. Members: 80,000. Staff: 250. Regional Groups: 11. Local Groups: 177. Technical society of mechanical engineers (70,000). Membership also includes student members (10,000) in 212 student sections. Conducts research; develops boiler and pressure vessel, and power test codes; serves as sponsor for the American National Standards Institute in developing safety codes and standards for equipment; maintains, with other engineering societies, a 180,000-volume library. Committees: U.S. National Committee of the International Electrotechnical Commission. Maintains 19 research committees. Divisions: Aerospace; Air Pollution Control; Applied Mechanics; Bioengineering; Design Engineering; Diesel and Gas Engine Power; Dynamic Systems and Control; Energetics; Fluids Engineering; Fuels; Gas Turbine; Heat Transfer; Lubrication; Management; Materials; Materials Handling Engineering; Nuclear Engineering; Ocean Engineering; Petroleum; Plant Engineering and Maintenance; Power; Pressure Vessels and Piping; Process Industries; Production Engineering; Rail Transportation; Safety; Solar Energy Applications; Solid Waste Processing; Technology and Society; Textile Engineering. Publications: (1) Applied Mechanics Reviews, monthly; (2) Mechanical Engineering, monthly; (3) Transactions (Journals of: Power; Industry; Heat Transfer; Applied Mechanics; Lubrication Technology; Dynamic Systems, Measurement and Control; Fluids Engineering; Engineering Materials and Technology; Pressure Vessel Technology), quarterly. Convention/ Meeting: semiannual - always June and November. 1980 Chicago, IL and Chicago, IL; 1981 San Antonio, TX and Washington, DC.

★4883★

OPERATIONS RESEARCH SOCIETY OF AMERICA (ORSA)
428 E. Preston St. Phone: (301) 528-4146
Baltimore, MD 21202 Jesse L. Turner, Bus. Mgr.
Founded: 1952. Members: 7000. Local Groups: 12. Sections: 11. Professional society of persons engaged or interested in operations research in industry, government and military services. Presents annual Lanchester Prize for best paper in field. Committees: Education; Ethics and Professional Practice; Student Affairs; Technical Sections. Publications: (1) Operations Research, bimonthly; (2) OR/MS Today (newsletter), bimonthly; (3) Transportation Science, quarterly; (4) Meeting Bulletin, semiannual; (5) Directory, annual. Convention/ Meeting: semiannual - 1980 May 4-7, Washington, DC and Nov. 10-12, Houston, TX; 1981 May 3-6, Toronto, ON, Canada and Oct. 17-21, Colorado Springs, CO.

★5014★

BATTELLE MEMORIAL INSTITUTE (Research) (BMI)

505 King Ave. Phone: (614) 424-6424
Columbus, OH 43201 Dr. Sherwood L. Fawcett, Pres.
Founded: 1929. Staff: 6900. Non-profit, public-purpose organization. Institute conducting scientific research on a contract basis for industrial firms and government agencies in chemistry, biochemistry, metallurgy, physics, energy, computer technology, electronics, nucleonics, ceramics, transportation, education and training, environmental quality, medical engineering, urban problems, mechanical engineering, and many other fields. Has research centers at Geneva, Switzerland; Frankfurt/Main, Germany; Richland, WA; and Columbus, OH. Conducts educational programs, including seminars and fellowships. Subsidiary corporation works to stimulate use of technological discoveries in industry. Columbus Laboratories maintain library of over 150,000 volumes; other research centers also have library facilities. Publications: (1) Battelle Today, quarterly; (2) President's Report and Annual Review; (3) Published Papers and Articles, annual; also publishes original research papers, articles, and abstracts.

★5018★

INDUSTRIAL RESEARCH INSTITUTE (IRI)

100 Park Ave., Suite 2209 Phone: (212) 683-7626
New York, NY 10017 Charles F. Larson, Exec. Dir.
Founded: 1938. Members: 250. Staff: 8. Manufacturers and industrial firms maintaining industrial research laboratories. To promote through the

cooperative efforts of its members improved, economical and effective techniques of organization, administration and operation of industrial research. Presents awards. Committees: Advanced Study Groups; Education; Emeriti; Federal Science and Technology; Management Study Groups; Plans and Policies; Research-on-Research; Seminar. Publications: Research Management, bimonthly. Convention/ Meeting: annual - always May. 1980 Tarpon Springs, FL; 1981 Scottsdale, AZ; 1982 Palm Beach, FL; 1983 White Sulphur Springs, WV.

★5025★

WORLD ASSOCIATION OF INDUSTRIAL AND TECHNOLOGICAL RESEARCH ORGANIZATIONS (WAITRO)

7 Pr. Beatrixlaan
P.O. Box 778
NL-2501 CT The Hague, Netherlands Dr. J. C. Gerritsen, Sec.-Gen.
Founded: 1970. Members: 70. Staff: 3. Organizations either actively engaged in technological research (Technical Members, 60) or actively interested in encouraging, promoting and supporting industrial research (Sustaining Members, 10). Aims are: to assist the development and improve the capabilities of technical members, especially in developing countries; to identify fields of research needing cooperation or assistance by outside agencies; to promote coordination and cooperation between members; to encourage the transfer of research results and technical know-how between members; to promote exchange of experience and research management between members. Sponsors technical meetings. Finds finances for improving research facilities, training of personnel, information exchange. Operates a central information clearing-house. Implements exchange of research workers and research facilities. Serves as a link between members and international associations and federations. Acts as a spokesman for members on matters of common interest. Publications: (1) Communiqué, quarterly; (2) Directory of Membership, biennial. Convention/ Meeting: biennial - next 1980.

★5078★

AMERICAN STATISTICAL ASSOCIATION (Statistics) (ASA)

806 15th St., N.W. Phone: (202) 393-3253
Washington, DC 20005 Fred C. Leone, Exec. Dir.
Founded: 1839. Members: 13,000. Staff: 19. Local Groups: 63. Professional society of persons interested in the theory, methodology and application of statistics to all fields of human endeavor. Sections: Biometrics; Business and Economic Statistics; Education; Physical and Engineering Sciences; Social Statistics; Statistical Computing; Survey Research Methods. Publications: (1) AMSTAT News, monthly; (2) American Statistician, quarterly; (3) Journal of ASA, quarterly; (4) Journal of Educational Statistics, quarterly; (5) Technometrics, quarterly; (6) Proceedings, annual; (7) Directory

Statisticians, irregular. Convention/ Meeting: annual - always August. 1980 Houston, TX.

★5079★

BERNOULLI SOCIETY FOR MATHEMATICAL STATISTICS AND PROBABILITY (BSMSP)

428 Prinses Beatrixlaan
NL-2270 AZ Voorburg, Netherlands E. Lunenberg, Exec. Sec.
Founded: 1961. Members: 700. A section of the International Statistical Institute, to advance, through international contacts, the sciences of probability and mathematical statistics and their applications. Publishes Proceedings. Committees: Conferences on Stochastic Processes; European Regional; Statistics in the Physical Sciences. Convention/ Meeting: biennial.

★5080★

CAUCUS FOR WOMEN IN STATISTICS (CWS)

Bureau Of The Census, Rm. 3555, Bldg. 3 Phone: (301) 763-7028
Washington, DC 20233 Irene Montie, Pres.
Founded: 1970. Members: 200. Individuals, primarily statisticians, united to improve employment and professional opportunities for women in statistics. Conducts technical sessions concerning statistical studies related to women. Publishes job announcements in newsletter. Committees: Employment. Publications: Newsletter, 4/year. Affiliated with: American Statistical Association. Convention/ Meeting: annual - always August. 1980 Houston, TX.

★5081★

COMMITTEE OF PRESIDENTS OF STATISTICAL SOCIETIES (Statistics)

Informal group comprising representatives from the American Statistical Association, the Biometric Society, the Institute of Mathematical Statistics and Section U (Statistics) of the American Association for the Advancement of Science. Information regarding the Committee's activities can be addressed to the American Statistical Association (see separate entry).

★5082★

ECONOMETRIC SOCIETY (Statistics) (ES)

Dept. Of Economics
Northwestern University Phone: (312) 492-3615
Evanston, IL 60201 Robert J. Gordon, Treas.
Founded: 1930. Members: 6000. Staff: 4. Economists, statisticians and mathematicians. Promotes studies that are directed towards unification of the theoretical and the empirical approaches to economic problems and advancement of economic theory in its relation to statistics and mathematics. Bestows awards. Publications: Econometrica, bimonthly. Convention/ Meeting: 3/year - always June, September and December.

★5083★

INSTITUTE FOR ECONOMETRIC RESEARCH (Statistics) (IER)

3471 N. Federal Hwy. Phone: (305) 561-5105
Ft. Lauderdale, FL 33306 Norman G. Fosback, Pres.
Founded: 1971. Members: 15,000 subscribers. Staff: 7. Investors. Fosters scientific research into stock markets and related financial phenomena. Conducts seminars; compiles statistics. Maintains 1000 volume library in additional data base of financial statistics and files of financial periodicals. Publications: (1) Market Logic, semimonthly; (2) New Issues, annual. Convention/ Meeting: annual seminars.

★5084★

INSTITUTE OF MATHEMATICAL STATISTICS (IMS)

Dept. Of Statistics And Probability
Michigan State University
East Lansing, MI 48824 Martin Fox, Exec. Sec.
Founded: 1930. Members: 3000. Staff: 2. Regional Groups: 4. Professional society of mathematicians, statisticians and others interested in mathematical statistics and probability theory. "To further research in Mathematical Statistics." Sponsors visiting lecturer program. Publications: (1) Annals of Probability, bimonthly; (2) Annals of Statistics, bimonthly; (3) The Institute of Mathematical Statistics Bulletin, bimonthly; (4) Directory of Statisticians, triennial; also publishes Statistical Research monographs, Current Index to Statistics, and Selected Tables in Mathematical Statistics. Convention/ Meeting: annual; also holds annual regional meetings.

★5085★

INTER AMERICAN STATISTICAL INSTITUTE (Statistics) (IASI)

C/O Organization Of American States
1725 I St., N.W. Phone: (202) 331-1010
Washington, DC 20006 Tulo H. Montenegro, Sec. Gen.
Founded: 1940. Governments of nations which are members of the Organization of American States or governments of nations not members of OAS which have adhered to the Institute; official or unofficial agencies, institutions, organizations or offices of the Western Hemisphere which are engaged in statistical work; individuals in the Western Hemisphere distinguished for their professional attainments and for their contributions to statistical science and the development of statistics; persons occupying

statistical offices or having certain representative capacities in national and international agencies and associations working wholly or in part in the field of statistics. Fosters statistical development in the Western Hemisphere, specifically by seeking "to stimulate improved methodology in the collection, tabulation, analysis and publication of both official and unofficial statistics; to encourage measures designed to improve the comparability and reliability of economic and social statistics among the nations of this Hemisphere; to provide a medium for professional statistical collaboration among statisticians; to cooperate with national and international organizations promoting the science and administration of statistics." Activities of the Institute are coordinated with Organization of American States by agreement with the OAS. Has consultative status with the United Nations Economic and Social Council. Committees: Improvement of National Statistics (COINS); 1980 Committee of the Americas (COTA); Statistical Education. Publications: *Statistica*, quarterly; also publishes *Directory of Members*, *Directory of Statistical Personnel in the American Nations*, bibliographies, reports of conferences, and papers in English, Spanish Portuguese, and French. Convention/ Meeting: every 2-4 years.

5★
INTERNATIONAL ASSOCIATION FOR REGIONAL AND URBAN STATISTICS (IARUS)

Prinses Beatrixlaan 170 AZ Voorburg, Netherlands E. Lunenberg, Treas. Founded: 1958. Members: 155. A section of the International Statistical Institute. To promote the production and use of statistical data to meet the needs of regional and urban administration, research and planning; to further the international comparability of regional and urban data and to exchange professional knowledge relating to regional and urban statistics. Formerly: International Statistical Institute's Committee on Statistics of Large Towns; 5) International Association of Municipal Statisticians. Convention/ Meeting: biennial - next 1980.

17★
INTERNATIONAL ASSOCIATION FOR STATISTICAL COMPUTING (Statistics) (IASC)

Prinses Beatrixlaan 270 AZ Voorburg, Netherlands E. Lunenberg, Dir. Founded: 1977. Members: 240. Section of the International Statistical Institute. Statisticians, computing professionals and organizations interested in promoting the theory, methods and practice of statistical computing. Represents world-wide interest in effective statistical computing; exchanges technical information through international contacts and meetings among members, institutions and governments. Establishes temporary "working groups" to address a specific task or need. Those groups presently active are: editing/imputation; evaluations (software and hardware); hand-held programmable calculators; input/output activities; languages; policy and procedures for acquisition and management of computing; portability, privacy and confidentiality; security; simulation; statistical data bases and data base systems; survey and census processing; unique requirements of developing countries. Publications: *Working Group Reports*, annual; also publishes *Newsletter*, reports, pamphlets and books. Convention/ Meeting: biennial General Assembly meeting.

088★
INTERNATIONAL ASSOCIATION OF SURVEY STATISTICIANS (Statistics) (IASS)

Boulevard A. Pinard 75675 Paris 14, France P. Damiani, Sec. Founded: 1971. Members: 1500. Staff: 21 A section of the International Statistical Institute to promote the study and development of the theory and practice of statistical censuses and surveys and associated subjects and to foster interest in these subjects. Publications: (1) *Survey Statistician*, triannual; (2) *Directory of Members*, biennial; (3) *Summary Booklet*, biennial. Convention/ Meeting: biennial.

5089★
INTERNATIONAL STATISTICAL INSTITUTE (Statistics) (ISI)

28 Prinses Beatrixlaan 1101 CA Voorburg, Netherlands E. Lunenberg, Dir. Perm. Office Founded: 1885. Members: 1010. Staff: 15. Persons "distinguished for their contributions to the development or application of statistical methods or to the administration of statistical services." The Institute is an autonomous society devoted to the development and improvement of statistical methods and their application throughout the world. Sponsors statistics course at Institute center in Calcutta, India. Compiles and publishes international statistics; has established an abstracting service of statistical publications; sponsors world fertility survey. Committees: Integration of Statistics; Statistical Education. Sections: Bernoulli Society for Mathematical Statistics and Probability; International Association for Regional and Urban Statistics; International Association for Statistical Computing; International Association of Survey Statisticians. Publications: (1) *Statistical Theory and Methods Abstracts*, quarterly; (2) *International Statistical Review*, 3/year; (3) *Newsletter*, 3/year; (4) *Bulletin of ISI*, biennial; has also published dictionaries of statistical terms

and bibliographies. Convention/ Meeting: biennial conference.

★5097★
INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS (IIASA)

Schloss Laxenburg A-2361 Laxenburg, Austria Roger E. Levien, Dir. Founded: 1972. Members: 17. Staff: 90. Members are national academies of sciences or national scientific committees. Develop and apply, through international cooperation, improved methods of investigation and analysis which shall make use of systems analysis methodology and modern management principles in order to predict, evaluate and manage policy alternatives for dealing with complex societal problems. Sponsors research projects on: energy systems; food and agriculture; resources and environment; human settlements and services; management and technology; system and decision sciences. Publications: (1) *Options* (newsletter), quarterly; (2) *Conference Proceedings*, irregular; (3) *Research Memoranda*, irregular; (4) *Research Reports*, irregular; also publishes monographs.

★5098★
SOCIETY FOR GENERAL SYSTEMS RESEARCH (SGSR)

Lisner Hall, Rm. 601 2023 G St., N.W. Washington, DC 20052 Phone: (202) 676-7155 Richard F. Ericson, Pres. Founded: 1954. Members: 1000. Regional Groups: 10. Mathematicians, physical scientists, engineers, psychologists, social scientists, psychiatrists, medical researchers, and others interested in general systems research. To encourage development of theoretical systems which are applicable to more than one of the traditional departments of knowledge. Functions include: investigate isomorphism of concepts, laws, and models in various fields and help in useful transfers from one field to another; encourage development of adequate theoretical models in fields which lack them; minimize duplication of theoretical effort in different fields; promote unity of science through improving communication among scientists. Publications: (1) *Behavioral Science* (journal), bimonthly; (2) *General Systems Bulletin*, 3/year; (3) *General Systems Yearbook*; (4) *Managing Directors Letter*, irregular; (5) *Proceedings of Annual Meetings*; (6) *Proceedings of Regional Meetings*, irregular. Affiliated with: American Association for the Advancement of Science; UNESCO. Formerly: (1955) Society for the Advancement of General Systems Theory. Convention/ Meeting: annual - with AAAS. Also holds annual regional meetings in the U.S.

Section 5 — EDUCATIONAL ORGANIZATIONS

★5281★
AMERICAN INSTITUTE FOR DECISION SCIENCES (Business)
University Plaza Atlanta, GA 30303 Phone: (404) 658-4000 Dennis Grawoig, Exec. Dir. Founded: 1969. Members: 4500. Regional Groups: 5. Businessmen and members of business school faculties. Bestows awards; maintains placement service. Committees: Curriculum. Publications: (1) *Decision Line* (newsletter), bimonthly; (2) *Decision Sciences Journal*, quarterly; (3) *Proceedings*, annual. Affiliated with: Alpha Iota Delta. Convention/ Meeting: annual - always October. 1980 Las Vegas, NV; 1981 Boston, MA.

INTERNATIONAL ORGANIZATIONS

A: Federations of international organizations

◆ A3893y Five International Associations Coordinating Committee (FIACC)

Comité de coordination de cinq associations internationales
Hon Sec Prof Dr Gy Striker, IMEKO, PO Box 457, H-1371 Budapest, Hungary. T. 324 116. C. IMEKO Budapest. Tx 22-57-92 mtesz h.

Founded 2-3 June 1970, Paris, by delegates of five non-governmental international associations: *International Federation of Automatic Control (IFAC)* — *Fédération internationale pour la commande automatique*; *International Federation for Information Processing (IFIP)* — *Fédération internationale pour le traitement de l'informatique*; *International Federation of Operational Research Societies (IFORS)* — *Fédération internationale des sociétés de recherche opérationnelle*; *International Association for Mathematics and Computers in Simulation (IMACS)* — *Association internationale des mathématiciens et calculateurs en simulation*, formerly *International Association for Analogue Computation* — *Association internationale pour le calcul analogique (AICA)*; and *International Measurement Confederation (IMEKO)* — *Confédération internationale de la mesure*. Current Objectives and Working Principles approved by the Sister Federations of FIACC, at 9th Meeting, June 1978, Helsinki.

Aims Coordinate public activities of constituent Associations, acting in an advisory capacity.

Structure General Meeting (normally once a year). Members of Coordinating Committee are appointed by their respective Associations (each delegation, consisting of maximum three members, has one vote). Chairman; Vice-Chairman; Honorary Secretary.

Activities Information and recommendations to constituent Associations and to outside Bodies. Congresses; symposia; colloquia; seminars. Publications.

Members Sister Federations (5):

International Association for Mathematics and Computers in Simulation (IMACS); *International Federation of Automatic Control (IFAC)*; *International Federation for Information Processing (IFIP)*; *International Federation of Operational Research Societies (IFORS)*; *International Measurement Confederation (IMEKO)*. 1982.11.22'

◆ B1033 Institute of Management Sciences (The) (TIMS)

Institut des sciences de gestion
Exec Dir M R De Mefim, 146 Westminster St, Providence RI 02903, USA. T. (401) 274 2525.

Founded 1 Dec 1953, New York. Incorporated under the laws of the State of California as a not-for-profit corporation, 2 Sept 1954.

Aims Identify, extend and unify scientific knowledge that contributes to the understanding and practice of management.

Structure Council of 18 members elected by the individual members; Standing Committees. President is chief executive officer. Staff 4 paid. Languages English. Finance Members' dues: \$30; sale of publications. Budget: \$407,000.

NGO Relations Member of *International Statistical Institute (ISI)*. Associate member of *International Federation of Operational Research Societies (IFORS)*.

Activities Co-operates with other organizations in the advancement of the practice of management, stimulates research and promotes high professional standards in the development of a unified management science.

Annual Meeting 21 up to 1974; Kyoto 1975, Athens 1977, Honolulu 1979, Toronto 1981. Research symposia.

Publications *Management Science* (monthly); *Interfaces* (bimonthly); *OR/MS Today* (newsletter); *Mathematics of Operations Research* (quarterly) in cooperation with Operations Research Soc of America.

Members Individuals (approx 6,500) in 60 countries:

Af Congo, Egypt, Kenya, Nigeria, Rwanda, South Africa, Tunisia, Uganda. Am Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Honduras, Mexico, Panama, Peru, USA, Uruguay, Venezuela. As Hong Kong, India, Iran, Israel, Japan, Korea S, Kuwait, Lebanon, Malaysia, Philippines, Singapore, Taiwan. Au Australia, Fiji, New Zealand. Eu Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Germany FR, Greece, Ireland, Italy, Luxembourg, Monaco, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, UK, USSR, Yugoslavia. 1983.02

B: Universal membership organizations

◆ B0481 Econometric Society (ES)

Société d'économétrie
Sec Julie P Gordon, Department of Economics, Northwestern University, Evanston IL 60201, USA. T. (312) 492 3615.

Founded 29 Dec 1930, Cleveland, by a group of economists, mathematicians and statisticians of various countries. Registered in USA as not-for-profit scientific organization.

Aims Advancement of economic theory in its relation to statistics and mathematics, and in particular promotion of studies that aim at a unification of the theoretical-quantitative and the empirical-quantitative approach to economic problems and that are penetrated by constructive and rigorous thinking similar to that which has come to dominate in the natural sciences; any activity which promises ultimately to further such unification of theoretical and factual studies in economics.

Structure The Fellows, who are nominated by the Council and elected by mail-vote of the Fellows, represent the highest authority; Council (annual) elected for 3 years by the fellows. The Officers, who are ex officio members of the Council, are elected by the Council for a period of one year. Meetings open. Staff 4. Languages English, French.

Finance Members' dues: Canada, USA, Europe, Japan, Australia and New Zealand \$27; other countries \$18. Subscriptions, institutional members. Budget: \$250,000. Consultative Status UNESCO (C). Meeting Annually in North America and Europe: Madison, Atlantic City and Helsinki 1976, Ottawa, New York and Vienna 1977, Athens and Atlanta 1979, Aix-en-Provence and Denver 1980, San Diego 1981.

Publications *Econometrica* (6 a year); *Bibliographical Directory of Members* (1977).

Members Individuals; institutional members in 59 countries:

Af Algeria, Congo, Egypt, Ghana, Madagascar, Morocco, Nigeria, Senegal, Sierra Leone, South Africa, Sudan, Tunisia. Am Argentina, Bolivia, Brazil, Canada, Caribbean, Chile, Colombia, Costa Rica, Dominican Rep, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Peru, Puerto Rico, USA, Uruguay, Venezuela. As Burma, Hong Kong, India, Iran, Iraq, Israel, Japan, Jordan, Korea S, Lebanon, Malaysia, Pakistan, Philippines, Sri Lanka, Taiwan, Thailand. Au Australia, New Zealand. Eu Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, Germany FR, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, UK, USSR, Yugoslavia. 1983.02

◆ B1174 International Association for Mathematics and Computers in Simulation (IMACS)

Association internationale pour les mathématiques et calculateurs en simulation
Pres Robert Vichnevetsky, Dept of Computer Science, Rutgers University, New Brunswick NJ 08903, USA.
Secretariat (European Region): ERM Electricité, Ave de la Renaissance 30, B-1040 Bruxelles, Belgium.
Secretariat (American/Pacific Region): Dept of Computer Science, Rutgers University, New Brunswick NJ 08903, USA.

Founded 2 Oct 1955, Brussels, as *International Association for Analogue Computation* — *Association internationale pour le calcul analogique (AICA)*. Present name adopted 1976.

Aims Promote exchange of scientific information among specialists interested in analogue and hybrid computation methods, by organizing international meetings, displays of equipment, by issuing scientific publications and establishing frequent contacts with scientific associations for the study of arithmetical computation methods.

Structure General Assembly (every 3 years) elects Board of Directors composed of President, Vice-Presidents, Secretary General, Treasurer, members and consultative (non voting) members. Technical Committees.

Languages English, French. Finance Members' dues: Individuals \$24.00 (\$60 Belg Fr); Associate Scientific memberships: \$48.00 (Belg Fr 1,800); Associate Industrial membership: \$140.00 (Belg Fr 5,000).

IGO Relations One of the five international scientific associations represented in *Five International Association Coordinating Committee (FIACC)*; coordination agreement with *International Federation of Automatic Control (IFAC)*; *International Federation for Information Processing (IFIP)*; *International Federation of Operational Research Societies (IFORS)*; *International Measurement Confederation (IMEKO)*.

Activities Research, publications and international scientific symposia and conferences in the general area of simulation systems (mathematical modelling in the engineering, physical, social, life and environmental sciences, numerical analysis, approximate theory, consideration about computer hardware and software for simulation, programming languages and compilers). Triennial Congress 5 up to 1967.

Munich 1970, Prague 1973, Delft 1976, Sorrento 1979, Montreal 1982. Symposium 6 up to 1969; Tokyo 1971, Rome 1974, Bethlehem PA 1975, London 1976, Bethlehem PA 1975, Blacksburg BA 1977, London 1977, Ghent 1977, Munich 1978, Vienna 1979, Rehovot (Israel) 1979, Bethlehem PA 1979, Berlin (E) 1980, Bethlehem PA 1981, Newark DE 1981.

Publications *Mathematics and Computer in Simulation* (quarterly); *IMACS News* Proceedings of international meetings and symposia.

Members Regular; Associate Scientific (academic institutions); Associate Industrial (industrial, public and private firms), in 33 countries: Am Argentina, Brazil, Canada, Mexico, USA, As China, India, Israel, Japan, Au Australia, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German DR, Germany FR, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, UK, USSR, Yugoslavia. 1983.02

C: Inter-continental membership organizations

♦ **C1187 International Association for Cybernetics**
 Association internationale de cybernétique (AIC) — Asociación Internacional de Cibernética — Internationale Vereinigung für Cybernetik
 8G A Nelis, Palais des Expositions, Rue Sergent Vrihoff 2, B-5000 Namur, Belgium. T. (081) 22 70 89.
 Pres Prof Georges R Boulanger, c/o Université Libre de Bruxelles, 50 av Franklin Roosevelt 50, B-1050 Bruxelles, Belgium. T. 549 00 30.
 Founded 6 Jan 1957, Namur, following 1st International Congress on Cybernetics, 26-29 June 1956, Namur. Registered in accordance with Belgian law.
 Aims Ensure organized and permanent liaison between research workers in different countries concerned with various sectors of cybernetics; promote development of the science and of its technical applications; disseminate information concerning achievements in this field.
 Structure General Assembly (annual) elects Administrative Council for 3-year terms. Assemblies closed; other meetings open. Staff 2 paid. Languages English, French. Finance Members' dues: individuals and industrial firms. Sale of publications; grants. Consultative Status UNESCO (C).
 Congresses 7 up to 1975; Namur 1976, Namur 1980.
 Publications *Cybernetica* (quarterly); Working papers (Series).
 Members Individuals and industrial firms in 42 countries:
 Africa. Am Argentina, Brazil, Canada, Chile, Mexico, USA, Uruguay, Venezuela. As China, India, Iraq, Israel, Japan, Saudi Arabia. Au Australia, New Zealand. Eu Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German DR, Germany FR, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, UK, USSR, Yugoslavia. 1980.11.25

♦ **C1778 World Organization of General Systems and Cybernetics (WOGSC)**
 Organisation mondiale de systèmes généraux et de cybernétique
 Dir Gen Dr J Rose, c/o College of Technology, Feilden Street, Blackburn BB2 1LH, UK. T. (0254) 64231.
 Founded 1970, following proposals adopted at 1st International Congress of Cybernetics, 5 Sep 1969, London, when the *International Cybernetics Congress Committee (ICCC)* was set up.
 Aims Act as clearing house for all societies concerned with cybernetics, general systems, operational research and computer science; generate interest in cybernetics among other disciplines; maintain liaison with international bodies concerned with other disciplines.
 Structure Council; Liaison Committee. Languages English, French, Russian.
 Consultative Status UNESCO (C). Activities Exhibition; Symposia on computers in medicine. Triennial Congress 1 up to 1969; Oxford 1972, Bucharest 1975, Amsterdam 1978, Mexico City 1981.
 Publications *Kybernetes* (quarterly); *Robotics* (quarterly). Congress and symposium proceedings.
 Members Affiliated societies (26 National Societies) in 44 countries:
 Af Ethiopia, Ghana. Am Brazil, Argentina, Canada, Chile, Mexico, Peru, USA, Venezuela. As China, India, Indonesia, Iran, Israel, Japan. Au Australia, New Zealand. Eu Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German DR, Germany FR, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, USSR, UK, Vatican, Yugoslavia. 1982.11.05*

♦ **C1862 International Federation of Automatic Control (IFAC)**
 Fédération internationale pour la commande automatique — Internationaler Verband für Selbsttätige Regelung und Steuerung — Federación Internacional de Automatización
 Hon Sec Fred Margulies, Schlossplatz 12, A-2361 Laxenburg, Austria. T. (02236) 71 4 47. Tx 79248 ifac a.
 Founded 12 Sep 1957, Paris, following the Automatic Control Congress, 27 Sep 1956, Heidelberg (Germany FR). Registered in accordance with Swiss law.
 Aims Promote among nations the science and technology of control in the broadest sense in all systems typically: engineering, physical, biological, social, economic and computational, in both theory and applications, and implemented by the interchange and circulation of information on automatic control activities, in cooperation with national and other international organizations and by international congresses and publications.
 Structure General Assembly elects Council of 12 plus the President for 3-year terms. Membership subject to approval by General Assembly. Staff Voluntary. Languages English, French, German, Russian, Spanish. Finance Members' dues: Swiss Fr 1,200 - 15,000.
 Consultative Status UNIDO. Activities Technical Committees (14): Applications; Biomedical Engineering; Components and Instruments; Computers; Developing Countries; Economic and Management Systems; Education; Manufacturing Technology; Mathematics of Control; Social Effects of Automation; Space; Systems Engineering; Terminology and Standards; Theory. Congresses (every three years). Symposia and workshops. Triennial Congress 5 up to 1972; Boston MA (USA) 1975, Helsinki 1978, Kyoto 1981, Budapest 1984.
 Publications *IFAC Newsletter, Automatica* (6 a year).
 Members One national scientific or professional engineering organization (or one council formed by 2 or more such organizations) in each of 40 countries:
 Af Egypt, Morocco, South Africa. Am Argentina, Brazil, Canada, Cuba, Mexico, USA, Venezuela. As China, India, Israel, Japan, Korea N, Au Australia. Eu Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German DR, Germany FR, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, USSR, UK, Yugoslavia. 1982.10.25*

♦ **C1828y International Federation for Information Processing (IFIP)**
 Fédération internationale pour le traitement de l'information — Federación Internacional para el Tratamiento de la Información — Internationaler Föderation für Datenverarbeitung

Admin Manager Ms Gwyneth Roberts, 3 Rue du Marché, CH-1204 Genève, Switzerland. T. (022) 28 26 49. Tx 428 472 ifip ch.

Founded Jan 1960, under the auspices of Unesco, when it came into official existence, following 1st International Conference on Information Processing, held in June 1959, Paris, under the sponsorship of Unesco.

Aims Promote information science and technology; advance international cooperation in the field of information processing; stimulate research, development and application of information processing in science and human activity; further the dissemination and exchange of information on information processing; encourage education in information processing.

Structure General Assembly (annual), composed of one representative from each member society, elects Council (meets twice a year), consisting of President, three Vice Presidents, Secretary Treasurer and up to eight Trustees. Secretariat (located in Geneva).

Consultative Status ECOSOC (Ros); UNESCO (B); WHO (Official Relations). NGO Relations Scientific affiliate of *International Council of Scientific Unions (ICSU)*. Working relationship with *International Telegraph and Telephone Consultative Committee (CCITT)*. Established *Five International Associations Coordinating Committee (FIACC)* together with: *International Association for Mathematics and Computers in Simulation (IMACS)*; *International Federation of Automatic Control (IFAC)*; *International Federation of Operational Research Societies (IFORS)*; *International Measurement Confederation (IMEKO)*.

Activities Congresses (held every three years), including exhibitions of computer systems and services. Since 1974, there has been a triennial series of World Conferences on Medical Informatics known as MENINFO, organized by *International Medical Informatics Association (IMIA)* of IFIP. International Conferences organized by Technical Committees. Symposia; workshops. Technical Committees (currently in operation B); Programming (TC2); Education (TC3); Computer Applications in Technology (TC5); Data Communication (TC6); System Modelling and Optimization (TC7); Informatics Systems (TC8); Relationships between Computers and Society (TC9); Digital Systems Design (TC10). Working Groups (30): WG 2.1 Algol; WG 2.2 Formal Description of Programming Concepts; WG 2.3 Programming Methodology; WG 2.4 System Implementation Languages; WG 2.5 Numerical Software; WG 2.6 Data Bases; WG 2.7 Operating System Interfaces; WG 3.7 Informatics Education at the Secondary Education Level; WG 3.2 Advanced Curriculum Projects in Information Processing; WG 3.3 Instructional Uses of Computers; WG 3.4 Post-Secondary Education and Vocational Training; WG 5.2 Computer-Aided Design; WG 5.3 Discrete Manufacturing; WG 5.4 Common and/or Standardized Hardware Software Techniques; WG 5.6 Maritime Industries; WG 5.7 Automation of Production Planning and Control; WG 6.1 International Packet Switching for Computer Sharing; WG 6.3 Human-Computer Interaction (under consideration); WG 6.4 Local Computer Networks; WG 6.5 International Computer Message Systems; WG 7.1 Modelling and Simulation; WG 7.2 Computational Techniques in Distributed Systems; WG 7.3 Computer System Modelling;

WG 8.1 Design and Evaluation of Information Systems; WG 8.2 The Interaction of Information Systems and the Organization; WG 8.3 Decision Support Systems; WG 9.1 Computers and Work; WG 9.2 Social Accountability; WG 10.1 System Concepts and Characteristics; WG 10.2 Digital Systems Descriptions and Design Tools; WG 10.3 Software/Hardware Interrelation; WG 10.4 Reliable Computing and Fault Tolerance; WG 10.5 Very Large Scale Integration "ULSI". Triennial Congress 3 up to 1988; Ljubljana (Yugoslavia) 1971, Stockholm 1974, Toronto 1977, Tokyo/Melbourne 1980, Paris 1983.

Publications *IFIP Newsletter; IFIP Information Bulletin; Information and Management; Computers in Industry*. Proceedings of Congresses and various conferences.

Members Full members in 42 countries:
 Af Algeria, Egypt, Morocco, Nigeria, South Africa, Tunisia. Am Argentina, Brazil, Canada, Cuba, USA. As China, India, Iraq, Israel, Japan, Korea S, Syria. Au Australia, New Zealand. Eu Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German DR, Germany FR, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, USSR, UK, Yugoslavia.

Affiliate members (4):
 European Association for Microprocessing and Microprogramming (EUROMICRO); International Association for Pattern Recognition (IAPR); International Association for Statistical Computing (IASC); International Council for Computer Communication (ICCC). 1982.10.22*

♦ **C1966 International Federation of Operational Research Societies (IFORS)**
 Fédération internationale des sociétés de recherche opérationnelle — Federación Internacional de Sociedades de Investigaciones Operacionales — Internationale Föderation der Gesellschaften für Verfahrensforschung

Sec Ms Helle Walling, DTH, c/o IMSOR, Bygning 349, DK-2800 Lyngby, Denmark. T. (02) 88 14 33. Tx 37529 DTHDIA.

Founded Jan 1959.
 Aims Stimulate the development of operational research as a unified science and promote its advancement all over the world.

Structure Administrative Committee, composed of President, up to three Vice-Presidents, the most recent living Past President, Honorary Treasurer, Secretary. Standing Committees (3): External Affairs; Publications; Plans and Programs. Education Sub-Committee. Languages English, French. Finance Members' dues.

Consultative Status ECOSOC (Ros). NGO Relations Associated in *Five International Associations Coordinating Committee (FIACC)* with: *International Association for Mathematics and Computers in Simulation (IMACS)*; *International Federation of Automatic Control (IFAC)*; *International Federation of Information Processing (IFIP)*; *International Measurement Confederation (IMEKO)*.

Activities International Conferences (every third year). International meetings; specialized conferences. Actions in developing countries. *Association of European Operational Research Societies (EURO)* established in Jan 1975 within IFORS. Triennial International Conference Oxford 1957, Aix-en-Provence (France) 1960, Oslo 1963, Boston MA (USA) 1966, Venice 1969, Dublin 1972, Tokyo/Kyoto 1975, Toronto 1978, Hamburg 1981.

Publications *International Abstracts in Operations Research* (journal); *IFORS Bulletin*. Proceedings of the Triennial International Conferences.

Members National Societies, grouping over 30,000 members, in 33 countries:
 Af Egypt, South Africa, Am Argentina, Brazil, Canada, Chile, Mexico, USA. As China, India, Japan, Korea S, Singapore. Au Australia, New Zealand. Eu Austria, Belgium, Denmark, Finland, France, Germany FR, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, UK.

Kindred Societies (6). 1982.11.09*

D: Regionally defined membership organizations

F: Organizations having a special form, including foundations and funds

◆ **D1797 International Management Systems Association (IMSA)**
 SG Dr Hans Knoepfel, c/o Inst for Planning, Construction Management, ETH
 Hoenggerberg, CH-8093 Zürich, Switzerland.
 Founded 1971. Aims Act as focus of international activities for the exchange of
 management systems knowledge and promoting the advancement of management
 methods, systems and techniques for practical applications. Members National pro-
 ject management associations (7).

◆ **D3924 Pacific Asian Federation of Industrial Engineering (PAFIE)**
 Fédération de l'Asie et du Pacifique des ingénieurs industriels
 Sec Prof M R Ramsay, 20 Leonie Hill Flats, Singapore 9, Singapore. T. 37 88
 75

Founded 11 May 1970, Singapore, in pursuance of the First Commonwealth Confer-
 ence on Work Study organized 4-8 May 1970 under the auspices of the Common-

wealth Foundation.

Aims Raise the living standards of the people in the Pacific Asian region by encourag-
 ing the application of Productivity and Management techniques, notably through
 increased communication with government, semi-government and similar agencies,
 internally and externally, among the member countries.

Structure Governing Council (2 representatives per member association) meets every
 3 years and elects Vice-President, who is also President-elect. Secretary and Head-
 quarters go with Presidency, by rotation. Languages English.

NGO Relations *World Confederation of Productivity Science (WCPS)*.

Members One recognized Association/Institution devoted to the encouragement of
 industrial engineering productivity and management techniques, representing the
 national interest, in 5 countries:

As India, Malaysia, Singapore, Sri Lanka, Au Australia.

1973.4

◆ **D6599 International Federation for Systems Research**
 Contact Lenard R Troncale, Inst for Advanced Systems Studies, California State
 Polytechnic Univ, 3801 W Temple Avenue, Pomona CA 91768, USA.
 NGO Relations *Society for General Systems Research*. Conference Washington
 1982.

◆ **D5785 Association of European Operational Research Societies (EURO)**

Association des sociétés européennes de recherche opérationnelle
 Pres Prof Rolfe Tomlinson, c/o Operational Research Society, Neville House, Water-
 loo Street, Birmingham B2 5TX, UK.

Founded Jan 1957, within *International Federation of Operational Research Societies*
 (IFORS) — *Fédération internationale des sociétés de recherche opérationnelle*. Activi-
 ties Organization of meetings (some of them jointly with The Institute of Management
 Sciences (TIMS) in USA). Working Groups. Conference Brussels 1975, Stockholm
 1976, Athens 1977, Amsterdam 1979, Cambridge (UK) 1980, Lausanne (Switzerland)
 1982. Publications *European Journal of Operational Research*.

Members National organizations in 16 countries:

Eu Austria, Belgium, Denmark, Finland, France, Germany FR, Greece, Ireland, Italy, Nether-
 lands, Norway, Spain, Sweden, Switzerland, Turkey, UK.

◆ **F5154 European Systems Research Institute (ESRI)**
 Contact: Chaussée de Bruxelles 135, B-1310 La Hulpe, Belgium. T. 657 90 80. Tx
 23 514.

Operates as one of the IBM schools at the Arthur K Watson International Education
 Centre, and provides tuition for systems engineers and senior administrators.

◆ **F5730 International Conference on Analysis and Optimization of Systems**
 Contact: INRIA, Domaine de Voluceau, Rocquencourt, F-78153 Le Chesnay CEDEX,
 France.

Conference series; not an organization. Conference 4 up to 1981; Antibes 1982.

◆ **F5742 International Symposium on Forecasting**

Contact: Muhittin Orul, General Chairperson, Dept of Industrial Engineering
 phorus Univ, PK 2, Bebek, Istanbul, Turkey.

Conference series; not an organization. Symposium 1 up to 1981; Istanbul 1982.

◆ **F5804 International Conference on Systems Science**

Contact Jerzy Swiatek, Technical Univ of Wroclaw, Inst of Engineering Cybernetics,
 Janiszewskiego St 11/17, 370 Wroclaw, Poland.

Conference series; not an organization. Conference 6 up to 1980; Wroclaw (Poland)
 1981, Wroclaw 1983.

G: Internationally-oriented organizations grounded

in a particular country, including bilateral bodies

◆ **G5424 International Academy of Management (IAM)**

Académie internationale de management

Head Office: c/o NIVE, Nederlandse Vereniging voor Management, Van Alkemade-
 aan 700, NL-2019 LS Den Haag, Netherlands.

Founded 19 Nov 1958, White Sulphur Springs, as section of *World Council of*
Management (CIOS).

Aims Provide CIOS members with a consultative organ at the international level for
 fundamental research in the currently evolving and advancing theories, philosophies,
 terminologies and practices of management.

Structure Administrative Council composed of Chancellor, Vice-Chancellors and one
 representative from each CIOS Regional Committee. Languages English, French.

Publications Reports and studies by members.

Members individuals (180). A maximum of 12 members are elected annually for
 life.

Membership countries not specified.

◆ **G5426 Association for Systems Management (ASM)**

Association pour la gestion de systèmes et méthodes

Exec Dir R L Irwin, 24587 Bagley Road, Cleveland OH 44138, USA. T. (216) 243
 6900.

Founded 1947, Detroit, as *Systems and Procedures Association of America*; 1968 n
 Name changed to *Systems and Procedure Association* 1961; present name adopted
 1968. Aims Promote the improvement of systems through education, research and
 exchange of ideas.

Members Chapters (135) in 4 countries:

Am Canada, Mexico, USA, Venezuela.

Total membership 10,000, primarily in USA and Canada.

♦ C2244 International Marketing Federation (IMF)

Fédération Internationale du Marketing
Pres François Boyer, c/o ADETEM, Rue d'Astorg 30, F-75008 Paris, France. T. 255 51 13. Tx Henkelf 250003 (Boyer).
Asia/Pacific Richard Barnes, c/o Market Research Society of Australia, PO Box 334, N Sydney 2050, Australia.

Founded Mar 1961, Rome. Organized as a free association in Zurich, 1961. Revised 1972.

Aims Foster application of scientific methods and principles in the study and practice of marketing; encourage application of those principles of integrity, ethics, objectivity and thoroughness which mark professional activities in other scientific fields; aid international exchange of knowledge and experience in marketing; contribute to the improvement of education in marketing.

Structure General Assembly (every 2 years), composed of delegates from member associations, elects Executive Council, consisting of president, 3 regional Vice-Presidents, Vice-President for Special Activities, Secretary-General, Treasurer, President-Elect and Immediate Past President, for 2-year term. Languages English, French, Finance Budget from members' dues, calculated on the individual membership of each member Association. Conferences and International Marketing Seminars.

NGO Relations *European Association for Industrial Marketing Research (EVAI)*; *European Society for Opinion and Marketing Research (ESOMAR)*. Publications *Newsbulletin*.

Members Professional associations in 22 countries:
Af South Africa, Am Mexico, As India, Israel, Korea S, Pakistan, Singapore, Thailand, Au Australia, Eu Belgium, Denmark, France, Greece, Ireland, Italy, Netherlands, Norway, Romania, Spain, Sweden, Switzerland, UK. 1982.10.07*

♦ C2247 International Mathematical Union (IMU)

Union mathématique internationale (UMI) — Internationale Mathematische Vereinigung — Unión Internacional de Matemática
Sec Prof Jacques-Louis Lions, Collège de France, 11 Place Marcelin-Berthelot, F-75231 Paris CEDEX 05, France. T. 033.11.57.
Pres Prof Lennart Carleson, same address.

Founded 27-29 Aug. 1950, New York.

Aims Promote international co-operation in mathematics; support and assist the International Congress of Mathematicians and other scientific meetings or conferences; encourage and support other international mathematical activities considered likely to contribute to the development of mathematical science in any of its aspects — pure, applied or educational.

Structure General Assembly; Executive Committee. Languages French, English, Russian.

NGO Relations Member of Int. Council of Scientific Unions.

Activities Commissions; Exchange of Mathematicians; Mathematical Instruction; Mathematical Reviewing. General Assemblies and Congresses 7 up to 1977; Otaniemi 1978, Warsaw 1982. Symposia.

Publications *IMU Bulletin*. Record of the General Assemblies; Annual Reports. *World Directory of Mathematicians*.

Members National organizations or institutions in 48 countries:
Af Cameroon, Egypt, Nigeria, S Africa, Am Argentina, Brazil, Canada, Cuba, Mexico, USA, As India, Iran, Israel, Japan, Korea N, Pakistan, Philippines, Singapore, Taiwan, Au Australia, New Zealand, Eu Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, German DR, Germany FR, Greece, Hungary, Iceland, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, UK, USSR, Yugoslavia. 1979.10

♦ C2250 International Measurement Confederation (IMEKO)

Confédération internationale de la mesure — Confederación Internacional de la Medida — Internationale Messtechnische Konföderation — Meždunarodnaja Konfederacija po izmeritelnoj Tehnici i Priborostroeniju
SG Prof Gy Striker, POB 457, H-1371 Budapest, Hungary. T. (36 1) 32 41 16. C. Imeko. Tx 225792 mtesz h.

Founded 1 July 1961, Budapest, as *International Measurement Conference — Conférence internationale de la mesure*, a Preparatory Committee having been set up 1958, Budapest, at 1st International Measurement Conference. Charter, Constitution and By-Laws adopted June 1965, Warsaw, when present name was adopted. Constitution amended 1972 and 1979.

Aims Promote the international exchange of scientific and technical information relating to developments in measuring techniques, *instrumentation* of instrumentation in scientific research and in industry; facilitate cooperation among scientists and engineers in studying problems in this field.

Structure General Council (annual), composed of one or two delegates from each

member organization, elects Officers: President, Secretary General, Treasurer, Immediate Past President, for 3-year term. Secretariat, headed by Secretary General. Technical Committees. Languages English, French, German, Russian. Staff 2 paid; 3 voluntary. Finance Members' dues: fixed freely by member organizations between a minimum of US \$70 and a maximum of US \$550 per annum.

Consultative Status UNESCO (C); UNIDO (C). NGO Relations Associated with *Five International Associations Coordinating Committee (FIACC)*, consisting, besides the Confederation, of the following sister-federations: *International Association for Mathematics and Computers in Simulation (IMACS)*; *International Federation of Automatic Control (IFAC)*; *International Federation for Information Processing (IFIP)*; *International Federation of Operational Research Societies (IFORS)*.

Activities Technical Committees (14): TC1 Higher Education; TC2 Photon-Detectors; TC3 Measurement of Force and Mass; TC4 Microwave Measurement (inactive at present); TC5 Hardness Measurement; TC6 Vocabulary; TC7 Measurement Theory; TC8 Metrology; TC9 Flow Measurement; TC10 Technical Diagnostics; TC11 Metrological Requirements in Developing Countries; TC12 Temperature Measurement; TC13 Measurements in Biology and Medicine; TC14 Measurement of Geometrical Quantities. Arranges Congresses (triennially), symposia, conferences and colloquia. Triennial Congresses 4 up to 1987: Versailles (France) 1970, Dresden (German DR) 1973, London 1976, Moscow 1979, Berlin (W) 1982, Prague 1985.

Publications *IMEKO Bulletin* (twice a year); *Acta IMEKO* (Proceedings of triennial Congresses). Proceedings of symposia, conferences and colloquia held by Technical Committees.

Members National scientific and technical societies concerned with measurement science, technology and instrumentation, in 27 countries:

Af Egypt, Morocco, Am Brazil, USA, As China, India, Japan, Au Australia, New Zealand, Eu Austria, Belgium, Bulgaria, Czechoslovakia, Finland, France, German DR, Germany FR, Hungary, Italy, Netherlands, Poland, Romania, Sweden, Switzerland, USSR, UK, Yugoslavia. 1982.12.08*

♦ C4187 Society for General Systems Research (SGSR)

Société d'études pour les systèmes généraux
Sec-Treas Dr John A Dillon, Systems Science Institute, University of Louisville, Louisville KY 40208, USA. T. (502) 588 6482.

Founded 1954, as *Society for the Advancement of General Systems Theory*. Present name adopted 1955.

Aims Encourage the development of theoretical systems which are applicable to more than one of the traditional departments of *knowledge*; develop theoretical systems of *concepts*, relationships and models and investigate the isomorphy of concepts, laws and models in various fields and help in useful transfers from one field to another; promote the unity of *science* through improving and breaking the barriers of communication among the specialists in various scientific fields.

Structure Members (meeting annually) elect Governing Board of 5 (3-year staggered terms) which elects, from among its own membership, President, Past-President, President-Elect, Vice-President and Secretary-Treasurer, for 1 year. Languages

English. Finance Annual members' dues.

Consultative Status UNESCO (B). Activities Information exchanges. Annual meetings; symposia. Annual Meeting 25 up to 1981; Washington DC 1982, Detroit MI (USA) 1983, New York NY 1984, Los Angeles CA 1985.

Publications *Behavioral Science* (6 a year); *Systems Research* (3 a year), the official Journal; *General Systems Bulletin* (3 a year); *General Systems Yearbook*. Meeting proceedings

Members Institutional; Individual. Members in 39 countries:

Af Egypt, Am Argentina, Brazil, Canada, Colombia, Costa Rica, Mexico, Nicaragua, Panama, Puerto Rico, USA, Venezuela, As China, India, Iran, Israel, Japan, Au Australia, New Zealand, Eu Austria, Belgium, Denmark, Finland, France, Germany FR, Greece, Hungary, Italy, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, USSR, UK, Yugoslavia. 1983.01.11*

♦ C4518 International Institute for Applied Systems Analysis (IIASA)

Institut international pour l'analyse des systèmes de haut niveau — Meždunarodnyj Institut Prikladnogo Sistemnogo Analiza
Dir Prof C S Holling, Schloss Laxenburg, A-2361 Laxenburg, Austria. T. (02236) 71521. Tx 079137.

Acting Sec Dr Matthew Dixon, same address.

Founded 4 Oct 1972, London, on signature of Charter by representatives of scientific organizations in 12 countries. Registered in Austria.

Aims Initiate and support collaborative and individual research in relation to problems of modern societies arising from scientific and technological development; encourage and reinforce national and international efforts in the fields of systems analysis, *cybernetics*, *operations research* and *management techniques*.

Structure Council of 17 (annual), composed of 1 representative from each National Member Organization (NMO) (which are Academies of Sciences or equivalent), elects Officers for 3-year term; Executive Committee. Finance Committee; membership Committee. Conference (every 3 years). Languages English. Finance Members' dues: NMOs US \$7 million (approx). External sources (foundations, etc): US \$1 million (approx).

NGO Relations Contacts with UNEP; UNIDO. Collaboration with WHO; IAEA. Activities Research on: energy systems; food and agriculture; forestry; research; renewable resources; population dynamics; system and decision sciences; economic structural change; environmental risks and conflicts; regional and urban development. Conferences, seminars, workshops.

Publications *IIASA Publications* (quarterly publications index); *Options* (quarterly news reports). Research Reports; Research Memoranda (approx 100 per year). Conference proceedings (approx 10 per year).

Members National Member Organizations in 17 countries:

Am Canada, USA, As Japan, Eu Austria, Bulgaria, Czechoslovakia, Finland, France, German DR, Germany FR, Hungary, Italy, Netherlands, Poland, Sweden, UK, USSR. 1982.09.20*

Appendix 4. Strong to very strong American graduate programs in
Operations Research and Industrial Engineering

A RATING OF GRADUATE PROGRAMS IN OPERATIONS RESEARCH
Leading Institutions

Fourteen institutions with scores in the 4.0–5.0 range, in rank order

INSTITUTION	Rank	Score	Curriculum	Faculty Instruction	Faculty Research	Library Resources (Operations Research)
California, Berkeley	1	4.94	4.94	4.95	4.93	4.94
Columbia	2	4.93	4.93	4.94	4.92	4.93
Stanford	3	4.92	4.92	4.93	4.91	4.92
M.I.T.	4	4.91	4.91	4.92	4.90	4.91
Cornell	5	4.89	4.90	4.91	4.88	4.88
Michigan (Ann Arbor)	6	4.88	4.89	4.90	4.87	4.85
Northwestern	7	4.85	4.85	4.90	4.84	4.81
UCLA	8	4.84	4.83	4.90	4.82	4.80
Carnegie-Mellon	9	4.81	4.80	4.87	4.78	4.79
N.Y.U.	10	4.76	4.75	4.83	4.72	4.73
Case Western Reserve	11	4.71	4.70	4.80	4.68	4.66
Wisconsin (Madison)	12	4.66	4.66	4.68	4.65	4.64
Johns Hopkins	13	4.63	4.63	4.65	4.64	4.60
North Carolina (Chapel Hill)	14	4.62	4.62	4.64	4.63	4.59

A RATING OF GRADUATE PROGRAMS IN INDUSTRIAL ENGINEERING
Leading Institutions

Twenty-eight institutions with scores in the 4.0–5.0 range, in rank order

INSTITUTION	Rank	Score	Curriculum	Faculty Instruction	Faculty Research	Library Resources (Industrial Engineering)
Michigan (Ann Arbor)	1	4.96	4.96	4.96	4.96	4.97
California, Berkeley	2	4.94	4.95	4.94	4.94	4.94
Stanford	3	4.92	4.93	4.92	4.92	4.92
Purdue (Lafayette)	4	4.90	4.91	4.91	4.89	4.89
Wisconsin (Madison)	5	4.86	4.90	4.90	4.83	4.81
Cornell	6	4.83	4.90	4.90	4.79	4.73
Georgia Tech	7	4.79	4.87	4.89	4.71	4.70
Northwestern	8	4.75	4.82	4.85	4.68	4.64
Columbia	9	4.72	4.81	4.82	4.62	4.63
Ohio State	10	4.69	4.75	4.80	4.58	4.61
Illinois (Urbana)	11	4.64	4.73	4.76	4.50	4.55
Iowa (Iowa City)	12	4.60	4.71	4.73	4.44	4.52
Iowa State (Ames)	13	4.58	4.69	4.71	4.41	4.50
Pittsburgh	14	4.53	4.63	4.68	4.38	4.44
Texas A&M	15	4.50	4.59	4.65	4.33	4.42
Penn State (U. Park)	16	4.47	4.54	4.62	4.31	4.40
Missouri (Columbia)	17	4.44	4.52	4.60	4.28	4.37
Oklahoma	18	4.40	4.48	4.56	4.22	4.35
Minnesota (Minneapolis)	19	4.36	4.43	4.50	4.20	4.32
Oklahoma State	20	4.31	4.39	4.43	4.16	4.27
Lehigh	21	4.28	4.33	4.38	4.15	4.24
Kansas State	22	4.24	4.29	4.33	4.12	4.20
V.P.I. & State U.	23	4.21	4.26	4.30	4.10	4.16
Florida	24	4.16	4.21	4.23	4.08	4.12
Auburn	25	4.13	4.16	4.20	4.07	4.10
SUNY (Buffalo)	26	4.11	4.12	4.16	4.05	4.09
LSU (Baton Rouge)	27	4.08	4.09	4.12	4.04	4.08
Syracuse	28	4.07	4.07	4.10	4.03	4.06