

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

# NEWSLETTER

#### Editor

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# From the Editor's Desk

#### Dear Everybody,

There is a saying that goes like this: A fool man can ask more questions than a wise man can answer! On p 4 of this issue you will find a list of questions many "fool" women ask on information technology. Perhaps some readers think that such questions should not be asked and certainly should not be allowed to occupy the pages of their favourite(!) Pattern Recognition newsletter. However, it becomes increasingly clear that the development of information technology can not ignore its social impact. The questions asked by women are only a subset of the questions asked by the general public and they cannot be dismissed simply as "feministic rubbish".

One of the issues we often have to expand upon when writing a proposal concerns the "social and economic benefits" that will result from the proposed research. Depending on the funding programme, one may get away with a "they will be great" or one may have to produce a fully worked out Volume 19

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business plan that will be crucial to the funding of the proposal. It was at a social occasion a few years back, when, responding to somebody's question, I said that I was working on automatic vehicle navigation for underwater inspection. My reply prompted an instant response from another guest: "Oh, so you are one of those who try to put me out of work!" He turned out to be a deep sea diver. I tried to sell to him all that stuff about "dangerous environments for the humans", "increased reliability", "improved quality of life" and all that bull \_\_\_\_\_ we write in the proposals. He looked at me sternly and said: "No thank you, I am very happy as I am. I do not find diving dangerous. I like my job and I want to keep it! Please find something else to work on!" So I did. A few months later I started working on satellite remote sensing, and I had the pleasure of meeting George, our "expert on the ground". Perhaps it would be a typical English under-statement to say that George did his best to ground our project! So, good old George would have felt secure in his job as the "expert on the ground" if he had the chance to read the article on p 2 that "Spy in sky costs more than a man on ground". But George will not read it because George is not a Pattern Recognition man as he never thought that we could do much good "with our machines"! After that, I would say that it is not surprising that nowadays it is not politically correct to even hint in our proposals that we may put people out of work. Aspects like increased safety, improved environment etc have to be stressed instead. Damn! We have to invent new bull\_\_\_\_ for our proposals now!

#### Maria Petrou

PS Please excuse my cynicism; it is the result of a deprived childhood...

# News for Members

#### **DIY IAPR membership!**

From April 1st 1997 you will be able to sign yourself in the list of IAPR members, at the site:

http://george.ee.washington.edu/IAPR/index.html

However, please note that adding your name on the list will not entitle you to receiving the IAPR newsletter, or having any other benefits stemming from IAPR membership, unless you are a *subscribing* member of one of the national societies affiliated to IAPR.

#### The impact of ICPR to Industry

The industrial participation in the last ICPR in Vienna was 9.6%. This is a significant increase over the 5% industrial participation in Jerusalem in 1994. The major contributors were USA and Japan with 19% of their papers coming from industry, followed by Belgium (15%), Germany (12%), Korea (10%), Israel and Austria (8%), the Netherlands (7%) and France (6%). This is counting only the countries with more than 10 papers each. Well done IAPR! The industrial giants started noticing you!

Gerd Maderlechner, Industrial Liaison Committee

#### The NATO Advanced Study Institute (ASI)

The Advanced Study Institutes are primarily high level teaching activities in which carefully defined subjects are presented in systematically and coherently structured programs for professionals in the field, at graduate and post-doctoral level. Considerable benefit is derived from the fact that the ASI is a small meeting with lectures given by a selected team of international experts. One such meeting is shortly to be held in Stirling, UK with the title "Face Recognition: From Theory to Applications" (see table for more details).

#### "Spy in sky costs more than man on ground"

"Spy-in-the-sky satellites used to unmask farmers who cheat to claim higher European Union livestock and crop subsidies are proving less accurate and six times more expensive than sending inspectors to check farmers in person" reports David Brown in the British newspaper Daily Telegraph, on February 21, 1997. Apparently, the 4% error committed by such systems does not allow the UK government to use the satellite data alone as admissible evidence in court. However, the good news is that the British Controller and Auditor General has not lost faith yet in automation and he recommends that the government should persevere with the remote sensing approach which gradually becomes cheaper and more efficient.

# TC15 launches its activities

As a new technical committee of IAPR, TC-15 intends to federate and encourage research work in Pattern Recognition and Image Analysis within the graph theory framework.

On April, 17-18, 1997 it is planning to hold its 1st International Workshop on Graph-based Representations in Pattern Recognition (GbR'97), in Lyon, France.

The workshop will provide a forum for presenting and discussing research results in this area as well as their applications. The workshop is scheduled around two invited talks and two sessions (all participants will receive the opportunity to present their work either orally or by a poster). A lot of time will be devoted to discussions and informal debates about theoretical and practical graph issues. In order to have active discussions, the number of participants will be limited to 30.

Topics for oral presentations include, but are not limited to: graph based methodology, graph representation, graph transformations for pattern recognition, image structure from graph, graph based clustering, graph matching, image segmentation with graphs, graphs versus Voronoi diagrams, graphs versus rigid structures (quad-trees, pyramids), aspect graphs.

If you intend to participate or would like further information on TC15, please send an email to the address on p10.

#### THE IAPR INDUSTRIAL LIAISON COMMITTEE

The purpose of the committee is to enhance involvement by industrial researchers and practitioners in affairs of the IAPR. The goal of this is twofold: to improve the academic researchers' awareness of problems and solutions of industry, and to encourage the transfer of practical solutions from academia to industry. One of its main activities in the past has been the choice of the "Best Industry-Related Paper Award", presented at each ICPR.

The members of Industrial Liaison Committee are:

Lawrence O'Gorman, chairman, (Bell Laboratories, log@research.bell-labs.com), John Bernsen (Philips Center for Manufacturing Technology, john@isp.cft.philips.nl), Ruud Bolle (Thomas J Watson Research Center IBM, bolle@watson.ibm.com), Mazakazu Ejiri (Central Research Laboratory Hitachi, ejiri@crl.hitachi.co.jp), Bruce E Flinchbaugh (Computer Science Center Texas Instruments, bef@osage.csc.ti.com), Robert Forchheimer (Department of Electrical Engineering, robert@isy.liu.se), Martin Kraaijveld (Shell Research m.a.kraaijveld@siep.shell.com), Gerd Maderlechner (Corporate Research and Development Siemens AG, gm@zfe.siemens.de), Masatsugu Kidode (Kansai Laboratory Toshiba Corporation, kdd@krl.toshiba.co.jp), Dragutin Petkovic (IBM Almaden Research Center, petkovic@almaden.ibm.com), Jorge L. C. Sanz (IBM Almaden Research Center, sanz@buevm1.vnet.ibm.com).

# What is IFIP?

The International Federation for Information Processing (IFIP) is a non-governmental, non-profit umbrella organization for national societies working in the field of information processing. It was established in 1960 under the auspices of UNESCO as an aftermath of the first World Computer Congress held in Paris in 1959. Today, IFIP has several types of members (IAPR being one of them) and maintains friendly connections to specialized agencies of the UN system and non-governmental organizations. Technical work, which is the heart of IFIP's activity, is managed by a series of Technical Committees. Each of these committees has two major types of activities: Events and Publications. On-line information on IFIP Publications can be found in the following addresses:

• For Chapman & Hall publications:

http://www.it-ch.com and

http://www.thomson.com/itch/catalogue/catalog.html

• For the Elsevier/North Holland publications:

http://www.elsevier.nl

The latter includes the books published by IFIP in the series:

- IFIP Transactions A: Computer Science and Technology
- IFIP Transactions B: Comp. Applications in Technology
- IFIP Transactions C: Communication Systems

The detailed information on individual IFIP publications includes the Title, Editors, Contents, Description, Related Publications and Bibliographic and Ordering information. The IFIP newsletter is available on line at: http://www.ifip.or.at/newsl.htm

Further information on IFIP can be obtained from: IFIP Secretariat, Hofstrasse 3. A-2361 Laxenburg, Austria Tel: +43 2236 73616, Fax: +43 2236 736169, http://www.ifip.or.at/, ftp.ifip.or.at



- YOU are affiliated to IFIP!!!

"Market forces alone will create the Information Super Footpath - a Highway needs planning." Professor Peter Cochrane, British Telecom

# COMPUTER VISION FROM HEAVEN

On Friday January 24, Computer Vision made history: The first lecture of a Computer Vision Course was broadcast by satellite throughout Europe. It was organised by EuroPACE 2000, ECVNet and the Catholic University of Leuven. Although initially it was going to be a fee paying course, due to the very generous support from the ECVNet it ended up being absolutely free. The course was broadcast over six successive Fridays until February 28. It consisted of 6 thematic sessions of 2 hours each. Each session started with a lecture that lasted for an hour and it was followed by a live panel discussion among leading experts. Your favourite newsletter did not report on it in advance because your favourite newsletter did not know about it until it was too late. However, unlike newsletters, which move like ducks, slowly and with dignity, some people can act with the speed of light, and the report that follows is from such a person!

#### For the love of CV: Man versus time

It was just two days before the first session that a colleague of mine informed me of the tele-course on Computer Vision. He thought that it would be a good idea for the new members of our group to attend this series of programmes so that they have a good overview of various aspects of the theory and application of Computer Vision.

A closer look at the homepage of the course convinced me (http://www.europace.be/course/cv97/). Unfortunately, everything had to be arranged in less than two days so that our students did not miss the first and the most general introductory session. A first attempt to book a room in our University with all the facilities needed, failed. The only possible solution was to purchase our own satellite equipment and set it up to track the correct satellite, at the right frequency and polarisation according to the admittedly very good specifications given by the organisers. A dish of 1.2m in diameter and the necessary hardware were ordered and purchased the following day! This gave a knock to my preconceived idea of bureaucratic University procedures with time-delayed responses! They certainly knew how to raise to the circumstance. One day before the broadcast we found ourselves with just a 2 hour temporal permit to setup the equipment on a roof adjacent to our seminar room. Two hours was good enough as this was the duration of the course including the live discussion after the one-hour lecture. Setting up the antenna and aligning it correctly in a matter of minutes without proper installation equipment and with just ten minutes of pre-broadcast signal from the satellite tansponder was yet another story! But Heavens was on our side: there was no wind so the sticky tape, that "secured" the dish on a pole, held! With no minutes to spare, we were ready on time!

The students enjoyed very much the course and the participation increased monotonically in the subsequent sessions for which the proper installation of our system had been completed. By the time the course finished, we all felt wiser, not only on Computer Vision but on all sorts of other things too!

> Nikos Georgis University of Surrey

# Spinning a Web from Past to Future

M any areas of society are being transformed by computer technology. Such transformations include transition from women's traditional work to work based on modern technology; from communicating within personal communities to communicating within virtual communities; from traditional job gendering to new perspectives on 'who does what'. In this context, the word 'computerisation' is interpreted not just in the narrow sense of computing systems, but also in a broader sense which includes the organisational and social context in which computer systems are designed and used.

The relevant issues are many, but perhaps they can be grouped under a few categories:

- Information Society, Multimedia and Networking: Can women's request for interpersonal networking be realised by new IT? How can multimedia and telecooperation be used successfully in order to improve women's living and working conditions? What is the impact of the transiency and changeability of electronic artifacts?
- Creating Models and Tools: Which aspects of feminist perspectives, such as epistemological criticism, can be integrated into informatics? Which paradigms and metaphors have contributed to the construction of computer (software) and the theory of computer science? Do they exclude women? How should computer systems (eg user interfaces) be designed so they consider the requirements of women?

- **Bodily Functions in Cyberspace:** How is the body represented in cyberspace/virtual reality and to what end?
- Labour and Living: Do public and private spaces merge? What are the restrictions for technical and social/political chances for flexible time-management? Will there be any jobs without IT-knowledge? Will the global division of labour contribute to equality?
- Education: What should be the elements of an informatics curriculum which represents informatics as a node in the web of other disciplines? How can the subjectivity of modelling and designing be taught in informatics? Will IT remove the distinction between public and private education?
- **History Herstory:** Herstory of feminist criticism of IT. Has feminist criticism changed women's strategies for gaining access to and influencing new technologies? Can women's influence be recognised in formative processes of informatics?

One may ask many questions on these topics and the answers are not easy. These issues will be discussed in the forthcoming interdisciplinary conference on Women, Work and Computerisation, organised by IFIP (IFIP-WWC 97, c/o Doris Koehler, Hamburg University Computer Centre, Schlueterstr. 70, D-20146 Hamburg, Germany. Fax: +49 40 4123 6270, IFIP-WWC97@rrz.uni-hamburg.de, http://www.uni-hamburg.de/~frauen/first.htm ).

# BOOK REVIEW

**Theory and Applications of Image Analysis II** edited by *G Borgefors*, World Scientific, ISBN 981-02-2448-6

T his is a collection of 31 selected papers form the 9th Scandinavian Conference on Image Analysis. The papers are divided into seven sections: Edges and Curves, Texture, Depth and Stereo, Scene Analysis, 3D Motion, Biomedical Applications and Industrial Applications. The list reflects the procedure used in the selection process - best results in the reviewing process. Unfortunately, the selection strategy leaves the collection without a focus. It is nothing more and nothing less than a set of (good) papers. This impression is reenforced by the absence of an index and a list of authors. Consequently, the only answer to review reader's standard questions: 'Should I have a look at the book?', 'Should our group library have a copy?' can be given in terms of the components, not the whole: yes, if there are enough papers of interest to you; no otherwise.

OK then, where can I find the list of papers this book is comprised of? After trying the editor's and the publisher's home pages, I conclude that you probably cannot find it, unless you have the book, which brings us back to square one... US The book costs 48 UK pounds in Europe, 72 dollars elsewhere. This is comparable with the price of the original SCIA proceedings. This raises another question: "If I had 45 spare pounds, would they be better spent on the SCIA proceedings or on this book?"

Having made several remarks that are not exactly encouraging people to buy the reviewed book, I must add that I have read with interest a number papers and that the quality is, in my opinion, very good on average. What else can I do to redeem myself from the wrath of the editor and World Scientific (only joking) ? What about copying the contents, ie. the list of the selected papers, and placing it on our WWW server? It would not take more than an hour and the result may be more informative than this whole review. Well, it is against the copyright printed right next to the table of contents! Let's hope someone will do it and thus send my main criticism to the dustbin of history!

> George Matas University of Surrey

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# BOOK REVIEW

**Neural Networks for Pattern Recognition** by *Christopher M Bishop*, Clarendon Press, Oxford, 1995, ISBN 0-19-853849-9, 482pp, and **Pattern Recognition and Neural Networks** by *B D Ripley*, Cambridge University Press, Cambridge, 1996, ISBN 0-521-46086-7, 403pp.

fter the death of the perceptron around 1970 and its revival as neural network after 1985, it took many years before this concept was accepted again by the pattern recognition community. A single glance made clear that neural network based classifiers contradicted the classic design principles for trainable pattern recognisers. Moreover, many of the papers reporting enthusiastically on the neural net successes appeared to neglect much more traditional methods that could do the job equally well or better. This regrettable state of affairs has now come to an end. It has become clear to most researchers in the pattern recognition field that artificial neural networks have interesting properties. The neural network community seems to have realized that there was a world before the back-propagation rule. After the earlier works by Pao and Schalkoff, more books are now being published bridging the gap. Two recent ones are "Neural networks for pattern recognition" by C M Bishop and "Pattern recognition and neural network s" by B D Ripley.

From a pattern recognition point of view the books are similar with respect to the topics that are treated. On the basis of a list of 27 possible subjects constructed by this reviewer, Ripley scored 13 and Bishop 12 with just a few differences. For missing some of the recent ones they cannot be blamed: bagging and the support vector classifier are very new developments, of interest to the researcher, but too recent for crystallisation in a book. For other issues both authors seem to have no interest because these issues are too fundamental: the no-free-lunch theorems and the compactness hypothesis. This is really a pity as a discussion on these topics might reveal the essential assumptions underlying the applicability of pattern recognisers and neural networks. On the other side of the spectrum, both authors disregard the opportunity to write a truly practical book, directly of use to the engineer and applied physicist that have to solve the real world pattern recognition problems: there is no interface with applications in speech recognition, image analysis or computer vision. As a result, classifiers based on the Hausdorff distance or on the edit distance are not discussed. To be fair, the books by Bishop and Ripley share this lack with almost all other pattern recognition books of the past. One may hope, however, that this gap will be bridged someday.

If we consider the differences in the list of topics treated in the two books, then we see for example, that Ripley treats some non-neural techniques such as belief networks and decision trees while Bishop more extensively discusses neural networks, their optimisation and related generalisation issues. For instance, he uses much more space for the over-training phenomenon. It is to be regretted, however, that both books fail to remove clearly the common but wrong belief that it is worthwhile to find the global minimum in the classical neural network training procedure. This is good only for very large training set sizes compared to the number of weights. On the whole it can be stated that Ripley has written a more general book on pattern recognition, treating neural networks as one of the topics. Bishop's book can be better characterised as a neural network introduction placed in a pattern recognition context.

Considering the qualities of the books, it is immediately apparent that the one by Ripley looks better and it is more accurately printed. It is a pleasure to browse through it, get caught by a sideline comment or attracted by a discussion. A special feature is the large number of original proofs. This will be mainly of interest to the scientist searching for the fundamentals. An extensive reference list and an author index serve the same purpose. A glossary and examples may make it accessible to students in engineering. However, Bishop serves this purpose better. He has written a text book, introducing techniques, relating them to the theory and explaining their pitfalls. Moreover, a large set of exercises makes it attractive for the teacher to use the book.

In conclusion, the two books should be warmly welcomed by the neural network and pattern recognition communities. Treating almost the same field they have their own style, goal and emphasis. They may also have a somewhat different readership. For instance, Bishop can be recommended to students and engineers in computer science, Ripley to researchers with an interest in statistical pattern recognition. If possible, however, take both!

> Robert P W Duin, Delft University of Technology, Holland

(This review appears by permission of the British Computer Society. It first appeared in a more extended form in the Computer Journal.)

# CONFERENCE ANNOUNCEMENT

#### BMVC97: The Eighth British Machine Vision Conference 8–11 September 1997 Colchester, UK

Topics: Image processing and feature extraction, Practical applications, Object recognition and scene analysis, Model-based coding, Reconstruction of 3D shape, Architectures, Computational issues in perception, Active vision, Robotic vision and sensory fusion, Motion analysis, Advanced pattern analysis, Neural networks.

Four anonymous copies of full papers not exceeding 10 pages (approx. 5000 words if there are no figures) should be submitted to:

## BMVC97 Secretariat,

Department of Electronic Systems Engineering, University of Essex, Wivenhoe Park, Colchester, CO4 3SQ, United Kingdom.

For more information see http://peipa.essex.ac.uk/BMVC97/

Deadline for paper submission	30 April 1997
Deadline for camera ready copy	July 1997

1997	Event	Location	Contact
17–18 April	Graph-based	Lyon,	J M Jolion, Lab Recon de Formes et Vision, INSA Lyon, Bat
GbR [IAPR]	Representations	France	403, 69621 Villeurbanne, France. jolion@rfv.insa-lyon.fr
12–15 May	International Conference	Ottawa,	G 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,
			http://www.nrc.ca/confserv/digital97/welcome.html
19-23 May	Vision Interface '97	Kelowna,	G Roth (address as above)
VI97 [IAPR]		BC, Canada	http://www.csd.uwo.ca/conf/VI97
20-22 May	Pattern Recognition and	Minsk,	V. Krasnoproshin, Faculty of Applied Mathematics,
PRIP'97	Information Processing	Belarus	Belarussian State University, Fr. Scorina Av. 4,
[IAPR]			220050 Minsk, Belarus, Fax: +375-172-31 84 03,
			abl@newman.basnet.minsk.by, dep04@fpm.bsu.minsk.by
28-30 May	International Workshop	Capri, Italy	IWVF3 Istituto di Cibernetica, CNR, Via Toiano 6,
IWVF3	on Visual Form		80072 Arco Felice, Napoli, Italy. iwvf3@imagm.na.cnr.it
[IAPR]			http://amalfi.dis.unina.it/IWVF3/iwvf3cfp.html
4–6 June	Pattern Recognition	Vlieland,	Dept. of Medical Informatics, Erasmus University,
PRP-V	in Practice V	The	P.O. Box 1738, 3000 DR Rotterdam, The Netherlands
[IAPR]	property and an application of the second seco	Netherlands.	Tel: +31 104087050 Fax: +31 104362882, prp5@mi.fgg.eur.nl
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		Lappeenranta, Finland. Fax: +358 53 621 3456,
	1 4144 9 545		SCIA97@lut.fi, 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
	In Tattern Recognition	Republic	stipr97@utia.cas.cz, http://www.utia.cas.cz/TC1/stipr97.html
11–13 June	Compression of Sequences	Positano,	B Carpentieri, Dipt di Infor ed Appl R M Capocelli,
SEQUENCES	Compression of Sequences	Italy	Universita di Salerno, 84081 Baronissi, Italy.
SEQUENCES		Italy	sequences97@dia.unisa.it, http://www.unisa.it/bc.dir/CCS97
15–16 June	Nonrigid and Articulated	Puerto Rico	D Metaxas, Dept of Comp and Inf Science, University of
NAM	Motion	I dello Rico	Pennsylvania, 200 South 33rd St, Philadelphia, PA 19104-6389,
INAIVI	Motion		USA. dnm@central.cis.upenn.edu,
			http://www.cc.gatech.edu/conferences/nramw97/
20 1	Content-based access of	Puerto Rico	
20 June		Puerto Rico	F Liu, E15-390, MIT Media Lab, 20 Ames St, Cambridge, MA
CBA	image and video libraries	Decenter Direc	02139 USA. http://www.cs.uchicago.edu/~swain/cfp-ivl.html
20 June	Undergraduate Education	Puerto Rico	Kevin Bowyer, Dept of Comp Sci & Eng Univ of South Florida,
UEIC	& Image Computation	D ( D	Tampa, Florida 33620, USA. kwb@csee.usf.edu
20 June	Document Image Analysis	Puerto Rico	Luc Vincent, Xerox, DDS, 3400 Hillview Avenue, Bldg 3,
DIA			Palo Alto, CA 94304, USA. Tel: +1 415 813 7863,
			Fax: +1 415 813 6792, lucv@adoc.xerox.com,
			http://marathon.csee.usf.edu/documents.html
23–25 June	Multimedia Signal	New Jersey,	kjrliu@eng.umd.edu,
MMSP	Processing	USA	http://neuro.ece.wisc.edu/~tsuhan/mmtc.html.
23 Jun - 4 Jul ASI	Face Recognition	Stirling, UK	http://chagall.gmu.edu/faces97/natoasi/
28 Jun - 2 Jul	Bayesian Image Analysis	Leeds, UK	C Gill, Dept of Statistics, University of Leeds, Leeds, LS2 9JT
LASR			UK. Tel: +44 113 2335157, Fax: +44 113 2335102,
			workshop@amsta.leeds.ac.uk,
			http://www.amsta.leeds.ac.uk/statistics/leeds97/leeds97.html
7–11 July	Industrial Electronics	Guimaraes,	C A Couto, Dept of Ind Elec, University of Minho, Azurem, 4800
		Portugal	Guimaraes, Portugal. Tel: +351 53510190, Fax: +351 53510189
ISIE'97			

# FORTHCOMING CONFERENCES, WORKSHOPS AND EVENTS

# FORTHCOMING CONFERENCES, WORKSHOPS AND EVENTS

1997	Event	Location	Contact
7–11 July SCI'97	Image Processing and related fields	Caracas, Venezuela	M Bennamoun, Signal Processing Research Centre, School of Elec Syst Eng, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001, Australia. Tel: +61 7 3864 1204, Fax: +61 7 3864 1516, m.bennamoun@qut.edu.au
18–20 Aug ICDAR '97 [IAPR]	4th International Conf on Document Analysis	Ulm, Germany´	Daimler Benz Research Center Ulm Wilhelm Runge Str. 11 89081 Ulm, Germany, Tel: +49-731-505-2151, Fax: +49-731- 505-4105, icdar97@dbag.ulm.daimlerbenz.com, http://www.icdar97.dbag.ulm.daimlerbenz.com/, http://www.rtna.daimlerbenz.com/spitz/icdar97.html
22–23 Aug GREC'97 [IAPR]	2nd IAPR Workshop on Graphics Recognition (TC-10)	Nancy, France	Karl Tombre, INRIA Lorraine & CRIN/CNRS 615 rue du jardin botanique, B. P. 101 54602 Villers–les-Nancy Cedex, France. tombre@loria.fr, Tel: +33 3 8359 2071 Fax: +33 3 8327 8319, atul@nynexst.com
24–28 Aug IGS97[IAPR]	Handwriting and Drawing	Genova, Italy	ART Srl PO Box 7026, I-16148 Genova, Italy. Fax +39 10 3532154, http://www.psych.kun.nl/igs
5–9 Sep IWSNHC3DI	Hybrid Coding and 3D Imaging	Rhodes, Greece	M G Strintzis Dept of Elec & Comp Eng, Aristotle Univer- sity of Thessaloniki, PO Box 460, 54006 Thessaloniki, Greece. Tel: +30 31 996351, Fax: +30 31 996342, strintzi@eng.auth.gr, http://uranus.ee.auth.gr/IWSNHC3DI'97/
7–11 Sep NSIP'97	Nonlinear Signal and Image Processing	Mackinac Island, Michigan	E J Coyle, Elec & Comp Eng, 1285 EE Building, Purdue Univ, West Lafayette, IN 47907 1285, USA. Tel: +1 317 494 3470, Fax: +1 317 494 3358, coyle@purdue.edu, http://www.ecn.purdue.edu/NSIP
10–12 Sep CAIP '97 [IAPR]	Computer Analysis of Images and Patterns	Kiel, Germany	G Sommer, Institut fuer Informatik, Christian-Albrechts- Universitaet Kiel, Preusserstr. 1-9, D-24105 Kiel, Germany, http://www.informatik.uni-kiel.de/~caip97/Fax: +49 431 560481, caip97@informatik.uni-kiel.de Tel +49 431 560473
15–17 Sep DAGM'97	19th DAGM Symposium Mustererkennung (Pattern Recognition)	Braunschweig Germany	F M Wahl, Institute for Robotics, Technical University Braunschweig D-38114 Braunschweig Tel: +49 531 3917451, Fax: +49 531 3915696 dagm97@tu-bs.de, http://www.cs.tu-bs.de/rob/dagm97/
17–19 Sep ICIAP'97 [IAPR]	International Conference on Image Analysis and Processing	Firenze, Italy	A Del Bimbo, Dipartimento di Sistemi e Informatica, Uni- versita di Firenze, Via S. Marta 3, I-50139, Firenze, Italy. iciap97@dsi.ing.unifi.it, http://dsi.ing.unifi.it/iciap97/ http://imago.ing.unibs.it/~iapricgb
22–26 Sep EUROPTO	Image and Signal Process- ing for Remote Sensing	London, UK	EUROPTO Direct Communications GmbH, Xantener Str 22, D - 10707 Berlin, Germany. Tel: +49 30 881 50 47, fax: +49 30 8868 2946, 100140.3216@Compuserve.com, http://www.dc-europto.com
14–17 Oct SPIE	Machine Inspection, Intelligent Robotics	Pittsburgh, USA	http://www.spie.org/info/is97.html
20–22 Oct CAMP'97	Computer Architecture for Machine Perception	Boston, USA	M Ferretti DIS Universita di Pavia, Via Ferrata 1, I-27100 Pavia, Italia. Tel: +39 382 505365, Fax: +39 382 505373 http://www.cs.umass.edu/~camp97
3–5 Nov BSDIA'97	Document Image Analysis	Curitiba, Brazil	N A Murshed, Lab of Document Im Anal & NN, Mestrado em Comput, PUC-PR, R Imaculada Conc, 1155, Curitiba, PR 80215- 901 Brasil. Tel: +55 41 330 1668, Fax: +55 41 330 1620 murshed@rla01.pucpr.br
9–12 Nov CVIV	Intelligent Transportation	Boston, Massachusetts	A Broggi, Dip di Ingegneria dell'Informazione, Universita di Parma, I-43100 Parma, Italy. Fax: +39 521 90 5723, broggi@ce.unipr.it, http://www.ce.unipr.it/itsc97, http://www.ieee.org/itsc/itsc97
6–9 Jan 1998 HICSS	Complex Comp Systems	Hawaii	A Broggi (address as above), http://www.ce.unipr.it/hicss

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

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.