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International Federation for Information Processing
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INTERACT '90

*by Prof Brian Shackel (GB) **

The third IFIP Conference on Human-Computer Interaction — INTERACT'90 — will be held in Cambridge, England 27-31 August. We shall be hosted by the British Computer Society (BCS) and by the BCS Specialist Group on Human-Computer Interaction (HCI). This international conference will be held under the aegis of the newly constituted IFIP Technical Committee on Human-Computer Interaction (TC13).

Both INTERACT'84 and INTERACT'87 brought together many of the principal researchers and industrial practitioners in this field to review the state of the art. INTERACT'90 is planned similarly to provide a comprehensive overview of the latest developments.

Papers which advance the theory or practice of all aspects of HCI will be included. Some of the topics to be covered are Cognitive Ergonomics, HCI Design and Evaluation, Cooperative and Group Work, Impact of Computers on Human Behaviour, Interactive Architectures, and HCI Applications.

The activities at the Conference will include refereed papers, refereed posters, panel sessions, a video programme, preconference tutorials, and a doctoral programme to provide postgraduate students with the opportunity to present their research in closed sessions and to meet and discuss their work with other students. Space will also be allocated for demonstrations and exhibits by authors and for commercial demonstrations.

We have received over 500 abstracts, and we expect over 400 full papers to be submitted, from which the best 120 to 150 will be selected; so the quality of the conference will be excellent. The attendance will be limited to 600 to 700, so early registration will be essential.

For further information on any aspect of INTERACT'90, please contact

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* chairman of TC13 and of INTERACT'90

FORMAL METHODS FOR VLSI DESIGN

WG10.5 to Hold Summer School

IFIP's Working Group on Very Large Scale Integration (WG10.5) will hold a summer school on Formal Methods for VLSI Design 24-30 June at the Technical University of Denmark in Lyngby. At this one-week summer school, speakers from Canada, Denmark, U.K., and U.S.A. will give lectures and demonstrations on the latest developments in formal methods for VLSI design. Such design techniques aim at unifying hardware and software design for dedicated and special-purpose chips (ASICs). A further motivation for these techniques is formal verification/analysis of VLSI designs. The focus will be on design and verification using behavioral descriptions of circuits.

Students attending the summer school will learn to design and verify VLSI chips, using high-level behavioral languages. The lecturers will present different approaches, which will give students an overview of alternative techniques. Although the summer school will not focus directly on synthesis techniques, each lecturer will include material on how his or her approach can be useful for designing "real" chips.

For further information, please contact

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The Secretariat can also answer inquiries about IFIP.

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Kindly submit material for the *Newsletter* three months before the publication date.

Please send the following **IFIP** information directly to the Secretariat: announcements of conferences, workshops, and other meetings; calls for papers; appointments to committees and other positions; and changes of address. The Secretariat is the clearinghouse for all such information; it will forward it to the *Newsletter.*

IFIP COUNCIL

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*by Mr. Moshe Gottlieb (IL) **

The Information Processing Association of Israel (IPA) is the leading professional society in Israel in the area of information processing and computing and is the Member society representing Israel in **IFIP.** It was founded in 1963, as an association of suppliers, developers, and users of hardware, software, and information systems. Its present membership comprises 3000 individual members and 400 firms and organizations, which include 12 000 professionals.

Dr. Joseph Raviv, who served as IPA representative to the **IFIP** General Assembly from 1982 to 1987, is currently IPA president, and *Dr. Micha Hanani* is chairman of the Executive Board. *Mr. Moshe* Gottlieb, General Manager, is the IPA representative to **IFIP.** (The Secretariat reports to the General Manager.)

The offices of the IPA Secretariat are located in Tel-Aviv, with a branch office in Jerusalem.

Special Interest Groups

IPA has six Special Interest Groups (SIGs). Each SIG has its own management. The SIGs are professionally independent but report administratively and financially to the IPA Executive Board. The SIGs are

- Computers and Education (800 members)
- Artificial Intelligence (400)
- Computer Vision and Pattern Recognition (200)
- Unix User Group (300)
- Ergonomics Society (200)
- Computer Aided Design and Manufacturing (600)

Each SIG publishes its own professional journal. During the past year, each SIG held a 2 to 4 day colloquium and an annual meeting, which included 1- to 2-day workshops.

In addition, there are eleven working groups in IPA:

- Software Engineering
- Legal Aspects of Data Processing
- Communications
- Project Management
- Information Systems Security
- ADA

* General Manager of **IPA** and **IFIP** General Assembly representative for Israel

- Office Automation
- CIM
- Computers in Rehabilitation
- Computerized Linguistics
- Data Bases

Each work group holds approximately 6 meetings per year.

Other IPA Activities

IPA holds from 6 to 8 colloquia per year on various subjects. It also holds an annual meeting and exhibition. Once every five years, the Jerusalem Conference on Information Technology (JCIT) is held. The forthcoming conference, in co-sponsorship with **IFIP,** is to take place in October. This will be the 25th anniversary of IPA conferences.

IPA publishes a bi-monthly professional journal *Maase Hoshev (A Matter of Computing).* IPA has an "Executives' Club," which serves as a meeting place for executives in the computer field, where they discuss questions of future strategy, infrastructure, and other computer-related topics. Meetings are held every two months. IPA awards prizes and grants. Last year, grants contributed by IPA were awarded to two Ph.D. candidates; prizes in five different fields were also awarded.

IPA participates extensively in national forums, such as parliamentary and governmental advisory committees and committees of the National Standards Institute and the National Telecommunication Company, representing the interests of the computing community.

IPA is active in **IFIP,** having representatives on several Technical Committees and members on several Working Groups.

IFIP'S MISSION

In September 1989, the General Assembly (GA) voted to accept a revised version of the statement of IFIP's Mission. The process of updating the Mission was initiated in 1988 by Mr. *Ashley Goldsworthy (A* US), then president of IFIP, and carried out by vice-president *Mr. Graham Morris (GB).* (See the June 1989 ***IFIP*** *Newsletter,* page 5.) Following is the Mission statement accepted by the GA:

General Statement

IFIP's mission is to be the leading, truly international, apolitical organisation which encourages and assists in the development, exploitation and application of informatics for the benefit of all people.

Our Mission in Detail

Principal Elements

1. To stimulate, encourage and participate in research, development and application of informatics and to foster international cooperation in these activities.

2. To provide a meeting place where national informatics societies can discuss and plan courses of action on issues in our field which are of international significance and thereby to forge increasingly strong links between them and with **IFIP.**

3. To promote international cooperation, directly and through national informatics societies, and in a free environment between individuals, national and international governmental bodies and kindred scientific and professional organisations.

4. To pay special attention to the needs of developing countries and to assist them in appropriate ways to secure the optimum benefit from the application of informatics.

5. To promote professionalism, incorporating high standards of ethics and conduct, among all informatics practitioners.

6. To provide a forum for assessing the social consequences of informatics applications; to campaign for the safe and beneficial development and use of informatics and the protection of people from abuse through its improper application.

More Specific Elements

7. To foster and facilitate cooperation between academics, the informatics industry and governmental bodies and to seek to represent the interests of users.

8. To provide a vehicle for work on the international aspects of informatics development and application including the necessary preparatory work for the generation of international standards.

9. To contribute to the formulation of the education and training needed by informatics practitioners, users and the public at large.

IFIP SECRETARIAT NOW ON COMPUTER NETWORK

A long-awaited event has occurred: the IFIP Secretariat now has access to a computer network. The Secretariat e-mail address is

IFIP@cgeuge51.bitnet

FROM THE PRESIDENT

Early in 1985, I had the honour and pleasure to participate in the celebration of the 25th anniversary of IFIP in Munich. Almost all the former presidents and many outstanding members were present. When I took office as IFIP president last September, in San Francisco during the General Assembly, I realized that we were on the threshold of the 30th anniversary. At the same time, with great satisfaction, I observed that the recent years had not passed in vain for IFIP. Under the leadership of an extremely dynamic and enthusiastic president, *Ashley Goldsworthy*, there has been a positive development of IFIP in various directions.

The founding of the Technical Assembly was an important organizational step. Within a short time, it has become a forum where, twice a year, technical problems are seriously and expertly discussed, decided or prepared for decision by the GA. Practical results did not take long to come. Two new Technical Committees were created: TC12 on Artificial Intelligence and TC13 on Human-Computer Interaction. They did not appear out of nowhere, but were the result of several years of successful preparatory work by well known experts from many countries. The TA also founded the Specialist Group on Foundations of Computer Science, including outstanding scientists from many countries. Let us not forget a considerable number of newly formed Working Groups within the framework of the existing TCs.

These diverse activities are neither ends in themselves nor are they isolated from the rest of the world in IFIP's area of activity. It is well known that developments in informatics are extremely dynamic. This is to IFIP's advantage on the one hand, but, on the other hand, it raises difficult problems to be solved. The rapid growth gives scope to the work of IFIP and contributes to its image as a prestigious and respected organization whose activities are followed with interest. On the other hand, this very development intensifies the competition and raises the problem of the choice that faces IFIP now. This was the major reason for us to bring up the issue of IFIP's mission and to try, through a few iterations, to reach some acceptable wording. Today we believe that IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of Information Science and Technology.

Undoubtedly, this statement calls for enlisting the cooperation of business and industry and especially encourages us to look for assistance from the academic world: universities, technical institutes, and research institutions. There are a number of outstanding scientists who could contribute in various ways to strengthening IFIP's position and improve its image. Here the TCs will have a decisive say. Together with their WGs, they should turn into magnets for these scientists.

There is another relevant area of TC activities: IFIP Congresses, which, from now on, will take place every two years. We now have an International Programme Committee Chairman for the Congress in Madrid in 1992 — *Prof. Dr. Wilfred Brauer* from F.R.G. who, I hope, will succeed in encouraging the TCs to work out a really attractive scientific programme of high quality.

I am fully aware that by accepting the high honour of being IFIP President, I charge myself with an extremely difficult and responsible task. But I hope and expect, with confidence, that the entire IFIP community will never leave me for a moment and give me its full support in attaining the worthy objectives facing us.

***B** lagovest Sendov*

WG2.7 HOLDS CONFERENCE ON HUMAN-COMPUTER INTERACTION

*by Dr. Leonard Bass (USA) **

Emerging user interface technology was extensively discussed at a Working Conference on "Engineering For Human-Computer Interaction" held in Napa Valley, California from August 21 to 25, 1989. The Conference, organized by IFIP's Working Group on Computer System User Interfaces (WG2.7), brought together 42 researchers in the field from 14 countries. The general chair of the conference was *Claus Unger (D),* the incoming chair of WG2.7. The program committee was chaired by *Len* **Bass** *(USA),* the incoming vice-chair of WG2.7, and the local arrangements were handled by *David Beech* (USA), the outgoing chair of WG2.7.

The Conference covered a broad range, from human factors and user psychology at one end to new user interface technologies at the other, but the focus was on what type of software architectures and tools are the most appropriate to allow end users easy access to the new technologies.

End User Requirements

The focus on both the technology and the end user's requirements could be seen in the paper "Workstation Audio and Window-Based Graphics: Similarities and Differences" by Binding et al. (USA): "Human communication is much richer than an exchange of text or graphic images, employing a variety of channels, such as speech, intonation, gesture and eye contact. These modes of communication remain at the fringes of human-computer interaction because the associated technology is less mature and the experience less widespread."

An example of the type of software architectural issues discussed could be seen in the paper "Architecture Models for Interactive Software: Failures and Trends" by Coutaz (F): "Separating the user interface from the application is recognized as a fundamental principle by the computer science community. The user interface defines the image of an interactive system, whereas the application implements the functional core. Although this basic model has served as a driving principle for the development of a number of promising techniques, it is increasingly the subject of strong disagreement." This generated much exuberant discussion.

The Human Side

The human side of the conference could be seen in the paper "Design and Use of a Group Editor" by Ellis, et al. (USA): "Studies have shown that workstations and personal computers can significantly increase the productivity of individual computer users, but complex tasks demand the communication of collaborative efforts of groups of people...Now that networked workstations and networked window systems are connecting more and more people, groupware is being investigated as a medium for supporting group activity."

The conference also had reports on tools which required the implementers to make decisions on the human, the architecture and the technology. Formal methods for describing user interfaces and command languages were also presented at the conference.

In general, the working and cosmopolitan nature of IFIP working conferences was everywhere in evidence, from the discussions on technical issues late at night over bottles of Napa Valley wine to the breakfasts near the pool prior to the days' sessions.

The proceedings, to be published by Elsevier/North-Holland early this year, are being edited by *Gilbert* Cockton (GB). They will include transcripts of the discussions.

* vice-chairman of WG2.7

SWEDISH MEMBER REORGANIZES

*by Dr. Dipak Khakhar (S) **

The Swedish Affiliate of the International Federation for Information Processing (SIFIP) is now the Swedish Member society of IFIP. This new organization was formed in January 1988, solely for the purpose of promoting IFIP activities in Sweden. Previously, the Swedish Society for Information Processing (SSI) was the Swedish member of IFIP. IFIP's Council noted the change from SSI to SIFIP in March 89, and the General Assembly was informed in September 89. SIFIP represented both SSI and the Swedish Computer Society (SDF). The two societies, SSI and SDF, were merged on 1 January of this year to form the Computer Society of Sweden (DF). The Society has approximately 11 000 members.

The merger was a direct consequence of an event sponsored by IFIP's Technical Committee on Data Communication (TC6): the first international conference on Information Networks and Data Communications, INDC '86. That was held in Sweden in 1986 and contributed to an acceleration of IFIP-related activities within the Nordic Data Union (comprising computer societies of Denmark, Finland, Iceland, Norway, and Sweden). INDC '88 was held in Copenhagen; INDC '90 will be held in Norway; and Finland is being considered as the site for INDC '92.

SIFIP remains as a component of DF. It includes representatives from DF and the GA member of IFIP. They meet regularly to plan activities related to IFIP. They also encourage and follow the activities of the Swedish members of IFIP TCs and Working Groups. A meeting with all TC members was held last year to review their activities and to determine what kind of IFIP-related activities should be organized in Sweden

* representative of Sweden in the General Assembly

National Abbreviations Used in Newsletter

A	Austria	ET	Egypt	NL	The Netherlands
AUS	Australia	F	France	NZ	New Zealand
BG	Bulgaria	GB	United Kingdom	P	Portugal
CDN	Canada	H	Hungary	S	Sweden
CH	Switzerland	I	Italy	SEARCC	South East Asia Regional Computer Confederation
CLEI	Centro Latinoamericano de Estudios en Informatica	IL	Israel	SF	Finland
CS	Czechoslovakia	IND	India	USA	U.S.A.
D	Fed. Rep. of Germany	IQ	Iraq	ZA	South Africa
DK	Denmark	IRL	Ireland	ZW	Zimbabwe
E	Spain	J	Japan		
		N	Norway		

IFIP

PUBLICATIONS AVAILABLE

New **IFIP** workers should be aware of the availability of the following **IFIP** publications from the **IFIP** Secretariat:

- Information Bulletin
- Statutes and Bylaws
- Standing Orders
- *What Is **IFIP?***
- 6-Year Plan (list of planned **IFIP** events)

WORKING GROUP ON COMPUTER GRAPHICS HOLDS FIRST CONFERENCE

*by Dr. Georges Grinstein (USA) **

IFIP's Working Group on Computer Graphics (WG5.10) held its first Working Conference 27-29 July 1989 in Lowell, Massachusetts. The topic was Workstations for Experimentation. There were 28 participants, with good international participation (Italy, F.R.G., Japan, Canada, U.S.A., and the Netherlands). The chairman of WG5.10, *Dr.* Jose *Encarnaçao (D),* and its vice-chairman, *Dr.* Georges *Grinstein (USA),* were co-chairmen of the International Program Committee. The University of Lowell's Continuing Education Division was responsible for local arrangements.

The focus of the conference was support tools for workstations used in experimentation. Position papers were presented, with two clear areas presenting themselves:

- Scientific Computing Support
- User Interface Issues

The group split during two days to brainstorm and develop position papers on topics within these two areas.

The first group emphasized visualization and pointed out the importance of not limiting current development activity to classical photo-realism within scientific environments, but one must think of visualization as "part of an analytical process" that may be applied to social, census or numerical data, to cite a few examples. Data need not be displayed just using classical pictures (charts, histograms, scatterplots), but visual textures, auditory support and other novel techniques of presenting data need to be explored and incorporated naturally into visualization environments.

The second group discussed at great length the necessary interface support for problem solving. Enhancing interaction and providing for better visual formalisms were key issues.

The workshop was lively and productive. Workstations will continue to appear in more research environments, for users who are more and more demanding. The most critical areas involve exploring novel methods for the presentation of data, increasing user interactivity within the process of exploration and problem solving, and beginning to incorporate timing within workstation research tools (in the presentation process, in the interaction process and in the software development environment).

The proceedings, edited by *Grinstein* and *Encarnaçao,* will be published by Springer-Verlag, early in 1990. They will include position papers generated during the Conference as well as those prepared before the Conference and presented there.

WG5.10 was established by the 1987 General Assembly in Budapest. Its aim is to promote and encourage the advancement of computer graphics and their applications in technology. After this successful first Working Conference, the WG is planning to hold conferences on "Toolkits for Testing Picture Quality," "Graphics and Education," and "The Future of Graphics Software." ■

• vice-chairman of WG5.10

INFORMATION SYSTEMS METHODOLOGIES - A FRAMEWORK FOR UNDERSTANDING

*by Dr. T. William 01le (GB) **

A framework to help in the overall understanding of information systems methodologies has recently been completed by an international Task Group of IFIP's Technical Committee 8 (Information Systems). The Task Group of seven experts in the field *(J. Hagelstein, I. Macdonald, T.W.* 011e, C. *Rolland, H. Sol, F. Van* Assche, *and A. Verrijn-Stuart)* has been working under the aegis of Working Group 8.1 (Design and Evaluation of Information Systems).

The framework for understanding is intended to help in evaluating, teaching and researching information systems methodologies. The framework was published in 1988 as a soft-cover IFIP book by Addison-Wesley, under the title *Information Systems Methodologies — a Framework for Understanding.* The term *information systems methodology* is used in preference to more established terms such as system development methodology, design methodology, and analysis and design methodology, in order to emphasize the idea of a methodology covering a significant part of the information systems life cycle.

Three *stages* in the information system life cycle are emphasized, namely Information System Planning, Business Analysis, and System Design. The focus is, hence, on the problems which arise in the information systems life cycle prior to the design and development of application programs. These latter important aspects are regarded as belonging in the two stages after System Design, namely Construction Design and Construction.

The framework identifies and interrelates about 130 possible *components.* A *design process* is regarded as consisting of a number of *steps,* which together cover some part of the three stages. A *design product* is a set of components which are to be handed over to a constructor to build the information system. The framework addresses the various ways in which the components which are generated may be represented and documented in various forms. It also addresses the question of how an information system may evolve once it has been built and installed.

This framework is intended for three classes of user, namely students and teachers, practitioners, and researchers. For teachers and students, the presentation of the framework is not intended to provide introductory material on information systems planning, analysis and design. It does aim to present a framework for these stages in the information systems life cycle against which most methodologies can be more clearly understood relative to each other. For the practitioner, this text is intended to put the problem of a methodological approach to information systems into a perspective independent of any specific methodology. For the researcher, the framework is intended as a springboard, rather than as a piece of research work in its own right. It identifies a number of open issues on which research is clearly needed. ■

* member of TC8

Mrs. *Rosa Alonso Munoz*, chairman of the Organizing Committee for **IFIP** Congress '92, was born in Madrid. She completed her undergraduate education in Industrial and General Physics at the University of Madrid in 1964 and did pre-doctoral studies in Computers and Switching Techniques in 1966. She began her professional career in 1964 as a programmer and Assistant Professor at the Instituto de Electronica y Automatica de Madrid.

In 1967 she moved to private industry, as a computer analyst for applications to real-time processes with Alcatel Standard Elétrica. She has remained with this company and its parent, ITT Alcatel, ever since, working in Madrid and Brussels. Over the years, she has taken positions of greater and greater responsibility. Her technical work has included design and testing of electronic switching systems, software engineering, and network analysis, and she has published and been awarded patents in these fields.

At present, Mrs. Alonso is director of the Technology Department and research program manager of the Research and Development Center. She has responsibility for technical relations with government, research centers, and universities. She is the Spanish representative to the Portable Common Tool Environment of the Commission of the European Communities.

In 1987 she was selected Informatics Person of the Year by *CHIP*, a Spanish technical magazine. In 1989 she was nominated as one of the Spanish candidates for "European Woman of the Year" and "Executive Woman of the Year" at the national level.

She is a member of the Board of the Federacion Espanola de Informatica y Automatica (AEIA) and has participated in several congresses run by it.

In her spare time, she enjoys attending lectures, theater, and concerts, designing and decorating her own dresses, embroidering, and going out dancing with her husband and friends. ■

ACQUIRING VISAS BEFORE ATTENDING IFIP MEETINGS

Ensuring that all scientists who wish to participate in **IFIP** meetings are granted visas to the host country is a continuing concern of **IFIP.** We and other international federations have been forced to cancel meetings or change their sites because of visa problems. **IFIP** is a Scientific Associate of the International Council of Scientific Unions (ICSU) and subscribes to ICSU's policy of free circulation of scientists. This policy applies to all **IFIP** conferences, workshops, seminars, symposia, and other such meetings, as well as meetings of Technical Committees and Working Groups. Organizers of **IFIP** events should be familiar with this policy, with their responsibilities to ensure that all potential participants will be granted visas, and with the steps they should take if difficulties arise.

In order to ensure awareness of these matters, we print here the contents of an ICSU brochure on visas for scientific meetings:

Advice to Organizers of International Scientific Meetings

1. In the context of this publication, an ICSU international scientific meeting is defined as any scientific meeting arranged or sponsored by National Members, Unions, Committees, Associates or other members of the ICSU family. In all such cases, by definition, scientific meetings must be open to any member of the scientific community without discrimination, in accordance with ICSU Statute 5.

2. Organizers of such meetings must ensure by all appropriate legal means that the meeting will comply with the ICSU requirement that no *bona fide* scientist should be excluded. SCFCS (Standing Committee on the Free Circulation of Scientists) has drawn up the following check list for the assistance of potential host organizations and individual organizers in the hope it will minimize the occasions when difficulties arise and maximize the likelihood of any problem being positively resolved:

(i) Prior to the submission of any invitation, or choice of site of a meeting, the host organization must provide assurances in writing that consultations have taken place with appropriate government authorities and that every effort will be made to facilitate the granting of entry visas to *bona fide* scientists to attend and fully participate in the scientific meeting;

(ii) The sponsoring body for the meeting should, in addition to receiving assurances from the organizers, seek information from either ICSU or SCFCS on the past record regarding delivery of visas by the national authorities of the country in which the meeting is scheduled to take place;

(iii) At least six months before a meeting, local organizers should provide information regarding mechanisms and time scales for obtaining an entry visa, ensuring that this is made abundantly clear on one or more of the invitations to the meeting;

(iv) Applications for visas, where necessary, should be made to the appropriate authorities not less than three months before the date of the meeting;

(v) Two months before the meeting, visas — where necessary — should be delivered or promised in writing and organizers should invite any potential participant not in receipt of such visas to so inform them;

(vi) Organizers or potential participants who become aware of difficulties in receiving visas should promptly report the facts to the ICSU member sponsoring the meeting. [In the case of IFIP, Secretary Fourot should be contacted. — Ed.] This ICSU member should immediately report to the SCFCS in Stockholm and to the ICSU Secretariat in Paris.

3. Action on problems will be investigated through ICSU and SCFCS. It is imperative that information available to them be as complete as possible, notably as regards specific actions already taken, at each stage of the checklist of steps for organizers to take, and by the potential participant(s). The following particular details are vital as regards visa refusals:

(i) date of invitation to hold the meeting and statement(s) concerning visas;

(ii) date and location of visa application and date of first indication that visa might not be available;

(iii) bona fides of scientist(s) concerned, including full name, address and date of birth;

(iv) nature of refusal and actions taken;

(v) effect of actions at (iv), if any, and indication of authorities involved and statements received from them;

(vi) reactions of local organizations and other local or regional bodies.

4. Should ICSU/SCFCS actions prove ineffective it will be necessary for one or more of the following measures to be taken in defense of ICSU nondiscrimination policy:

(i) publicizing information about the refusal to grant entry visas;

(ii) issuance of a formal protest statement at local, national or international level;

(iii) withdrawal of the ICSU sponsorship of the meeting;

(iv) recommendation to all ICSU family members not to accept invitations to hold meetings in the country concerned for five years or until the situation is remedied;

(v) in exceptional cases cancellation of the meeting. ■

The following Scopes and Aims were approved by the **IFIP** Technical Assembly at its meeting in San Francisco in September 1989, preceding the General Assembly.

NEW ACTIVITIES

Technical Committee on Artificial Intelligence (TC12)

AIMS: The promotion of research and the coordination of the exchange of information within the field of Artificial Intelligence and with related fields of interest.

SCOPE: The scope of this Technical Committee includes the study of knowledge representation, reasoning, problem-solving, machine-learning, processing and understanding natural language, robotics, computer vision, and other cognitive and intelligent functions of machines.

Technical Committee on Human-Computer Interaction (TC 13)

SCOPE: The Technical Committee aims toward the development of a science and a technology of the interaction between humans and computers (under "computers" we include information technology, in general). The main orientation is toward the users, especially the non-computer-professional users, and how to improve the human-computer relationship for them.

Areas for study include

- the problems people have with computers
- the impact of computers upon people in both individual **and** organisational contexts
- the determinants of utility, usability and acceptability
- the appropriate allocation of tasks between computers and people
- modelling the user as an aid to better system design
- harmonising the computer to the characteristics and needs of the user

While the scope is thus set wide, with a tendency towards general principles rather than particular systems, it is recognised that progress will be achieved only through both general studies to advance theoretical understanding and specific studies on particular practical issues (e.g., interface design standards, software system consistency, documentation, appropriateness of alternative communication media, human factors guidelines for dialogue design, the problems of integrating multi-media systems to match user needs and organisational practices).

AIMS: To encourage development of a science and a technology of human-computer interaction, the Technical Committee will pursue the following aims:

- to promote and provide facilities for the exchange of information
- to encourage empirical research (using valid and reliable methodology, with studies of the methods themselves, where necessary)
- to promote the use of knowledge and methods from the human sciences in both design and evaluation of computer systems
- to promote better understanding of the relation between formal design methods and system usability and acceptability
- to develop guidelines, models and methods by which designers may be able to provide better human-oriented computer systems
- to co-operate with other groups, inside and outside of **IFIP,** to promote user-orientation and "humanization" in system design
- to organise specific programmes (e.g., by technical study groups, workshops, etc.) through which to pursue these aims.

Provisional Specialist Group on Foundations of Computer Science

SCOPE:

1. to support the development of theoretical computer science as a fundamental science that has similar scientific goals in understanding the information processing world as physics has in understanding the energy processing world and similar goals in developing methodology for science and technology as mathematics does;
2. to support the development and exploration of fundamental concepts, models, theories, systems, and other basic tools and the understanding of laws, limits, and possibilities of information processing as well as to develop bridges with other sciences and their applications.

AIMS: to encourage, organise, support, and unify the development of the following areas:

- frontiers, laws, and limits of information processing
- fundamental formal systems
- efficiency and complexity of information processing
- formal systems to specify, design, verify, analyse, and manipulate complex information processing systems
- theoretical foundations of various other parts of computer science and its main application areas
- scientific paradigms of informatics and their relations to other disciplines
- information processing fundamental concepts, models and theories **to** support the development of other sciences.

with the goal to develop foundations and to make use of them.

Working Group on Social Implications of Computers in Developing Countries (WG9.4)

WG9.4 is concerned with social implications of the development and use of computer technology in developing countries.

SCOPE:

1. national computerization policy issues
2. culturally adapted computer technology and information systems
3. role of trans-national corporations, regional and international cooperation and self-sufficiency in informatics
4. social awareness of computers and computer literacy

AIMS:

1. to collect, exchange and disseminate experiences of developing countries
2. to develop a consciousness amongst professionals, policy makers and the public on social implications of computers in developing nations
3. to develop criteria, methods, and guidelines for design and implementation of culturally adapted information systems
4. to create a greater interest among professionals from industrialized countries to focus on issues of special relevance to developing countries, through joint activities with other TCs

Working Group on Social Implications of Artificial Intelligence Systems (WG9.5)

WG 9.5 is concerned with social implications of the design and development of AI systems and their applications.

SCOPE:

1. impacts of AI systems and their applications on individuals, groups, enterprises, economies, nations, and international relations
2. risks and opportunities of AI systems: especially integration of AI methods in complex computer communication systems such as databases, networks, command and controls, and intelligence systems
3. national policies regarding Al systems development
4. role of Al systems in development of human resources such as education, training, employment and management

AIMS:

1. to collect, exchange and disseminate knowledge or experiences, risks and opportunities of AI systems
2. to develop greater awareness and responsibility among professional developers and users of AI systems
3. to develop criteria, methods and guidelines for humanistic design, implementation, and use of Al systems
4. to adapt AI systems to the unique sensitivities and requirements of the ethos and culture of the users and the international public interest

REVISED SCOPES AND AIMS

Working Group on Informatics Education at the University Level (WG3.2) (formerly called Advanced Curriculum Projects in Information Processing)

AIMS:

1. to promote a proper understanding of the impact of information technologies on society and to develop an awareness of the consequent new professional responsibilities of all students
2. to keep in review the need for on-going changes in curricula for informatics resulting from changes in the emphasis put on the existing components, from technological development and from theoretical advances
3. to provide guidance on the adequate informatics component needed in the curricula of all disciplines making significant use of informatics
4. to work on model curricula, adaptable to various cultural needs and educational systems, especially those of developing countries

Working Group on Vocational Education and Training (WG3.4)

AIMS: to update and promote, within general and adult education, more effective vocational education and training of professionals and advanced end-users for the field of informatics.

(The scope is unchanged.)

Working Group on Application Layer Communication Services (WG6.5)

SCOPE: Message Handling Systems (MHS) are now progressing into a worldwide interworking service utilizing established standards. The **MHS** store-and-forward service complements the equally growing data network services provided by internationally interconnected networks (WAN, LAN, ISDN, etc.) These services remain of limited usefulness unless accompanied by standards to regulate the exchange of information objects between network-connected applications.

AIMS: The Working Group will study information objects and their structure, procedures and protocols for network application service elements using MHS, or any other information object transfer services. The Working Group will also study and promote the definition and standardization of any service that supports and augments the basic Worldwide Application Layer Communication Services or permits the interworking of individual facets of such services. Results of this work will be made available to individuals and organizations concerned, such as users, manufacturers, common carriers, PTTs, ISO, CCITT, national and regional standards bodies, and implementation profile developers.

MEMBER SOCIETIES REPORT ACTIVITIES

Twenty **IFIP** Member societies submitted annual written reports to the 1989 General Assembly (GA) in San Francisco last September. The reports are intended to provide a means by which Members may learn of each other's accomplishments, problems, and interests. Members also state in these reports specific issues they wish addressed to the **IFIP** community.

The reports cover common activities of Members: holding conferences, seminars, and similar events for both members of the societies and the information processing community at large; publishing journals, books, and other documents; advising governments; accrediting professionals and educational institutions; and related activities. In addition, the reports describe some unusual activities.

The Computer Society of India reported that its project on training the blind for careers in computers was progressing and that equipment was being installed. The Computer Society of South Africa (CSSA) also reported that its involvement with computers for the disabled was continuing, including a self-help data-capture bureau for physically disabled persons and a program to train blind and partially-sighted programmers. CSSA also reported a new program of the Cape Town chapter to "adopt" an under-privileged high school and donate computer equipment to it and train its staff and students.

Activity related to **IFIP** Congresses was reported by Members. The Information Processing Society of Japan (IPSJ) reported extensive support for Congress '89 in San Francisco. One result was the 274 registrants from Japan at the Congress. IPSJ also reported plans under way to hold its first international conference this October in Tokyo. The Spanish Computer Society, in preparation for **IFIP** Congress '92, is striving to increase its membership and activities in the Madrid area. Additional office space has been opened, and some 1000 new members have joined the different member societies. Of course, the American Federation of Information Processing Societies (AFIPS) was deeply involved in organizing Congress '89. The AFIPS report also stressed that there were no plans to hold National Computer Conferences any time in the future.

There were several other unusual activities. In light of the current concern about computer viruses, the New Zealand Computer Society held a series of security seminars throughout the country to indicate the precautions that should be taken to avoid viruses or limit their impact. The Computer Society of Zimbabwe has held a national salary survey and a comprehensive survey of hardware in use.

Help to Developing Countries

Means of involving **IFIP** volunteers to assist developing countries were suggested in several reports. The Argentine Society of Informatics and Operational Research (SADIO) plans to invite nationals of other Latin American countries to observe the 1990 **IFIP** GA, which will be held 2-7 September in Buenos Aires. SADIO also stated: "Those participating in the GA who wish to establish contacts with some Latin American institutions or individuals, as well as to visit any place, can contact SADIO's GA member, who will gladly try to help." The Indian Member also suggested that, "senior professionals in Member countries might take a sabbatical and work for **IFIP** in various countries."

Summarizing the concerns appearing in the Member reports, **IFIP** trustee *Prof. Angel Alvarez Rodriguez (E)* reported to the GA as follows:

> A recurring suggestion to **IFIP** is the development of stronger involvement in the field of computers and disabled people. Other recommendations to **IFIP** include the establishment of education programmes that enable **IFIP** experts to transfer their knowledge to less developed countries, and the commitment of Technical Committees to hold meetings in those same countries on a regular basis.
>
> As an explicit suggestion, **IFIP** might want to encourage Working Group members and other **IFIP** technical experts to give talks on their fields of specialization when visiting foreign countries. A letter of interest together with a brief résumé and abstract(s) of possible talk(s) to give, addressed to the national GA representative of the country to visit, might well be all that is required. National societies could also take advantage of these talks to publicize **IFIP** within their countries and, at the same time, get the younger generations of computer scientists involved in their work.

ZEMANEK RECEIVES VON NEUMANN MEDAL

On 15 September 1989, the John von Neumann Society for Computer Science of Hungary awarded the John von Neumann Medal to *Prof. Dr. Heinz Zemanek (A),* the fourth president of **IFIP** and **IFIP** Honorary Member. He is the second non-Hungarian to receive the medal.

The award was in recognition of Prof. *Zemanek's* support of Hungarian computing and the Society, his numerous presentations and talks in Hungary, and his many other activities there.

To Organizers of IFIP Conferences:
Please send several copies of your Calls for Papers to the **IFIP** Secretariat, in order that the staff may be able to handle queries.

MESSAGE FROM NEW U.S. REPRESENTATIVE

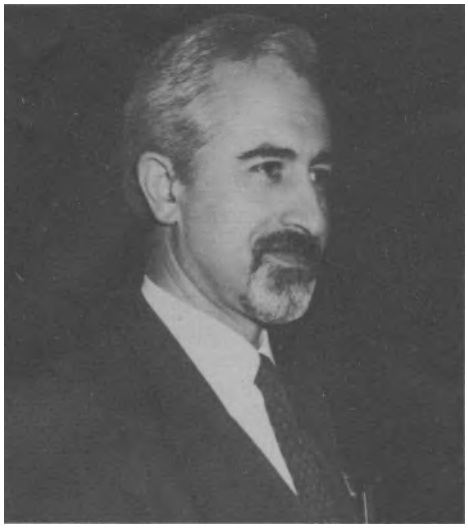
Following is a message to the **IFIP** community from *Mr. Howard Funk,* delegate of the American Federation of Information Processing Societies (AFIPS) to **IFIP:**

Dear Colleagues,

I am delighted to join the **IFIP** family as the United States delegate to **IFIP.** *George Glaser* has set an excellent model for me to follow. I think those of you who were unable to attend the opening ceremony of **IFIP** Congress '89 in San Francisco will be pleased to know that there George received from AFIPS an engraved silver bowl as recognition for his ten years of service as the U.S. representative.

AFIPS has recently announced that it will provide up to 40 travel grants of $1500 each to support travel to **IFIP's** World Conference on Computers in Education, which will be held this year in Australia. We believe that this type of support is beneficial to both **IFIP** (by increasing attendance at **IFIP** events) and to members of the AFIPS constituent societies (permitting them to participate in important technical conferences).

Who's Who in IFIP: MR. LUIS PENEDO



Mr. Luis Filipe do Cruzeiro Goncalves *Penedo,* an **IFIP** trustee and the representative of Portugal in the General Assembly, was born in 1941 in Lisbon. He studied at the Technical University of Lisbon and received the degree of Master of Sciences in Electronics and Communications (with a minor in quantum mechanics and nuclear physics) in 1968.

Upon graduation, he joined TAP, the Portuguese airline, and worked in a number of positions related to communications and computers. He coordinated the installation of the first digital message switching system in Portugal, was involved in the first international implementation of a medium speed link control procedure, which was established between London and Lisbon in 1968, contributed to the implementation of an international computer ring network for the Societée International des Telecommunications Aeronautiques (SITA), and participated in the design of a large data processing center for airline reservations for small countries.

In 1970 he joined IBM, where he has served as a sales representative, systems engineer, account manager, branch manager, senior marketing manager, and Oporto Sectors manager. Among the business areas he has covered for IBM are television, transportation, telecommunications, databases, Portuguese navy, and universities in the fields of databases, telecommunications, and office systems.

Luis *Filipe* Penedo has served as president of the Associacao Portuguesa de Informatica (API), the Portuguese Computer Society, from 1975 to 1977 and 1983 to 1985 and as the president of the API General Assembly from 1985 to 1988 (and reelected to serve until 1990). He has also served on the API Council and on many committees to organize API meetings and special events.

In 1983 he was appointed as the Portuguese representative to the **IFIP** General Assembly. He was elected trustee in 1984 and re-elected in 1986 and 1989. He has served on many **IFIP** committees and as Cognizant Officer for TC8. Presently, he is chairman of the Developing Countries Support Committee, which seeks to use **IFIP** resources to support developing countries in their efforts to use information technology. He has been the moving force within **IFIP** to have **IFIP** establish activities related to the study of fractals. He was instrumental in founding the **IFIP** Task Group on Fractals, and he is the chairman of the Organizing Committee for FRACTAL 90, the first **IFIP** conference on fractals.

Those who have had the pleasure of talking to *Luis Filipe Penedo* know him to be a man with a wide range of interests, from the technical to the philosophical. One evening during the 1986 Council meeting, some of us heard him play "fado" on his Portuguese guitar at a restaurant in Lisbon. As a youngster, he won championships in chess and rowing. At present, he is studying prehistory, from the end of the last glacial age to the beginning of history, preparing a thesis on the decoding of mythology and the anthropology and sociology of religions, studying the relationship between the brain structures of men and women and their social behaviors, and preparing a model of natural language chronology. ■

CHILDREN IN THE INFORMATION AGE

*by Prof. Peter Bollerslev (DK) **

The Third International Conference on Children in the Information Age was held 20-23 May 1989 in Sofia, Bulgaria. The subtitle of the Conference was "Human Development and Emerging Technologies." About 350 people from more than 40 countries participated.

The Conference was organized by the Bulgarian Ministry of Culture, Science and Education and sponsored by **IFIP,** Unesco, and other organizations. The International Programme Committee, chaired by *Acad. Blagovest* Sendov (BG) (now **IFIP** president), had established a very interesting programme with 2 keynotes and 15 invited papers in plenary sessions and approximately 80 submitted papers in 3 streams.

The scientific programme covered a very broad spectrum, gave birth to an intensive exchange of knowledge and ideas, and created an understanding of the importance of the influence on education of different national, political, geographical, cultural and social backgrounds.

Three sessions in the conference were devoted to panel discussions. The themes were Software Portability from an International Perspective, Electronic Networking and Education, and Psychological and Social Aspects of Using New Technologies in Education. Very lively and fruitful discussions occurred in these sessions, even though they were held in the evenings.

In summarizing the Conference, *Prof. A. Jablensky,* President of the Medical Academy of Bulgaria, noted that no conclusions were drawn during the Conference. Concrete results from specific studies are needed. He also talked about the military needs of the fifties and the social needs of the eighties and found that innovations are still too much initiated by the former. The concept "the global village" was mentioned, and in that connection *Prof. Jablensky* felt that there had been too little in the conference about the Third World or the handicapped and disabled. These issues were then suggested as themes for the next "Children in the Information Age" conference.

The Conference ended with the following recommendations:

- that the Bulgarian Ministry of Culture, Science and Education organize a Fourth International Conference in 1991
- that the next conference focus on "Human and Social Aspects with Respect to Children"
- that the ITEC project (An International Longitudinal Study of the Impact of Computers on Children's Cognitive Development) results be reported at the conference ■

* vice-chairman of TC3 and chairman of WG3.1

SHAPING ORGANISATIONS, SHAPING TECHNOLOGY

*by Julie Cameron (A US) **

A Working Conference entitled Shaping Organisations, Shaping Technology (SOST 89) took place in Sydney, Australia, 3-5 May 1989, co-sponsored by IFIP's Technical Committee on Relationship between Computers and Society (TC9) and the Australian Computer Society. This Conference was a forum for 107 participants: organisational leaders from the government and private sectors, users of technology, managers, technical practitioners, researchers and consultants. A high proportion were working in large organisations. Ten percent of the delegates came from outside Australia.

The 37 papers stimulated discussion of case studies and practical experiences. The main issues related to

- the implications of new technologies, specifically Electronic Data Interchange, Office Automation and Electronic Funds Transfer
- the impacts of technology on organisations and in particular on the government and banking sectors
- the impacts of technology on human resource management
- the impacts on the community, including Parliamentary decision-making
- the impacts of organisations on technology, with emphasis on design and implementation methodologies which involve users and clients in the development processes

Conference Conclusions

The conclusions reached emphasized the need for compatibility between the choice of technology and the design of a new system, on the one hand, and the aims, infrastructure and culture of the organization and community in which it is implemented, on the other. It therefore becomes very important to ensure that organisations adopt methodologies and approaches for the design and implementation of information technology which enable users, clients and those affected to make significant inputs into the development processes. The implications of the specific technology and issues related to the expected impacts must be fully discussed and understood by management and users, to ensure the changes will enhance the goals and values of the organization and the community. Hardware, software, "orgware" (the organisational infrastructure) and the "cultware" (the corporate culture and values) are four equally vital components of information technology. These four components need equal consideration. The choice and interactions of these four components determine whether we get the information systems we deserve.

Discussion of the social implications of information technology is increasing among managers, technicians and users, as organisations learn from their failures. Information technology is a tool. Organisations must learn to shape technology to meet social as well as economic goals.

SOST 89 was the first TC9 conference in Australia. SOST 89 delegates requested another SOST conference, so SOST 91 will take place in Queensland, Australia in September 1991.

* chairperson of the Organizing Committee of SOST 89

VICHNEVETSKY IS NEW PRESIDENT OF FIACC

Prot. *Robert Vichnevetsky (USA)* has been named President of FIACC for a term of two years, to end in 1991. FIACC (the Five International Associations Coordinating Committee) is the coordinating body between five international organizations concerned with research, publications, conferences and professional ethics in new disciplines that have emerged in the past half century. Its members are IFIP and

- IFAC: International Federation of Automatic Control
- IFORS: International Federation of Operational Research Societies
- IMACS: International Association for Mathematics and Computers in Simulation
- IMEKO: International Measurement Confederation.

FIACC includes, ex-officio, the presidents of these five organizations. *Prof. Vichnevetsky,* who was FIACC president also from 1979 to 1981, is the president of IMACS.

The nineteen-fifties saw a rapid development of new disciplines that were at the interface between the older, more traditional branches of science and engineering and the newer technologies based on electronics and computers. The need for cooperation brought about the formation, independently of one another, of the five international organizations that are now grouped within FIACC. This occurred within a short time span. With the evolution of those disciplines, it soon became evident that the boundaries between their fields of interest were becoming blurred. To their credit, those who were in charge at the time resisted the temptation to engage in fruitless discussions of territorial rights. Many workshops and conferences on specialized topics where overlap was evident became joint events between two or more associations.

The formation of FIACC came as the natural next step. It was founded in 1970 in Paris, with the assistance of the United Nations Economic, Scientific and Cultural Organization (Unesco), as a medium for the coordination of the activities of the "Five" sister professional federations and to promote cooperation between them. This has resulted in a collaboration that has been successful in every respect. The element of personal contact between the five Presidents, and also with members of the Secretariats, has proven, through the many years, to be a factor of significant value, contributing to a better understanding and giving birth to new avenues of international cooperation.

The coordinating function of FIACC is essentially advisory. It is concerned with public activities such as congresses, conferences, symposia and publications. FIACC also serves as a liaison between the "Five" and non-governmental organizations concerned with science, research and education.

The next full meeting of FIACC is scheduled to take place in August 1990 in Tallinn, U.S.S.R. during the 11th World Congress of IFAC.

NEW IFIP PUBLICATIONS FROM NORTH-HOLLAND

Information Technology in Developing Countries
(Proceedings of the IFIP TC9/TC8 Working Conference on the Impact of Information Systems in Developing Countries, New Delhi, India, November 1988)
edited byS.C. Bhatnagar *and* N. Bjorn-Andersen
1990 188 pages
Price: US $71.75/Dfl. 140.00
ISBN 0-444-88416-5

Protocol Specification, Testing, and Verification, IX
(Proceedings of the IFIP WG6.1 Ninth International Symposium, Enschede, The Netherlands, June 1989)
edited by E. Brinksma, G. Scollo *andC.A.* Vissers
1990 418 pages
Price: US $105.25/Dfl. 200.00
ISBN 0-444-88343-6

Engineering for Human-Computer Interaction
(Proceedings of the IFIP TC2/WG2.7 Working Conference, Napa Valley, CA, USA, August 1989)
edited byG. Cockton
1990 540 pages
Price: US $112.75/Dfi. 220.00
ISBN 0-444-88342-8

Databases for Production Management
(Proceedings of the IFIP TC5/WG5.7 Working Conference on Design, Implementation and Operation of Databases for Production Management, Barcelona, Spain, May 1989)
edited by **J.L. Burbidge**
1990 xii + 360 pages
Price: US $89.75/Dfl. 175.00
ISBN 0-444-88658-3

High Speed Local Area Networks, II
(Proceedings of the IFIP TC6 WG6.4 Second International Workshop, Liege, Belgium, April 1988)
edited by **A.** Danthine *andO.* Spaniol
1990 viii + 272 pages
Price: US $76.25/Dfl. 145.00
ISBN 0-444-88506-4

Computer Hardware Description Languages and their Applications
(Proceedings of the IFIP WG10.2 Ninth International Symposium, Washington, D.C., USA, June 1989)
edited **byJ.A. Darringer** *and* **F.J. Rammig**
1990 xii + 362 pages
Price: US $92.00/Dfl. 175.00
ISBN 0-444-88411-4

Declarative Systems
(Proceedings of the IFIP TC 10/WG 10.1 Workshop on Concepts and Characteristics of Declarative Systems, Budapest, Hungary, October 1988)
edited byG. **David, R.T. Boute** *and* **B.D. Shriver**
1990 viii + 324 pages
Price: US $87.25/Dfl. 170.00
ISBN 0-444-88431-9

Protocol Test Systems
(Proceedings of the IFIP TC6 Second International Workshop, organized by GMD-FOKUS and IBM-ENC, Berlin, FRG, October 1989)
edited by J. **de Meer, L. Mackert** *and W.* **Effelsberg**
1990 x + 372 pages
Price: US $94.75/Dfl. 185.00
ISBN 0-444-88563-3

Artificial Intelligence in Databases and Information Systems (DS-3)
(Proceedings of the IFIP TC2 WG2.6 / TC8 WG8.1 Working Conference, Guangzhou, China, July 1988)
edited by **B.A. Meersman, Zhongzhl Shl andCheng-Ho Kung**
1990 xiv + 584 pages
Price: US $110.25/Dfl. 215.00
ISBN 0-444-88645-1

Computer Integrated Quality System in CIM Systems
(Proceedings of the IFIP TC5/WG5.3 Working Conference, Belgrade, Yugoslavia, June 1989)
edited by **V.R. Milacic** *and J.* **Stanic**
1990 xii + 362 pages
Price: US $89.75/Dfl. 175.00
ISBN 0-444-88562-5

VLSI 89
(Proceedings of the IFIP TC10/WG10.5 International Conference on Very Large Scale Integration, Munich, FRG, August 1989)
edited by G. Musgrave *and* **U. Lauther**
1990 xiv + 516 pages
Price: US $1 18.50/Dfl. 225.00
ISBN 0-444-88344-4

Protocols for High-Speed Networks
(Selected and Revised Papers from the IFIP WG6.1/WG6.4 International Workshop, Zurich, Switzerland, May 1989)
edited by **H. Rudin** *and* **R. Williamson**
1989 xii + 324 pages
Price: US $86.75/Dfl. 165.00
ISBN 0-444-88536-6

Wafer Scale Integration, III
(Proceedings of the Third IFIP WG10.5 Workshop, Como, Italy, June 1989)
edited by **M. Sarni** *andF.* **Distante**
1990 x + 402 pages
Price: US $94.75/Dfl. 185.00
ISBN 0-444-88496-3

Concepts and Characteristics of Knowledge-Based Systems
(Selected and Reviewed Papers from the IFIP TC10 WG10.1 Workshop, Mt. Fuji, Japan, November 1987)
edited by **M. Tokoro, Y. Anzal** *and A.* **Yonezawa**
1989 xiv + 512 pages
Price: US $110.50/Dfl. 210.00
ISBN 0-444-88328-2

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JOSE GARCIA SANTESMASES 1907-1989

IFIP has lost one of its founders, Prof. José Garcia Santesmases, who was representative of Spain from the time of the International Congress of Information Processing (ICIP) in Paris in 1959. He signed the **IFIP** charter, served in Council and General Assembly until 1970, was chairman of the Awards Committee, played an important role in TC3 and was a member of the Programme Committee for **IFIP** Congress '62. He was among the first to receive the **IFIP** Silver Core award, in 1974.

Dr. Santesmases was born on May 2, 1907 in Barcelona, studied electrical engineering in Paris, became a university professor in Granada, but soon was called to Madrid, where he was appointed head of the Institute of Informatics and Automatics. He came from analog computing and the differential analyzer. His early efforts concerned the application of ferroresonance for computer and control devices. One of his last papers, on the possibility of building computers from organic molecules, was written for the **IFIP** Quarter Century volume (pp. 269-271). He supervised more than 40 doctorates, supplying Spain with specialists in informatics. He was the director of the *Journal for Informatics and Automatics*, founded the Association of the same name and was president of our Spanish member organization, FESI.

He wrote more than 100 papers, a textbook on general physics and a book about the Spanish computing and automata pioneer Leonardo Torres y Quevedo.

He was elected member of the Royal Spanish Academy of Sciences in 1960 and was its Vice-President during recent years. Of the many awards and honors he received, the most important was the Echegaray Golden Medal of the Royal Spanish Academy of Sciences.

Santesmases died, without suffering, in the midst of his family on October 24, 1989. His contributions to **IFIP** remain as one of the monuments to him.

Prof. Dr. Heinz Zemanek, **IFIP** Honorary Member

FUTURE IFIP MEETINGS

GENERAL ASSEMBLY AND COUNCIL (and related meetings)

GA	2-7 Sep 90	Buenos Aires
Council	early Mar 91	Barcelona
GA	Ist week of Sep 91	Harrare, Zimbabwe

TECHNICAL COMMITTEE AND WORKING GROUP MEETINGS*

TC2	2-10 Apr 90	Sea of Galilee, Israel
	27-28 Aug 90	Sofia
	Jun 91	Australia
WG2.I	30 Apr-4 May 90	Chester, U.K.
	Dec 90	Brussels, Munich, or Amsterdam
	Jan 91	Europe ?
WG2.2	2-10 Apr 90	Sea of Galilee, Israel
WG2.3	28-31 Mar 90	Munich
	Jan 91	Catalina Island, California
WG2.4	May 90	Canada
WG2.5	29-30 May 90	Jerusalem
	mid Sep 91	Karlsruhe, F.R.G.
WG2.7	Apr 90	Portland, Oregon
WG2.8	26-30 Mar 90	Rome
TC3	8, 13, 14 Jul 90 (before and after WCCE '90)	Sydney
WG5.7	20-22 Aug 90 (during APMS Conf.)	Espoo, Finland
	2nd week of Nov 91	
TC6	11-12 May 90 (with Comnet 90)	Budapest
	Sep or Oct 90	Brazil
	or Nov 90	New Delhi
	24-25 May 91 (with Africom 91)	Tunisia
	early Nov 91 (with Comtap 91)	Sydney
	Mar or Apr 92 (with SEACOM 92)	S.E. Asia - Kasmir
	Sep or Oct 92	Spain
	Mar or Apr 93 (with Datacom '93)	Johannesburg
WG6.4	first week of May 90	Budapest
TC7	11 Apr 90 (with WG7.2 conference)	Irsee, F.R.G.
TC8	11-12 Jun 90	Lisbon
TC9	13-14 Jul 90 ? (probably with 4th HCC Conf.)	Dublin
WG9.2	7-8 Jul 90 (prior to 4th HCC Conf.)	Dublin
WG 10.3	10-21 Apr 90 (with NATUG)	Santa Clara, California
WG10.4	3rd quarter 90	U.K.
	Ist quarter 91	
	3rd quarter 91	Quebec
	1st quarter 92	
WG10.5	Jan 90	Perlach, F.R.G. (near Munich)
TC11	21-22 May 90	Helsinki

* Some meetings are scheduled in conjunction with Working Conferences, for which the conference dates are listed.

Will TC and WG chairmen kindly keep the Secretariat advised of the dates and locations of their future administrative meetings and also send a copy of the minutes to the Secretariat.

DR. S. HANADA

We regret to announce the death, on 9 October 1989, of Dr. S. Hanada, the Japanese representative to the Technical Committee on Information Systems (TC8).

FROM THE EDITOR

Readers of the ***IFIP*** *Newsletter* are requested to consider the following questions:

How much internal news is appropriate? For example, should detailed reports of Council and General Assembly meetings be printed? Are the "Who's Who in **IFIP**" columns and the articles about member societies too parochial?

To what extent should the *Newsletter* report important **IFIP** news that may not be favorable to **IFIP?** For example, how much negative financial news should be reported?

Should lengthy obituaries be printed, or should all obituaries be brief?

I shall be grateful to receive your thoughts on these subjects.

Jack Rosenfeld, Editor ■

IFIP SECRETARIAT NOW ON COMPUTER NETWORK

A long-awaited event has occurred: the IFIP Secretariat now has access to a computer network. The Secretariat e-mail address is

IFIP @cgeuge51. bitnet

NEW IFIP POSITIONS

The following appointments have been made by **IFIP** president Acad. *Blagovest Sendov (BG).* A brief description of the new functions appeared in the December 1989 ***IFIP*** *Newsletter* on page 3.

Contract Officer:
P. Nedkov
Bulgarian Academy of Sciences
1, 7 November Str.
Sofia, Bulgaria
tel: (02) 802831, fax: (02) 803023
telex: 22424 Ban Sf

Activity Secretary:
P. Falster
Electric Power Engineering Dept.
Building 325
Technical University of Denmark
DK-2800 Lyngby, Denmark
tel: +45 (4288) 1633
fax: +45 (4288) 2239 ■

CHANGES IN IFIP

NEW APPOINTMENTS

GA REPRESENTATIVE

Mr. R. Brotto
c/o SUCESU Nacional
Av. W-3 Norte, Quadra 504
Ed. Mariana, Sala 205
70 730 Brasilia, D.F., Brazil
tel: 55 (61) 228 21 77, fax: 55 (61) 228 17 91
telex: 272161

TC AND WG OFFICERS

TC5 vice-chairman: Prof. Dr. D. Kochan
Technische Universität Dresden
Sektion Fretigungstechnik &
Werkzeugmaschinen
Mommsenstrasse 13
DDR-8027 Dresden, G.D.R.
tel: 37 (51) 46 33 339, telex: 2278

TC5 secretary: Prof. V.R. Milacic
Mechanical Engineering Faculty
Univ. of Beograd
26 Marta 80
YU-I 1000 Beograd, Yugoslavia

TC7 vice-chairman and WG7.7 chairman:
Prof. P. KaII
Univ. of Zurich
Moussonstrasse 15
CH-8044 Zurich, Switzerland
tel: 41 (01) 25 73 771
e-mail: K 193301 CZHRZU1A

WG3.1 chairman: Mr. T.J. van Weert
Dept. of Computer Science
Univ. of Nijmegen
Toernoojveld 1
NL-6525 ED Nijmegen, The Netherlands
tel: 31 (80) 61 23 65, fax: 31 (80) 55 34 50
(succeeding P. Bollerslev)

WG3.2 chairman: Prof. B. Levrat
Centre Universitaire d'Informatique
Universite de Geneve
12, rue du Lac
CH-1207 Geneva, Switzerland
tel: 41 (22) 787 6580, fax: 41 (22) 735 3905
e-mail: LEVRAT@CGEUGE51.bitnet
(succeeding F. Atchison)

WG3.5 chairman: Mr. E. Schmidt
Revlingbakken 40
DK-9000 Aalborg, Denmark
tel: 45 (98) 185 366 (home)
45 (98) 112 211 (office)
fax: 45 (98) 191 634 (office)
telex: 69970 AAKUL DK
e-mail: Datapost (DIALCOM) 12271:DKR071
(succeeding F. Lovis)

WG8.2 secretary: Mr. K. Lyytinen
Univ. of Jyvaskyla
Dept. of Computer Science
Cygnaeuksenkatu 3
SF-40100 Jyvaskyla, Finland

WG10.3 chairman: Prof. M. Cosnard
École Normale Superieure de Lyon
46 Allee d'Italie
F-69364 Lyon cedex 07, France
tel: 33 (72) 728 037, fax: 33 (72) 728 080
(succeeding Prof. E.L. Dagless)

WG10.3 secretary: Dr. M.H. Barton
(address given in ***IFIP** Information Bulletin)*

WG12.1 (Knowledge Representation and Reasoning) acting chairman: W. Bibel
Technische Hochschule Darmstadt
FB Informatik
Alexanderstrasse 10
D-6100 Darmstadt, F.R. Germany

WG12.2 (Machine Learning) acting chairman:
Y. Kodratoff
Université Paris Sud
Equipe Inference et Apprentissage
Batiment 490 LRI
F-91405 Orsay, France

WG12.2 acting secretary: P. Flach
INFOLAB
Tilburg Univ.
P.O. Box 90153
5000 LE Tilburg, The Netherlands

WGI2.3 (Problem Solving) acting chairman:
L. Siklóssy
P.O. Box 71710
1008 DE Amsterdam, The Netherlands

WG1 2.4 (Natural Language Processing) acting chairman: J. Sowa
IBM Research Institute
500 Columbus Ave.
Thornwood, NY 10594, U.S.A.
tel: **1** (914) 742-5639, *fax:* 1 (914) 742-5594
Internet: sowa@ibm.com, Bitnet: sowa@yktymy

WG12.4 **acting vice-chairman: H.** Bunt
Institute for Language Technology and Artificial Intelligence
P.O. Box 90163
5000 LE Tilburg, The Netherlands

NEW TC AND WG MEMBERS

TC2: Dr. Bengt G. Lundberg (S)
(succeeding **J.** Nordling)
Prof. Dr. J. van Katwijk (NL)
(succeeding A.J.W. Duijvestijn)
Prof. K. MacGregor (ZA)
TC3: Ms. Anita Kollerbaur (S)
(succeeding L. Gunnarsson)
TC5: Prof. E. Acerman (S)
(succeeding L.H. Fransson, who was corresponding member)
Dr. Miroslav Iliev (BG)
(succeeding Dr. G. Zachariev)
TC10: Mr. Claude Girault (F)
(succeeding V. Cordonnier)
Prof. H. Neishlos (ZA)
TC1 1 : Mr. Gilles Martin (F)
(succeeding A. Grissonanche)
TC12: Dr. Ismail I. Khalil (IQ)
Prof. R. Pfeifer (CH), Prof. Dr. V. **Sgurev (BG)**
TC13: Dr. M. Tauber (A), Prof. R. Marti (CH)

WG3.3:

R. Atken (USA)	G. Olimpo **(I)**
B. Collis (NL)	M. Ostini (CH)
G. Cumming (AUS)	E. Rodriguez-
P.J. Hietala (SF)	R. Martinez (E)
J.A. Jensen **(DK)**	P. Ross (GB)
H. Mandl (D)	J. Tiffin (NZ)
T. Mayes (GB)	A. Vaquero (E)
J. Moonen (NL)	M. Vivet (F)

WG3.5:

R.L. Cohen (F)	R. Nikolov (BG)
K.-D. Graf (D)	W. Olmstead (E)
A. Knierzinger **(A)**	Ch. Parmentier (F)
J. Markvart (CS)	

WG5.3: J.R. Crokall (GB)
WG5.9: P. Gapa (ZW) C.T. McCare (ZW)
WG8.1:
S. Brinkkemper (NL) Cristina Sernadas (P)

E.N. El-Sayed (ET)	S. Twine (AUS)
L.J.B. Essink (NL)	K. Voss (D)
B. Nilson (S)	

NEW SEARCC MEMBER

Australian Computer Society
(address given in ***IFIP** Information Bulletin)*
tel: 61 (2) 211 58 55
fax: 61 (2) 281 12 08

ADDRESS AND OTHER CHANGES

Vice-president, Technical Assembly chairman, and GA representative of Norway:
Prof. A. Rostadås
preferred fax: 47 (7) 597 117

Past-president and GA representative of Australia:
Mr. A.W. Goldsworthy
fax: 61 (3) 562 2664

GA **representative of Japan:** M. Ozeki
fax: 81 (425) 73 7349

Honorary member: Dr. R.I. Tanaka
Scan-Optics, Inc.
22 Prestige Park Circle
East Hartford, CT 06108, U.S.A.
tel: 1 (203) 289-6001, fax: 1 (203) 289-9034

TC8 chairman: Prof. G.B. Davis
e-mail: gdavis@umnsom (correction)

TC9 chairman: Dr. K. Brunnstein
tel: 49 (40) 4123-4158, *fax:* 49 (40) 4123 2449
e-mail: Brunnstein%
RZ.Informatik.Uni Hamburg@nodeid
nodeid: EARN= dbp.de, BITNET=
Ddfngate.bitnet, ARPANET= relay.cs.net

WG3.4 chairman: Dr. B.Z. Barta
(temporary address, until July 1990)
Dept. of Computer Studies
City Polytechnic of Hong Kong
Argyle Center, Tower II
700 Nathan Road, Kowloon, Mongkok
Hong Kong
tel: 852 (3) 788-1167, fax: 852 (3) 984321

WG3.6 chairman: Mr. G. Kovacs
tel: 36 (1) 115 1036 or 329 390

Contract Officer: Dr. P. Nedkov
tel: 359 (2) 80 28 31, fax: 359 (2) 80 30 23

Full Member:
West African Regional Computer Society
(WARCS)
P.M.B. 21185
25, Adeniyi Jones Ave.
Ikeja, Lagos, Nigeria
tel: 234 (1) 33 637
telex: 34265 OEDPDA NG

President and GA Representative of CLEI:
Prof. José A. Pino
Dept. of Computer Science, Univ. de Chile
Casilla 2777
Santiago, Chile
tel: 56 (2) 92736 or 6982071, fax: 56 (2) 712799
UUCP mail: jpino@toqui.uchile.CL

Executive Secretary of CLEI: Dr. Marcos Borges
NCE/UFRJ
20001 - Rio de Janeiro, Brazil
fax: 55 (21) 2708554
Bitnet mail: NCD10040@UFRJ.BITNET

Affiliate Member: The International Federation of Associations of Computer Users in Engineering, Architecture and Related Fields (FACE)
16, High St.
Glen Iris, Vic. 3146, Australia
tel: 61 (3) 885 65 86, fax: 61 (3) 885 59 74

National Correspondent of Australia:
do not address to specific individual
(address given in ***IFIP** Information Bulletin)*

National Correspondent of Japan:
The Secretariat
Information Processing Society of Japan
Hoshina Bldg.
2-4-2 Azabudai Minato-ku
Tokyo 106, Japan ■

CALL FOR PAPERS

WG6.5 Intl. Symp. on Message Handling **Systems and Application Layer Communication Protocols**
3-5 Oct 90, Zurich
papers **due:** 30 Apr 90
contact: Dr. Peter Schicker
Ascom Zelcom AG
CH-8634 Hombrechtikon, Switzerland
tel: +41 55 416 377, fax: +41 55 423 391
telex: 876 089
Internet: schicker@clients.switch.ch
Bitnet: schicker@cernvax
or
Einar Stefferud
Network Management Associates, Inc.
17301 Drey Lane
Huntington Beach, CA 92647, U.S.A.
tel: +1 714 842 3711
Internet: stef@ics.uci.edu
Bitnet: EStef@UCI ■

CALENDAR OF EVENTS

(continued from page 16)

Event	Date	Location	Organized by
Symp. on *Intelligent Tuning and Adaptive Control*	15-17 Jan 91	Singapore	IFAC IEEE **IFIP** IMEKO
Purdue Intl. Workshop on *Industrial Computer Systems*	15-18 Apr 91	West Lafayette, Indiana	Purdue TC5 WG5.4
Intl. Symp. on *Computer Hardware Description Languages and Their Applications — CHDL '91*	Apr 91	Europe	TC10 WG10.2
Seventh Intl. Conf. on *Computer Security — IFIP/SEC '91*	14-17 May 91	Brighton	TCII
AFRICOM '91 / CCDC '91	21-23 May 91	Tunis	TC6 ICCC
Workshop on *Computer Software Structures Integrating AI /K BS Systems*	29-30 May 91	Bergen, Norway	IFAC **IFIP** NFA
Work. Conf. on *Human Jobs and Computer Interfaces*	May 91	Tampere, Finland	TC9 WG9.1
Eleventh Work. Conf. on *Protocol Specification, Testing and Verification*	9-12 Jun 91	Stockholm	TC6 WG6.1 SICS
Work. Conf. on *Approximations and Applications in Stochastic Programming*	17-21 Jun 91	Tallinn, Estonia	TC7 WG7.7 et al.
Work. Conf. on *Change-Point Detection*	Jun 91	Telsknys, Vilnius, U.S.S.R.	TC7 WG7. I
Fifth Symp. on *Computer-Aided Design in Control and Engineering Systems*	15-17 Jul 91	Swansea, U.K.	IFAC **IFIP**
Thirteenth *!MACS World Congress on Computation and Applied Mathematics*	22-26 Jul 91	Dublin	IMACS
Work. Conf. on *The Teacher and Computing: Why, What, How and When?*	Jul 91	Norway	TC3 WG3.5
Twelfth Intl. Joint Conf. on *Artificial Intelligence — IJCAII '91*	18-23 Aug 91	Sydney	IJCAII
Intl. Conf. on *European Medical Informatics*	19-22 Aug 91	Vienna	IMIA EFMI
Work. Conf. on *Collaborative Work. Social Communication and Information Systems Theories. Methods. Tools and Impacts*	27-29 Aug 91	Helsinki	TC8 FIPA
Work. Conf. on *Impacts of Informatics on the Organization of Education*	Aug 91	Santa Barbara, California	TC3 WG3.1
VLSI '91	Aug 91	Edinburgh	TC10 WG10.5
Fifteenth Intl. Conf. on *System Modelling and Optimization*	2-6 Sep 91	Zurich	TC7 IFAC IFORS
Seventeenth Intl. Conf. *VLDB '91*	3-6 Sep 91	Barcelona	VLDB
Twelfth *IMEKO World Congress*	5-10 Sep 91	Beijing	IMEKO
Computer Application in Production and Engineering — CAPE '91	10-12 Sep 91	Bordeaux	TC5
Workshop on *Supporting Functionality in the Office Environment*	10-12 Sep 91	Canturbury	TC8 WG8.3 WG8.4
Symp. on *Robot Control — SYROCO '91*	16-18 Sep 91	Vienna	IFAC **IFIP**
Work. Conf. on *Programming Environments for High-Level Sci. Prob.-Solving*	23-27 Sep 91	Karlsruhe, F.R.G.	TC2 WG2.5
Work. Conf. on *Process Planning for Complex Machining with Al Methods*	Sep 91	Dresden, G.D.R.	TC5 WG5.3
Computers and Society — a Summer Teach-in	Sep 91	U. of Exeter, U.K.	TC9 WG9.2
Work. Conf. on *Shaping Organizations and Shaping Technology*	Sep 91	Gold Coast, Queensland	TC9 ACS
Purdue Intl. Workshop on *Industrial Computer Systems*	21-24 Oct 91	West Lafayette, Indiana	Purdue TC5 WG5.4
Workshop on *CAD/CAM Interfaces in Mechanical Engineering*	91	Darmstadt, F.R.G.	TC5 WG5.2 WG5.3 WG5.10
Work. Conf. on *Production Management of Complex One-of-a-Kind Production*	91	Bremen, F.R.G.	TC5 WG5.7
Workshop on *Intelligent CAD*	91	Israel	TC5 WG5.2
Intl. Conf. on *Computers in the Automation of Shipyard Operations and Ship Design — ICCAS '91*	91	Rio de Janiero	TC5 WG5.6
Work. Conf. on *Programming Environments for Concurrent Systems*	91	7	TC10 WG10.3
Workshop on *Design and Implementation of Communication Systems*	91	G.D.R.	TC6/Acad. of Sciences, G.D.R.
Work. Conf. on *Stochastic Programming: Stability and Numerical Methods*	Mar 92	Wendisch-Rietz, G.D.R.	TC7 WG7.7 Humboldt Univ.
Purdue Intl. Workshop on *Industrial Computer Systems*	6-9 Apr 92	West Lafayette, Indiana	Purdue TC5 WG5.4
Work. Conf. on *Stochastic Optimization: The State of the Art*	Apr 92	Havana	TC7 WG7.7 U. of Havana
Eighth Intl. Conf. on *Computer Security — IFIP/SEC '92*	May 92	Singapore	TC11
Seventh Symp. on *Dynamic Modelling of National Economies*	18-20 Aug 92	Beijing	IFAC IFORS IFIP IIASA
Seventh World Cong. on *Medical Informatics — MEDINFO '92*	6-11 Sep 92	Geneva	IMIA
IFIP Congress '92 — 12th World Computer Congress	21-25 Sep 92	Madrid	**IFIP**
ICCC '92	27 Sep-2 Oct 92	Genoa	ICCC
Work. Conf. on *Computational Techniques of Stochastic Programming*	Sep 92	Seregelyes, Hungary	TC7 WG7.7 MTA SZTAKE
Eighth Conf. on *Software for Discrete Manufacturing — PROLAMAT*	92	Japan	TC5 WG5.3 IFAC
Workshop on *Geometric Modelling*	92	Budapest	TC5
Eleventh Intl. Conf. on *Pattern Recognition*	92	The Netherlands	IAPR
Ninth Intl. Conf. on *Computer Security — IFIP/SEC '93*	May 93	Tokyo	TC I I
Thirteenth Intl. Joint Conf. on *Artificial Intelligence — IJCAII '93*	29 Aug-3 Sep 93	Chambery, France	IJCAII
Work. Conf. on *Statistical Aspects of Stochastic Programming*	Aug 93	Prague	TC7 WG7.7
VLSI '93	Aug 93	Grenoble	TC10 WG10.5
Twelfth *IFAC World Congress*	93	Sydney	IFAC
World Conf. on *Computers in Education — WCCE '95*	Jul 95	U.K.	**IFIP** TC3 BCS
IFIP Congress '95 — 13th World Computer Congress	95	Hamburg	**IFIP**
Thirteenth *IFAC World Congress*	96	San Francisco	IFAC

Please see page 13 for schedule of **IFIP** administrative meetings.

The **IFIP** Secretariat can furnish details of most of the events listed.

CALENDAR OF EVENTS

Event	Date	Location	Organized by
Work Conf. *Modelling the Innovation: Communications, Automation and Information Systems*	21-23 Mar 90	Rome	TC7 WG7.4 AEI IEEE IFAC
Third Work. Conf. on *Reliability and Optimization of Structural Systems*	26-28 Mar 90	Berkeley, California	TC7 WG7.5
Third Intl. Conf. on *Info. Networks and Data Communications — INDC '90*	26-29 Mar 90	Lillehammer, Norway	TC6 SDF SSE/DND
Workshop on *Knowledge-Based System Design Tools*	Mar 90	Amsterdam	TC10 WG10.2
Work. Conf. on *Programming Concepts and Methods*	2-5 Apr 90	Sea of Gallilee, Israel	TC2 WG2.2 WG2.3
Informatics Curricula for the 90's	5 Apr 90	U.S.A.	TC3 WG3.2
Work. Conf. on *Artificial Intelligence Devoted to Applications in CIM*	15 Apr 90	Leningrad	TC5 WG5.3 Europ.Assn.A1
Purdue Intl. Workshop on *Industrial Computer Systems*	23-26 Apr 90	West Lafayette, Indiana	Purdue TC5 WG5.4
COMNET '90 — Forward into the 2nd Quarter-Century in Networking	8-10 May 90	Budapest	TC6 J.v.Neumann Society
Fifth *International Computer Science Journees*	9-11 May 90	Tunis	Tunisian School of CS
Sixth Intl. Conf. on *Computer Security — IFIPSEC '90*	23-25 May 90	Helsinki	TC11 FIPA
Work. Conf. on *Stochastic Optimization: Numerical Methods and Technical Applications*	29-31 May 90	Neubiberg, F.R.G.	TC7 WG7.7
Work. Conf. on *Human Factors in Information Systems Analysis and Design — WHISA D '90*	5-7 Jun 90	Schaerding, Austria	TC8 WG8.1
First Work. Conf. on *Fractals in the Fundamental and Applied Sciences — FRACTAL '90*	6-8 Jun 90	Lisbon	Task Group on Fractals
Tenth Work. Conf. on *Protocol Specification, Testing and Verification*	13-15 Jun 90	Ottawa	TC6 WG6.1
First Workshop on *Design for Manufacturing*	14-15 Jun 90	Enschede, Netherlands	TC5 WG5.2
Third Workshop on *Geometric Modelling in CAD*	17-21 Jun 90	Rensselaerville, N.Y.	TC5 WG5.2
Tenth Intl. Conf. on *Pattern Recognition*	17-21 Jun 90	Atlantic City	IAPR
Work. Conf. on *Environments for Supporting Decision Processes*	18-21 Jun 90	Budapest	TC8 WG8.3
Fourth Intl. Conf. on *Data Communication Networks and Their Performance*	18-22 Jun 90	Barcelona	TC6 WG6.5 ACM IEEE ITC
Work. Conf. on *Man in Flexible Automated Production*	19-21 Jun 90	Prague	TC5 WG5.3 VUSTE
Work. Conf. on *Formal Methods for VLSI Design*	24-30 Jun 90	Lyngby, Denmark	TC10 WG10.5
Twelfth *IFORS Conference*	25-29 Jun 90	Athens	IFORS
Workshop on *Computer-Intensive Methods in Simulation and Stochastic Optimization*	Jun 90	Vienna	TC7 WG7.7
Eighteenth Workshop on *Reliable Computing and Fault Tolerance*	Jun 90	Newcastle	TC10 WG10.4
Work. Conf. on *Object-Oriented Databases: Analysis, Design and Contraction*	2-6 Jul 90	Windermere, U.K.	TC2
Intl. Conf. on *Economics and Artificial Intelligence — CECOJA II*	2-6 Jul 90	Paris	AFCET IFORS **IFIP** IFAC
Open Conf. on *Information Technology Assessment — HCC4*	9-12 Jul 90	Dublin	TC9 CEC (FAST pgm.)/ICS
Fifth World Conf. on *Computers in Education — WCCE '90*	9-13 Jul 90	Sydney	TC3 ACS et al.
Intl. Conf. on *Advanced Research on Computers in Education*	18-20 Jul 90	Tokyo	**IFIP** TC3 WCCE (post)
Eleventh *IFAC World Congress: Automatic Control in the Service of Mankind*	13-17 Aug 90	Tallinn, U.S.S.R.	IFAC
Intl. Conf. on *Advances in Production Management Systems — APMS '90*	20-22 Aug 90	Helsinki	TC5 WG5.7
European Medical Informatics Congress	20-23 Aug 90	Glasgow	IMIA EFMI
Sixteenth Symp. on *Microprocessing and Micropgmg. — EUROMICRO '90*	27-30 Aug 90	Amsterdam	Euromicro
Intl. Conf. on *Human-Computer Interaction — INTERACT '90*	27-31 Aug 90	Cambridge, U.K.	TC13 et al.
Sixteenth Intl. Conf. *VLDB '90*	Aug 90	Gold Coast, Australia	VLDB
Fourteenth Intl. Symp. on *Computer Performance Modelling, Measurement and Evaluation*	12-14 Sep 90	Edinburgh	TC7 WG7.3/BCS Peri Eng. SG
Work. Conf. on *Approving Software Products*	15-17 Sep 90	Garmisch (near Munich)	TC5 WG5.4
Workshop on *LAN Management*	18-19 Sep 90	Canterbury	TC6 WG6.4A
Work. Conf. on *Multi-user Interfaces and Applications*	24-26 Sep 90	Heraklion, Greece	TC8 WG8.4 ACM
Work. Conf. on *Low Quality Information*	24-26 Sep 90	Spa, Belgium	TC 12
Seventh Work. Conf. on *Stochastic Systems and Optimization*	Sep 90	London	TC7 WG7.1
Intl. Conf. on *Harmonization of Technology with Society — INFO JAPAN '90*	1-5 Oct 90	Tokyo	IPSJ **IFIP** IPSC IEEE/ACM
Intl. Symp. on *Message Handling Systems and Application Layer Communication Protocols*	3-5 Oct 90	Zurich	TC6 WG6.5
Purdue Intl. Workshop on *Industrial Computer Systems*	8-11 Oct 90	West Lafayette, Indiana	Purdue TC5 WG5.4
Intl. Conf. *TELEMATICA '90*	12-14 Oct 90	Porto Alegre, RS, Brazil	TC6 SUCESU-RS/TC6
Fifth *Jerusalem Conference on Information Technology — JCIT*	22-25 Oct 90	Jerusalem	IPAI **IFIP**
Work. Conf. on *Formal Product Information*	23-25 Oct 90	Amsterdam	TC5 WG5.2/3/6/7/8
Symp. on *Safety, Security and Reliability related Computers for the 1990s — SA FECOMP '90*	30 Oct-2 Nov 90	Gatwick Airport, U.K.	IFAC TC5 WG5.4
First Work. Conf. on *History of Computing in Europe*	Oct 90	Budapest	**IFIP** Hist. Comm./J vN. Soc.
Technology for Mass Applications — ICCC '90	5-9 Nov 90	New Delhi	ICCC
Regional Conf. on *Harnessing Information Technology for Developing Africa*	12 Nov 90	Zimbabwe	TC6 TC5 TC3 CSZ
Second Conf. on *CAD/CAM and Technology Transfer to Latin America*	19-24 Nov 90	Havana	TC5
Work. Conf. on *Information Systems Research Methodologies*	14-16 Dec90	Copenhagen	TC8 WG8.2
Eleventh Intl. Conf. on *Information Systems — ICIS '90*	16-19 Dec90	Copenhagen	SIM TIMS ACM **IFIP** TC8

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IFIP Congress '92 — 12th World Computer Congress	21-25 Sep 92	Madrid	**IFIP**
IFIP Congress '94 — 13th World Computer Congress	94	Hamburg	**IFIP**

Please see page 13 for schedule of **IFIP** administrative meetings.
The **IFIP** Secretariat can furnish details of most of the events listed.