

Newsletter 52, October 1997

TC10 News #52

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Dear TC10 members and friends,

This is the first TC10 news after GREC'97 and ICDAR'97. This issue begins with a report on the GREC workshop. Since it has been about two months from the date of the last TC10 news, a lot of announcements have accumulated for this issue.

Some of the session chairs and session scribes for GREC'97 have given us their feedback on the respective sessions. The chairs and scribes who haven't contacted us yet, please send us your impressions, notes, or transcripts from the respective sessions. We hope to incorporate these in the post workshop book. Please e-mail the notes, etc. to atul@nynexst.com and Karl.Tombre@loria.fr.

Karl Tombre has written a report on the GREC'97 workshop. The report, along with my additions, is included below. I would welcome other participants' impressions of GREC'97. Perhaps some of you have more interesting thoughts/memories of GREC'97. Please e-mail me your comments.

Deadlines for some workshops/conferences that are of great interest to the TC10 community are fast approaching.

RIDT'98 (Raster Imaging and Digital Typography) has a submission deadline of October 15. The CFP can be found in the last issue of TC10 news.

Vision Interface'98 has a deadline of October 31. The CFP is included below.

The Pattern Recognition journal is accepting submission for a special issue on Image Registration. The deadline for submissions is November 1. CFP is included below.

SSPR'98 (Structural and Syntactic PR) and SPR'98 (Statistical PR) have submission deadlines of December 1. The SPR'98 CFP is included below. The SSPR'98 CFP was included in the last issue of TC10 news.

TC10 News is available on-line at the following URL. Back issues are also archived at this URL.

<http://www.iapr-tc10.or.kr/TC10-News> Now to the regular announcements and calls for papers.

-Atul

Subject: Report: GREC'97

Report on the GREC'97 workshop

The second International Workshop on Graphics Recognition (GREC'97), organized by IAPR TC-10, was held in Nancy (France) on August 22--23. Around 60 persons from 16 different countries attended this event. The largest national groups came from the USA and France (15 persons each), followed by Japan (7 participants). Around 40 participants came from academic institutions (universities, research centers) and around 20 from industry or other organizations.

The scientific program was organized into six topical sessions: vectorization and separation, interpretation of engineering drawings, recognition of business graphics and forms, analysis of maps, diagrams

and symbol recognition, performance evaluation. Each session started with an introduction to the state of the art of the addressed topic by a leading scientist. This was followed by short, to-the-point presentations of the technical contributions. Each session was concluded by an open 25 minutes panel discussion, where conclusions were drawn for the different topics and the audience interacted with the speakers and with each other. These discussions were of high quality, and we had several thorough exchanges on the big challenges in graphics recognition.

An international graphics recognition contest was also organized during the workshop. This contest aimed at testing the participants' ability to segment text from graphics and to recognize graphical primitives such as lines, arcs, and circles, both solid and dashed. Three commercial software packages and one academic software package participated in this contest. The systems were evaluated on two axes -- number of missed entities and number of false alarm entities. Matching of detected entities with the ground truth entities was done using the methods described in the proceedings paper "A Performance Evaluation Protocol for Engineering-drawing Recognition Systems." The testing methodology generated a lot of controversy at the workshop. Since some of the contest participants were not present in person at the contest, the contest organizers ran their software on the test images. It was felt that we did not do a good job fine tuning the operating parameters of each software for each type of drawing. Therefore, it was decided to run the contest again, off line, giving the participants an opportunity to determine the optimal settings for the operating parameters of their systems. The packages are currently being re-evaluated. Upon completion of this work, a report on the contest will be made available through the TC10 web site.

In addition to the proceedings of the workshop (some copies can still be ordered for 100 FRF by sending an e-mail to Karl.Tombre@loria.fr), we are preparing a book which will include a selection of articles in revised form, reports from the panel discussions and from the contest, etc. This book will be published by Springer Verlag in the Lecture Notes in Computer Science series, and should come out in Spring 1998. Authors should receive feedback from reviewers later this month. Authors of the accepted papers will be given until late December to submit camera ready papers. The precise deadline will be stated in the acceptance letters.

These days gave also the opportunity to have useful and rich exchanges on an informal basis, during lunches, coffee breaks and social events. The welcome reception, the walking tour of Nancy, and the banquet & canal cruise attracted most of the participants. The optional post-workshop tour to the Vosges mountains seemed to have frightened most participants. Only ten people showed up for this tour. The hike on gradual mountain slopes provided a welcome reprieve from the rigors of the workshop. Some photographs from the social events will soon be placed on the TC10 web site.

At the end of the workshop, it was decided that the next workshop would be held in connection with ICDAR'99, somewhere in India. The GREC'99 workshop will be co-chaired by Atul Chhabra and Dov Dori. ICDAR'99 is being held in Bangalore, India, September 20-22, 1999. Currently, the plan is to organize GREC'99 on September 24 and 25, 1999.

Karl Tombre and Atul Chhabra

From: Karl Tombre <Karl.Tombre@loria.fr>
Subject: Announcement: IJDAR special price

Dear colleagues,

There is a special subscription price to IJDAR for individual members of IAPR and IAPR member societies: DM 75 + carriage charges (instead of DM 98 + carriage).

Karl

From: Karl Tombre <Karl.Tombre@loria.fr>
Subject: Announcement: GREC'97 Proceedings

There are a few extra GREC97 proceedings left, which can be ordered by e-mail to me for 100 FRF, on a first-come-first-served basis.

Karl

From: gsdb@imagn.na.cnr.it (Gabiella Sanniti di Baja)
Subject: Announcement: New Procedure for Best Student Paper Selection for ICPR98

Dear All,

the following message is of interest to all students submitting a contribution to the 14th ICPR and willing to participate in the competition for the Best Student Paper Prize to be given during the ICPR.

The IAPR Education Committee has decided to have a new procedure in the selection of the Student Prize for the best student-authored paper of ICPR98.

The procedure is following:

"The papers submitted to ICPR98 and to be considered for the Student Prize should have at most 2 authors (student alone or student + his/her advisor). With their submission the author(s) should mention that the paper is a candidate for the Student Prize and in case of 2 authors the advisor should certify that the paper is mainly the work of the student."

.....
Dr Gabriella Sanniti di Baja
Istituto di Cibernetica, CNR
Via Toiano 6, 80072 Arco Felice (Naples) ITALY

Tel. + 39 81 8534 237
Fax + 39 81 5267 654
Email gsdb@imagn.na.cnr.it

From: amin@cse.unsw.edu.au (Adnan Amin)
Subject: CFP: Statistical Techniques in PR, SPR'98, Sydney, Australia

Second International Workshop on Statistical Techniques in Pattern Recognition

Call for Papers and Participation
Swiss Grand Hotel, Bondi Beach, Sydney, Australia August 11-13, 1998

The WWW page is <http://www.cse.unsw.edu.au/spr98>
Deadline for Submission December 1, 1997

You are invited to participate in the 2nd International workshop on Statistical Techniques in Pattern Recognition (SPR'98) to be held on August 11-13, 1998 at the Swiss Grand Hotel, Bondi Beach, Sydney, Australia.

Honorary Chairman
Herbert Freeman,
Rutgers University, New Brunswick, New Jersey, USA

Co-chairmen
Adnan Amin Pavel Pudil
School of Computer Science&Engineering Inst. of Information Theory and Automation
University of New South Wales Academy of Sciences of Czech Republic
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Program Committee
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S. Raudys Vilnius University, Lithuania  
R. Sabourin Ecole de Technologie Supérieure, Canada  
M. Schlesinger Academy of Sciences, Ukraine  
S. Singh University of Plymouth, UK  
J. Sklansky University of California, CA, USA  
C. Y. Suen Concordia University, Canada  
T. Taxt University of Bergen, Norway  
H. Yan Sydney University, Australia

Aim and Scope  
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The workshop aims to promote interaction and collaboration not only among researchers working directly in Statistical Pattern Recognition but also among those specialized in other fields but using or developing statistical techniques. In this relation it is of particular interest to stimulate links with many mathematical theoreticians and practitioners alike who work at present outside the pattern recognition community. These issues include, but are not limited to, the following issues:

- * General methodology
- * Statistical Classification Techniques
- * Feature Extraction and Feature Selection
- * Density Estimation
- * Approximation by Mixtures
- * Neural Networks

- * Clustering Techniques
- * Contextual Methods
- * Syntactical and Hybrid Methods
- * Learning Systems
- * Random Fields
- * 2D and 3D Object Recognition
- * Statistical techniques in image processing
- * Speech and one-dimensional signal analysis.
- * techniques on document image analysis: handwriting, maps, etc...

Submission Procedure

Papers should describe original and unpublished work. Prospective authors should submit five copies of their contribution(s) by December 1, 1997 to:

SPR'98 SECRETARIAT
c/o Adnan Amin (SPR'98)
School of Computer Science and Engineering
University of New South Wales
Sydney, 2052, NSW, Australia
Email: spr98@cse.unsw.edu.au
Fax : (61) 2 9385 5995

The manuscript submitted should be no longer than 10 pages (double space). The first page should contain: title, author's name, affiliation and address, phone/fax number and e-mail address of the contact author. The second page should include a title, a 150-word abstract, and keywords. All manuscripts will be reviewed by at least two members of the program committee. Accepted papers will appear in the proceedings which are expected to be published in the series Lecture Notes in Computer Science by Springer-Verlag, and will be distributed to all participants at the workshop. We do not review papers submitted by facsimile or e-mail.

Special Issue of Pattern Recognition

Selected papers from the workshop will be published in a special edition of the Journal PATTERN RECOGNITION scheduled for July 1999. Prospective authors will be asked to submit enhanced papers for review at the workshop.

Homepage:

Information on the workshop is maintained at

<http://www.cse.unsw.edu.au/spr98>

The page will include information on accepted papers and the final program.

Important Dates

Extended paper submission deadline: December 1, 1997
Notification of acceptance: 15 March 1998
Camera-ready paper due: 1 May 1998

Location

Sydney is a city of over 4 million people located on the East coast of Australia. Sydney, with its breathtaking harbour and the Opera House, is one of the most beautiful cities in the world. The original colony of New South Wales began here and many of Australia's treasured historic landmarks are found in its streets and in the nearby countryside. It is the hub of contemporary Australian life and home to some of Australia's most creative artists, actors, fashion designer, and musicians.

Some of the most beautiful spots on earth lie in and around Sydney, from magnificent beaches, many practically deserted most of the year, to mountains for hiking. Sydney is a vibrant, pulsating city offering a varied cultural life, many shopping areas, and a great variety of restaurants.

Workshop Site

The workshop site, Swiss Grand Hotel, is located on Bondi Beach in the Eastern suburbs of the city. The site is only 7km from Sydney Airport and 5km from the City Centre. Within a 5km radius of the hotel are 8 Premier Golf Courses, Randwick Racecourse, The Sydney Showground, Football Stadium, and Cricket Ground.

Weather:

Sydney has a temperate climate with mild winters and warm to hot summers. The conference will be held in Winter, with daytime temperatures ranging from 16 degrees celcius to 21 degrees celcius. For the month of August, the average maximum temperature is 18.7 degrees celcius and the average minimum is 10.4 degrees celcius.

If you intend to participate or would like further information, please send e-mail to:

spr98@cse.unsw.edu.au

From: Cheriet Mohamed <cheriet@exa.gpa.etsmtl.ca>
Subject: CFP: Vision Interface, VI'98, Canada

Vision Interface '98

VI '98 - the eleventh Canadian conference devoted to computer vision, signal and image processing, and pattern recognition - is sponsored by the Canadian Image Processing and Pattern Recognition Society and the International Association of Pattern Recognition. VI '98 will have a theme:

"Computer Vision for Real World Applications". The 1998 conference will be held in conjunction with Artificial Intelligence and Graphics Interface. Contributions describing original and unpublished research results are solicited on this theme and in other areas of computer vision, image processing and pattern recognition.

<http://www.etsmtl.ca/VI98>

Program Co-Chairs:

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Mohamed Cheriet, Ecole de technologie superieure  
Yee-Hong Yang, University of Saskatchewan

Important Dates

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Five (5) copies of full papers should be sent to the Program Chair by 31 October 1997.

Acceptance or Rejection will be sent by 31 January 1998.
Full copies of accepted papers are due by 28 March 1998.

For Further Information Contact Mohamed Cheriet or:
Wayne Davis, PO Box 817, Fort Macleod, Alberta T0L 0Z0
Phone: 403-553-3029, Fax: 403-553-2745, email: davis@cs.ualberta.ca

Vision Interface '98 - Papers must be received by: 31 October 1997.

VI'98 will have a theme: "Computer Vision for Real World Applications".

Contributions describing original and unpublished research results are solicited on this theme and in other areas of computer vision, image processing and pattern recognition. Topics of the conference include, but not limited to, the following:

2D and 3D scene analysis
Biomedical image analysis
Image database
Industrial visual inspection and applications
Active and real-time vision
Image compression and coding
Image segmentation
Image processing in multimedia computing
Mathematical morphology
Stereo and motion analysis
Neural networks Document compression and coding
Document analysis
Content-based image retrieval
Object recognition
OCR and Handwriting recognition
Texture analysis
Video retrieval and indexing
Web or network-based image processing and retrieval

Five (5) copies of full papers of not more than 15 double-spaced pages should be submitted to either of the Program Co-chairs before 31 October 1997. Each paper must have a cover page with the title of the paper, the authors, the affiliation, physical and email addresses, telephone and fax numbers, an abstract with no more than 250 words, and at most 5 keywords in descending order of preference to classify the paper. In addition, authors are required to submit a cover letter indicating: (1) the physical address and e-mail address of the corresponding author, (2) telephone and fax numbers of the corresponding author, (3) that the submitted paper has not been and will not be simultaneously submitted to another conference or journal, and (4) that one of the authors will present the paper at the conference if the paper is accepted. Each paper is allotted up to 8 pages in the Conference Proceedings. Selected papers will appear in a special issue of The International Journal of Pattern Recognition and Artificial Intelligence. The selection process will be done by the program committee.

Program Co-chairs:

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Denis Gingras, INO
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Jim Little, University of British Columbia
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Georges Stamon, Paris-Sorbonne
Ching Y Suen, Concordia University
Tardi Tjahjadi, University of Warwick
Patrick Wang, Northeastern University
Kazuhiko Yamamoto, Gifu University

--- Mohamed Cheriet
VI'98 Co-Chair

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From: Ardeshir Goshtasby <agoshtas@cs.wright.edu>
Subject: CFP: Special Issue of PR - Image Registration

LAST CALL FOR PAPERS
Special Issue of PATTERN RECOGNITION on Image Registration

Image registration is a basic operation involving determination of correspondence between all points in two or more images of the same scene. This operation is needed in many image analysis tasks such as change detection, image data fusion, and image geometric correction. The need for image registration has tremendously increased due to the increased use of temporal and multimodal 2-D and 3-D images in medical, remote sensing, and industrial applications. The aim of this special issue is to survey existing image registration techniques and introduce new techniques that improve over existing ones.

TOPICS:

Papers are solicited covering theory as well as applications of image registration including but not limited to: feature selection, feature correspondence, similarity metrics, image geometric transformation, image resampling, sub-pixel accuracy, evaluation, comparison of existing techniques; as well as registration techniques that are application-dependent and take into consideration special properties of medical, remote sensing, and industrial images.

PAPER SUBMISSION:

Submit four copies of your paper to either of the guest editors. Papers covering general and application-independent topics should be submitted to:

Dr. Ardeshir Goshtasby
303 Russ Engineering Center
Department of Computer Science and Engineering
Wright State University
Dayton, OH 45435

and papers covering application-specific topics should be submitted to:

Dr. Jacqueline Le Moigne
USRA/CESDIS Code 930.5
NASA Goddard Space Flight Center
Greenbelt, MD 20771

IMPORTANT DATES:

Paper Submissions: Nov. 1, 1997
Notification of Acceptance: Feb. 1, 1998
Paper in Final Form: May 1, 1998

HOME PAGE:

More complete information about this special issue can be found at
<http://www.cs.wright.edu/people/faculty/agoshtas/ImgReg.html>

FURTHER INFORMATION:

For further information, please contact
Dr. A. Goshtasby (agoshtas@cs.wright.edu) or
Dr. J. Le Moigne (lemoigne@cesdis.gsfc.nasa.gov).

From: "Lee-Anne McKinnell" <PHLW@giraffe.ru.ac.za>
Subject: CFP: South African Workshop on PR, PRASA97, Rhodes Univ., South Africa

PRASA 97

Dear Potential Participant

We have just discovered to our horror that our mailing system failed to distribute our First Call for papers, which was meant to go out to a mailing list of 200 people over three weeks ago! We apologise for the delay - here are the details:

PRASA 97

Call for Papers for the 1997 SA Pattern Recognition Workshop.

I would appreciate it if you could circulate this document as far as possible. Any persons not contacted directly could email me (Allon Poole) (phap@giraffe.ru.ac.za) so that I can add them to the email address list. It would be appreciated if you could inform me of anybody that can only be reached by way of fax or mail in order for me to contact them.

Any suggestions for special sessions or special types of discussions are also welcomed.

The call for papers and other details are available on the workshop web page at
<http://phlinux.ru.ac.za/hoia/prasa97.html>

Note: You are encouraged to send your abstracts as email messages.

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Announcement and call for papers for the
Eighth Annual South African Workshop on Pattern Recognition

to be held at

Rhodes University

26-27 November 1997

(*** Please note slight change of dates from those advertised at COMSIG)

1. PRASA

This workshop will be the fourth one organized as the main annual event of the Pattern Recognition Association of South Africa (PRASA). PRASA is affiliated with the "International Association for Pattern Recognition" (IAPR). Therefore, members of PRASA will also enjoy the benefits of the IAPR. Registration for this workshop is all that is required to become a member of PRASA.

2. Call for Papers

Those interested in presenting their work at the workshop are invited to submit abstracts consisting of no more than 500 words to the Pattern Recognition Workshop (via mail, fax or email as provided below). Topics which would be considered include (but are not limited to) the following:

- 1 Pattern Recognition Theory
- 2 Pattern Recognition Applications
- 3 Image Processing
- 4 Signal Processing
- 5 Neural Networks
- 6 Remote Sensing
- 7 Computer Vision
- 8 Document Processing
- 9 Neural Dynamics

2.1 Abstract Requirements

Title
Name(s) of Author(s) and affiliation(s)
Name of Corresponding Author
Oral or Poster Presentation preferred
Associated topics from above list (if possible)
Abstract
Postal Address
Fax Number
Email Address

The submission deadline is 30 October 1997. Authors will be notified by 8 November 1997 whether their papers have been accepted for

presentation. Depending on the number of contributions, some of these may be required to be presented as poster papers. A special poster session and informal panel discussion will be arranged if necessary. Posters should be indicated on abstract submissions especially if the work being reported is of a nature which makes extended discussion particularly useful. All authors should provide a camera ready copy of their papers at the workshop for the published proceedings. Fifteen minutes will be allowed for each of the oral presentations, followed by five minutes for questions. Two awards will be presented for the best papers: one for the best paper overall and one for the best paper presented by a student.

3. Registration

The venue of the Workshop will be in the Continuing Education Centre on the Rhodes campus. The CEC is an ideal venue for an informal workshop style conference, set in quiet, wooded surroundings. The venue can viewed on our webpage. At this stage, the workshop is scheduled to begin at 13h00 on Wednesday 26 November, and end at 13h00 on Thursday 27 November. These times may change, depending on the response. The full registration fee is R300. This includes a copy of the proceedings and the conference dinner. It also serves as a fee for one year regular PRASA membership.

Extra dinner tickets for partners are available at R90.

Full-time students may register at the student fee of R150 and this includes a copy of the proceedings. (Extra Proceedings may be ordered separately) It also serves as a fee for one year PRASA student membership.

A registration form appears at the bottom of this document. To avoid problems of reconciling payments with registration forms, please print the registration form, complete it and return to the Workshop Chair together with your cheque (made payable to PRASA97 - RU), by mail. Your registration will be acknowledged on receipt.

4. Accommodation and Travel

4.1 Accommodation

Participants are expected to make their own accommodation arrangements. Accommodation at a reasonable price is available in the CEC itself - these are single, en suite bedrooms (R105 B&B, R125 B&B + lunch). Click on the webpage to view this accommodation. Then contact Leslie Futter (0461) 318138, e-mail adml@warthog.ru.ac.za. Double room accommodation within walking distance (10 mins) is available at Historic Cottages (R100 sharing, R120 single). Contact Roswita Hobson (0461) 28936. For details of hotel accomodation, contact Grahamstown Tourism (0461) 23241.

4.2 Traveling

Conference attendees are expected to make their own travel arrangements. Grahamstown is about 1.5 hour's drive from the nearest airport at Port Elizabeth. The Leopard Express minibus service runs back and forth once a day. For more details, contact:

Leopard Express (0461) 24589
Grahamstown Tourism (0461) 23241

5. Organizing Committee

Allon Poole phap@giraffe.ru.ac.za
Lee-Anne McKinnell phlw@giraffe.ru.ac.za
Justin Jonas phjj@hippo.ru.ac.za

6. Workshop contact Address

Mail address: Pattern Recognition Workshop
Department of Physics and Electronics
Rhodes University
P.O. Box 94
Grahamstown
6140

Fax : (0461) 25049
Email : phap@giraffe.ru.ac.za
phlw@giraffe.ru.ac.za
phjj@hippo.ru.ac.za

7. Registration form:

Name:
Affiliation:
Address:
.....
.....
.....
Telephone:
Fax:

E-mail:
Payment (Yes/No):.....
(for Full membership /registration : R300
for Student membership registration : R150)

.....

Lee-Anne McKinnell (nee Willisicroft)
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phlw@jansky.ru.ac.za

From: Donato Malerba <malerba@iacam.uniba.it>
Subject: CFP: European Conf. on Machine Learning, ECML'98, Chemnitz, Germany

Call for Papers

TENTH EUROPEAN CONFERENCE ON MACHINE LEARNING (ECML'98)

Chemnitz, Germany, April 21-24 1998

Up-to-date information on the conference can be found at
<http://www.tu-chemnitz.de/informatik/ecml98/>

GENERAL INFORMATION:

The 10th European Conference on Machine Learning (ECML-98) will be held in Chemnitz (ex- Karl Marx Stadt, near Dresden), Germany, from April, 21st to 24th 1998.

PROGRAM

The scientific program (April 21 - 23) will include invited talks, presentations of accepted papers, summary and commenting sessions on current and upcoming issues in machine learning, tutorials, an industrial session as well as poster and demonstration sessions. Saturday, April 24, will be devoted to workshops.

Separate calls for proposals will be issued (please, consult ECML'98 web page or contact ECML'98 chairpersons at ecml98@lri.fr for details).

RELEVANT RESEARCH AREAS

Submissions are invited that describe empirical and theoretical research in all areas of machine learning. In addition, papers from related disciplines that deal with adaptive intelligence, (semi-)automated knowledge acquisition, or (semi-)automated knowledge organization are welcome.

Submissions that describe the application of machine learning methods to real-world problems are encouraged, but such submissions should speak of general issues of machine learning, perhaps illustrating novel learning methods or demonstrating the utility of established methods in previously unexplored settings.

Key Words (non exhaustive list)

abduction knowledge base refinement
analogy knowledge discovery in databases
artificial neural network knowledge intensive learning
bayesian network machine learning of natural language
case-based learning multi-agent learning
cognitive modelling multistrategy learning
computational learning theory pattern recognition
cooperative learning planning and learning
evolutionary computation reinforcement learning
genetic learning revision and restructuring
grammatical inference robot learning
inductive learning scientific discovery
inductive logic programming statistical approaches
information retrieval and learning vision and learning
knowledge acquisition and learning web navigation, web mining

SUBMISSION OF PAPERS

Two kinds of submissions are solicited: full papers describing substantial completed research or applications, and research notes reporting on work in progress. Submissions must be clearly marked as one of these two kinds. The programme committee may decide to move accepted contributions from the full paper to the research note category. All accepted papers will be presented at plenary sessions and will be published in the conference proceedings. The conference proceedings will be published by Springer Verlag, Berlin, as part of the "Lecture Notes in AI (LNAI)" series.

A copy of the review form can be obtained at <http://www.lri.fr/~ecml98/reviewform.html> or by mail request to ecml98@lri.fr.

Format: The size limit for submissions is 12 pages for full papers, 6 pages for research notes (excluding title page and bibliography, but including all tables and figures). Submissions exceeding this limit will not be reviewed. Submitted papers should preferably be formatted according to the LNAI guidelines.

Formatting instructions and LaTeX style files for LNAI are available at <http://www.lri.fr/~ecml98/lncs/> or can be obtained by e-mail request to ecml98@lri.fr.

A separate title page must contain the title of the paper, the names and addresses of all authors, a list of keywords, and an abstract of maximum 200 words. The full address of the first author (or the contact person), including phone, fax and e-mail, must be given.

The following items must be submitted by October 31, 1997. Four hard copies of the paper, an electronic version (uuencoded and compressed PostScript) of the paper, and an electronic version of the titlepage only (plain ASCII).

POSTER and DEMONSTRATION SESSION

Slightly moderated poster and demonstration sessions will be organized. People willing to present research work, activities of a research group or project, news, demonstration of software, etc. are invited to send a two page description. The selection criterion will be relevance with respect to the scope of the conference. Contributions will be published separately from the proceedings as a technical report of Chemnitz University.

REGISTRATION AND FURTHER INFORMATION

For information about paper submission and program that would not be available on the web site, please contact the program chairs. For information about local arrangements, registration forms, etc., please, contact the local organizers at

FIRST Business Travel International
Innere Klosterstr. 19
D-09111 Chemnitz Germany
Phone: 0049-371-6752212
Fax: 0049-371-6752233
E-Mail: ecml98@informatik.tu-chemnitz.de

IMPORTANT DATES:

Submission deadline: 31 October 1997
Notification of acceptance 13 January 1998
Camera ready copy 9 February 1998
Conference 21-24 April 1998

PROGRAM CHAIRPERSONS

Claire Nedellec and Celine Rouveirol (University of Paris-Sud, France)

LOCAL CHAIR:

W. Dilger (Chemnitz University of Technology, Germany)

PROGRAM COMMITTEE:

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J. Fuernkranz (Austria) S. Wrobel (Germany)
Y. Kodratoff (France) G. Widmer (Austria)

IMPORTANT ADDRESS

Submitted papers, and poster / demonstration descriptions should be sent to :

Claire Nedellec and Celine Rouveirol (ECML'98)
LRI, Bat 490
Universite Paris-Sud
F-91405 Orsay Cedex FRANCE
E-mail: ecml98@lri.fr

.....
F. Esposito & D. Malarba
University of Bari, Italy

Donato MALERBA
Universita' degli Studi di Bari Tel.: +39 - 80 - 5443269
Dipartimento di Informatica Fax.: +39 - 80 - 5443196
via Orabona 4 email: malerba@lacam.uniba.it
Bari I-70126
Italia
<http://lacam.uniba.it:8000/pagine/people/donato/Donato.html>

From: Mei-Yuh Hwang <mhwang@microsoft.com>
Subject: CFP: Int. Conf. on Acoustics, Speech & Signal Proc., ICASSP 98

DEAR COLLEAGUE,

Finally, ICASSP 98 is ready for accepting paper submission. This year, IEEE Signal Processing Society has decided a new submission procedure --- only one full-paper submission due November 3, 1997. No more early abstract submission and NO REVISION ON ACCEPTED PAPERS, either.

ICASSP 98 is also attempting to automate the process of generating the conference guide, etc., by ELECTRONIC Paper Cover Sheet. In addition, you will be able to verify your paper's outlook on CD-ROMs when you FTP your Postscript file to the ICASSP 98 server.

For details, please follow the instruction on our Web site:
[HTTP://ICASSP98.MICROSOFT.COM/](http://ICASSP98.MICROSOFT.COM/) to submit your paper. You can find the Author's Kit and various forms on the Web. If you cannot access ICASSP 98 Web site, you can also acquire all the relevant information via anonymous FTP to [ICASSP98.MICROSOFT.COM](ftp://ICASSP98.MICROSOFT.COM); then "cd icassp98/akit". An ASCII text version can also be obtained by sending e-mail to ICASSP98@WWW.EE.WASHINGTON.EDU with body text "info icassp98" (without quotes).

If you receive this e-mail, but not a hard copy of our Call-For-Papers (which has been mailed at the beginning of September, 1997), please send e-mail to icassp98@courtesyASSOC.com for our record, and to get a hard copy of the Call-For-Papers, if you want.

TO SUBMIT A PAPER

In summary, the steps to submit a paper are:

1. Read the Paper Preparation and Abstract Preparation in the Author's Kit first, regarding the format of your paper.
In general, the format is the same as past ICASSPs. Likewise, we also provide templates for Word and LaTeX.
2. Prepare a CAMERA-READY paper, at most 4 pages long, including figures and references, and find an appropriate subcategory from the Paper Categories for your paper.
3. Do Electronic Submission of the Paper Cover Sheet. If the electronic submission is not successful, you will need to fill out the Paper Cover Sheet manually and prepare a floppy disk containing the Cover Sheet information and the abstract of your paper.
4. If you succeed at Step 3, FTP the postscript file of your full paper to the ICASSP 98 server.
5. Fill out one copy of the Copyright Form.
6. Mail the following package in a large envelope with a cardboard to prevent bending.
 - a) 1 Copyright form,
 - b) 6 hard copies of your full paper, with one Paper Cover Sheet on top of each copy,
 - c) the floppy disk if your electronic submission is not successful.

The package has to be received by the conference office on or before November 3, 1997. The address of the conference office is:
ICASSP-98
Courtesy Associates
2000 L Street NW, Suite 710
Washington DC, 20036 USA

SCHEDULE

Both Electronic submission and camera-ready package:
To be RECEIVED (not postmarked) by November 3, 1997.

Notification of acceptance:
To be mailed out on January 31, 1998.

NOTE

The year of 1998 is also the 50th anniversary of the IEEE Signal Processing Society. ICASSP 98 will celebrate the 50th anniversary by a full morning of special plenary speech, given by world-wide famous researchers and industrial leaders. So join us at ICASSP 98 to retrospect the past 50 years and plan for the next 50 years.

Subject: CFP: Int. Conf. on Image Processing, ICIP-98, Chicago, IL, USA

IEEE Signal Processing Society
1998 International Conference
on Image Processing
October 4-7, 1998
Chicago, Illinois, USA

ICIP-98 CALL FOR PAPERS

ICIP-98, sponsored by the IEEE Signal Processing Society, has been recognized as the premier forum for presentation of technological advances and research results in the fields of theoretical, experimental, and applied image and video processing. Held annually since 1994, ICIP brings together worldwide leading engineers and scientists in image and video processing. Research frontiers in fields ranging from traditional image processing applications to evolving multimedia and video technologies are regularly advanced by results first reported in ICIP's technical sessions.

SCOPE:

1. GENERAL TECHNIQUES AND ALGORITHMS Filtering, Enhancement, Restoration, Coding, Segmentation, Multiresolution Processing, Multispectral Processing, Image Representation, Image Analysis, Image Understanding, Interpolation and Spatial Transformations, Neural Networks for Image Processing, Architectures and Software.
2. COMPUTED IMAGING
Acoustic, Radar, Tomography, Magnetic Resonance, Geophysical and Seismic, Speckle Imaging, Radio Astronomy, Computer Holography, Confocal, Electron Microscopy, X-ray Crystallography, Coded- Aperture Imaging, Real-Aperture Arrays.
3. IMAGE SCANNING DISPLAY AND PRINTING
Scanning and Sampling, Quantization and Halftoning, Color Reproduction, Rendering, Graphics and Fonts, Image Quality, Visualization.
4. VIDEO AND MULTIMEDIA
Multimedia, HDTV, Enhanced Quality TV, Packet Video, Motion Detection, Analysis and Estimation, Image Sequence Processing, Video Data Base, Low Bit Rate and Very Low Bit Rate Coding, Video over Wireless Channels, Video Signal Processor ICs, Access to and Retrieval from Multimedia Databases.
5. APPLICATIONS
Application of Image Processing Technology to any field, including the Biomedical Sciences, Astronomy, Geosciences, and Environment and Document Processing.

SUBMISSION PROCEDURES

Prospective authors are invited to propose papers for presentation in any of the technical areas listed above. To submit a proposal, prepare a 2-3 page summary of the paper including figures and references. Send six copies of the paper summary each with a cover sheet stating: (1) paper title, (2) technical area(s), (3) nature of problem which you have addressed and its importance, (4) original contribution, (5) contact author's a. first (personal) name, b. last (family) name, c. address, d. telephone number, e. fax number, and f. electronic mail address to:

Conference Management Services
3109 Westchester Avenue
College Station, TX 77845-7919, USA

Each selected paper (five-page limit) will be published in the Proceedings of ICIP-98. Presentations will be assigned to a lecture or poster session by the technical committee. Style files in LaTeX will be provided for the convenience of the authors. Additional information can be obtained at our web site:

<http://mri.beckman.uiuc.edu/ICIP98/>

ICIP-98 SCHEDULE:

Paper proposals due: 16 January 1998
Notification of Acceptance: 10 April 1998
Camera-Ready papers due: 5 June 1998

[You may obtain the paper submission cover sheet from the web site above -AKC]

From: mgrgic@zea.cc.fer.hr (Mislav Grgic)
Subject: CFP: Systems, Signals & Image Processing, IWSSIP98, Zagreb, Croatia

5th International Workshop on Systems, Signals and Image Processing
June 3-5, 1998 - Zagreb, Croatia

C A L L F O R P A P E R S

After successful workshops in Budapest (1994 and 1995), Manchester (1996) and Poznan (1997), the 5th International Workshop on Systems, Signals and Image Processing, IWSSIP'98, will be organized by the Faculty of Electrical Engineering and Computing, University of Zagreb and co-sponsored by IEEE, IEE and European Association for Signal Processing (EURASIP). IWSSIP'98 is an international workshop on theoretical, experimental and applied signal and image processing. The workshop intends to attract high quality papers and bring together researchers from both sides of the Atlantic as well as from the countries of Central and Eastern Europe.

SCOPE

1. General techniques and algorithms. Adaptive DSP algorithms. Digital filter implementations. Multidimensional signal processing. Image analysis and segmentation. Image restoration and enhancement. Image representation and modeling. Digital transforms.
2. Technologies. Neural networks. Expert systems. Fuzzy systems. Edge detection. Pattern/object recognition. Multisensor data fusion.
3. Image and video coding. Vector quantization. Fractals. Transform coding. Subband and Wavelet coding. Motion estimation. Shape description and recognition. Texture coding. Colour processing. Standards.
4. Multimedia networks and protocols. Multimedia services. Multimedia servers. B-ISDN and ATM. Internet. Wireless and mobile networks.
5. Implementations. Analog and digital circuits and systems for audio, image and video processing. Architectures and VLSI hardware. Programmable signal processors. Real time software.
6. Applications: communications, television, digital production, broadcasting, medical, sensing, robotics, telepresence, virtual reality.

SUBMISSION PROCEDURE

Prospective authors are invited to propose papers in any of the technical areas listed above. To submit a proposal prepare a 2-3 page summary of the paper including figures and references. Send four copies of the paper summary and a cover sheet stating the (1) paper title, (2) technical area(s), (3) contact author's name, (4) address, (5) telephone and fax number and (6) e-mail address to:

prof. Branka Zovko-Cihlar
Faculty of Electrical Engineering and Computing
Department of Radiocommunications - IWSSIP'98
CROATIA, 10000 Zagreb, Unska 3

Each accepted paper (four-page limit) will be published in the Proceedings.

SCHEDULE

Extended summaries: January 15th, 1998
Notification of acceptance: March 1st, 1998
Submission of camera-ready papers: April 1st, 1998

CONFERENCE SITE

IWSSIP'98 will be held at the Faculty of Electrical Engineering and Computing, University of Zagreb, Unska 3, Zagreb, Croatia.

INTERNATIONAL ORGANIZING COMMITTEE

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~~~~~  
Branka Zovko-Cihlar, University of Zagreb, Croatia

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SECRETARY

Mislav Grgic
University of Zagreb, Croatia

Information: mgrgic@zea.cc.fer.hr

<http://grgicnt.cc.fer.hr/iwssip98>

From: Mark Plutowski/Almaden/IBM <mepp@almaden.ibm.com>
Subject: CFP: Special Issue AI Review - Data mining the Internet

Artificial Intelligence Review:
Special Issue on Data Mining on the Internet

The advent of the World Wide Web has caused a dramatic increase in usage of the Internet. The resulting growth in on-line information combined with the almost chaotic nature of the web necessitates the development of powerful yet computationally efficient algorithms to track and tame this constantly evolving complex system.

While traditionally the data mining community has dealt with structured databases, web mining poses problems not only due to the lack of structure, but also due to the intrinsic distributed nature of the data. Furthermore, mining on the Internet involves also dealing with multi-media content consisting of not only natural language documents but also images, audio and video streams. Several interesting and potentially useful applications have already been developed by academic researchers and industry practitioners to address these challenges. It is important to learn from these initial endeavors, if we are to develop new algorithms and interesting applications.

The purpose of this special issue is to provide a comprehensive state-of-the-art overview of the technical challenges and successes in mining of the Internet. Of particular interest are papers describing both the development of novel algorithms and applications. Topics of interest could include but are not limited to:

- * Resource Discovery
- * Collaborative Filtering
- * Information Filtering
- * Content Mining (text, images, video, etc.)
- * Information Extraction
- * User Profiling
- * Applications, e.g., one-to-one marketing

In addition to the call for full-length papers, we request that any researchers working in this area submit abstracts and/or pointers to recently published applications for the purposes of compiling a comprehensive survey of the current state-of-the-art.

The mission of Artificial Intelligence Review: The Artificial Intelligence Review serves as a forum for the work of researchers and application developers from Artificial Intelligence, Cognitive Science and related disciplines. The Review publishes state-of-the-art research and applications and critical evaluations of techniques and algorithms from the field. The Review also presents refereed survey and tutorial articles, as well as reviews and commentary on topics from these applications.

Instructions for submitting papers

Papers should be no more than 30 printed pages (approximately 15,000 words) with a 12-point font and 18-point spacing, including figures and tables. Papers must not have appeared in, nor be under consideration by other journals. Include a separate page specifying the paper's title and providing the address of the contact author for correspondence (including postal, telephone number, fax number, and e-mail address). Send FOUR copies of each submission to the guest editor listed below. Papers in ascii or postscript form may be submitted electronically. Instructions for on-line submission are given below.

Information For on-line submission

Kluwer Academic Publishers allows on-line submission of scientific articles via ftp and e-mail. We will make this system more user-friendly by incorporating it into our KAPIS WWW server and use Netscape as the user-interface. This is currently being prepared and will be implemented by the end of this year. Below, please find the procedure that should be used until then.

- an author sends an e-mail message to "submit@wkap.nl" containing the following line
REQUEST SUBMISSIONFORM AIRE

AIRE = Artificial Intelligence Review (the 4-letter code that is used at Kluwer)

- the author receives the electronic submission form (see attachment) via e-mail with a dedicated file name filled in (and also the information that is given at point 4: the journal's four-letter code plus the full journal title)

- the author fills in the submission form and send it back to:
"submit@wkap.nl"

- at the same time, the author submits his/her article via anonymous ftp at the following address: "ftp.wkap.nl" in the subdirectory INCOMING/SUBMIT, using the dedicated file name with an appropriate extension

- at Kluwer, the article is registered and taken into production in the usual way

Important Dates

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Papers Due: December 15, 1997  
Acceptance Notification: March 1, 1998  
Final Manuscript due: June 1, 1998  
Guest Editor: Shivakumar Vaithyanathan, net.Mining, IBM Almaden Research Center,  
650 Harry Road, San Jose, CA 95120  
(408)927-2465 (Phone)  
(408)927-2240 (Fax)  
e-mail: [shiv@almaden.ibm.com](mailto:shiv@almaden.ibm.com)

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From: [dsp98@egr.msu.edu](mailto:dsp98@egr.msu.edu)  
Subject: CFP: DSP Workshop '98, Utah, USA

#### CALL FOR PAPERS --- Eighth Digital Signal Processing Workshop

The Eighth Digital Signal Processing Workshop, sponsored by the IEEE Signal Processing Society, will be held August 9-12, 1998 in Ruby's Inn near the entrance to the Bryce Canyon National Park, Utah. The Park is approximately one hour from St. George, Utah by car, about 2-1/2 hours from Las Vegas and about five hours from the Salt Lake City. Papers are solicited for technical poster sessions on the following topics:

Time-Frequency Signal Analysis  
Nonlinear Systems  
Signal Reconstruction and Estimation  
Adaptive Filtering  
DSP Algorithms and Architectures  
Statistical Signal Processing  
Multirate Filter Banks  
Signal Compression  
DSP for Communications  
Applications of DSP

Prospective authors are invited to send four copies of two-page paper summaries to Lee Swindlehurst for review:

A. Lee Swindlehurst  
Dept. of Electrical and Comp. Engg.  
459 CB  
Brigham Young University  
Provo, UT 84602

The top of the first page of the summary should include a title, names, affiliations, addresses, phone and fax numbers, and email addresses of the authors. Authors of accepted papers will then submit camera-ready four-page papers, which will form the published workshop proceedings. In addition to the contributed poster presentations, the workshop will include a number of invited plenary talks on topics of general interest.

#### Deadlines:

Submission of two-page summary ..... January 1, 1998  
Notification of acceptance ..... February 10, 1998  
Submission of four-page papers ..... April 1, 1998  
Room Deposit ..... June 30, 1998

#### Rates:

IEEE member registration (before May 1, 1998) ..... \$220  
Non-member registration (before May 1, 1998) ..... \$275  
IEEE member registration (after May 1, 1998) ..... \$275  
Non-member registration (after May 1, 1998) ..... \$325  
Student registration (before May 1, 1998) ..... \$150  
Student registration (after May 1, 1998) ..... \$200  
Room (single or double occupancy) ..... \$85/night

Room (triple or quad occupancy) ..... \$90/night

Additional Information:

Email: [dsp98@egr.msu.edu](mailto:dsp98@egr.msu.edu)

Web: <http://www.egr.msu.edu/DSP98/>

Workshop Committee  
~~~~~

General Chairman

V. John Mathews
Dept. of Electrical Engineering
University of Utah
Salt Lake City, UT 84112
mathews@ee.utah.edu
+ 1 801 581 7869

Technical Program

A. Lee Swindlehurst
Dept. of Electrical and Comp.
Engg.
459 CB
Brigham Young University
Provo, UT 84602

Scott C. Douglas
University of Utah

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Georgia Tech

Jogn Triechler
Applied Signal Technology

Andrew Yagle
University of Michigan

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Brigham Young University

Workshop Proceedings

Stephen Pohlig
M.I.T. Lincoln Laboratory

Publicity

Robert Nowak
Michigan State University

Finance/Registration

Todd Moon
Utah State University

International Liaisons

Europe: Pierre Duhamel
SIG/ENST

Asia: V. U. Reddy
Indian Institute of Science

Australia: Robert Bogner
University of Adelaide

From: Alberto Broggi <broggi@attila.ce.unipr.it>
Subject: CFP: IEEE Expert - Special Issue on Vision-based Driving Assistance

C A L L F O R A R T I C L E S

IEEE Expert Magazine

VISION-BASED DRIVING ASSISTANCE IN VEHICLES OF THE FUTURE
<http://www.ce.unipr.it/expert>

ALBERTO BROGGI, Guest Editor

Thanks to the increasing computational power of current computer systems and to the reduced costs of image-acquisition devices, in the last few years vision-based sensing of the surrounding environment has gained a strategic importance not only in military applications, but also in the automotive field. This special issue will address the problems of autonomous vehicle driving, describe common techniques, and present the state of the art. Suggested topics include

- Vision-based guidance of unmanned vehicles.
- Analysis of real-time constraints for vehicle driving.
- Vehicle navigation in unknown environments.
- Integration of specialized hardware on vehicles.
- Description of research prototypes.
- Legal aspects.
- Analysis of future trends.

Expert seeks two kinds of articles:

- TUTORIALS and SURVEYS introducing this field and reviewing the state of the art or the state of the practice of work done in this area, with the aim of comparing different solutions and techniques. Such articles should be approximately 6,000 words (9-10 magazine pages), with extensive references to widely available published works. One or two such articles will likely be included.

- ARTICLES describing prototypes of autonomous vehicles developed worldwide by universities, research centers, corporations, and government institutions. These articles should describe both the techniques and the results obtained, and the references should allow the interested reader to follow up on both. Articles describing the fusion of data coming from sensors other than vision are also welcome. These articles should be from 5,500 to 6,000 words (8-9 magazine pages), with no more than 12 references. A consistent and useful set of definitions and examples can often help explain the underlying mathematics. Such aids can be presented as sidebars in the published article. Four or five such articles will likely be included.

All authors should submit six hard copies of their article by December 20, 1997, to the guest editor, Alberto Broggi. Authors intending to submit tutorials or survey articles are encouraged to discuss this with the guest editor or to send an extended abstract to him by October 1, 1997.

Guest Editor: Alberto BROGGI
 Dipartimento di Ingegneria dell'Informazione
 Università di Parma
 I-43100 Parma
 ITALY
 Fax 39 (521) 90-5723
a.broggi@computer.org

Schedule:

Submission of manuscripts: December 20, 1997

Acceptance/rejection notification: April 12, 1998

Revised manuscripts due: June 7, 1998

Publication: September 1998

For more information, access <http://www.ce.unipr.it/expert>

IEEE Expert: Intelligent Systems and Their Applications publishes technically substantive articles that are referenced extensively in the literature and read by 8,000-9,000 people worldwide. Expert is a magazine of applied AI - a bridge between the research community and the user community. Its readers want to learn about the tools, techniques, concepts, and systems that have potential for real-world applications. Conceptual or theoretical papers are welcome, provided they clarify and present items of importance to applications. Clear, not overly formal, writing is essential.

All articles will be carefully peer reviewed. Authors whose articles are accepted on technical grounds will work with the magazine's staff editors to arrive at a final article that is clear, straightforward, and valuable to the user community.

Full publication guidelines are available at <http://computer.org/pubs/expert/edguide.htm>, or from the managing editor at dprice@computer.org.

 From: gsdb@imagn.na.cnr.it (Gabriella Sanniti di Baja)
 Subject: CFP: Multimedia Information Analysis and Retrieval, MINAR'98, Hong Kong

Dear IAPR Community Members,

please find enclosed the CFP of MINAR'98, organised by TC12 - Multimedia Systems.

Best regards

Gabriella Sanniti di Baja
 IAPR Secretary
 ~~~~~

FIRST CALL FOR PAPER

IARP International Workshop on  
 Multimedia Information Analysis & Retrieval  
 (MINAR'98)

Organised by IAPR TC12 - Multimedia Systems

13-14 August 1998 (Thursday-Friday), HONG KONG

This international workshop will focus on the latest technologies for the modelling, indexing, and retrieval of multimedia information with emphasis on pictorial data.

Following a similar highly successful Workshop held in Amsterdam prior to ICPR'96, this workshop, to be held in Hong Kong, is located conveniently for participants attending ICPR'98 to be held in Brisbane, 17-20 August 1998, Australia.

General Chair: Horace H S Ip (City University of Hong Kong, Hong Kong)  
Programme Chair: Arnold Smeulders (Amsterdam University, The Netherlands)

Keynote Speaker: Prof. Ramesh Jain (UCSD, USA)

Topics include, but are not limited to, the following:

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- Indexing methods: theoretical foundation and performance analysis
- Content-based media retrieval
- Dynamic composition of multimedia content
- Invariant and multi-resolution techniques for image/video retrieval
- Multimedia information visualization
- Content analysis and analysis tools
- System integration
- Multimedia databases and information management
- Applications

International Programme Committee

~~~~~

- S K Chang (Pittsburg U, USA)
- A del-Bimbo (U of Firenze, Italy)
- W Grosky (Wayne State, USA)
- R Kasturi (Penn State, USA)
- T Kato (ETL, Japan)
- C Leung (Victoria U, Australia)
- S D Ma (Academica Sinica, PRC)
- D Petkovic (IBM, Almaden USA)
- H Samet (Maryland U, USA)
- S Smoliar (FXPAL, USA)
- R Srihari (Cedar, USA)
- H Tagare (Yale, USA)
- J K Wu (NUS, Singapore)

Proceedings of the workshop will be published by Springer-Verlag as as a volume in the Lecture Notes in Computer Science Series.

Submission Instruction

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Authors are requested to submit full paper (in English) of no more than 20 pages (double-spaced, 12-point, including text, figures and references) describing original results of their research work. Each copy of the paper should have a cover page containing the title of the paper, names and addresses of the authors, and an abstract of no more than 200 words.

Deadlines

~~~~~

- Paper Submission 15 January 98
- Notification of Acceptance 15 March 98
- Final Camera-ready paper 15 April 98

Five hard copies of each paper should be sent to:

Prof. Horace H S Ip  
Professor & Head  
Department of Computer Science  
City University of Hong Kong  
Tat Chee Avenue, Kowloon,  
Hong Kong  
Email: [cship@cityu.edu.hk](mailto:cship@cityu.edu.hk)  
Fax: +852 2788-8614

Local Organising Committee:

~~~~~

- Publicity Irwin King (CUHK)
- Local Arrangements K C K Law (CityU)
- Publication T C Pong (HKUST)

Sponsored by IAPR and the Hong Kong Society for Multimedia and Image Computing
Co-operated with IEEE (HK) Computer Society (to be confirmed)

Enquiries: Prof. Horace H S Ip (Email: cship@cityu.edu.hk)
Image Computing Group
Department of Computer Science
City University of Hong Kong
Tat Chee Avenue, Kowloon,

Hong Kong

From: gsdb@imagn.na.cnr.it (Gabriella Sanniti di Baja)
Subject: CFP: Special Issue, Deformable Models and Techniques

Dear IAPR Community Members,

please find enclosed the CFP for a special issue of Signal Processing.

Best regards

Gabriella Sanniti di Baja
IAPR Secretary
~~~~~

#### CALL FOR PAPERS

Signal Processing  
An International Journal  
Special Issue on  
DEFORMABLE MODELS AND TECHNIQUES  
FOR IMAGE AND SIGNAL PROCESSING

#### GUEST EDITORS:

Aurelio Campilho  
INEB-Instituto de Engenharia Biomedica  
Faculdade de Engenharia da Universidade do Porto  
4050 Porto, Portugal

Mohamed Kamel  
Pattern Analysis and Machine Intelligence Lab.  
Dept. of Systems Design Engineering  
University of Waterloo  
Waterloo, Ontario, N2L3G1, Canada

#### THEME OF THE SPECIAL ISSUE:

The use of deformable models has attracted the attention of many researchers due to the uniqueness and powerful characteristics of this approach in dealing with the representation of complex and flexible 2D and 3D shapes. Furthermore, these models provide a powerful analytical and theoretical framework overcoming ad-hoc approaches for image analysis and representation. The focus of this issue will be on designing, developing, and implementing methods which are based on deformable models and theory and which are aimed at solving problems in applications such as: biomedical signals and images, character recognition, computer vision and visualization.

#### TOPICS FOR ARTICLES IN THIS SPECIAL ISSUE INCLUDE:

- \* Deformable model theory: mathematical models, dynamical models, geometrical deformation, free form deformation, time varying deformation, etc..
- \* Methods and techniques: finite element methods, constraint methods, energy minimization methods, spline methods, blended methods, elastic and nonrigid matching, tracking, morphing, classification and segmentation.
- \* Analysis: modal analysis, shape description and recognition, motion tracking and analysis, vibration analysis, image sequence analysis.
- \* Applications (include but not limited to): biomedical imaging, character recognition, computer vision, industrial inspection, visualization and cytology.

#### TIMETABLE:

Manuscript Due: Nov 10, 1997  
Notification of acceptance decision: April 20, 1998  
Final Version due: June 10, 1998

#### SUBMISSION:

Five copies of papers written in English, should be received by the guest editors at the address below, on or before Nov 10th, 1997. The paper length should be at least 15 and at most 25 double spaced pages, 12pt font on 8.5 by 11 inch or A4 paper. Please include a covering page containing full contact details and e-mail address. All submissions will be peer reviewed for originality, technical contents and relevance to the theme of the special issue. Electronic submission is not acceptable.

#### SUBMISSION ADDRESS:

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From: "Sergey Ablameyko" <[ABL@newman.basnet.minsk.by](mailto:ABL@newman.basnet.minsk.by)>

Subject: Book Announcement: Intro. to Interpretation of Graphic Images

I would like to propose to attention of TC10 members information about my book entitled "An Introduction to Interpretation of Graphic Images" that has been published last month by SPIE. I believe that it should be interesting to our community.

E-mail: [abl@newman.basnet.minsk.by](mailto:abl@newman.basnet.minsk.by)

S.Ablameyko

An Introduction to Interpretation of Graphic Images, SPIE Press, TT27, USA, 1997, 182 pages.

Includes 8 chapters, 550 bibliographical references and index

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Price: SPIE member \$34, WG member \$39, Nonmember \$42.  
The book can be ordered from SPIE - The International Society for Optical Engineering

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The book summary

The image analysis community has put much effort into developing systems for the automatic reading of various types of documents containing text, graphic information, and pictures. A closely related but much more problematic task is the reading and interpretation of line drawings such as maps, engineering drawings, and diagrams. This book considers the problem in detail, analyzes its theoretical foundations, and analyzes existing approaches and systems.

The book is organized in the sequence in which line drawings are usually analyzed. The first chapter considers the problem of line-drawing interpretation. A comparison is made between manual and automatic line-drawing input, and between vector and raster types of information representation; line-drawing specifics are analyzed in detail. A brief overview of the existing research systems is given as well as commercial systems existing in the Russian market.

The second chapter is devoted to a general methodology of the line-drawing interpretation process. First, the main requirements for an interpretation technology are given. We then consider the basic technology stages and show how an initial image is transformed to a final representation. All intermediate image models are classified and described in detail. Finally, possible output image representations for maps and engineering drawings are considered.

The third chapter addresses image scanning and binarization. The main characteristics of existing scanners are shown and how they can be used to input line drawings. An analysis of existing image file formats is given, leading to a discussion of the binarization of gray-scale images. Finally, the two principal theoretical tools for binary image processing—the distance transform and mathematical morphology—are introduced.

The binary image preprocessing stage is analyzed in the next chapter. First, the general principles of raster-to-vector transform of binary images are introduced. Then, noise reduction algorithms for binary images are presented, as well as classification of thinning algorithms and a developed thinning algorithm. The medial axis transform operation, to obtain object middle lines, and image contouring are also discussed.

Chapter 5 addresses the main techniques for image vectorization. Feature extraction and thinned image vectorization stages are described, polygonal approximation algorithms are classified, and an example of a data structure to represent the vectorized images is given. Since the vectorized image usually has defects (structural noise), algorithms to reduce object defects are considered.

The sixth Chapter is devoted to recognition of cartographic objects. A general methodology of map recognition is proposed that incorporates the three main object classes: line objects, area and texture objects, and symbols. Its classification is given and algorithms to recognize these object classes are described. Note that recognition algorithms for line objects and symbols are based on vector object representation, while recognition of texture objects is based on

raster representation.

Chapter 7 examines the problem of engineering drawing (ED) entities recognition. Specifics of ED image vectorization are introduced that take into account as much information about the initial drawing as possible. Algorithms to recognize all main ED entities (arcs, circles, line types, dimensions, crosshatching areas, and blocks) are proposed. Recognition examples are given.

The final chapter explores output image representation. Because automatic recognition alone cannot produce the required output, interactive techniques for map interpretation are described. Control of the digitized data is considered and its main notions are introduced. Existing devices for drafting the vectorized image models are investigated. Practical applications of map and engineering drawing interpretation, and recommendations for design of such systems, are given. Finally, topics for further development of this problem are discussed.

We have attempted to examine all problems of line-drawing interpretation and hope this book will be useful for creation of such systems.

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That's all for now. In the next TC10 news, I hope to present the results of the graphics recognition contest.

As you may notice in my signature, the name of my employer has changed. My ex-employer, NYNEX, has merged with another US regional phone company, Bell Atlantic. The new Bell Atlantic is now the second largest phone company in the US.

Your TC10 chairman,

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