



International Association for Pattern Recognition Inc
An affiliate member of the International Federation for Information Processing

NEWSLETTER

Editor

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face to face with death: this gave me a scale of measuring our "size" in time. Then I studied Astronomy, and this gave me a scale of our span in space. We are, I am, so insignificant in spacetime! How can we possibly take ourselves so seriously? Dear friends, I will miss communicating with you!

Maria Petrou

PS The melodrama over, you can turn the page now to see the jokes!

AN AESOP'S FABLE



Once upon a time, a mosquito sat on an ox's horn. The ox totally ignored it. After some time the mosquito could no longer take it: "Am I disturbing you?" it asked. And the ox replied: "I neither noticed when you came, nor shall I notice when you go..."

From the Editor's Desk

Dear All,

This is the last issue of the newsletter I am producing and editing. Having done this job for 5 years now, I thought the time came for some new blood to come into IAPR and somebody else to have this great opportunity.

Over the years, I had a lot of fun writing to you and I made lots and lots of friends, and a few (very few I would like to believe) enemies. Sometimes I had feedback verbally or in writing and very often I was astonished by what people read in my writings: often the interpretation used was heavily model-based! I would like to take this last opportunity as editor, to explain just a little what I was writing about. I guess I cheated IAPR, as the message I was trying to pass over the years had nothing to do with Pattern Recognition or Image Processing; it was all about how seriously we take ourselves. We are 4-dimensional creations in spacetime. Early in my life I came

News for Members

Change in Italian telephone system

The Italian telephone numbering system has changed (from June 19, 1998). The area code, including the starting "0", has to be dialled when calling any Italian telephone number, both from outside Italy and from any place in Italy. For example, Dr Sanniti di Baja's telephone number becomes +39 081 8534237.

New GB representative from the Czech Republic

Dr Pavel Pudil is the new GB member for the Czech Republic, replacing Dr Michal Handle. Dr Pudil's address is: Institute of Information Theory and Automation, Academy of Sciences of the Czech Republic, Pod vodarenskou vezi 4, 18208 Praha 8, Czech Republic. Tel: +420 2 6605 2353, Fax: +420 2 688 3031, pudil@utia.cas.cz

Correction: The New GB member for Sweden

The new GB member of Sweden is Dr Kalle Astrom, and not just Dr Kalle as it was mentioned in the previous issue by a mistake.

In memory of Piero Zamperoni

Piero Zamperoni is no longer with us. He died much before his time on August 8, 1998, when he was only 59 years old. I knew he was seriously ill, but did not expect such a rapid evolution of the illness (the last message I got from him dates July 30). Piero Zamperoni was a man of science and was a real gentleman. He was not working just to make a successful career for himself; he was actually interested in the deeper sense of science and was often debating our role in the scientific community (see, for instance, his contribution "Plus ca va, moins ca va", Pattern Recognition Letters 17 (1996) 671-677). His scientific merits are undoubted; he also served the IAPR as he was member of the Education Committee since the institution of the committee itself. However, I prefer remembering him for another exceptional capacity he had: Piero was a good writer, and not only when writing scientific papers. His letters have always been food for the heart, including those he wrote towards the end of his life. I will miss them and will never forget Piero.

Gabriella Sanniti di Baja, Italy

Best Industry Related Paper Award

The Award for the Best Industry-Related Paper in the 14th ICPR was given by the Industrial Liaison Committee to: Jae-Chang Shim, Chitra Dorai and Ruud Bolle, all from the IBM Watson Research Center, USA, for their paper, "Automatic text extraction from video for content-based annotation and retrieval".

IAPR has 17 New Fellows!

Prof Josef Kittler: For contributions to computer vision and pattern recognition, and for outstanding leadership in the IAPR.

Prof Keiichi Abe: For contributions to structural pattern recognition and for service to the IAPR.

Prof Sergey V Ablameyko: For contributions to document image analysis and for service to the IAPR.

Dr Ruud M. Bolle: For contributions to industrial computer vision and for service to the IAPR.

Prof Gunilla Borgefors: For contributions to digital geometry and for outstanding service to the IAPR.

Prof Bidyut Baran Chaudhuri: For contributions to character recognition and speech synthesis in Indian language.

Prof Leila De Floriani: For contributions to geometric modelling and algorithm design for computer vision applications, and for service to the IAPR.

Prof Sebastiano Impedovo: For contributions to handwriting recognition and document analysis, and for service to the IAPR.

Prof Seong-Whan Lee: For contributions to document understanding and for service to the IAPR.

Prof Piero Mussio: For contributions to image description and interpretation, and for service to the IAPR.

Prof Hans-Hellmut Nagel: For contributions to image sequence analysis.

Prof George Nagy: For contributions to document image analysis and for service to the IAPR.

Prof Jorgen Schormann: For contributions to character recognition and polynomial classifiers, and for service to the IAPR.

Prof Yoshiaki Shirai: For contributions to three-dimensional object recognition and for service to the IAPR.

Prof Jun-ichiro Toriwaki: For contributions to medical image analysis and for service to the IAPR.

Prof Ventzeslav Valev: For contributions to pattern recognition theory and for service to the IAPR.

Prof Harry Wechsler: For contributions to computer vision and pattern recognition, and for service to the IAPR.

Machine Vision and Applications Special Issue on High Performance Computing for Industrial Visual Inspection

Topics: *High speed sensing, Hierarchical architectures, Multisensing and data fusion, Modular techniques, Real time imaging methods, Hybrid techniques, Parallel architectures, Adaptive and co-operative processing methods, Networked architectures, Hardware and VLSI implementations, Data reduction, partitioning and task decomposition methods, Applications.*

Guest Editors: A Jorge Padilha & Mohamed Kamel.

Submit 5 copies of a paper (15-25 double spaced pages, 12pt font on A4 paper) by November 10 1998, to A Jorge Padilha, INEB / Faculdade de Engenharia, Universidade do Porto, Pr Coronel Pacheco, 1, 4050 Porto, Portugal.

MESSAGE FROM THE PRESIDENT

To begin with, I would like to thank the past Nominating Committee for putting forward my name as a candidate for IAPR Presidency, and the Governing Board for the confidence that they have expressed by electing me as such. It was an encouraging experience to receive so many warm words of support during the days prior to and after my election. On the one hand, such support is a real comfort, on the other hand, it makes me aware of the fact that much is expected of me during the coming two years. I will do my best to serve the IAPR in this new capacity. I am particularly happy to be surrounded by an Executive Committee composed of enthusiastic Officers: **Horst Bunke** (First Vice-President), **Rangachar Kasturi** (Second Vice-President), **Gabriella Sanniti di Baja** (Secretary), **Walter Kropatsch** (Treasurer) and **Bob Haralick** (Past President).



The New President of IAPR: Edzard Gelsema

I am convinced that the IAPR is potentially a strong and active organization. I was confirmed in this conviction during the past few weeks that I spent to attract chairpersons and members of the various Standing Committees. Almost all persons whom I approached accepted to serve and assured me of their support. Those few who did not accept had strong, convincing reasons for declining. As I write these lines, the process of the formation of a few of the committees is still going on, and I have good reasons to believe that it will be finalized very soon. The composition of some of these committees requires the approval of the Governing Board; the respective ballots are almost ready to be issued to the GB members.

As regards the Technical Committees, of which we have sixteen, during my term as First Vice-President, I have had the opportunity to observe their functioning. Most of them are actively organizing workshops and other events, proving that the IAPR is functioning in many technical areas. I will try, together with the Vice-Presidents, to bring also those TC's which have been less active to the level of the well performing ones. It has been a complaint of some TC-chairpersons that they did not have any influence on the definition of the scientific program of the ICPR's. I have already contacted the organizers of the next ICPR in Barcelona to find ways in which this situation can be improved.

Since its conception, some 25 years ago, the IAPR has

grown enormously, both in number of national member organizations and in number of technical areas covered. Such a growth brings with it the difficulty of internal communication. It is my intention to stimulate communication at and between all levels in the IAPR hierarchy. Only in that way can people become aware of their identity as members of IAPR. It was astonishing to learn that at the ICPR in Brisbane, a large percentage of the attendants did not know whether they were IAPR members through their membership of any national association. This means that IAPR visibility can and must be improved and the possibility of an open communication of individual members with the various committees is a vital issue. I would like to encourage the active participation of individual members and especially of the members of the Governing Board by stimulating them to communicate with the Executive Committee to put forward their opinions on all matters that they feel might deserve special attention. Therefore, if you have any questions, bright ideas, complaints, or other important messages that you would like to be considered, please address them to any member of the Executive Committee. We will respond to such input in an appropriate way. The Governing Board meets only once every two years with the Executive Committee, which is then at the end of its term. I would rather see a more constant discussion between GB members (and other individual members for that matter) and the various committees of our organization, especially at times when these committees still have a substantial amount of time to go.

The IAPR Newsletter is another medium through which an exchange of opinions and ideas can and should take place to a much larger extent than has been customary. In spite of the continuous efforts of our Newsletter Editor Maria Petrou to attract contributions to the Newsletter, this possibility is largely neglected. Again, this is a sign that people may be insufficiently aware of the fact that they are IAPR members.

Although I feel encouraged by the support that I have in the IAPR community, I do feel a need to surround myself with some advisors. I have invited a few prominent IAPR individuals to become members of an advisory body. The formation of this non-official committee is not yet complete, so I cannot divulge names yet, but I will certainly do so in the next Newsletter. The task of the members of this committee is to give advice to the President, either on request or spontaneously, as a committee or as individuals, on all matters that seem appropriate. In my view this is a way to safeguard the cultural heritage from the past, at the same time pushing forward on matters of strategic planning. I am looking forward to experimenting with such an advisory body. At the end of my term, I will communicate my experience to the next administration.

And now to work. I would like to remind all committee members, GB members and individual members of the fact that the IAPR does not only exist at the discrete time points of the ICPR's, but that it has a far more continuous existence. It is mainly between ICPR's that the real work, both scientific and organizational is done. I am looking forward to leading a fruitful and productive IAPR into the next millennium.

Edzard S Gelsema

The newsletter in bits!

In the last issue you were requested to send me a message indicating when you received the newsletter and what form you would like the newsletter to have in the future. Out of the 7,000 or more recipients, a grand total of 10 responded! The Swedish were the first to get the July issue: it had reached them by June 22. This is no surprising as they use direct personal posting. Next, the Germans had it by mid July. This is excellent as the newsletter is posted bulk there and re-distributed by the local organisation: Well done Germany! The British did not do so bad: they had it by August 3rd. The French by August 7. The rest of the world retained the silence of a fish, so as far as I can tell they have not got it yet! From the 10 people, who responded, 5 want electronic distribution, 3 want paper copy and 2 do not care.

After the above overwhelming response, it was decided to have a paper questionnaire at the 14th ICPR. To lure people into responding to the questionnaire, we offered to have a draw among the respondents and give as a prize a bottle of Dom Perignon 1988 worth 115 Au\$ (to those like me who are ignorant of such matters, this is fine French Champaign). This had some results! Out of the 600 or so participants, 115 returned the questionnaire. 74 were members of IAPR. This constitutes just over 0.1% of our members, a pretty good fraction as gallop poles go. Of the 74 members, 28 people would be happy with just electronic version of the newsletter, while only 16 with just paper version. 30 people want both, electronic and paper version.

Invoking the fair sample hypothesis then, we may say that an overwhelming 78% of our members want to see some electronic version of the newsletter in the future. An almost equally significant fraction (62%) want to retain the hard copy as well. In view of that, the Executive Committee of IAPR has decided to spend some money into acquiring a server and taking the appropriate steps for an electronic version to appear. The honours are upon the shoulders of the next editor, who, by the way, has not been formally appointed yet, that is why I cannot announce his name at this stage.

So, in the future, your favourite newsletter will also be in bits, but hopefully, not in pieces!

Maria Petrou



The new president hard at work during the banquet of the 14th ICPR!

IAPR Student Paper Prize

The IAPR Education Committee presented a Student Paper Prize for the best student-authored paper of ICPR98. To qualify, papers should have at most 2 authors (student alone or student and his/her supervisor). In case of 2 authors, the supervisor should have certified that the paper was mainly the work of the student.

The Committee had 49 nominees, and decided that the winner was Mark W Peters (with co-author Arcot Sowmya) from the University of New South Wales, Sydney, Australia, with the paper "A real-time variable sampling technique: DIEM". The Prize of US\$ 540 was kindly donated by Nokia Corporation from Finland, "for the purpose of purchasing a Nokia Mobile Phone or some other Nokia products".

Mark Peters received the Prize from Professor Matti Pietikainen, the Chairman of the IAPR Education Committee, during the ICPR banquet in Brisbane on August 19th.

24th Annual Pattern Recognition Society Award Presented at the 14th ICPR

The Editor-in-Chief of Pattern Recognition, Professor Robert S Ledley presented the 24th annual Pattern Recognition Society Award to the winners, during the banquet of the 14th ICPR. This Annual Award is made for the best paper published in the journal Pattern Recognition. Certificates of Honorable Mention are also awarded for outstanding papers. Manuscripts published in Volume 30 (1997) had been judged by the Associate Editors of the journal based on originality of the contribution and presentation and exposition of the manuscript. The winners are awarded a cash prize and a bronze medal.

The winners this year were: T P Minka and R W Picard for the paper "Interactive Learning with a Society of Models". Honorable Mention was given to A M Finch, R C Wilson and E R Hancock for their paper "Matching Delaunay Graphs", to A K Jain and C Dorai for the paper "Practising Vision: Integration, Evaluation and Applications", and to R Brunelli and T Poggio for the paper "Template Matching: Matched Spatial Filters and Beyond".

Certificates of Appreciation to IAPR officers

The out-going IAPR president Bob Haralick gave Certificates of Appreciation to officers of IAPR during the 14th ICPR banquet, for their services to IAPR. The recipient were:

Josef Bigun for outstanding service as treasurer of IAPR 1994–1998.

Masakazu Ejiri for outstanding service as Chairperson of IAPR Fellow Committee 1996–1998.

Edzard Gelsema for outstanding service as vice-president to IAPR 1996–1998.

Maria Petrou for outstanding service as IAPR newsletter editor 1994–1998.

Gabriella Sanniti di Baja for outstanding service as secretary to IAPR 1994–1998.

ROBOTS... ROBOTS...ROBOTS...

The Second Robot World Cup (RoboCup-98 Paris) was held at La Cite des Sciences et de l'Industrie, Paris during July 4-8, 1998. This was a scientific forum to foster robotic and artificial intelligence research using soccer, authorised by The RoboCup Federation.

The first Robot World Cup was held in August 1997 at Nagoya, in conjunction with the International Joint Conference on Artificial Intelligence 1997 (IJCAI-97), and was attended by over 40 participant teams (32 simulator teams, 4 small-size robot teams, and 5 middle-size robot teams), with over 7,000 spectators and world media. Since then, RoboCup has been recognised as one of the most important activities in robotics and artificial intelligence research. The dramatic increase in number of participating teams for RoboCup-98 Paris signifies the excitement of the community.

RoboCup-98 Paris had over 80 teams (nearly 40 simulator teams, 12 small size robot teams, 16 middle size robot teams, 3 legged robot teams) and many other related exhibitions and technical presentations (nearly 100 papers were presented). The World Champion in the Middle Size League was CS-Freiburg, Germany, in the Small Size League CMUnited98, and in the Simulator League CMUnited.

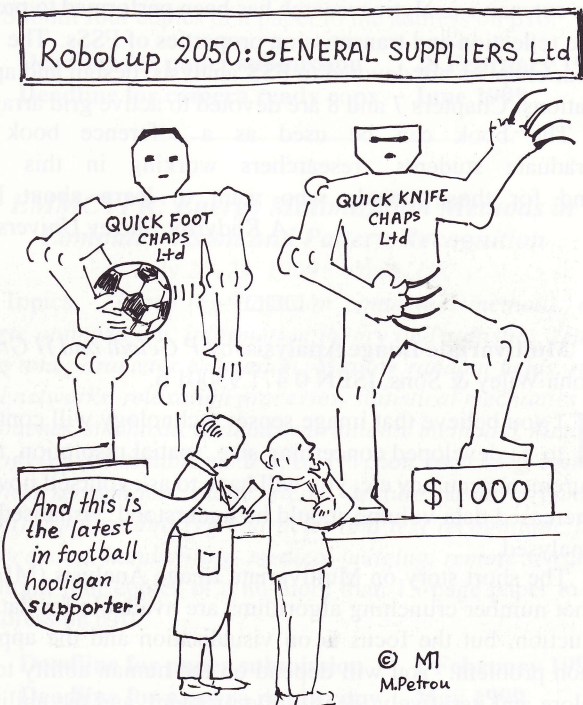
RoboCup is not just for the teams who compete in each of the leagues. This year there was an exhibition of RoboCup related technologies which are not directly related to competing teams. For example, the RoboCup Commentator Exhibition demonstrated a number of systems which automatically generate soccer commentary for simulation league games. Such a system understands what is going on in the game, analyses the performance of each player, creates hypotheses on interesting topics to provide comments on, and generates fluent commentary in different languages. The applications of such a technology are enormous, for example, in internet broadcast. The RoboCup Scientific Challenge Award was given to the Electrotechnical Laboratory (ETL), Sony Computer Science Laboratories, Inc, and the German Research Centre for Artificial Intelligence GmbH (DFKI) for the development of a fully automatic commentator systems for RoboCup simulator league.

The future of Robotics and AI technologies could also be seen at RoboCup, such as Sony's legged robots and Honda's humanoid robot. Sony organised a special demonstration as a part of RoboCup Technical Exhibition Program, where their legged robot was demonstrated. Honda showed a video presentation of their recent progress with their ground breaking humanoid robot which was first demonstrated last year.

The Robot World Cup Initiative was launched to promote state-of-the-art in robotics and AI research, as well as to provide a platform for integrated project oriented education. It has encouraged international joint projects involving over 20 countries and nearly 1,000 researchers. While the RoboCup Federation (established in Bern, Switzerland, as a non-profit organisation, with operational headquarter in Tokyo, Japan) does not have a research group of its own, each of the participant laboratories and corporations advance toward the common goal. The main function of the RoboCup Federation is to

organise annual conferences and competitions, and to foster technical exchanges among researchers. One of the effective ways to promote engineering research, apart from specific application developments, is to set a significant long term goal. When significant social impact is achieved by accomplishing such a goal, the goal is referred to as a **grand challenge project**. Building a robot to play soccer itself does not generate significant social and economic impact, but the accomplishment will certainly be considered a major achievement in the field. We call this kind of project a **landmark project**. RoboCup is a landmark project. The ultimate goal is: **By the mid-21st century, a team of fully autonomous humanoid robot soccer players shall win a game of soccer, complying with the official rules of the FIFA, against the winner of the most recent World Cup.** This goal may sound overly ambitious given the state-of-the-art technology today. Nevertheless, it is believed to be important that such a long term goal is to be claimed and identified and pursued. It took only 50 years from the Wright Brothers' first aircraft flight to Apollo mission to send man to the moon and safely return them to Earth. Also, it took only 50 years, from the invention of the digital computer to the Deep Blue, which beat a human champion at chess. It is recognised, however, that building humanoid soccer players requires an equally long period and extensive efforts of a broad range of researchers, and the goal will not be met in the near future. Nevertheless, it is believed that the goal should be pursued, and this has been identified as the RoboCup challenge. In order to accomplish the mission, a broad range of technologies has to be developed and these will be applied to various social and industrial applications. More details can be found at <http://www.robocup.org/>

Hiroaki Kitano, Sony Computer Science Laboratory, Japan



BOOK REVIEWS

Frequency Selective Surface and Grid Array, edited by *T K Wu*, John Wiley & Sons, ISBN 0 471 31189 8

The screen door of microwave oven consisting of a periodic array of metallic holes has been designed for reflecting microwave energies at 2.45 GHz while allowing light to pass through. This allows us to see the food as it is being cooked inside the oven. This is an example of a periodic structure. Periodic structures are used in antenna systems because of their frequency filtering property. Such a two-dimensional periodic array of patch or aperture elements is called a **frequency selective surface** (FSS). Really it is not a surface but a band of a few kinds of elements spread periodically. Each element consists of dielectric and metal. The typical size of an element is about 1 mm.

Moreover, the elements can be simple active electronic devices that make FSS capable of a broader range of functions. The earliest proposal for an array of this type appeared in 1972. Such structures are also called active **grid arrays**. One simple form of active grid array consists of a metallic grid periodically loaded with biased linear diodes. This array is capable of modifying the amplitude or phase of a quasi-optical beam under external control and this type of array has been given the name beam control array. Various grid arrays have been demonstrated including detectors, phase shifters, multipliers, oscillators, amplifiers and switches.

The knowledge about FSS has been scattered throughout technical reports, conference proceedings, and company reports. There was a need for unified presentation of FSS technology. This book presents an updated and complete coverage of the subject of FSS and active grid arrays. The eight chapters of this book cover various aspects of FSS and written by nine recognised experts in this field. In the first chapter an extensive analytic research has been performed to predict the reflection and transmission properties of FSSs. The next four chapters are devoted to FSS analysis, design and applications. Chapters 7 and 8 are devoted to active grid arrays.

The book can be used as a reference book for graduate students, researchers working in this field and for those people who want to learn about FSS.

A Kadyrov, Surrey University

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Multivariate Image Analysis, by *P Geladi and H Grahn*, John Wiley & Sons, ISBN 0 471 93001 6.

If you believe that image sensor technology will continue to be developed concerning size, spatial resolution, measurement accuracy etc, you will have to ask yourself how the increased data volume should be understood, visualised and analysed.

The short story on Multivariate Image Analysis (MIA) is that number crunching algorithms are available for data reduction, but the focus is on visualisation and the application problem. You will depend on the human ability to explore and iteratively identify the problem, and the ability of

the eye-brain to identify relevant information in the visualisations used. I admit that I am a supporter of this strategy.

The book starts out with introducing imaging, images, image operations etc. The authors are well aware that this introduction can not replace the vast literature in the area; it has to be basic, but it is well done. It is interesting to note that the necessity of knowing the characteristics of the image (depending on sensor technology) and the (imaging) experiment is better described here than in conventional image processing literature. A good analysis depends on these factors, right? The main application area magnetic resonance imaging (MRI) is described, but of course it becomes basic too. The used algorithm is principal component analysis (PCA). It is well described, using theory, examples and graphics. I especially appreciate the chapter on pre-processing techniques, with coupling to image and experiment characteristics.

After these introductions, it is time for MIA. The corner stones of MIA, visualisations, data reduction and iterative model work, are described and used in many examples. To be more specific, local models can be created, different matrices can be used, residuals are analysed, a multitude of visualisations are used, and the examples cover many applications (some are a little strange, for example hard bread). The main example is an MRI example. The result is a segmentation, or an understanding of the data which helps in further experiments.

The book includes many examples and also high level language code, so it is possible to understand everything in depth if desirable. My own experience is that MIA is quite multidisciplinary, it demands several experts (sensor technology, image processing, possibly statistics and especially the application expert!) to be successful. Without doubt, the book fills the role of creating a common platform for any such project. This book is to my knowledge the only one dedicated to its theme at the moment. There is a historical overview of work in the area which I appreciate very much. The references are adequate, and there are pointers to relevant journals.

Unfortunately, the book does not answer two crucial questions for MIA: What software should be used? After reading about MIA, I would expect a chapter on software. Just think of all the visualisation needed, and what you would like to have in the future. To write your own software would be a never ending project; I know, I have done it. What do the created images show? This is the curse of PCA (and factor analysis in general). Any application expert would like to know, so this is a crucial question. The only way I know (and I have used) to answer this is to use synthetic data, of which you have control. This is a good exercise to model the image characteristics. This approach is not used, and I can understand that. It puts even more demands on the used software.

*Finn Pedersen,
(Finn.Pedersen@era.ericsson.se,
formerly Uppsala University, Sweden)*

CONFERENCE ANNOUNCEMENTS

Second International Conference on 3D Digital Imaging and Modelling (3DIM99) [IAPR]

October 4–8, 1999 Ottawa, Canada

3-D digital imaging and modelling is one of the fastest growing digital technologies. Important applications such as robotics, rapid product development, human modelling, medicine, virtual reality and scientific imaging attest to the far reaching implications of research in this field.

A first conference, held in 1997, provided a unique forum on 3D imaging and modelling for 150 researchers and developers from more than 15 countries.

It is in this context that the Second International Conference on 3-D Imaging and Modelling will take place. Sponsored and organized by the National Research Council of Canada, the conference will look at recent advances in 3-D sensor systems, geometric data processing, geometric modelling, and applications.

Topics: *3D sensing methods, Smart sensors, smart scanning, Hand-held 3D sensors, Integrated sensor systems, Sensor calibration and accuracy, Filtering; segmentation; edge detection, View registration and integration, Geometric processing algorithms, 3-D image understanding, Surface and solid modelling, Reverse engineering and CAD interfacing, Texture acquisition, integration and mapping, Object digitizing and modelling, Human digitizing and modelling, Site and environment digitizing and modelling, Virtual environment modelling, Fusion of optical data with other sensor modalities, Multiresolution 3D representations, Applications (industrial, medical, entertainment, etc).*

Submit a full paper to the address on p10.

Deadline for paper submission **5 March 1999**
Deadline for camera ready copy **11 June 1999**

The Visual Computer Journal Special Issue on Real-time Virtual Worlds

Topics: *Modelling for Real-time Virtual Worlds, Real-time animation, Real-time rendering algorithms, Real-time motion control and motion capture, Real-time talking heads, Intelligent interfaces for real-time computer animation, Avatars and Real-time Autonomous Virtual Humans, 3D interaction with Virtual Worlds, Networked Virtual Environments, Artificial Life in Virtual Worlds, Virtual Worlds on the Web, Real-time audio and speech for Virtual Worlds, Real-time simulation, Games and entertainment applications.*

Submit your paper electronically by October 31, 1998, using anonymous ftp to [ligsg2.epfl.ch](ftp://ligsg2.epfl.ch), in directory tv. Notify by email tvcanim@lig.di.epfl.ch. More details in <http://www.computer.org/multimedia/edguide.htm>. Information for the journal can be found in <http://link.springer.de/link/service/journals/00371/index.htm>

International Conference on Image Analysis and Processing (ICIAP99) [IAPR]

September 27–29, 1999 Venice, Italy

The Conference is an international forum for discussion of advances in the fields of image analysis, understanding and communication. It is organised biennially by the Italian Chapter of the International Association for Pattern Recognition (IAPR-IC).

ICIAP99 will focus on image-based emerging applications. Papers will be accepted for both oral and poster presentation. Scientific events will be organised in conjunction with ICIAP99: Special issues of international journals; A special session on european research projects; An open forum for young scientists.

Topics: *Image Analysis: sensing, filtering and attention. Image operators and feature extraction; Shape and motion primitives; Color and texture primitives; Image and video sequence analysis; Segmentation and grouping; active perception; dedicated architectures. Image Inference: learning, modelling and reasoning. Neural networks and perceptual learning; Pattern classification; Model acquisition; Shape analysis and reconstruction; Spatial data structures and spatial reasoning; 2D and 3D object recognition; Motion analysis and tracking. Image Communication: coding, retrieval and dialogue. Image and video compression and coding; Digital and video libraries; Multimedia databases; Visual languages and computing; Human-computer interaction; virtual and augmented reality. Domain-oriented Applications. Biomedical applications; OCR and document processing; Cultural heritage; Remote sensing and GIS; Automated surveillance; Face recognition and tracking; Inspection and Quality control; Telematics applications.*

Submit four copies of a paper to the address on p10.

Deadline for paper submission **28 February 1999**
Deadline for camera ready copy **June 1999**

EMMCVPR: Energy Minimization Methods in Computer Vision and Pattern Recognition

July 26–29, 1999 York, UK

Topics: *Theory (eg Bayesian contextual methods, discrete optimization, information theory and statistics, learning and parameter estimation, Markov random fields, neural networks, relaxation processes, statistical mechanics approaches, stochastic methods, variational methods), Methodology (eg deformable models, early vision, matching, motion, object recognition, shape, stereo, texture, visual organization), Applications (eg character and text recognition, face processing, handwriting, medical imaging, remote sensing).* Submit four copies of a no more than 15-page paper to the address on p10.

Deadline for paper submission **1 February 1999**
Deadline for camera ready copy **May 1999**

**Third International Workshop on
Graphics Recognition (GREC'99) [IAPR]**
September 26–27, 1999 Jaipur, India

This single-track 2-day workshop is organized by IAPR TC-10 (Technical Committee on Graphics Recognition). For each session of the workshop, there will be an invited presentation, followed by a number of short presentations and concluded by a panel discussion.

The workshop will be held just after the 5th International Conference on Document Analysis and Recognition (Bangalore, India, September 20–22, 1999). Jaipur is located in northern India, 250 km from New Delhi. There are plenty of flights connecting it to Bangalore and Delhi. Between Delhi and Jaipur, there is also good rail and bus connection. Attendance will be limited to 75 persons.

Topics: *raster-to-vector techniques, recognition of graphical primitives, recognition of graphic symbols in charts and diagrams, interpretation of engineering drawings, logic diagrams, maps, charts, etc, analysis of line drawings, tables, forms etc, graphics-based information retrieval, 3-D models from multiple 2-D views (line drawings), interpretation of low-level ("dumb") CAD data, description of complete systems for interpretation of graphics in, scanned documents, performance evaluation in graphics recognition.*

Proposals are being sought for the third graphics recognition contest to be held at the workshop. At the past two GREC workshops, contests were held in the areas of dashed line detection and raster to vector conversion.

Send a 2-4 page abstract to the address on p10. Please indicate if you would be willing to present a state-of-the-art paper on this topic, if invited to do so by the programme committee. After the workshop, the program committee plans to publish as a book revised versions of selected key papers, possibly including reports from the panel discussions and the contest.

Deadline for abstract submission 1 March 1999
Deadline for camera ready copy 15 June 1999

**Automatic Extraction of GIS
Objects from Digital Imagery (ISPRS)**
September 6–10, 1999 Munich, Germany

Topics: *Automatic and semi-automatic extraction of topographic objects such as buildings, roads, and vegetation, Models and strategies for topographic object extraction from aerial images, satellite imagery, surface models, and laser-scanner data, Sensor and data fusion including the use of information from geographic information systems (GIS), Automatic extraction of digital surface models, Automatic image orientation and registration, Integration and interaction of digital systems for image analysis and GIS, Quality control and performance evaluation.*

Submit 4 copies of a 6-page paper to the address on p10 (see format at <http://www.photo.verm.tu-muenchen.de/isprs/munich99>).

Include a title page with the title of the paper, the names and complete addresses of all authors a set of keywords, and

an abstract of up to 300 words clearly stating the impact of the contribution (originality, importance, results, practical impact, related work and how it differs), as well as a second title page without the authors' names and addresses.

Deadline for paper submission 16 January 1999
Deadline for camera-ready copy 31 May 1999

**Second UK Conference on Image Retrieval
CIR'99**

February 25–26, 1999 Newcastle upon Tyne, U.K.

Topics: *Studies of information-seeking behaviour among image users, HCI issues in image retrieval, Evaluation of image retrieval systems, Novel image data management systems and applications, Query models, paradigms and languages for image retrieval, Content-based indexing, search and retrieval of images, Feature extraction and representation, Visual perception and image retrieval, Image search and browsing on the Web, Semantic retrieval of images and video, Neural network techniques for image classification and retrieval, Database architectures for image retrieval, Image data management for multimedia systems.*

Submit 3 copies of a paper no longer than 5000 words, to the address on p10. (Follow style as in <http://ewic.springer.co.uk/submitting/guidelines/#papers>). Electronic submission is preferred. (Instructions in <http://www.scms.rgu.ac.uk/research/ir/sub.html>).

Deadline for paper submission 30 October 1998
Deadline for camera ready copy 29 January 1999

**Third International Conference on
Visual Information Systems (VISUAL99)**

June 2–4, 1999 Amsterdam, The Netherlands

Topics: *Content-based indexing, search and retrieval, Image databases, Visual data modelling, Visual information system architectures, Feature (invariant) retrieval, Picture representation languages, Query models, Optimization of pictorial queries, Compression and image content, Visualizing pictorial and non-pictorial information, Hypermedia of picture and text, Parallel processing in visual information systems, Image crawling the web, Picture book browsing, Delivery of visual information, Application areas of visual information systems, Interactive segmentation, Video databases, Benchmarking.*

Submit 3 copies of an 8-page paper (in the format of the Lecture Notes in Computer Science series LNCS-style sheet from Springer Verlag GmbH, <http://www.springer.de/comp/lncs/authors.html>) to the address on p10.

Deadline for paper submission 15 November 1998
Deadline for camera ready copy 20 February 1999

**International Conference on
Computer Vision (ICCV'99)**

September 21 - 24, 1999 Kerkyra, Greece

Topics: *Image Representation, Compression and Coding, Mathematical Morphology, Texture, Colour, Stereo and Motion Analysis, Image Segmentation and Grouping, Surface Geometry and Shape, Object and Event Recognition, Active Vision, Real-Time Vision, 2D and 3D Scene Analysis, Visually Guided Robotics, Computational Models of Biological Vision, Applications.*

Submit electronically a no more than 15-page (single-spaced, 12 point font) paper by anonymous ftp to <ftp://ftp.cs.toronto.edu/pub/iccv99/in.coming>. Include an abstract of up to 300 words clearly stating the impact of the contribution (originality, importance, results, related work and how does your work differ from past work) and at most 10 keywords. Also include a second title page without the authors' names and addresses.

Deadline for paper submission 5 March 1999

Deadline for camera ready copy 30 June 1999

**XVIth International Conference on
Information Processing in Medical Imaging
IPMI'99**

June 28–July 2, 1999 Visegrad, Hungary

Topics: *Computer vision techniques useful in medical image analysis, Analysis of image sequences and temporal data, Image segmentation, Feature extraction and pattern recognition, Registration and fusion of data from different modalities, Anatomical models and their use in image analysis, Bayesian/entropy and other statistical methods useful in medical image processing, New approaches to image formation, Image reconstruction from underdetermined, multiplexed or noisy projections, Use of prior information in image reconstruction and analysis, Objective assessment of image quality, Searching and sorting in medical image databases, Estimation of quantitative parameters from images, Display systems for visualization of multidimensional data, Rule based systems and learning.*

The demonstration of the specific medical application of the presented image processing procedure is required.

Submit four copies of a full paper (20 pages, double space, 12 pt font, 1 inch margins, including figs, refs, etc) and one summary page to the address on p10.

In the summary answer the questions: 1. What is the original contribution of this work? 2. Why should this contribution be considered important? 3. What is the most closely related work by others and how does this work differ? 4. How can other researchers make use of this work? 5. If any part of this paper has been submitted to another conference or workshop, please state the meeting and also how this paper differs.

Deadline for paper submission 1 November 1998

Deadline for camera ready copy 22 February 1999

**IEEE Transactions on Image Processing
Special Issue on Image and Video
Processing for Digital Libraries**

Topics: *Algorithms and schemes for image content-based indexing, searching, and browsing. Image features for indexing and retrieval. Visual similarity metrics for image matching. Compressed domain image/video feature extraction and manipulation. Spatial and/or temporal segmentation to facilitate indexing and search. Representing spatial and spatio-temporal relationships of visual objects for search and indexing; optimizing queries that involve such relationships. Architectures and systems addressing specifically image processing issues for large image/video libraries. Digital watermarking and data hiding in image and video documents. Robust and scalable algorithms for multidimensional indexing. Performance evaluation issues in image/video databases.*

Follow the guidelines of the IEEE Transactions on Image Processing, except send the copies of the manuscript to B S Manjunath, Univ of California, Santa Barbara, Dept of Elec & Comp Engin, Santa Barbara, CA 93106, USA, by December 1, 1998. Include a one page summary describing the original contribution, clearly indicating the relevant image processing issues addressed in the research.

CONFERENCE REPORTS

Medical Image Understanding and Analysis

July 6–7 1998 Leeds, UK

Find copies for downloading of all the papers and posters presented at <http://www.miu.org.uk/>. There is also information on how to purchase a bound copy.

**Report on the Noblesse Workshop
on Non-Linear Model Based Image Analysis
1–3 July 1998, Glasgow, UK.**

Before... After...



©MI

Be wise...
Linearise &
Gaussianise...

Be precise
Analyse &
non-parameterise!

(Proceedings edited by S Marshall, N Harvey and D Shah, Springer ISBN 3-540-76258-2)

Due to the short time between the end of the 14th ICPR and the time of this issue going to the printers, no report on the technical content of ICPR could be arranged. But in brief: It was good, even better than other years! You can get the proceedings (all 4.5 kgs of them!) from IEEE Comp. Society, ISBN 0-8186-8512-3.

FORTHCOMING CONFERENCES, WORKSHOPS AND EVENTS

| 1998 | Event | Location | Contact |
|------------------------|---|-----------------------------|---|
| 17-19 Nov MVA'98 | Machine Vision Applications | Makuhari Chiba, Japan | K Ikeuchi, Inst of Industr Sci, Univ of Tokyo, 7-22-1 Roppongi Minato-ku Tokyo 106 Japan. Tel/Fax:+813 34011433 ki@iis.u-tokyo.ac.jp, http://www.etl.go.jp/etl/gazo/mva98/ |
| 19-20 Nov PRASA'98 | Pattern Recognition | South Africa | http://espresso.ee.sun.ac.za/prasa98 dupreez@firga.sun.ac.za |
| 23-25 Nov ICAPR'98 | Pattern Recognition | Plymouth UK | S Singh, School of Computing, Univ of Plymouth, Plymouth PL4 8AA, UK. Tel: +44 1752 232 612, Fax: +44 1752 232 540, Http://www.soc.plym.ac.uk/soc/icapr |
| 18-20 Dec ICCIT'98 | Computers and Infor Technology | Dhaka Bangladesh | M Kaykobad, Dept of CSE, Bangladesh Univ of Eng & Tech, Dhaka-1000, Bangladesh. iccit98@csebuuet.agni.com Tel: +880 2 9665612, Fax: +880 2 863026 |
| 21-23 Dec ICVGIP | Vision, Graphics, Image Processing | New Delhi India | K K Biswas, Dept of Comp Sci and Eng, Indian Institute of Technology, Hauz Khas, New Delhi, 110016, India. icvgip@iitd.ernet.in, http://www.iitd.ernet.in/icvgip |
| 1999 | Event | Location | Contact |
| 5-8 Jan HICSS | Complex Systems | Hawaii | A Broggi, Dip di Ingegneria dell'Informazione, University of Parma, I-43100 Parma, Italy, Fax: +39 521 905723, broggi@ce.unipr.it http://www.ce.unipr.it/hicss |
| 8-10 Jan ISA | Shape Analysis | Calcutta India | S K Pal, Machine Intelligence Unit, Indian Statistical Institute, 203 B T Rd, Calcutta 700 035, India. sankar@isical.ac.in Tel: +91 33 577 8085 x 3101, Fax: +91 33 577 6680 (or 6925) |
| 12 Jan PE | Performance Evaluation | Canary Islands | http://peipa.essex.ac.uk/conf/icvs-workshop/ alien@essex.ac.uk |
| 13-15 Jan ICVS'99 | Vision Systems | Canary Islands | Centre for Autonomous Systems, NADA/CVAP, Kungliga Tekniska Hoegskolan, S-100 44 Stockholm, Sweden. icvs@mozart.dis.ulpgc.es, http://mozart.dis.ulpgc.es/ICVS/ |
| 22-29 Jan BiOS99 | Biomedical Optics | San Jose USA | pw99@spie.org, http://www.spie.org/info/pw/ Fax: +1 360 647 1445, Tel: +1 360 676 3290 |
| 23-29 Jan SPIE | Image Databases | San Jose USA | URL: www.spie.org/forms/ei99_submission_form.html SPIE PO Box 10, Bellingham, WA 98227-0010, USA. Tel: +1 360 676 3290, Fax: +1 360 647 1445 |
| 12 Feb Devijver | Pattern Recognition | Brussels | C Perneel, Royal Military Academy - TWMA, 30 Av de la Renaissance, B-1000 Brussels, Belgium Christiaan.Perneel@twma.rma.ac.be |
| 25-26 Feb CIR'99 | Image Retrieval | UK | D Harper, School of Comp & Math Sciences, Robert Gordon University, Aberdeen AB25 1HG, UK. http://www.unn.ac.uk/iidr/conference.html |
| 15-19 Mar ICASSP-99 | Signal Processing | Arizona | http://icassp99.asu.edu , icassp99@asu.edu Tel: +1 409 693 6000 |
| 22-24 Mar AVBPA | Person Authentication | Washington DC | R Chellappa, Rm 4417, A V Williams Building, 115 Paint Branch Dr, University of Maryland, College Park, MD 20742, USA. http://www.umiacs.umd.edu/users/lrd/avbpa/avbpa.html |
| 18-20 May PRIP'99 | Pattern Recognition | Minsk Belarus | R Sadykhov, Dept of Computer Systems, Belarussian State University of Informatics & Radioelectronics, ul P Brovki 6, 220600 Minsk, Belarus. Tel: +375 17 2310982, Fax: +375 17 2318403, prip99@newman.basnet.minsk.by |
| 18-21 May VI/QCAV | Comp Vision for Industrial Applications | Quebec Canada | D Ziou, Dept de mathematiques et d'informatique, Univ de Sherbrooke, 2500 Boulevard Universite, Sherbrooke, Quebec, Canada J1K 2R1. Tel: +1 819 821 8000 x 2859, Fax: +1 8198218200, Ziou@DMI.USherb.CA, nouboud@uqtr.quebec.ca |
| 2-4 June PRP-VI | Pattern Recognition | Vlieland Netherlands | PRP VI, Dept of Medical Informatics, Erasmus Univ, PO Box 1738, 3000 DR Rotterdam, The Netherlands, Tel:+31 10 4087050, Fax:+31 10 4362882, prp6@mi.fgg.eur.nl |

FORTHCOMING CONFERENCES, WORKSHOPS AND EVENTS

| 1999 | Event | Location | Contact |
|-------------------------------|----------------------|------------------------|--|
| 2-4 June VISUAL99 | Visual Systems | Amsterdam | A Smeulders, Faculty of WINS, Dept of Comp Science & Logic, Univ of Amsterdam, Kruislaan 403, 1098 SJ Amsterdam, The Netherlands. Tel: +31 20 525 7463, Fax: +31 20 525 7490, VISual99@wins.uva.nl, http://www.wins.uva.nl/events/VISual99 |
| 7-11 June SCIA'99 | Image Analysis | Greenland | H Welling, Dept of Math Modelling, Building 321, Technical Univ of Denmark, DK-2800 Lyngby, Denmark. Fax: +45 45881397, http://www.diku.dk/scia99, scia99@imm.dtu.dk |
| 7-11 June ICMCS'99 | Multimedia | Florence Italy | ICMCS'99, Dip di Sistemi e Informatica, Univ of Florence, Via S Marta 3, 50139 Firenze, Italy. icmcs99@dsi.unifi.it http://www.dsi.unifi.it/icmcs99 |
| 23-25 June CVPR99 | Computer Vision | Colorado USA | http://www.cs.colostate.edu/cvpr99 , draper@cs.colostate.edu hanson@cs.umass.edu , ross@cs.colostate.edu , price@usc.edu |
| 28-30 June IGS99 | Graphonomics | Singapore | IGS99, G B Dee/M Toh, Nanyang Techn Univ, Conf Manag Center CCE, Admin Annex #04-06, Nanyang Avenue, Singapore 639798 igs99@ntu.edu.sg, http://www.ntu.edu.sg/sas/events/IGS99 Tel: +65 799 4723, Fax: +65 793 0997, asgledham@ntu.edu.sg |
| 28 June- 2 July IPMI'99 | Medical Imaging | Hungary | A Kuba, Dept of Applied Informatics, Jozsef Attila Univ, Arpad ter 2, H-6720 Szeged, Hungary. ipmi@inf.u-szeged.hu Tel: +36 62311184, Fax: +36 62312292, http://www.inf.u-szeged.hu/ipmi/ |
| 26-29 July EMMCVPR | Energy Minimization | York UK | E Hancock, Dept of Comp Science, Univ of York, Heslington, York, YO1 5DD, UK. erh@cs.york.ac.uk http://www.cs.york.ac.uk/erh/EMMCVPR99.html |
| 1-3 Sept CAIP'99 | Images & Patterns | Ljubljana, Slovenia | F Solina, Univ of Ljubljana, Faculty of Comp & Inf Science, Trzaska 25, 1001 Ljubljana, Slovenia. Tel: +386 61 1768 389, +386 61 1768 256. Fax: +386 61 1264 647, franc@fri.uni-lj.si, ales.leonardis@fri.uni-lj.si, http://razor.fri.uni-lj.si/CAIP99 |
| 6-10 Sept ISPRS | GIS | Munich Germany | ISPRS-Munich99, Photogrammetry & Remote Sensing, Technische Universitaet Muenchen, D-80290 Munich, Germany. isprs_conf99@photo.verm.tu-muenchen.de , Fax: +49 89 280 9573 http://www.photo.verm.tu-muenchen.de/isprs/munich99 |
| 13-15 Sept KI | Tagung | Bonn Germany | A B Cremers, abc@informatik.uni-bonn.de |
| 15-17 Sept DAGM | Pattern Recognition | Bonn Germany | W Forstner, wf@ipb.uni-bonn.de , www.ipb.uni-bonn.de/DAGM/dagm99/welcome.html |
| 20-22 Sept ICDAR'99 | Document Analysis | Bangalore India | J J Hull, Ricoh California Research Center, 2882 Sand Hill Rd, Suite 115, Menlo Park, CA 94025, USA. hull@crc.ricoh.com Tel: +1 650 496 5723, Fax: +1 650 854 8740, http://www.cedar.buffalo.edu/icdar99, icdar99@cedar.buffalo.edu |
| 21-24 Sept ICCV'99 | Computer Vision | Kerkyra Greece | ICCV, Dept of Comp Science, DL Pratt Build, Room 283, 6 King's College Rd, Univ of Toronto, Toronto, Ontario, Canada M5S 3G4. iccv99@cs.toronto.edu , http://www.cs.toronto.edu/iccv99/ |
| 26-27 Sept GREC'99 | Graphics Recognition | Jaipur India | A Chhabra, Bell Atlantic Network Systems, Advanced Technology, 500 Westchester Av, White Plains, NY 10604, USA. atul@basit.com Tel: +1 914 644 2786, Fax: +1 914 644 2561, dori@ie.technion.ac.il, http://graphics.basit.com/iapr-tc10/GREC99/ |
| 27-29 Sept ICIAP99 | Image Analysis | Venice Italy | V Roberto, Dipartimento di Informatica, Universita' di Udine Via delle Scienze, 206, I 33100 Udine, Italy. iciap99@dimi.uniud.it http://www.dimi.uniud.it/iciap99/ |
| 4-8 Oct 3DIM99 | Imaging & Modelling | Ottawa Canada | marc.rioux@iit.nrc.ca , pierre.boulanger@iit.nrc.ca laurend@gel.ulaval.ca , http://www.vit.iit.nrc.ca/3DIM99 |

YEAR AT A GLANCE CONFERENCE PLANNER

Contact Addresses Pages: 10-11 Previous Reports are shown in Brackets (volume, number)
 ● = submission date □ = final camera ready copy numbers = actual meeting dates

| Conference | Location | Oct | Nov | Dec | Jan | Feb | March | Apr | May | June | July | Aug | Sept |
|-------------------|---------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|
| SPIE (v20n3) | Boston | □ 5 | 1-6 | | | | | | | | | | |
| ISPACS'98 (v20n2) | Australia | | 4-6 | | | | | | | | | | |
| IVCNZ (v20n3) | Auckland | □ 16 | 16-18 | | | | | | | | | | |
| MVA'98 | Japan | | 17-19 | | | | | | | | | | |
| PRASA'98 | South Africa | | 19-20 | | | | | | | | | | |
| ICAPR'98 | Plymouth | | 23-25 | | | | | | | | | | |
| ICCI'98 | Bangladesh | □ 15 | | 18-20 | | | | | | | | | |
| ICVGIP | India | | | 21-23 | | | | | | | | | |
| HICSS | Hawaii | □ 1 | | | 5-8 | | | | | | | | |
| ISA | Calcutta | | | | 8-10 | | | | | | | | |
| PE | Canary Isl | | | □ 1 | 12 | | | | | | | | |
| ICVS'99 | Canary Isl | | | | 13-15 | | | | | | | | |
| BiOS99 | San Jose | | | ● 28 | 22-29 | | | | | | | | |
| SPIE | San Jose | | □ 2 | | 23-29 | | | | | | | | |
| Devijver | Brussels | ● 15 | | | □ 15 | 12 | | | | | | | |
| CIR'99 | UK | ● 30 | | | □ 29 | 25-26 | | | | | | | |
| ICASSP-99 | Arizona | | | | | | 15-19 | | | | | | |
| AVBPA | Washington DC | | | | | | 22-24 | | | | | | |
| PRIP'99 | Minsk | | ● 15 | | | | | | 18-20 | | | | |
| VI/QCAV | Quebec | ● 31 | | | | | □ 15 | | 18-21 | | | | |
| VISUAL99 | Amsterdam | | ● 15 | | | □ 20 | | | | 2-4 | | | |
| PRP-VI | Vieland | | ● 1 | | | | | | □ 1 | 2-4 | | | |
| SCIA'99 | Greenland | | ● 2 | | | | □ 1 | | | 7-11 | | | |
| ICMCS'99 | Florence | ● 15 | | | | □ 15 | | | | 7-11 | | | |
| CVPR99 | Colorado | | | ● 2 | | | | | | 23-25 | | | |
| IGS99 | Singapore | | | | ● 15 | | | □ 15 | | 28-30 | | | |
| IPMI'99 | Hungary | | ● 1 | | | □ 22 | | | | 28- | 2 | | |
| EMMCVPR | UK | | | | | ● 1 | | | □ | | 26-29 | | |
| CAIP'99 | Slovenia | | | | ● 15 | | | | | | | 1-3 | |
| ISPRS | Munich | | | | ● 1 | | | | □ 31 | | | 6-10 | |
| KI | Bonn | | | | | | | | | | | 13-15 | |
| DAGM | Bonn | | | | | | | | | | | 15-17 | |
| ICDAR'99 | India | | | | ● 15 | | | | □ 31 | | | 20-22 | |
| ICCV'99 | Greece | | | | | | ● 5 | | | □ 30 | | 21-24 | |
| GREC'99 | India | | | | | | ● 1 | | | □ 15 | | 26-27 | |
| ICIA'99 | Venice | | | | | ● 28 | | | | □ | | 27-29 | |
| 3DIM99 | Ottawa | | | | | | ● 5 | | | □ 11 | | | |

The views presented in this newsletter represent the personal views of the authors of the respective articles and not of their host Institutes or IAPR.