



International Association for Pattern Recognition, Inc.

An affiliate member of the International Federation for Information Processing

NEWSLETTER

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FROM THE EDITOR'S DESK

The production of this issue of the Newsletter has been delayed by some three weeks due to extraordinary events relating to the 9th International Conference on Pattern Recognition. It may sound incredible on first reading, but the long awaited Beijing conference will not after all be held in Beijing. A formal announcement of the change of venue of the 9th ICPR is included in the message from the President of IAPR, Dr Pierre Devijver, together with a detailed account of the developments leading to this dramatic decision of the IAPR Executive Committee. The Chinese perception of the events is set out in the open letter to the President of IAPR from the organizers of the Beijing conference, reprinted after the Presidential message. A response to the letter by the IAPR Secretary, Prof M J B Duff, is carried in the sequel. It is clear from Dr Devijver's statement that the situation arose from the IAPR Executive Committee's concern about a serious point of principle, namely that ICPRs must be open for participation to any member of IAPR. I believe that most of us will agree that the raw facts of the telegraphic messages received from China left a very few options open for the Executive Commit-

tee. But was there a genuine problem or just a tragic misunderstanding due to communication difficulties. An analysis of the events will in no doubt be a major item on the agenda of the IAPR Governing Board meeting in Rome later on this year to prevent a similar situation happening in the future for the sake of both the conference organisers and IAPR. But an equally important task faced by the Governing Board will be to find a way of winning our Chinese colleagues back to IAPR to help to promote IAPR interests and to enhance its international standing.

The Editor

NEWS IN BRIEF

PAMI TC DEBATES THE ICCV FORMAT The Pattern Analysis and Machine Intelligence Technical Committee of the IEEE Computer Society is discussing the format of its International Conference on Computer Vision, a series of annual conferences inaugurated last year in London. The main issue is whether or not the number of papers presented at the conference should be limited so as to create a non-parallel session programme, and if the former is adopted how to ensure a fair paper selection process.

PAMI TC NEWSLETTER TO REACH ALL PAMI SUBSCRIBERS The Newsletter of the PAMI Technical Committee, edited by Prof Azriel Rosenfeld, will in future be mailed to the entire Transactions on PAMI mailing list.

CONSTITUTION AND BYLAWS COMMITTEE FOR PAMI TC A Constitution and Bylaws Committee has been appointed by the PAMI TC to introduce more structure into TC's proceedings and operations in order to enable the Committee to cope better with the rapid growth of the areas in its remit.

IAPR TC-13 INAUGURAL MEETING The first meeting of the IAPR Technical Committee TC-13 on Astronomy and Astrophysics held its first meeting in Garching-bei-Muenchen in October 1987. For a copy of the minutes of the meeting and information on the TC's activities please write to the TC-13 Chairman, Prof Vito Di Gesu, Dip. di Matematica ed Applicazioni, Univ. di Palermo, Italy.

PRESIDENTIAL MESSAGE

At the time this Newsletter reaches you, you will certainly be aware of the exceptional events which have marked the IAPR's life in the recent months and have led to the decision of moving the 9th ICPR from Beijing to Rome. Every effort has been made to give the widest possible dissemination to this information. However, I feel quite sure that some of our members have not been adequately informed of the motivation behind this decision. Accordingly, I will either reproduce or summarize hereafter the various messages that have been circulated.

* * * * *

As soon as the decision was made of withdrawing the IAPR sponsorship from the Beijing meeting, the following message was sent by Prof Freeman, Program Chairman, to all those who had submitted a paper to the 9th ICPR.

May 9, 1988

THE NINTH INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION

IMPORTANT NOTICE

The Executive Committee of the International Association for Pattern Recognition greatly regrets that it must withdraw its sponsorship from the meeting proposed to be held in Beijing during 17-20 October 1988. Unfortunately, the organizers are not able to guarantee full access to this meeting for all classes of participants and are therefore not in a position to meet the terms of Bylaw 11.5 which states that the ICPR must be open for attendance to all members of IAPR member societies, including individual members. The problem concerns the issue of visas and this matter is subject to unacceptable restrictions imposed by the Chinese Government.

It has been regretfully decided to move the 9th ICPR to another venue and details will be circulated at the earliest possible date. Papers which have already been accepted for presentation at the meeting will automatically be accepted for the new meeting.

signed: *Pierre A Devijver*

* * * * *

Such a dramatic decision should normally have been taken by the IAPR Governing Board, but the question was handled at the level of the Executive Committee as a matter of urgency. Accordingly, on May 10, 1988, I sent a longer memo to about sixty addresses all over the world. My memo was essentially as follows:

TO: ALL MEMBERS OF THE IAPR GOVERNING BOARD, CHAIRMEN / MEMBERS OF STANDING AND TECHNICAL COMMITTEES, NEWSLETTER EDITOR

SUBJECT: 9TH INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION

...There should be no need to insist that the above decision was not made lightly and that full consideration was given to the fact that our decision will be harmful mostly to our Chinese colleagues from the Pattern Recognition and Machine Intelligence Committee of the Chinese Association for Automation.

At the next IAPR Governing Board meeting, I will report in full details on the course of action that has led to this decision. It is my purpose here to underline the most important aspects of the problem we have been confronted with.

The problem at issue consisted in unacceptable restrictions imposed by the Chinese government on the delivery of visas for participants to the 9th ICPR. You are all aware that openness of conferences and workshops (co-) sponsored by IAPR has always been a major concern of both the Executive Committee and Governing Board of IAPR, and in this respect, I wish to make two preliminary remarks.

On the one hand, at the time our Chinese colleagues submitted their proposal to host the 9th ICPR in Beijing, a competing proposal was rejected on the ground that some individuals from IAPR national member organizations would be denied a visa to the host country (see p. 4 of the minutes of the 4th Governing Board meeting, Montreal, August 1, 1984). It was only upon Professor Chang's insistence that there would be no entry problem to China that the Chinese proposal was taken into consideration.

On the other hand, the Article 11.5 of the IAPR Bylaws states that: "The ICPR.... must be open for attendance to all members of IAPR member societies, including individual members". Clearly, this statement needs no comment.

The submission of a first batch of 47 visa applications demonstrated that our Chinese colleagues were not in position to comply with the above principle: In response to this submission, a telex dated April 19 stated,

among other things, that the Chinese government had decided to put an upper limit on the number of delegates from a specified country. The reaction of the Executive Committee was immediate. This position was regarded as unacceptable by the IAPR. Accordingly, I informed the Chinese Association for Automation that there could not be - and would not be - any form of "national quota" on the number of delegates to the next ICPR and that, likewise, there could not be any form of national discrimination regarding the procedure to be applied for obtaining visas. I also insisted that I should receive a clear confirmation that they would be able to abide by these rules. Unfortunately, I did not receive such a confirmation. Instead, I received another telex which imposed a new condition on the delivery of visas, namely, that applicants should prove that they are "bona fide scientists". Accordingly, they guaranteed entry visa to authors of accepted papers, but their telex ignored other classes of potential applicants.

The Executive Committee has examined the situation very carefully and has concluded that there was no chance that any form of agreement could be reached on this crucial matter, in a time delay that would preserve our freedom of action. Consequently, it was regretfully decided to move the 9th ICPR to another venue....

signed: *Pierre A Devijver*

* * * * *

Very soon after, that is on May 18, 1988, the IAPR Executive Committee held a meeting in Amsterdam, in connection with the Conference "Pattern Recognition Theory and Practice III". Needless to say, the cancellation of the conference in Beijing and the selection of a new site for the 9th ICPR were major items of the agenda, and minimizing the harm being done to the Workshop on Computer Vision organized in Tokyo by Technical Committees 6 and 8 was one of our serious concerns. Significant progress was made on that day, and I could announce to the conference participants that the final decision would hopefully be made by May 25, at the latest. From then on, things proceeded smoothly and on May 26 I could mail the following announcement:

**THE NINTH INTERNATIONAL
CONFERENCE ON
PATTERN RECOGNITION**

ROME

NOVEMBER 14-17, 1988

The Executive Committee of the International Association for Pattern Recognition has decided to move

the 9th ICPR to Italy. The Conference will be held in hotel ERGIFE, Rome, Italy during 14-17 November 1988. The Conference Chairman will be Professor Stefano Levialdi from the University of Rome. As announced previously papers which have already been accepted for presentation are automatically accepted for the new conference.

On behalf of IAPR, I extend my warmest thanks to Professor Levialdi for accepting the responsibility of organizing this major conference on such a short notice. Anyone who wishes to attend may contact him at the following address: Professor Stefano Levialdi, Dipartimento di Matematica, Universita di Roma, Piazzale Aldo Moro 2, 00185, Rome, Italy. Tf: +39 6 4991.32.49(50), Fax: +39 6 495.76.97.

signed: *Pierre A Devijver*

* * * * *

I hope everybody will understand that I will refrain from making any further comment at this stage. We should first let this matter cool down. However, as a final remark, I would like to say that very soon after the decision was made, I received dozens of reactions from all over the world. They were all supportive of our decision. Presently it is my firm belief that failing to react the way we did could have made much harm to IAPR. This, however, should not detract us from making every effort to prevent such difficult situations to reoccur in the future.

Pierre A. Devijver

CHINESE PERSPECTIVE ON CHANGE OF ICPR VENUE

Below reprinted is an open letter from the Chinese Association of Automation in response to the IAPR Executive Committee's decision to withdraw IAPR sponsorship from the Beijing conference. The letter is addressed to the President of IAPR. Dr Devijver intimated that he would be responding to it in detail but not by means of an open communication.

Dear Dr Pierre A Devijver,

We were very shocked when we learnt that a decision had been made by the IAPR Executive Committee of not holding the 9th International Conference on Pattern Recognition in Beijing. We think this abrupt decision made in such a short notice is indiscreet and constitutes a serious mistake. This decision has ruined the

relation between the Chinese Association of Automation and IAPR. The Chinese Association of Automation, the China International Conference Center for Science and Technology and we feel very sorry about this decision.

The international exchange programs and activities of the Chinese Association of Automation has always been supported by the Chinese government. The Chinese government respects the principles laid by all international nongovernmental organizations of free circulation of scientists from all over the world and of openness of conferences and workshops to all member organizations and individual members. It is because of the support of our government that more than 400 international scientific conferences with several thousands of participants from various countries have been held in China since 1982. Among them are hundreds of scientists from those countries with which China has no diplomatic relation. This includes scientists from Israel. All these participants, according to China's regulations, have proceeded with the necessary formalities for the entry visa application, mailing their curriculum vitae for proving their scientific identity before their attendance. We do not think the above necessary formalities for entry visa application are a "condition" as stated in your memo. The same formalities are proceeded through by the Chinese scientists who want to attend international conferences held in many countries with which China has diplomatic relations. They fill out necessary forms and provide their curriculum vitae for the entry visa, all in accordance with the regulations of that country. So we do not think this common practice is "an unacceptable restriction imposed by the Chinese government on the delivery of visas for participants" as stated in your memo.

With regard to the so called "upper limit" on the number of delegates from Israel in the April 19 telex from China mentioned in your memo, this is also not in conformity with the truth. The truth is, although we had not received the curriculum vitae of the Israeli scientists who applied to the 9th ICPR, we used the submitted papers of the 14 authors to prove their scientific position and got their entry visas. And considering that their spouses would come along with them, we stated that 30 people including their spouses would be granted visa to China. At the same time, we requested that other scientists from Israel mail their curriculum vitae to us so that we could proceed with formalities for their entry visas. This is by no means the "national quota" as stated in your memo. We have to hereby express our regret once again to the IAPR Executive Committee for making a memo in public which distorted the facts without undergoing investigation.

Originally, we had no intention to make this letter public to all members of IAPR and to the participants of the 9th ICPR. But due to the fact that the IAPR Executive Committee has made a very unfriendly and formal memo to all its members in defiance of the great efforts made by the Chinese Association of Automation and the China International Conference Center for Science and Technology in the preparation for the 9th ICPR, as well as of the interests of more than 200 Chinese and 400 overseas registrants, we do not have any choice but to make this letter public to all. Accordingly, on the Pattern Recognition and Machine Intelligence Committee of the Chinese Association of Automation, we hereby announce to IAPR our formal decision of withdrawing our membership from IAPR in protest against your wrong decision. We are sure that our withdrawal from IAPR will not affect our friendly cooperation and professional exchanges with the IAPR member organizations and individual scientists, nor will it affect other international conferences which will be held in China this year and in the future.

As a final remark, we request the immediate withdrawal of our loan of US\$ 5000 sent in Jan and March to Prof H Freeman as the chairman of the 9th ICPR as well as the US\$ 3000 we spent for organizing the 9th ICPR and we shall also write to the next IAPR Governing Board meeting in full details.

With best wishes,

Sincerely

Hu Qiheng

Co-Chairman of the 9th ICPR
President of the Chinese Association of Automation

Shi Qingyun

Co-Chairman of the 9th ICPR IPC
President, Committee of Pattern Recognition
and Machine Intelligence, CAA

FROM THE SECRETARY

Some comments on the text of the letter from our Chinese colleagues may be helpful, particularly since the letter had been widely distributed prior to its publication in this Newsletter. The President has stated in broad terms what occurred during these past few weeks and the following remarks refer more specifically to the points in the letter above.

First, the Executive Committee decision was neither 'abrupt' nor at 'short notice'. A batch of 42 visa applications from Israel was sent to China (using forms agreed with the Chinese authorities) on 12 January,

1988, but by 2 March, despite repeated telexes requesting an acknowledgement of receipt, no confirmation had been received indicating safe arrival of the applications. A batch of 5 more applications was then sent off and these were acknowledged on 18 March. It was not until 30 March that a telex was received from China stating that all the applications had, in fact, arrived.

Similar communication problems had occurred last year when the Chinese organisers suddenly announced that they wanted to change the registration arrangements which had been agreed formally in 1984 when the Beijing venue was approved (note also that at this time there were firm undertakings given that no visa restrictions would be made; the inability to make such an undertaking had already ruled out a competitive bid from another country). The new proposed arrangements cancelled the procedure by which North American registrations would have been made in the USA in order to avoid trying to transfer funds out of China. It was with great reluctance that the Executive Committee finally accepted the Chinese demands in this matter, particularly since by that time the Program Chairman had still not received from China the money necessary to carry out the refereeing process. 80April, 1988 (although it had been requested at the Paris ICPR in 1986).

The telex from China stipulating an upper limit of 30 participants from Israel was dispatched to Israel on 19 April. In the same telex, it was insisted that new visa applications should be submitted for a maximum of 30 participants, and that an increased amount of detail about those applying would be required. IAPR responded with a telex a week later and, in the light of previous difficulties in obtaining replies from China, it was insisted that not only should the 'quota restriction' be withdrawn but that the formal confirmation should reach IAPR not later than 5 May, otherwise a new venue would be sought for the conference. Clearly, there was no time to waste if the conference had to be moved. The telex in reply arrived on 4 May but ignored the question of the quota, although it did state that China would resign from IAPR if the conference were to be moved from Beijing. Very reluctantly, the Executive Committee announced its decision to move the conference on 9 May - nearly four months after the visa applications had been sent to China. The full text of the original telex from China speaks for itself:

ATT:S.PLEGE

RE:9 ICPR VISA ISUG FR ISRAELIS

1.JUST GOT RPLY FRM GOVNT THT AT MOST
30 ISRAELI DELGTS PLUS THR SPOUSES WL BE
PERMTD TO ATND 9ICPR.

2.WE WERE INFRMD BY AUTHRTY THT REG FRMS U SNT ARE TOO SUMERIZD.THY NEED RESUME OR CURICULAR VITA OF EACH DELGT. THFR, PLS SND NAME LST OF 30 DELGTS + THEIR RESUME + VISA ISUG PLACE + PASPRT NBR + SPOUSE NAME N PASPRT NBR TO ME ASAP

RE:PRE TR

AUTHRTY SAID IT'S IMOSBL TO APRV ISRAELI PRE TR GRP UNLES SOME PARTCPNTS FRM OTHR CNTRS JOIN GRP.WE SUGST THT U HV TO FIND SEVRL PARTCPNTS FRM OTHR CNTRS N HV THM JOIN PRE TR GRP.THN WE CAN WORK OUT ITNRY.

RGDS.CAO YUE

The Executive Committee's reply was equally direct:

ATTN: PROFESSORS CHANG AND QIHENG
c/o Mr. CAO YUE at ICCST

1. THERE CANNOT BE AND THERE WILL NOT BE ANY FORM OF NATIONAL QUOTAS ON THE NUMBER OF DELEGATES TO THE ICPR's. LIKEWISE, THERE CANNOT BE ANY FORM OF NATIONAL DISCRIMINATION REGARDING THE PROCEDURE TO BE APPLIED FOR OBTAINING VISAS FROM THE COUNTRIES HOSTING THE ICPR's.

2. WE REQUIRE A RELIABLE AND FORMAL CONFIRMATION FROM THE CHINESE GOVERNMENT (FOR INSTANCE THROUGH THE CHINESE EMBASSY IN BRUSSELS) THAT THE ABOVE RULES WILL APPLY TO THE ORGANIZATION OF THE 9TH ICPR.

3. SHOULD WE NOT RECEIVE SUCH A CONFIRMATION BY MAY 05TH 1988 AT THE LATEST, WE WILL MOVE THE CONFERENCE WITHOUT ANY FURTHER ADO TO ANOTHER COUNTRY.

PIERRE A. DEVIJVER, PRESIDENT IAPR

It should be emphasised that ICPRs are conferences open to all who belong to IAPR member organisations. The clearly imposed upper limit for Israeli attendance is quite inconsistent with this provision in the IAPR Bylaws.

The tragedy of King Sun Fu's death no doubt made it difficult for the organisers in Beijing to communicate so easily with the Executive Committee and we were also sorry to hear that Professor Chang had been seriously ill. Nevertheless, the correspondence on these matters

did leave no doubt in our minds that the Chinese Association of Automation were no longer in a position to fulfill the requirements for hosting an ICPR. It was with very great regret that we had to take the actions that followed.

CONFERENCE REPORTS

BPRA 4th International Conference on Pattern Recognition

The British Pattern Recognition Association held the fourth of its biennial International Conferences on Pattern Recognition in the historic university town of Cambridge, England between 28-30 March. During these three days nearly 70 papers were presented with over half from outside the United Kingdom. The program was organised so that the first hour of each morning and afternoon were plenary sessions devoted to contributions from eminent invited speakers while the remaining time was divided into two parallel sessions. Papers covered all aspects of Pattern Recognition, going from the conventional topics of statistical and syntactic methods through neural networks, techniques for both low and high level vision, architectures for pattern processing and onto specific application domains such as document processing, speech and text recognition and vision for industrial robotics systems.

The five plenary sessions consisted of talks from acknowledged experts who each spoke about the fields in which they had made coherent and substantial contributions. For many people these talks proved the highlights of the conference as they provided the opportunity to glimpse the state of the art in subject areas outside their own necessarily narrow research domains. The first talk was given by Dr Wilson of Warwick University, UK. Under the enigmatic title of 'Is Vision a Pattern Recognition Problem?' he discussed an approach to vision in which the traditional feature extraction-classification paradigm of pattern recognition is replaced by group theoretic notions of representations and invariants applied to symbolic representations of images. This leads to a careful consideration of the complex relationship between symbols and the signals from which they are derived and Dr Wilson illustrated his talk with examples of practical low level vision tasks. Much of this research has been influenced by work at Linköping University in Sweden and many of the ideas have been implemented in the image processors marketed by ContextVision.

Dr Devijver of Phillips Research in Belgium spoke of his latest work on modelling images using Markov Models

CALLS FOR PAPERS

IEEE WORKSHOP ON VISUAL MOTION

Irvine, California, USA - March 20-22, 1989

and showed how they can be very successful in both image segmentation and image restoration. In particular, he presented a coherent learning algorithm which permitted the estimation of the parameters of his Markov Mesh Random Fields so that they gave the best fit to actual image data. The development of these methods by Dr Devijver and others has been probably one of the most significant advances in image segmentation methodology during the last decade.

Although much of the conference encompassed vision as its major problem area Professor Jelinek of IBM reported on the work of his group in developing speech recognition systems. He neatly illustrated his talk with a short video presentation of a 5000 word, continuous speech recognition system working in realtime and it was fascinating to watch the system invoke several hypotheses and then resolved them using context supplied by further analysis.

Professor Haralick of University of Washington gave an excellent review and critique of current techniques for evidence combination, applying his usual rigor to identify the underlying assumptions of the methods and hence delineate their range of applicability. He encompassed both probability based contextual and relaxation methods as well as knowledge based methods such as the Dempster-Shafer theory of evidence.

Professor Zucker of McGill University presented yet another aspect of the vision field by discussing what can be learnt from biological systems with regard to curve and curve tangent detection. He showed that precise estimates of these properties can be made from coarse initial measurements provided suitable constraints are utilised. His thesis is that such constraints are used within biological vision systems and therefore study of them is crucial to vision understanding.

The conference also included an exhibition of products from half a dozen image processing system companies and a comprehensive display of books relating to pattern recognition. Conference food and accomodation at Queens College was excellent and entertainment was provided by an organ recital and a conference banquet. As usual at these events, much of the important work occurred between sessions and during evenings at the bar and it was pleasing to note the increased participation of colleagues from the Eastern European countries. The proceedings of the conference have been published as a 700 page volume in the Springer-Verlag Lecture notes in Computer Science.

J Illingworth

Program

The analysis of visual motion is attracting increasing attention from researchers in computer vision, visual perception and artificial intelligence. This workshop will bring together researchers from this broad range of disciplines to discuss current work on the representation and analysis of motion in image sequences. Sessions will be devoted to each of several aspects of motion research. The number of presentations will be limited, with the aim of increasing discussions. Papers are invited on all aspects of the analysis of human and machine vision including:

- motion detection mechanisms
- optical flow and motion correspondence
- structure from motion
- event recognition and representation
- temporal planning and inferences
- control structures for dynamic scene analysis
- uncertainty in dynamic scene analysis
- applications in navigation, object manipulation and recognition

Authors are encouraged to present new computational methods with experimental results, theoretical results that offer significant new insights into problem solutions, or to relate experimental observations on human visual processing to the underlying computational strategies used.

Deadlines

July 15, 1988	Full paper (3 copies)
Oct 15, 1988	Authors notified
Nov 25, 1988	Camera-ready manuscripts

Paper Submission

Ellen Hidreth
AI Laboratory
545 Technology Square
Cambridge
MA 02139
USA

or

Ramesh Jain
Dept Elect Engineering and Computer Science
The University of Michigan

Ann Arbor
MI 48109-2122
USA

**IEEE 1989 INTERNATIONAL
CONFERENCE ON ACOUSTIC,
SPEECH, AND SIGNAL PROCESSING**

Glasgow, Scotland - May 23-26, 1989

Program

ICASSP-89 is the fourteenth in a series of international conferences presenting work in experimental and theoretical signal processing, speech and acoustics. Conference topics include:

- speech analysis and recognition
- multidimensional signal processing and recognition
- VLSI for signal processing

Deadlines

August 8, 1988 Summary (400 words, 5 copies)
Nov 1, 1988 Authors notified
Dec 30, 1988 Camera-ready manuscripts

Paper Submission

Peter M Grant
Dept of Electrical Engineering
University of Edinburgh
The King's Buildings
Edinburgh EH9 3JL
United Kingdom

**1989 IEEE INTERNATIONAL CONFERENCE
ON ROBOTICS AND AUTOMATION**

The Registry Resort, Arizona, USA - May 14-19, 1989

Program

The theme of this conference is intelligent robot systems, but original basic and applied papers in all areas of robotics including vision of real world scenes, recognition and representation are solicited.

Deadlines

Oct 21, 1988 Full paper (4 copies)
Jan 16, 1989 Authors notified
Feb 15, 1989 Camera-ready manuscripts

Paper Submission

John M Hollerbach
MIT Artificial Intelligence Lab
545 Technology Square
Cambridge, Mass 02139
USA

**INTERNATIONAL WORKSHOP ON
INDUSTRIAL APPLICATIONS OF
MACHINE INTELLIGENCE AND VISION**

Roppongi, Tokyo, Japan - April 10-12, 1989

Program

The workshop which is co-sponsored by IEEE Industrial Electronics Society and Institute of Industrial Science, University of Tokyo is organised in cooperation with IAPR TC8. The purpose of the workshop is to stimulate international exchange and discussions on the two key technologies, AI and Vision, for building tomorrow's industrial systems and society. As seen in the title of the workshop, the emphasis is on advanced AI and Vision technologies applicable to industrial problems. Topics of interest include:

- Foundations for AI and vision systems
- AI technologies
- Vision technologies
- Hardware architectures for AI and vision systems
- Advanced environments for AI and vision systems

Deadlines

Nov 21, 1988 Summary (800 words, 4 copies)
Dec 20, 1988 Authors notified
Feb 10, 1989 Camera-ready manuscripts

Paper Submission and Further Information

Prof Mitsuru Ishizuka
(General Chair of MIV-89)
Institute of Industrial Science
University of Tokyo
7-22-1, Roppongi, Minato-ku
Tokyo 106
Japan

**IEE 3rd INTERNATIONAL
CONFERENCE ON IMAGE
PROCESSING AND APPLICATIONS**

*University of Warwick, United
Kingdom - July 18-20, 1989*

Program

The conference will provide a forum for the exchange of new results in the area of image processing. It will cover algorithms, systems and specialised hardware for image processing and applications. Topics to be covered include:

- image modelling and simulation

- image interpretation and recognition
- knowledge based image processing
- multidimensional sampling, filtering and interpolation techniques
- image coding techniques
- enhancement and restoration of images
- motion analysis and compensation techniques
- hardware/software
- parallel and other novel architectures for image processing
- VLSI for image processing
- image storage and retrieval
- applications

Deadlines

Nov 1, 1988 Summary (2 A4 pages)
 Jan, 1989 Authors notified
 March 17, 1989 Camera-ready manuscripts

Paper Submission and Further Information

IEE Conference Services Dept
 IEE
 Savoy Place
 London WC2R 0BL
 United Kingdom

6th SCANDINAVIAN CONFERENCE ON IMAGE ANALYSIS

University of Oulu, Finland - June 19-22, 1989

Program

The 6th SCIA is organised by the Pattern Recognition Society of Finland and co-sponsored by IAPR. The programme will include invited and contributed papers in the areas of:

- computer vision
- image processing
- pattern recognition
- perception
- parallel algorithms and architectures
- applications

Deadlines

Dec 1, 1988 Summary (1000 words, 4 copies)
 Jan 31, 1989 Authors notified
 March 31, 1989 Camera-ready manuscripts

Paper Submission and Further Information

Prof Matti Pietikäinen
 6SCIA Program Chairman
 Dept Electrical Engineering
 University of Oulu

SF-90570 Oulu
 Finland

2nd CONFERENCE OF THE INTERNATIONAL FEDERATION OF CLASSIFICATION SOCIETIES

Charlottesville, VA, USA - June 27-30, 1989

Program

The conference which is co-sponsored by IAPR is devoted to the presentation of theoretical, methodological and applied papers on classification, pattern recognition, and related methods of statistics and data analysis in the broad sense. It includes mathematical, statistical and practical investigations in special fields of knowledge, and the interface between classification and the Information Sciences. Suitable topics include:

- Classification, discrimination and clustering methods
- Pattern recognition and image analysis methods
- Statistical and probabilistic methods for data analysis and classification
- Similarity and distance measures, data quality and reliability
- Multidimensional scaling and structure recovery methods
- Consensus methods and correspondence analysis methods
- Analysis and comparison of tree and graph patterns
- Classification and clustering algorithms and algorithmic aspects
- Classification and clustering software
- Computer graphics for classificatory problems
- Applications

Deadlines

Jan 15, 1989 Summary (1 page)

Paper Submission

Prof R F Ling
 Chairman, IFCS-89 Program Committee
 Dept Math. Sciences
 Clemson University
 Clemson, SC 29634-1907
 USA

TUTORIALS

England
tel.:(+44 483) 571281 ext. 2271

STATISTICAL PATTERN RECOGNITION: Introduction

University of Surrey, Guildford,
England- September 19-21, 1988

The course sponsored by the IAPR Technical Committee TC1 will discuss fundamental methods of statistical pattern recognition. Several example classes will be aimed at familiarizing the participants with the material presented. The course will include seminars on application of pattern recognition methods to specific problems in which a step by step description of the design of practical pattern recognition systems will be outlined.

The topics covered will include *elements of statistical decision theory, nonparametric pattern classification, learning machines, probability density function estimation, classification error probability estimation, feature selection, feature extraction and cluster analysis.*

Course textbook: P A Devijver and J Kittler, Pattern Recognition: A statistical approach, Prentice/Hall, Englewood Cliffs, NJ, 1982.

Course lecturers: Dr P A Devijver and Dr J Kittler

For further information and registration form write to:

Miss Corinne Gizard
Department of Electronic
and Electrical Engineering
University of Surrey
Guildford GU2 5XH

STATISTICAL PATTERN RECOGNITION: Advanced Topics

University of Surrey, Guildford,
England- September 22-23, 1988

The course will feature a number of advance topics in statistical pattern recognition. In particular, it will focus on the use of contextual information in decision making with the emphasis on Markov models. The methodology will be illustrated on applications in speech recognition, image restoration, image segmentation, computer vision and character recognition.

The topics covered will include: *role of context, Markov chain, Markov mesh and Markov random field models of apriori world knowledge, Gibbs distributions, hidden Markov models, elements of compound decision theory, Baum's algorithm, Derin's algorithm, Viterbi algorithm, labelling in hidden Markov meshes and random fields, discrete relaxation, probabilistic relaxation, learning contextual relationships, learning Markov models.*

Course lecturers: Dr P.A.Devijver and Dr J.Kittler

For further information and registration form write to:

Miss Corinne Gizard
Department of Electronic
and Electrical Engineering
University of Surrey
Guildford GU2 5XH
England
tel.:(+44 483) 571281 ext. 2271

CALENDAR OF EVENTS

Date	Event	Location	Sponsor/Information
August 14-17, 1988	Detroit, USA	3rd International Conference on CAD/CAM: Robotics and Factories of the Future	For information on the session on Computer Vision for Industrial Automation contact: Prof J G Postaire, Centre d'Automatique, Université des Sciences et Technique de Lille Flandres-Artois, 59655 Villeneuve d'Ascq Cédex, France
August 14-19, 1988	Optical and Optoelectronic Applied Science and Engineering	San Diego, California, USA	SPIE, PO Box 10, Bellingham, WA 98227-0010, USA
August 31- Sept 2, 1988	Alvey Vision Conference	University of Manchester, United Kingdom	AVC88, c/o Helen Jenkins, Rutherford Appleton Laboratory, Chilton, Didcot, OX11 0QX, United Kingdom
Sept 5-8, 1988	4th European Signal Processing Conference	Grenoble, France	Eusipco-88 Conference Secretariat, Cephag-ENSIEG, BP46, 38402 St Martin d'Heres cedex, France

Sept 5-8, 1988	1st International Conference on Visual Search	University of Durham, UK	David Brogan, FIC VS, Department of Psychology, University of Durham, Science Laboratories, South Road, Durham DH1 3LE, UK
Sept 12-14, 1988	1988 Picture Coding Symposium	Torino, Italy	Mario Guglielmo, CSELT, Via G Reiss Romoli 274, 10148 Torino, Italy
Sept 12-14, 1988	IAPR International Workshop on Structural and Syntactic Pattern Recognition	Nancy, France	Roger Mohr, CRIN-INRIA Lorraine, Campus Scientifique, BP 239, 54506 Vandœuvre Cedex, France
September 19-23, 1988	Optical Science and Engineering	Hamburg, West Germany	SPIE, PO Box 10, Bellingham, WA 98227-0010, USA
Sept 27-29, 1988	10ty DAGM-Symposium Mustererkennung	University of Zürich, Switzerland	Prof P Stucki, Universität Zürich, Institute für Informatik, Winterthurerstrasse 190, CH-8097 Zürich, Switzerland
October 4-5, 1988	SGAICO Annual Conference on Artificial Intelligence in Manufacturing, Assembly and Robotics	University of Berne, Switzerland	Prof H Bunke, Universität Bern, Institut für Informatik und Angewandte Mathematik, Länggass-Strasse 51, CH-3012 Bern, Switzerland
October 12-14, 1988	IAPR Workshop on Computer Vision	Tokyo, Japan	Mikio Takagi, Institute of Industrial Science, University of Tokyo, 7-22-1 Roppongi Minato-ku, Tokyo 106, Japan
November 6-11, 1988	Visual Communications and Image Processing III	Cambridge, Massachusetts, USA	SPIE, PO Box 10, Bellingham, WA 98227-0010, USA
Nov 14-17, 1988	IAPR 9th International Conference on Pattern Recognition	Hotel ERGIFE, Rome, Italy	Prof Stefano Levialdi, Dipartimento di Matematica, Università di Roma, Piazzale Aldo Moro 2, 00185 Rome, Italy
Nov 14-15, 1988	Conference on Pattern Recognition for Advanced Missile Systems 1988	Huntsville, Alabama, USA	Commander U S Army Missile Command, attn: Dr Don A Gregory/ ASMI-RD-RE-OP, Redstone Arsenal, Alabama 35898-5248, USA
December 5-8, 1988	IEEE 2nd International Conference on Computer Vision	Tarpon Springs, Florida, USA	ICCV 88, c/o Computer Society of the IEEE, 1730 Massachusetts Avenue, N.W., Washington, DC 20036-1903, USA
January 11-13, 1989	2nd International Workshop on Artificial Intelligence in Economics and Management	Singapore	Mrs Vicky Toh, Institute of Systems Science, National University of Singapore, Kent Ridge, Singapore 0511, Republic of Singapore
March 20-22, 1989	IEEE Workshop on Visual Motion	Irvine, California, USA	Ellen Hildreth, Artificial Intelligence Laboratory, 545 Technology Square, Cambridge, MA 02139, USA
April 10-12, 1989	International Workshop on Industrial Applications of Machine Intelligence and Vision (MIV-89)	Roppongi, Tokyo, Japan	Prof Mitsuru Ishizuka (General Chair of MIV-89), Institute of Industrial Science, University of Tokyo, 7-22-1, Roppongi, Minato-ku, Tokyo 106, Japan
May 14-19, 1989	1989 IEEE International Conference on Robotics and Automation	The Registry Resort, Scottsdale, Arizona, USA	IEEE Robotics and Automation, PO Box 3216, Silver Spring, MD 20901, USA
May 23-26, 1989	IEEE 1989 International Conference on Acoustics, Speech, and Signal Processing	Glasgow Forum Hotel, Glasgow, Scotland, United Kingdom	Peter M Grant, Dept. Electrical Engineering, University of Edinburgh, The King's Buildings, Edinburgh EH9 3JL, Scotland, UK

June 19-22, 1989	The 6th Scandinavian Conference on Image Analysis	University of Oulu, Finland	Prof Matti Pietikäinen, 6SCIA Chairman, Dept Electrical Engineering, University of Oulu, SF-90570 Oulu, Finland
June 27-30, 1989	2nd Conference of the International Federation of Classification Societies	Charlottesville, VA, USA	IFCS-89, Dept Mathematics, University of Virginia, Charlottesville, VA 22903, USA
July 18-20, 1989	3rd International Conference on Image Processing and its Applications	University of Warwick, United Kingdom	IEE Secretariat, Conference Services, Savoy Place, London WC2r 0BL, United Kingdom
August 31 - Sept 2, 1989	3rd International Conference on Computer Analysis of Images and Patterns	Leipzig, DDR	Präsidium KDT, WGMA, Conference Secretary of CAIP '89, Clara-Zetkin-Str 115/117, Berlin, DDR