



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 receipt of a copy of the preliminary programme and registration form for the 9th International Conference on Pattern Recognition prompted me to prepare this shorter 8-page issue of the Newsletter for immediate production and distribution so that the information can reach you in good time. The leaflet is reproduced on page 3 and 4 and requires your action **now** if you wish to meet the early registration deadline of 15 September.

*The Editor*

## News Copy Deadlines

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## NEWS IN BRIEF

**9ICPR PROGRAMME** The technical programme of the 9ICPR has now been finalised. It consists of some 200 technical papers and 100 poster presentations by engineers and scientists from more than 28 countries.

### THE MEMBERSHIP COMMITTEE

IAPR is first and foremost an 'association of associations'. As it says in our Constitution: 'Members may be either scientific or professional organizations or individuals working in the field of interest'. The Bylaws spell out the criteria for membership in some detail, as follows:

#### 2. Criteria for Membership

2.1 To be eligible for membership, an organization shall be national, multinational, or international in scope and shall be a non-profit scientific or professional organization, whose membership is open to qualified individuals and is organized along democratic principles. The term "national" is defined to be in accordance with accepted United Nations terminology.

2.2 It would normally be expected that only one member organization of IAPR would exist in a given country. Under special circumstances the Governing Board may allow exceptions to this.

2.3 It would normally be expected that when a member organization of IAPR exists in a person's country he will participate in IAPR through that organization. Under special circumstances the Membership Committee may allow exceptions to this.

2.4 When no member organization of IAPR exists in a person's country, or in case of an exception as mentioned in Article 2.3 of these Bylaws, an application for individual membership in IAPR may be made. Individual membership is limited to those who have demonstrated professional competence in the field of interest of IAPR.

At the time of writing, our membership consists of twenty-two national organisations and five individual members, the latter from five countries as yet not represented by national groups. A full listing can be found in the March 1987 Newsletter, with the exception of Portugal (Portuguese Group on Pattern Recognition) who joined just after the list was published.

Discussions are now proceeding with representatives of three further countries. We hope that it will soon be possible to announce membership of a group

from the USSR. Negotiations were well under way at the time of the Paris ICPR but, unfortunately, certain technical difficulties were encountered. Broadly speaking, a national group member has to be of a type which fits the criteria for membership in Bylaw 2.1 and many existing national groups in most countries do not do this. However, we are all confident that this problem will be overcome in the near future.

More recently, approaches have been made to Greece and Australia. In the case of Greece, it is known that there are a substantial number of interested scientists but there is no representative association in existence. Enquiries are now being made to establish whether a suitable association can be formed. Australia presents rather more formidable difficulties in that, in such a vast country, it is extremely expensive to bring together colleagues with a common interest for local meetings and discussions, so that a member organisation might have to conduct most of its business by post. Nevertheless, it is known that several pattern recognition groups exist (or, at least, researchers using pattern recognition techniques) and attempts are being made to pull together a common interest group with a view to them joining us. It is noteworthy that we still have no national organisation members from the Southern Hemisphere.

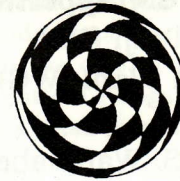
Why should we try to increase our membership? The answer can (once again) be found in our Constitution, where the second article states that: '. . . the objective [of the Association] is the advancement of theory and practice in the field of interest [defined earlier]'. In other words, we are trying to keep pattern recognition alive and healthy, which implies growth. Presumably most of us are aware of the scientific interest in the subject and in the enormous potential for social benefits to be gained from it, especially in relation to medicine (eg medical image processing), industry (eg automated inspection) and ecology (eg remote sensing). We need to spread the word and that means more members. Please write to me with your suggestions for new countries to enrol, preferably with the name and address of a contact. Alternatively, the Membership Committee would be delighted to hear from anyone who would like to either apply for individual membership or who would be willing to carry out a local investigation as to the possibility of starting a new group. Please address correspondence to Professor M. J. B. Duff, Department of Physics & Astronomy, University College London, Gower Street, London, WC1E 6BT, England.

*M J B Duff*

*IAPR Secretary and Chairman IAPR Membership Committee*

# 9th International Conference on Pattern Recognition

**Ergife Palace Hotel, Rome, Italy  
14-17 November 1988**



Sponsored by the International Association for Pattern Recognition

The purpose of this Conference is to bring together participants from research and industrial fields to stimulate discussion on the following topics:

- Computer Vision
- Pattern Recognition Systems and Applications
- Image, Speech and Signal Processing
- Algorithms and Architectures for Pattern Recognition

The Conference will have about 350 presentations on the above topics and the following invited talks:

- |                       |   |
|-----------------------|---|
| Gerard Brugal (F)     | <i>Pattern recognition, image analysis and data processing in artificial intelligence in medical microscopy</i> |
| Peter J. Burt (US)    | <i>Smart sensing strategies in computer vision</i>  |
| Renato De Mori (C)    | <i>Neural networks and markov models in automatic speech recognition</i>  |
| Kai Hwang (US)        | <i>Parallel architectures for image processing and pattern recognition</i>                                      |
| Ramesh C. Jain (US)   | <i>Dynamic vision</i>   |
| Stefano Levialdi (I)  | <i>Architectures for pattern recognition</i>  |
| Takashi Matsuyama (J) | <i>Expert systems for image processing</i>  |
| Jan-Peter Muller (UK) | <i>Image understanding system components for automated mapping</i>  |
| N. Nandhakumar (US)   | <i>Range images analysis and interpretation</i>   |
| Yoh-Han Pao (US)      | <i>Artificial neural nets and pattern recognition</i>   |
| Mikio Takagi (US)     | <i>Processing of meteorological satellite (NOAA) images</i>   |

Name.....Affiliation.....  
Address.....Phone.....  
Arrival date.....Flight N°.....Departure date.....  
Please book a single/double/double as single room.....  
Signature.....

Charles C. Tappert(US) *On-line handwriting recognition*  
Saburo Tsuji (US) *Continuous image interpretation by a moving viewer*  
Friedrich Wahl (WG) *A survey on Hough transform and Hough space  
analysis techniques*  
Michael S. Watanabe (J) *The development of heuristic principle of  
minimum entropy for pattern recognition*

Commercial systems demonstrations are planned as well as a technical book  
exhibition. Information on the Conference may be obtained from

**Conference Chairman**

Prof. Stefano Levioldi  
Dipartimento di Matematica  
Università di Roma  
Piazzale Aldo Moro 2  
I-00185 Roma, Italy

**Program Chairman**

Prof. Herbert Freeman  
CAIP Center - CN -1390  
Rutgers University  
Piscataway, NJ-08855-1390  
USA

Tel: (39) (6) 4991-3249 or-3250  
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FAX: (39) (6) 495-7697

Tel: (201) 932-3443  
Telex: 6502497820 mcl  
FAX: (201) 932-4775

The registration fee is 300 US \$ before September 15th and 350 US \$  
(afterwards) to the account n° 19220/5 - IAPR 88 at the Banco di Santo  
Spirito, Tesoreria Università di Roma, Ple. Aldo Moro 5, 00185 Rome, Italy.  
The Conference will take place at the Ergife Palace Hotel on Via Aurelia 617,  
Rome. The room costs (per day) including continental breakfast and working  
lunch, are the following:

Single room	130 US \$
Double room (per person)	100 US \$
Double room (single occupancy)	160 US \$

Registration and booking may all be done by letter/telegram/telex/fax before  
September 15th at the address of the Conference Chairman.

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Prof. Stefano Levioldi  
Dip. Matematica  
University of Rome  
Ple. Aldo Moro 2  
00185 Rome, Italy

## VISION RESEARCH AND IAPR

It is an unfortunate fact that there is, and possibly always has been, a cultural divide between the two sections of our community concerned with extracting information from images. On the one hand, we have the Vision community and on the other, the Rest. Not, you might say, a very erudite definition of the problem, but true nevertheless. The Vision side, roughly speaking, are interested in 3-D scene interpretation, in the use of AI methods (particularly with a view to incorporating explicit knowledge into their analysis methods), and they talk to psychologists. On the other hand, we have the Rest, who are involved in 2-D image interpretation, build knowledge implicitly into their programs, and talk to engineers. Both camps agree on one thing: the other side is trying hard to gain control over all available research funding!

The sad thing, from the point of view of IAPR, is that 'the Rest' has become identified with the words 'Pattern Recognition' and hence with IAPR. Furthermore, the very words 'Pattern Recognition' are beginning to have a rather outdated ring to them and don't seem able to conjure up an impression of enthusiastic young scientists pushing forward the frontiers of knowledge. It is true, of course, that most things go in fashions and even Science is not immune from the taint of familiarity breeding contempt. Anything which has been around for thirty or so years no longer surprises and usually no longer has the power to impress; sadly, it is also too young to merit the respect due to old age.

In practical terms, this much to be regretted division has found concrete form in a tendency for the Vision community to seek alternative outlets for their publications and to put on conferences devoted solely to 'vision' (as opposed to 'image analysis'). Those of us who regard IAPR as being an association with a keen interest in both styles of image processing can only welcome the increased activity that this implies; what is not welcome, however, is the accompanying feeling that we, as an association, are somehow failing in that we are not meeting the needs of the vision specialists.

The Executive Committee have discussed these matters at length and are clear that more emphasis must be given to soliciting papers on vision at the ICPRs (with, perhaps, sterner refereeing in order to improve the quality of the accepted papers). More dramatically, they will propose to the Governing Board at its meeting in November, that the name of the association should be changed to: 'The International Association for Vision and Pattern Recognition', soon to be known, we can expect, as IAVPR. Naturally, this might be interpreted as

a purely cosmetic exercise that will not be backed up by any change of attitudes or of practice but, it is to be hoped, this will not be the case. Purists might object that vision is part of pattern recognition so the title is redundant; this seems a small price to pay for peace.

If you have any views on how these problems should be tackled, please take the trouble to write them down and let me have them, if time permits, before the Rome ICPR, so that they can be summarised and forwarded to the Governing Board. IAPR is trying to serve your interests and it does help to know what they are.

*M J B Duff*

## CALLS FOR PAPERS

### THE INTERNATIONAL CONGRESS ON OPTICAL SCIENCE AND ENGINEERING

*Paris, France - April 24-28, 1989*

#### Program

The congress is co-sponsored by EPS, EUROPTICA and SPIE. 20 topical conferences will include a technical programme track on Image Detection and Display with interest in:

- Optical pattern recognition
- Image processing
- Science and engineering of medical imaging
- Holographic optics

#### Deadlines

Sept 12, 1988	Abstract (300 words, 6 copies)
Dec 31, 1988	Authors notified
March 10, 1989	Camera-ready manuscripts

#### Paper Submission and Further Information

Amanda Caillot  
Conference Coordinator  
Europtica Services I.C.  
16, avenue Bugeaud  
75116 Paris  
France

### 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

### COMPUTER VISION AND PATTERN RECOGNITION 89

*San Diego, California, USA - June 4-8, 1989*

#### Program

The conference is organised by the IEEE Computer Society. Conference topics include:

- Image processing
- 3-D representation and recognition
- Motion and stereo
- Visual navigation
- Shape from shading, texture,...
- Vision systems and architectures
- Pattern recognition
- Applications of computer vision
- AI in computer vision
- Robust statistical methods for computer vision
- Neural networks
- Classifier systems

#### Deadlines

Nov 16, 1988	Full paper( 4 copies)
Feb 1, 1989	Authors notified
March 8, 1989	Camera-ready manuscripts

#### Paper Submission and Further Information

Prof Worthy Martin  
Department of Computer Science  
University of Virginia  
Charlottesville, VA 22903  
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

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

### 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

### 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)
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### Paper Submission

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

## CALENDAR OF EVENTS

<i>Date</i>	<i>Event</i>	<i>Location</i>	<i>Sponsor/Information</i>
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, Universita 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
April 24-28, 1989	The International Congress on Optical Science and Engineering	Palais des Congrès, Porte Maillot, Paris, France	Amanda Caillot, Conference Coordinator, Europtica Services I.C., 16 avenue Bugeaud, 75116 Paris, France
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 4-8, 1989	IEEE Computer Society Conference on Computer Vision and Pattern Recognition	Sheraton Grand Hotel on Harbor Island, San Diego, California, USA	The Computer Society of IEEE, 1730 Massachusetts Avenue, N.W., Washington, DC 20036-1903, USA
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