

International Association for Pattern Recognition Inc

An affiliate member of the International Federation for Information Processing

NEWSLETTER

Editor

Dr. Maria Petrou

Department of Electronic and Electrical Engineering

University of Surrey

Guildford GU2 5XH, United Kingdom

Telephone: +44 1483 259801 Facsimile: +44 1483 34139

Email: m.petrou@ee.surrey.ac.uk IAPR www: http://peipa.essex.ac.uk/iapr/ Volume 19

Number 1

January 1997

News for Members 2 Message from the New President 3 A readers' digest: Trends Emerging from the 13th ICPR 4 IEEE honours Ruud Bolle and Franz Leberl 5 Book Reviews 6 Conference reports 7 Conference announcements 8 Conference, Workhops & events calendar 10 Year at a glance 12

From the Editor's Desk

Dear Everybody,

I think it was Aristotle who said "We are what we repeatedly do. Thus excellence is not a quality but a habit". When I first read this, I was struck by the first part of it: We are what we do. We all, directly or indirectly are involved in creating the super-humanoid robots of the future: They will not only do the housework for us, not only do the mining, the fighting and the repairing of nuclear reactors; they will also catch us when we exceed the speed limit by a couple of miles, evade tax by a few pounds, pick a flower from a bush that is not ours, behave improperly in the streets, in the roads, in the buildings. Do you get a feeling of the Big Brother watching? I do. However, in order for this to come true, *somebody* will have to decide, authorise, have built and install all these robots everywhere. Somebody who will be the product of our society. One of us! Somebody who will have become near robot himself in his thinking... I read with dismay the proposals for the "Virtual Conferences" (see p8). They are the answer to those appallingly organised conferences I felt again compelled, as an editor, to include a report on (see p7) as a way of increasing the voice of the helpless academic victim. The Virtual Conferences, however, will be perfectly organised. The Virtual Conferences will be cheap and effective ways of communication. In a Virtual Conference nobody will be delayed for hours in a cold airport and nobody will lose his suitcase. In a Virtual Conference nobody will be over-charged and nobody will be mugged by a local thug. In a Virtual Conference nobody will suffer indigestion from the local food and nobody will break his leg dancing the local dance during the banquet. But in a Virtual Conference nobody will dance a local dance, savour a local dish and stroll in unknown streets; because everybody will be sitting inside their four walls,



in front of their screens being terribly efficient, terribly professional, terribly productive and terribly robot–like! I sincerely hope that my professional career will be over by the time ICPR will be called IVCPR! What about then all the frustrations we all suffer sometimes at conferences? Wasn't it Nevatia who said that what characterises the human vision system is that it can come up with answers like "This is a red cow with five legs", implying that the human brain, the human nature, can identify the useful, the pleasant and the desirable in a clutter of junk, unpleasantness and repulsion? And isn't that what makes a human different from a robot? And isn't that what makes possible for even a badly organised bad conference to be preferable to a perfectly organised Virtual one?

Maria Petrou

News for Members

THE NEW FACE OF THE K S FU AWARD

The IAPR Governing Board decided to change the name of the "K S Fu Award" to "K S Fu Prize", to enhance the prestige of this award and to distinguish it from other awards now offered by the IAPR. The K S Fu Award Committee will also have sponsorship responsibilities and its name will be changed to "King Sun Fu Prize Committee", to take into account that the committee will deal with the K S Fu Prize. Its membership will increase from 5 to 6 and in order for its activity to have some continuity, in the future, only 2 new Members will be appointed for 6 years, every two years.

IAPR HAS TWO NEW TECHNICAL COMMITTEES

The IAPR Governing Board decided to create two new Technical Committees: TC15, "Graph based Representations" which will be of interest to a large section of people dealing with graph representations and willing to exchange algorithms and applications in this area, and TC16, "Algebraic and Discrete Mathematical Techniques in Pattern Recognition and Image Analysis", which is expected to attract a large portion of researchers, especially in the Russian Federation. TC16 will promote the exchange of information in the field by electronic means and will stimulate the organisation of IAPR sponsored meetings (first steps in this direction have already been taken, eg the Russian-German workshop organised recently).

FRENCH TELEPHONE NUMBERS CHANGE

Several telephone numbers in France have changed. For up to date information see :

http://www.francetelecom.fr/vanglais/actualit/ndcbr.htm

About 88% of submissions to Pattern Recognition Letters are reviewed within 2 months, while 99% are reviewed within 3 months.

SLOVENIAN PATTERN RECOGNITION SOCIETY

The Pattern Recognition Society of Slovenija (SPRS) has in its Annual Meeting elected Professor Franjo Pernus (franjo.pernus@fe.uni-lj.si) as its president, Dr Ales Leonardis (ales.leonardis@fri.uni-lj.si) as its vice-president and representative in IAPR, and Mr Bostjan Likar (bostjan.likar@fe.uni-lj.si) as secretary for the years 1996-1998. The number of the members of the society at present is 69. Information on the Society is on www: http://luz.fe.uni-li.si/english/SPRS

Journal of Electronic Imaging: Special Section on Neural Networks and Fuzzy Logic for Imaging Applications

Manuscripts due January 10, 1997. Send four copies to: Prof Hong Yan, Dept of Elec Eng, J13, Univ of Sydney, Sydney, NSW 2006, Australia, Tel: +61 2 9351 3515, Fax: +61 2 9351 3847, yan@ee.usyd.edu.au, or Prof Madan Gupta, Intelligent Systems Research Laboratory, University of Saskatchewan, Saskatoon, Saskatchewan S7N 5A9 Canada, Tel: +1 306 966 5451, Fax: +1 306 966 5427, guptam@sask.usask.ca

Special Issue of the Journal Engineering Applications of Artificial Intelligence: Machine Vision for Intelligent Vehicles and Autonomous Robots

Topics: Active and Real-Time Vision, Object Recognition and Scene Interpretation, Sensing of Unknown Environments, Vision-based Real-time Robot and Vehicle Navigation, Vision-based Guidance of Unmanned Vehicles, Intelligent Sensors and Architectures for Low-level Vision, Description of Research Prototypes. Submission deadline March 1, 1997. Publication date February 1998. More information in http://WWW.CE.UniPR.IT/eaai. Co-ordinator: Alberto Broggi, Dipartimento di Ingegneria dell'Informazione, Universita di Parma, Viale delle Scienze, I-43100 Parma, Italy. Tel: +39 521 90 5707, Fax: +39 521 90 5723, broggi@CE.UniPR.IT.

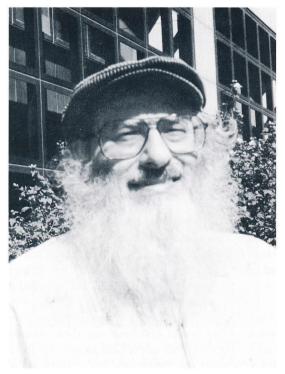
Special Issue on Copyright Protection and Access Control for Multimedia Services in the Signal Processing Journal

Topics: image, video and sound watermarking and scrambling, encryption and cyphering, document and image authentication, access control in digital TV, multimedia services, client-server architectures. Submission deadline: January 31st, 1997. Co-organizers: B Macq, Dept of Elec Eng, Univ Catholique de Louvain, 2 Place du Levant, 1348 Louvain-la-Neuve, Belgium. macq@tele.ucl.ac.be, Tel: + 32 10 47 22 71, Fax: + 32 10 47 20 89, or I Pitas, Dept of Informatics, Univ of Thessaloniki, Box 451, Thessaloniki 54006, Greece. pitas@zeus.csd.auth.gr, Tel: +30 31 996304, Fax: +30 31 996304

MESSAGE FROM THE NEW PRESIDENT

Mould like first to express my appreciation to the IAPR Governing Board who elected me President, for the trust they have placed in me to help guide IAPR activities during the next two years. I promise to do my best. In this message I hope to outline how I see the future of IAPR in playing the leading role in the research activities in our subject.

As we move into the last few years of this century, there are many changes that are occurring that affect the way in which we advance research in Pattern Recognition. One is that there is an expectation that when some Pattern Recognition technology gets employed in a consumer product, that it works perfectly nearly all the time. The old Pattern Recognition constant of 85% or even 90% sucess is inadequate. Another change is the enormous increase in computing capability that occured in the recent years. The implications are that we are able to consider implementations of Pattern Recognition technology that involve more computation and high speed memory and we are able to easily store in low speed memory large data sets which have been appropriately ground truthed. These data sets can then be used to estimate the free parameters associated with a Pattern Recognition algorithm.



Bob Haralick

Thus there is no excuse for our Pattern Recognition research not involving large publicly available annotated, ground truthed data sets on which to train our algorithms. Memory storage is no longer a problem. Therefore, I am urging each of the TC chairs to survey its members to locate ground truthed data sets in its research domain that could be put on the web site for the TC and thereby be made available for the rest of the community. Along with the data sets

should also be software for evaluation of the results produced by any algorithm. That will permit all researchers to try their methods and compare their results in a common framework. TC-5, the Benchmarking and Software Technical Committee, should make its task providing webb links and descriptions to the data sets that various governmental agencies and institutions are making available. With the availability and use of ground truthed data sets for a variety of different kinds of problems in different kinds of problem domains, our papers can reach a higher standard and thereby we may be more effective in moving the frontier of Pattern Recognition. Thus, we shall no longer be writing papers which state a procedure and give a result on a few problem instances. Instead, the results will be statistical summaries of the performance of a procedure proposed to solve a well defined problem, over a body of hundreds or thousands of instances.

There are some other recent major developments directly affecting the future of Pattern Recognition: Multi-media queries, database access, and information retrieval are becoming increasingly important. Indeed, digital information along with digital video is already an integral component of all emerging computer-mediated communication systems. Applications in digital information range from digital libraries to surveillance and entertainment. As people have access to a wide range of digital information, research is needed for tools that represent digital content and help to retrieve it in a timely manner. The IAPR TCs involved in these domains should consider co-operating in forming an IAPR sponsored international conference covering these areas. The time is right for such a conference and it can take off and be as successful as the IAPR conference on Document Analysis and Recognition, which was started just a few years ago.

Finally, I would be happy to hear your ideas and suggestions for the future of IAPR and I would encourage you to email me at haralick@ee.washington.edu.

Bob Haralick

Special Issue on: Diagrammatic Representation and Reasoning in Machine Graphics & Vision

Topics: 1) Use of computers for diagrammatic representation and/or reasoning, including discussion of implementation problems and methods, as well as descriptions of specific computer programs and systems; 2) Designs and proposals of visual languages and formal systems for diagrammatic representation and reasoning (both for computer or human use).

However, papers on other topics (like cognitive science issues of diagrammatic representation and reasoning) will be also considered for publication in the special issue.

Send your submission by February 15, 1997 to: Dr Z Kulpa, Institute of Fundamental Technological Research of the Polish Academy of Sciences, ul Swietokrzyska 21, 00-049 Warsaw, Poland, Fax: +48 22 269815, zkulpa@ippt.gov.pl, http://www.ippt.gov.pl/ zkulpa/.

A readers' digest: TRENDS EMERGING FROM THE 13th ICPR

large number of papers and posters were presented during the last ICPR conference, from which some interesting trends and perspectives may be observed: Efficiency, robustness, usability, autonomy, integration and generic design seem to be the flavours of the day.

Efficiency appears a central preoccupation, with the development of fast computing algorithms and architectures, and the necessity to reduce the range and complexity of representations while preserving their accuracy (eg use only a single view to perform object recognition and pose estimation in a 3D context). Robustness is concerned with the design of systems that are able to work in noisy and complex environments, i.e. with degraded signals, under unstable conditions, viewing distortions and partial occlusions, or missing information. The design of methods able to eliminate or compensate the effects of systematic error sources in calibration procedures is another theme. The student award paper is actually on motion without structure, a new paradigm for determining the ego-motion between two frames, which is best suited when reliable correspondence is difficult, or when the expected camera motion is large. Distributed architectures are also considered as a way of designing fault tolerant systems. Usability characterises systems that are able to work with reduced a priori knowledge, but at the same time can cope with greater complexity. There is in fact a necessity to reduce the assumptions about the parametric form of data, to avoid inadequate over-strong constraints in the development of calibration and matching strategies (eg camera calibration from arbitrary sequences of views) and to avoid the necessity of salient and reliable measurements in order to proceed to recognition (eg classifiers applicable to very small sample sizes, or classifiers able to work under poor training conditions). Systems able to cope with image mixtures, with multiple or uncertain interpretations, or with 3D free-form objects have been presented in this area. Last but not least, the question of controlling multiple robot systems is directly related to mastering a growing complexity. Autonomy implies the capacity to adapt and to learn, which in turn implies the capacity to estimate a situation and evaluate a performance. Adaptive noise reduction or feature extraction techniques have been considered to dynamically adapt the input data to given processing algorithms. Active vision appears to be an important field of research in this direction. Active depth estimation with gaze and vergence control has been discussed, as well as active view selection for efficient 3D scene reconstruction, or active target selection. Learning is enjoying a growing interest, especially in the field of vision-based autonomous navigation, where incremental strategies, self-organisation and dynamic maps are being studied. Learn to select, parametrise and sequence visual procedures to achieve specific goals is also considered, based on traditional search techniques as well as Markov decision processes. How to build distributed classifiers or to train relaxation labelling processes is studied as well, in the framework of incremental and auto-associative techniques. Adaptation and learning imply a capacity to estimate a situation and evaluate a performance: how to estimate the presence of a texture has been discussed, as well as how to characterise the performance of operators or quantify the reliability of feature-based object recognition. Designing an experimentation environment for the evaluation of vision modules has also been considered. Integration means bringing together the advantages provided by the use of multiple views, by the consideration of multiple modalities (eg a speech / gesture interface to a visual computing environment, the derivation of new material descriptors from the analysis of the sounds of impacts), by the combination of heterogeneous models and hybrid reasoning styles (eg knowledge based systems to integrate low level algorithms), by the fusion of multiple classifier decisions, like in the mixed expert architecture, or finally by the combination of different paradigms (eg a physics-based approach to 3D image segmentation, using simulated electrical charge distributions). The need for generic designs was apparent as a clear tendency to explore the commonalities between well known pattern recognition techniques and to try and unify pattern analysis under a common framework. A unification of fast algorithm for the discrete Fourier transform has for example been proposed, as well as how to generalise the discrete (finite) Gabor scheme by incorporating multiple windows. How to map fuzzy reasoning on a multi-layer perceptron architecture, what are the relations between hierarchically structured neural networks and image pyramids have also been typical of this new trend. A quasi-Markov model has been studied as a unified algorithmical framework to cover quite a wide class of image processing problems, and Pattern Recognition has been considered as involving three optimisation subproblems, thus being appropriate for a unifying generic approach.

What all the above indicates is a clear tendency to cope with more complexity by means of a more rational design. The necessity to integrate vision systems into more open user-oriented environments also leads to the consideration of new application domains, although, applications papers appear to concentrate in a few domains, ie character recognition and document processing, face analysis and contentbased indexing and retrieval. There is a definite emphasis on the processing of handwritten characters and phrases, with a trend to combine on-line and off-line recognition, and a tendency to use hybrid techniques. Document processing often leads to the design of content-based and adaptive analysis tools. Face analysis rather concentrates on the analysis of lips movement and the recognition of facial expressions. New trends in this field appear to be concerned with the design of active face observation systems, and the application of face analysis to sign language translation (to allow communication between deaf and non-deaf persons) and to the design of automatic speech reading systems. A few contributions concerned gesture recognition. Mobile robotics as always attracts a lot of attention with a few well-known problems like obstacle avoidance and gaze control revisited, but also with

IEEE HONOURS RUUD BOLLE AND FRANZ LEBERL

n the next century, when you go to a supermarket and buy vegetables, the bags containing them will be scanned by a reader, much like the products with bar codes are scanned. And for every beep, Ruud Bolle will be making money...because he designed VeggieVision, a machine that recognises fruits and vegetables, using of course the basic technologies developed over the past several years. A native of Holland, he studied at the Delft Institute of Technology, and then, like most young men, he went west. His ship took him to Providence, Rhode Island, where, five years later he was awarded a PhD degree from Brown University, for his work on Bayesian Estimation and Visual Surface Reconstruction. But he made two mistakes: he did not use the word "invariance" in his thesis, while he was just extracting invariants, and he did not use the term "Physics based", while his work was exactly that. Thus, he missed a few hundred references...But he is not a man of references, he is a man of action. He moved to the IBM TJ Watson Research Centre where he manages the Vision Research Group and he heads a multimillion dollar effort on Video Processing. Ruud Bolle was honoured with an IEEE Fellowship Certificate, for extracting symbolic descriptions from raw image data.



Ruud Bolles receiving a hug and an IEEE Fellowship from Yiannis Aloimonos, Chair of 13th ICPR in Vienna

Franz Leberl is a man of many talents! A native of Austria, he studied Geodetic Engineering at the Technical University of Vienna where he also received a PhD degree. His career started in the Netherlands (1969-74). He then worked at NASA (1974-76). In a first professional period in Austria he was professor of Photogrammetry and Remote Sensing at the Technical University of Graz (1976-84) and started the Research Institute for Digital Image Processing and Graphics at Joanneum Research (1980) that became internationally famous in a few years time... His return to the United

States in 1984 resulted in two Colorado companies (1984/85 and 1991/92). Work in these companies is responsible for the processing of the Radar images of planet Venus as part of NASA's Magellan Mission. From September 1996 to December 1999 he has been on a leave to assume the job as director of the Austrian Research Centre Seibersdorf near Vienna, currently the largest research organisation in Austria. Franz Leberl was honoured with an IEEE Fellowship Certificate for his research on Remote Sensing and particularly on the processing of radar images.

Text: Yiannis Aloimonos



Franz Leberl receiving another hug and another IEEE Fellowship from Yiannis Aloimonos, during the banquet of the 13th ICPR in Vienna

Continuation from page 4

new applications, like the micro-manipulation of microscopic objects.

In the general framework described above, we have the old favourite popular themes explored: **Segmentation** (dual active contour techniques, and the combination of linear and non-linear point distribution models), **feature extraction**, **motion analysis** (unified detection of 2D and 3D motion, Spatio-temporal relaxation for the analysis of image sequences, tracking of non-rigid motion, motion simulation and synthesis) and **classification** (combination of classifiers to design hybrid or mixed expert architectures). Noticeable is the prominent use of MRF models, neural networks and genetic algorithms and the emergence of evolutionary programming techniques, applied for example to the automated creation of visual routines. Symbolic models are rarely considered, and image understanding as well as object recognition are rather considered as optimisation problems.

Catherine GARBAY, IMAG, France

BOOK REVIEWS

Research Strategies in Technical Communication by *Lynnette R Porter and William Coggin*, John Willey & Sons, 1995, 375 pages, ISBN: 0 471 11994 6

I usually find it interesting to brouse through literature with titles like the above. Sometimes I compare my behaviour, my tricks and my habits with advice given in the book or the paper, sometimes I try to find something useful for my jób routine. So it was the title of the book that attracted my attention here. Let's open the book!

There are eighteen chapters united in four parts. The authors cover all the basics in planning, conducting, analyzing, and documenting research for technical communication projects. It does not mater that I work in image processing, or not; the methods the book outlines are valid for anyone who needs to gather information and render it into a useful form.

Part 1: Introduction to research strategies. Step by step the authors lead us through a scientific tool kit: how to start a research, where to start from, how to generate ideas. They shortly describe three main strategies of idea generation: brainstorming, outlining and freewriting. All of them oriented to computer technology as an integral part of any modern research activity. The third chapter explains how to plan research and how to make documentation plans better. I suspect that Euclid worked without such planning and very productively, but who knows? Maybe he could have done more if he had planned his study! The next chapter is devoted to ethics, what is ethical and how does ethics affects us with some concept to the research process. The authors provide us with some concepts and guidelines for developing our own ethical code.

Part 2: Ways to conduct research. The first two chapters of this part show us how to locate secondary sources of information by computer, in particular by an information search in an appropriate database, as well as by using e-mail, news groups, discussion groups, electronic journals, mailing lists, and of course the World Wide Web and Internet. The purpose of chapter seven is to define personal experience and knowledge, provide some methods for taking an inventory of our experience and to suggest some group and individual activities through which we can increase our knowledge. The ninth chapter is called "Letters of Inquiry". Is contains several hints for inquiring by letter, by FAX and by electronic mail. The following chapter explains how to make questionnaires and surveys. Empirical experimentation is the subject of the eleventh chapter.

Part 3: Ways to evaluate research. Research is a process of permanent evaluation and revision: we evaluate our research methodologies, revise our plans, extent our personal bibliography database and so on. The first chapter of this part explains how to evaluate information sources. The authors explain how to assess the reliability of a source, the age of the information it gives, the quality of the information and the style/format of the source. In the subsequent chapter they develop a vocabulary of terms associated with statistics and sta-

tistical measurements. After that they discuss the usability of testing and validation. Usability in technical communication refers not to paper documents, but to every type of scientific or technical information that is created.

Part 4: Possible publication of your results. Research is meant to be shared with people who need or want your information, your results. You can share your finding in a number of ways. Suppose that you wish to publish your manuscript. The authors explain how to research possible ways of publication, how to write a query or a proposal letter. There are several samples. The next chapter is devoted to the art of abstract writing. Typical examples are given. A separate chapter gives several pieces of advice on how to work with bibliography. For example, the bibliography itself is a publication (everybody knows the annual Rosenfeld's lists).

To be an effective researcher, you need to actively seek presentation, publication and further support for your ongoing research. The book can help you whether you are responsible for creating documentation for a new hardware or software product, designing a user interface, testing usability, conducting field research, or writing a master's or doctoral thesis.

Valery Starovoitov Institute of Engineering Cybernetics, Belarus

A casebook for a first course in statistics and data analysis by Samprit Chatterjee, Mark S Handcock & Jeffrey S Simonoff, John Wiley & Sons, 1995, ISBN 0 471 11030 2

This book is intended to be used in conjunction with some other textbook in statistics. It presents a series of cases where statistical analysis is required, based on real life examples. The cases are grouped in four parts. The first part contains cases that demonstrate the use of general data analysis. The second part is concerned with probabilities, the third part presents the issues of statistical inference while the last part concentrates on regression. Each part is comprised of several cases and after each case is presented there is a small reference to the corresponding methodology. Some cases are fully investigated while others are left to the reader to analyze.

The book comes with a floppy disc containing all the data used in the cases presented in the book, so as an arithmetic evaluation is possible if the proper steps of the analysis are followed. This is a good package, for those who want to get a better feeling of what statistics can do for them in real life applications. Its advantage is that the themes used in the cases are quite appealing to the reader. The analysis that follows though sometimes contains far too many details, which although enlighten all the aspects, do not comply with the simplicity generally required from such a book.

Panagiota Bosdogianni, University of Surrey

CONFERENCE REPORTS

The International Workshop on Structural and Syntactical Pattern Recognition (SSPR'96)

Leipzig, Germany, August 20-23, 1996

SSPR'96 was the sixth in a series of biannual workshops traditionally organised by the Technical Committee on Structural and Syntactical Pattern Recognition (TC2) of the IAPR and generally held in conjunction with the International Conference on Pattern Recognition (ICPR). SSPR'96 was organised by the Institute of Computer Vision and Applied Computer Sciences, Germany. Petra Perner and Patrick Wang were the two SSPR'96 co-chairs, while Azriel Rosenfeld was the honorary chair. The workshop was aimed at providing a forum for discussing issues related to structural and syntactical pattern recognition, covering all aspects from the more theoretical ones to those application oriented. More than 50 contributions were submitted, 36 of which were accepted after a rigorous reviewing process aimed at maintaining the scientific level of SSPR high. All accepted contributions were presented orally in plenary sessions; 30 minutes were scheduled for each presentation so that both the speaker and the audience had plenty of time for a deep discussion. Four invited talks completed the scientific program: "Structural and syntactic methods in line drawing analysis: To which extent do they work?" (Karl Tombre); "Representing shape by line patterns" (Gabriella Sanniti di Baja); "Recognition of 3D objects from 2D images - Some issues" (Patrick Wang); and "Invariants and fixed structures lead the way to change" (Luc Van Gool).



Dov Dori, Gabriella Sanniti di Baja and Petra Perner having a good time at the cellar of the castle where the SSPR'96 banquet took place

The proceedings volume has been published by Springer-Verlag in the series Lecture Notes in Computer Science (Number 1121). The Editors are P Perner, P Wang and A Rosenfeld and the title of the book is "Advances in Structural and Syntactical Pattern Recognition". The book was already available at the meeting. Interested people can order it by contacting Petra Perner (mail address: Dr Petra

Perner, Institute of Computer Vision and Applied Computer Sciences, Raschwitzerstrasse 26, 04416 Markkleeberg, Germany; email address: perner@imise.uni-leipzig.de). Around 45 participants from 19 countries registered for SSPR'96. Occasional visitors were also welcome, so that around 60 people attended the workshop. The small size of SSPR'96 allowed an easier interaction among participants, who could continue scientific discussions also after the conference sessions in a relaxed atmosphere. The social program was rich and pleasant and provided to the attendees food for both their "stomach" and "spirit". As an example of food for the spirit, I will just mention the interesting guided visit to the Bach Museum that was followed by a short concert given by a trio. The conference banquet was offered in the court-yard of the Gnandstein Castle, located some 50 kilometers from Leipzig. The castle dates back to the middle age and was worth a visit. The banquet itself was gorgeous and served in perfect medieval style. The next SSPR will be held in 1998 in Sydney, Australia, in conjunction with the 14th ICPR in Brisbane. It will be on your way to the ICPR. Think it over!

> Gabriella Sanniti di Baja Istituto di Cibernetica

The EUROPTO Symposium on Satellite Remote Sensing III

Taormina, Italy, 23-26 September 1996

The European Symposium on Satellite Remote Sensing III, an assembly of 16 conferences, was disorganised, expensive, and often disappointing. Registration materials and Programmes were not sent to most participants ahead of time. On-site registration, which was scheduled to start at 7:30am Monday, was delayed until 2pm because registration materials had not arrived. On Monday morning, one copy of the day's schedule was posted in the lobby, and most participants received their Programmes after the first day's papers had ended. I wondered whether the two conferences which only met on Monday morning found their audiences.

There was severe attrition in participants and speakers compared to the two previous Symposia (Rome 1994 and Paris 1996). Even members of organising committees and cochairs did not attend. Authors were not informed that their papers were accepted until after the published deadline for submitting camera-ready copies. Rumours about people being asked to fill gaps at the last minute were rife. Too late to allow changes in air tickets, this Symposium was shortened by one day.

Logistics were not well planned. For example, the Modelling of Clouds and the Atmosphere conference was placed in what was called Hall F, in reality a noisy foyer, exposed to elevator and stairway traffic and to the din of conversations from other conferences' coffee breaks.

The conference entitled Image and Signal Processing for Remote Sensing maintained a 2.5-day programme, but lost much of its more exploratory content. Preprocessing and segmentation algorithms greatly outnumbered classification and higher-order interpretation. In a conference presumably focused on remote sensing applications, there were papers presenting theory without real data processing or realistic data interpretation.

A continually annoying aspect of the Taormina Symposium was the touristy atmosphere that pervaded everything and the accompanying inflated prices for less than adequate service. Many participants, myself included, were placed in hotels adjacent to the beach in Giardini Naxos and then transported in tourist buses to the Palazzo dei Congressi, 25 minutes away. This transportation was overpriced, provided little freedom to dine with colleagues staying in Taormina hotels, and was unreliable. Eight people staying at my hotel were not picked up Thursday morning and had to find another means of transportation or miss the 9:00am papers. This situation occurred when three-star hotels in Taormina with more reasonable rates had vacancies.

Although I regularly attend remote sensing conferences and conventions, the EUROPTO registration fees and the offprint charges are the highest I have paid. The full registration fees, DM 630 for EOS/SPIE members or for authors and DM 700 for others, included only one volume of the seven proceedings, coffee breaks, and a meager reception. In striking contrast, the British Remote Sensing Society's 22nd Annual Conference (RSS96), held at the University of Durham, UK, two weeks earlier, provided a varied technical and social programme professionally and inexpensively executed. The full registration fees, £210 for members and £260 for others, included the complete 700-page proceedings, three nights of en suite B & B at Collingwood College, all meals and coffee breaks from Wednesday evening to Saturday lunch, two receptions (not meager), an elegant dinner at Lumley Castle, and a walking tour of University College and other picturesque parts of old Durham.

It appears that the difference between these two programmes is the motivation of the organisers. RSS96 was or-

ganised by academics to serve the interests of a professional community. The EUROPTO symposia are organised by a Berlin company with apparently other goals in mind. Sadly, the results are driving people away.

The Modelling of Clouds and the Atmosphere conference organisers announced that this conference would not participate in the renamed European Symposium on Aerospace Remote Sensing, to be held in London in 1997. I would encourage others to follow suit.

Patricia G Foschi San Francisco State University

Virtual Conferences and other scary tales...

It was reported in the newsletter of IFIP (International Federation of Information Processing) that Working Group 6.5 of IFIP under the chairmanship of Mr Einar Stefferud has proposed the procedure under which virtual conferences should be organised: Related papers will be mounted on WWW in sets, so as to simulate sets of papers presented in sessions at real conferences. For each set, a mailing list is created to facilitate email discussion of the papers by the people who obtain copies of the set. Mailing list subscriptions are automatically created when people acquire copies of the related set of virtual session papers. A virtual session chair is appointed to act as a moderator and facilitator for each virtual session. The virtual session occurs on the internet in the form of mailing list exchanges, with an archive to automatically accumulate the messages, for access by new recipients of the virtual session set. The email archive becomes a permanent part of the virtual conference proceedings. When it becomes a matter of mailing list consensus that the discussion has covered the appropriate ground, the virtual session may be closed. A small fee may be charged to those participating.

CONFERENCE ANNOUNCEMENTS

DSP97: 13th International Conference on Digital Signal Processing

2-4 July 1997 Santorini, Greece

Topics: Adaptive and Array Signal Processing, Biomedical Signal and Image Processing, Blind Equalisation, Computer Vision, Multidimensional Signal Processing, Motion Detection and Estimation, Noise Reduction / Cancellation, Nonlinear Signals and Systems, Chaos and Fractals, Nonuniform Sampling and Multiresolution Signal Processing, Signal and Image Processing Algorithms/Architectures/Implementations, Signal and System Modelling, Speech Processing, Theory & Applications of Transforms and Time-Frequency Representation. Submit 3 copies of a camera-ready 4-page paper, on A4 paper with 2cm margins, in two columns format, single spaced, in 10 point Times to the address on p10.

Deadline for paper submission 1 March 1997

ICCV: International Conference on Computer Vision

4–7 January 1998 Bombay, India

Submit 4 copies of a no more than 30 double spaced pages paper, using the equivalent of 12 point Times Roman and 12 point spacing. A cover sheet should be attached to only one copy, with the author's name and address. The other three copies should not identify the authors in any way.

Include a page answering the questions: What is the original contribution of this work? Why should this contribution be considered important? What is the most closely related work by others and how does this work differ? How can other researchers make use of the results of this work?

Deadline for paper submission 24 March 1997

ICIAP'97: 9th International Conference on Image Analysis and Processing [IAPR]

17–19 September 1997 Florence, Italy

Topics include but are not limited to: Image Analysis and Pattern Recognition (Image Enhancement and Restoration, Image Segmentation, Statistical and Syntactical PR, Color and Texture Analysis), Machine Learning and Understanding (Neural Networks, Image Understanding, Spatial Reasoning), Computer Vision (Active Vision, Shape Analysis and Representation, Motion Analysis and Representation, 2D and 3D Object Recognition), Architectures for Image Processing (Multiprocessor Systems, Massively Parallel Architectures, VLSI Architectures), Imaging Technologies and Image Databases (Vision-based HCI, Merging Graphics and Vision, Image and Video Compression, Image and Video Indexing/Retrieval), Imaging Applications and Multimedia (Biomedical Applications, Remote Sensing, OCR and Document Processing, Integration with Other Media).

Electronic submission (PostScript format) should be made via anonymous ftp to dsi.ing.unifi.it in the directory iciap97/incoming. Alternatively, send four hard copies of the manuscript to the address on p10.

Papers should not exceed 14 pages (12pt font, 1.5 spacing); a separate page should include the names of the authors, their affiliation, and complete address. Papers will undergo blind refereeing by three separate reviewers of the Programme Committee. Conference proceedings will be published by Springer Verlag in the series Lecture Notes in Computer Science.

Deadline for paper submission 30 January 1997 Deadline for camera ready copy 1 July 1997

ICA3PP-97: Special session on Instruction-level Parallel Processing

8–12 December 1997 Melbourne, Australia

Topics: Architectural and Software issues, Theoretical foundations, Appilications. Submit 6 copies of an extended summary (at least 5 pages plus figures and tables) or the full paper (not exceeding 20 pages) to the address on p 10.

Deadline for paper submission 17 March 1997
Deadline for camera ready copy 1 September 1997

WIAMIS'97: Workshop on Image Analysis for Multimedia Interactive Services

26–27 June 1997 Louvain-la-Neuve, Belgium

Topics: Supervised and unsupervised segmentation of objects in 2D/3D image sequences, Indexing of images and video, Motion/texture/shape descriptors, Identification and tracking of regions in scenes, 2D/3D feature extraction, Voice/audio assisted image/video segmentation, Feature-based image/video query, Searching and browsing of images and video, Content generation and manipulation. Submit 3 copies of your abstract to the address on p 10.

Deadline for abstract submission 15 March 1997 Deadline for camera ready copy 15 May 1997

IGS'97: International Graphonomics Society: Research on handwriting and drawing [IAPR]

24–28 August 1997 Genova, Italy

The aim of the conference is to address topics of research on handwriting and drawing with a strongly multidisciplinary approach, which includes behavioral, theoretical, methodological, technological, educational, medical, and forensic aspects. The intended audience includes Developmental, and Experimental Psychologists, Computer Scientists, Educators, Ergonomists, Forensic Document Examiners, Motor Control Researchers, Neurologists, Theoretical and Clinical Neuropsychologists, Occupational Therapists, Paleographers, and Physicians among others. The topic which will receive special emphasis in IGS'97 is Neuroscience and Motor Control aspects of Handwriting Research.

Submit one original plus five copies of a camera-ready abstract, no more than two pages long, including figures and references (no electronic submission, please). For the format, please contact the secretariat. Include a cover sheet which contains the following: Full address (including fax, telephone and email); Presentation preference (poster or oral); Topic preference (Neuroscience, Education, Motor Control, Pattern Recognition, Forensic Applications, Other). Accepted abstracts will be printed in the Conference Proceedings without any difference between oral and poster presentations. A subset of the abstracts, selected by the Program Committee, will be reviewed as expanded full papers to be edited and published in a book on Advances in Handwriting Research.

Deadline for paper submission 1 March 1997

IWPIA '97: The Fifth International Workshop on Parallel Image Analysis

29-30 September 1997 Hiroshima, Japan

Topics: Theories (array, graph and parallel grammars, 2D/3D and cellular automata, digital topology), Algorithms (parallel algorithms for image processing, complexity analysis), Architectures (parallel architectures for image processing, neural networks), Applications (image processing systems based on parallel architectures). Send 4 copies of complete papers to the address on p10, or a PostScript file by email.

Deadline for paper submission 20 March 1997 Deadline for camera ready copy 1 August 1997

IWSSIP-97: 4th International Workshop on Systems, Signals and Image Processing 28–30 May 1997 Poznan, Poland

Topics: Wavelets, SVD, Fractals, Neural Networks, Speech analysis, recognition and synthesis, Image and Video processing, applications, etc. Submit four copies of a two-page summary to the address on p 10.

Deadline for paper submission 10 January 1997 Deadline for camera ready copy 15 March 1997

FORTHCOMING CONFERENCES, WORKSHOPS AND EVENTS

1996	Event	Location	Contact
27-31 Jan	Discrete Geometry and	Auckland,	Mrs. D Albert, School of Mathematical and Information
DISVIS97	Computer Vision	New	Sciences, The University of Auckland, Private Bag 92019,
[IAPR]	•	Zealand	Auckland, New Zealand, Tel: +64 9 373 7599 ext 8772,
[Fax: +64 9 373 7457, d.albert@auckland.ac.nz,
			http://www.tcs.auckland.ac.nz/ rklette/Disvis/disvis97.html
12-14 Mar	Audio & Video based	Crans-	Josef Bigun Swiss Federal Institute of Technology
AVBPA	Biometric person	Montana,	CH-1015 Lausanne, Switzerland,
[IAPR]	identification	Switzerland	http://www.tele.ucl.ac.be/IMAGES/AVBPA
1–5 April	Parallel Processing	Geneva,	http://cuiwww.unige.ch/ ipps97/
IPPS'97		Switzerland	D. G. L. ID d. N. C. ID
12–15 May	International Conference	Ottawa,	Dr Gerhard Roth, National Research Council Canada,
RADIM	on Recent Advances	Ontario	Institute for Information Technology, Building M-50,
[IAPR]	in 3-D Digital	Canada	Montreal Road, Ottawa, Ontario Canada K1A 0R6.
	Imaging and Modeling		Tel: +1 613 993 1219, Fax: +1 613 952 0215, roth@iit.nrc.ca,
		Y7 1	http://www.nrc.ca/confserv/digital97/welcome.html
19–23 May	Vision Interface '97	Kelowna,	Gerhard Roth, Visual Information Technology,
VI'97		BC, Canada	National Research Council, Ottawa, Ontario, Canada K1A 0R6. Tel: +1 613 993 1219, Fax: +1 613 952 0215,
[IAPR]			email:roth@iit.nrc.ca, http://www.csd.uwo.ca/conf/VI97
		24. 1	V. Krasnoproshin, Faculty of Applied Mathematics,
20–22 May	Pattern Recognition and	Minsk,	Belarussian State University, Fr. Scorina Av. 4,
PRIP'97	Information Processing	Belarus	220050 Minsk, Belarus, Fax: +375-172-31 84 03,
[IAPR]			abl@newman.basnet.minsk.by, dep04@fpm.bsu.minsk.by
		3.6'1 T. 1	G Gallassi, Italtel SPA, 20019 Settimo Milanese, Italy,
21–23 May	Multimedia Applications,	Milan, Italy	Tel: +39 2 4388 7744, Fax: +39 2 4388 7989, gallassi@italtel.it,
ECMAST97	Services and Techniques		http://www.italtel.it/drsc/ecmast97/head.htm
	T	C 'Italia	IWVF3 Istituto di Cibernetica, CNR, Via Toiano
28–30 May	International Workshop	Capri, Italy	6, 80072 Arco Felice, Napoli, Italy, iwvf3@imagm.na.cnr.it,
IWVF3	on Visual Form		http://amalfi.dis.unina.it/IWVF3/iwvf3cfp.html
[IAPR]	4.1 T to the state of the state	Poznan,	Prof M Domanski, Politechnika Poznanska, Instytut Electroniki i
28–30 May	4th International Workshop	Poland	Telekomunikacji, ul Piotrowo 3a, PL 60-965 Poznan, Poland.
IWSSIP-97	on Systems, Signals and Image Processing	1 Olanu	iwssip97@et.put.poznan.pl, http://www/et.put.poznan.pl/iwssip.html
9–11 June	10th Scandinavian	Lappeenranta,	SCIA'97, Department of Information Technology, Lappeen-
SCIA'97	Conference on Image	Finland	ranta University of Technology, P.O.Box 20, FIN-53851,
[IAPR]	Analysis	T miana	Lappeenranta, Finland, Fax: +358 53 621 3456,
	Analysis		Email: SCIA97@lut.fi, WWW: http://www.lut.fi/scia97
9-11 June	Workshop on	Prague,	Pavel Pudil, Inst of Information Theory and Automation,
STIPR'97	Statistical Techniques	Czech	Academy of Sciences, Pod vodarenskou vezi 4, P.O. Box
[IAPR]	in Pattern Recognition	Republic	18, 18208 Prague 8, Czech Republic, Fax: +42 2 6883031
	· · · · · · · · · · · · · · · · · ·	•	stipr97@utia.cas.cz, http://www.utia.cas.cz/TC1/stipr97.html
16–19 June	Machine Vision for	Florence,	Alberto BROGGI Dipartimento di Ingegneria dell'Informazione
MVIVAR	Intelligent Vehicles	Italy	Universita' di Parma I-43100 Parma, Italy Fax: +39 - 521 905723
	and Autonomous Robots		Email: broggi@CE.UniPR.IT, http://WWW.CE.UniPR.IT/isata,
			http://WWW.spincom.com/isata
23–26 June	Sampling Theory	Aveiro,	P Ferreira, Dept de Electronica e Telecomunicacoes, Universi-
SampTA-97	and Applications	Portugal	dade de Aveiro, 3810 Aveiro Portugal, pjf@inesca.pt,
1			http://www.inesca.pt/conferences/sampta97.html
26–27 June	Workshop on Image	Louvain-la-	Mrs C Rouyer, Laboratoire de Telecommunications et Telede-
WIAMIS'97	Analysis for	Neuve,	tection, Btiment Stevin 2, place du Levant, B-1348 Louvain-la-
	Multimedia Interactive	Belgium	Neuve, Belgium. Tel: +32 10 478075, Fax: +32 10 472089,
	Services		rouyer@tele.ucl.ac.be
	Del vices		
2–4 July		Santorini,	DSP97, Electronics Laboratory, University of Patras, GR-26110
2–4 July DSP97	13th Int Conf on Digital Signal Processing	Santorini, Greece	DSP97, Electronics Laboratory, University of Patras, GR-26110 Patras, Greece. Tel: +30 61 997 463,

FORTHCOMING CONFERENCES, WORKSHOPS AND EVENTS

1997	Event	Location	Contact
2–4 July	First Int Conf on	Utrecht, the	Dr ter Haar Romeny, Imaging Center, Univ Hospital Utrecht,
SS'97	Scale-Space Theory	Netherlands	E01.334, Heidelberglaan 100, 3584 CX Utrecht, Holland. Tel:
	in Computer Vision		+31-30-2508197 Fax: +31-30-2513399 scalespace97@cv.ruu.nl
	•		http://www.cv.ruu.nl/Conferences/ScaleSpace97.html,
7–9 July	Artificial Neural Networks	Cambridge,	ANN97 Secretariat, IEE Conference Services, Savoy Place,
ANN '97		UK	London WC2R 0BL, UK. Fax: +44 171 240 8830
			nashley@iee.org.uk, joconnell@iee.org.uk
7–9 July	Artificial Intelligence	Capri, Italy	Clare Day, Wessex Institute of Technology, Ashurst Lodge,
AIENG97			Ashurst, Southampton, SO40 7AA, UK. Tel: +44 1703 293223,
Car Assessment Car IX			Fax: +44 1703 292853, cday@wessex.ac.uk,
			http://www.wessex.ac.uk/conferences/aieng
27 Jul - 1 Aug	Parallel and Distributed	San Diego,	SPIE, PO Box 10, Bellingham, WA 98227-0010, USA Tel: +1
SPIE	Methods for Image Processing	California	360 676 3290, Fax: +1 360 647 1445
18-20 Aug	4th International Conf on	Ulm,	Daimler Benz Research Center Ulm Wilhelm Runge Str. 11
ICDAR '97	Document Analysis	Germany	89081 Ulm, Germany, Tel: +49-731-505-2151, Fax: +49-731-
[IAPR]	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		505-4105, icdar97@dbag.ulm.daimlerbenz.com,
			http://wwwicdar97.dbag.ulm.daimlerbenz.com/,
			http://www.rtna.daimlerbenz.com/spitz/icdar97.html
22-23 Aug	2nd IAPR Workshop on	Nancy,	Karl Tombre, INRIA Lorraine & CRIN/CNRS 615 rue du
GREC'97	Graphics Recognition	France	jardin botanique, B. P. 101 54602 Villlers—les-Nancy Cedex,
[IAPR]	(TC-10)	Trance	France. tombre@loria.fr, Tel: +33 3 8359 2071
	(10-10)		Fax: +33 3 8327 8319, atul@nynexst.com
23-29 Aug	15th International Joint	Nagoya,	IJCAI–97 c/o American Association for Artificial Intelligence
IJCAI–97	Conference on Artificial	Japan	445 Burgess Drive, Menlo Park, CA 94025-3496, USA
IJCAI-97	Intelligence	заран	pollack@cs.pitt.edu, http://ijcai.org/ijcai-97/
24 28 4 22	Handwriting	Genova,	ART Srl PO Box 7026, I-16148 Genova, Italy.
24–28 Aug	and Drawing	Italy	Fax +39 10 3532154, http://www.psych.kun.nl/igs
IGS97[IAPR]	Time-Frequency and	Coventry,	Dr Stuart Lawson, Dept of Engineering, University of Warwick,
27–29 Aug TFTS'97	Time-Frequency and Time-Scale methods	UK	
1513 97	Time-scale methods	UK	Coventry, CV4 7AL, UK. Tel: +44 1203 523780,
10 12 0	C	77:-1	Fax: +44 1203 418922, ssl@eng.warwick.ac.uk
10–12 Sep	Computer Analysis of	Kiel,	Prof Gerald Sommer, Institut fuer Informatik, Christian-
CAIP '97	Images and Patterns	Germany	Albrechts-Universitaet Kiel, Preusserstr. 1-9, D-24105 Kiel,
[IAPR]			Germany, http://www.informatik.uni-kiel.de/~caip97/Fax:
17 10 C	100	T.	+49 431 560481, caip97@informatik.uni-kiel.de Tel +49 431 560473
17–19 Sep	International Conference	Firenze,	Prof Alberto Del Bimbo, Dipartimento di Sistemi e Informat-
ICIAP'97	on Image Analysis	Italy	ica, Universita di Firenze, Via S. Marta 3, I-50139, Firenze,
[IAPR]	and Processing		Italy. iciap97@dsi.ing.unifi.it, http://dsi.ing.unifi.it/iciap97/
20.20.7			http://imago.ing.unibs.it/ iapricgb
29–30 Sep	5th Int Workshop on Paral-	Hiroshima,	Kenichi Morita Faculty of Engineering, Hiroshima University
IWPIA '97	lel Image Analysis	Japan	Higashi-Hiroshima, 739, Japan iwpia@ke.sys.hiroshima-u.ac.jp,
			http://kelp.ke.sys.hiroshima-u.ac.jp/iwpia/
26–29 Oct	International Conference	Santa	Prof. B. R. Hunt, c/o Courtesy Associates, 655 Fifteenth St. NW,
ICIP'97	on Image Processing	Barbara,	Washingthon, DC 20005, attn: Ms Pamela Wagner ICIP-97.
		CA, USA	Tel: +1 202 639 4804 Fax: +1 202 347 6109
			http://www.ece.ucsb.edu/icip97/
8–12 Dec	IEEE 3rd Int Conf on Algo-	Melbourne,	Alberto Broggi, Dipartimento di Ingegneria dell'Informazione,
ICA3PP-97	rithms And Architectures	Australia	Universita' di Parma, Viale delle Scienze, I-43100 Parma, Italy.
	for Parallel Processing		Tel: +39 521905707 Fax: +39 521905723 broggi@CE.UniPR.IT
			http://www.ce.unipr.it/ica3pp97
	T4	Location	Contact
1998	Event	Docution	
1998 4–7 Jan	International Conference	Bombay,	Prof L S Davis, Institute for Advanced Computer Studies, Room
			0.1 0.00-0.00

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	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
WOCS, IPPS'97	Geneva				1, 1–5								
ICCPOL'97 (v18n4)	Hong Kong	□ 31			2-4								
SDAIR'97 (v18n4)	Nevada	□ 15			20-23								
ICASSP'97 (v18n4)	Munich				21–24			-					
ADIC (v18n4)	Erlangen	□ 31			25								
RADIM	Ottawa					12–15							
76.IV	Kelowna			□ 31		19–23							
PRIP'97	Belarus			0.1		20–22							
SMATI'97 (v18n4)	Bonn			□ 24		21–23							
EMMCVPR'97 (v18n3)	Venice					21–23			e.				
ECMAST97	Milan			□ 25		21–23							
QCAV'97 (v18n4)	Burgundy	8 •			□ 15	28–30				,			
IWSSIP-97	Poznan	• 10		□ 15		28–30							
IWVF3	Capri					\Box 1, 28–30							
WSOM (v18n4)	Helsinki			• 1			4–6						
PRP-V (v18n1)	Vlieland					0 1	4–6						
SCIA'97	Lappeenranta			□ 31			9–11			1			
STIPR'97	Prague		• 28		□ 30		9-11						
MVIVAR	Florence						□ 16 16–19						
AIM'97 (v18n4)	Tokyo	• 15			□ 15		16–20						
SampTA-97.	Aveiro				0 1		23–26						
ECSAP-97 (v18n3)	Prague		□ 14				24–27						
WIAMIS'97	Louvain-la-Neuve			• 15		□ 15	26–27						
SS:97	Utrecht			□ 15				2-4					
DSP97	Santorini			□ 1				2-4					
ANN'97	Cambridge, UK			□ 14				7–9					
AIENG97	Capri		□ 28					7–9					
SPIE	San Diego						□ 30	27-	_				
ICDAR'97 (v18n3)	Ulm					0 1			18–20				
GREC'97	Nancy			• 1			□ 15		22–23				
IJCAI-97	Nagoya	• 23			□ 28				23–29				
1GS.62	Genova			• 1					24–28				
TFTS'97	Coventry			• 14				0.4	27-29				
CAIP'97 (v18n3)	Kiel		• 1				□ 20			10-12			
ICIAP'97	Florence	• 30					0 1			17–19			
IWPIA '97	Hiroshima			• 20						29–30	-		
ICIP'97	Santa Barbara	• 31					□ 13				26–29		
ICA3PP-97	Melbourne			• 17						0			8-12
1CCV'98	Bombay			• 24								2	

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.