Newsletter 61, March 2000

Newsletter of the IAPR Technical Committee on Graphics Recognition (TC10)
To subscribe to this newletter and to join TC10, visit the URL:
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TC10 News #61

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Dear TC10 members and friends,

Some of you may have already heard the sad news about Professor
Jean-Claude Simon's demise last week. The first item in this TC-10
news is an extract from the obituary written by Herbert Freeman for
the IAPR newsletter. This first appeared in the TC2 list. The extract
is reproduced here with Herb's permission.

Regarding the post-GREC'99 LNCS book, I apologize for the delay in
sending out reviews to the authors. The reviews will go out by
tommorow (March 3).

I have just submitted a report on the GREC'99 workshop to the IAPR
newsletter. A copy of the report is included below.

As many of you know, we could not conduct the graphics recognition
contest at GREC'99. We plan to conduct the contest in the end of March
and to present the report at ICPR 2000 in Barcelona. At present, we
have four entries for the contest. If you are interested in
participating, or for more information, please visit the contest URL

http://graphics.basit.com/iapr-tc10/contests/contest2000/

This URL will be up and running on March 4, 2000.

--Atul

Obituary
Jean-Claude Simon, Former IAPR President and Winner of 1998 K.S. Fu Prize

Professor Jean Claude Simon, one of the world's leading scholars and
engineers in the field of computer pattern recognition during the last 30
years, died Wednesday, 16 February 2000 in Paris at the age of 76. Death
was attributed to complications arising from some relatively routine
surgery a few weeks earlier.

Professor Simon published more than 100 papers in journals and conference
proceeding dealing with various aspects of Pattern Recognition. He was
the editor of five books based on the proceedings of NATO Advanced Study
institutes of which he was the organizer.

He was active in the establishment of the biennial International Joint
Conferences on Pattern Recognition in the early 1970s as well as of the
International Association for Pattern Recognition in 1976, serving as
president of the latter from 1982 to 1984, a period of rapid growth for
that organization. In 1986 he organized and served as General Chairman of
the International Conference on Pattern Recognition in Paris.

Professor Simon received numerous honors, including two prizes of the
French Acadmie des Sciences, the Prix du Gnral Ferri of the French Socit
des Electriciens et Electroniciens, the Mdaille Blondel, and the Grand
Prix des Techniques de la Ville de Paris. He was an Officier de la Lgion
d'Honneur, a Chevalier des Palmes Acadmiques, an Honorary Fellow of the
Honda Foundation, and a member of the Conseil Scientifique de la Fondation
de France. In 1998 the International Association for Pattern Recognition,

at its biennial convention in Brisbane, Australia, awarded him its highest
honor, the K.S. Fu Prize, "for his contributions to the automated
recognition of handwritten words and his life-long leadership in pattern
recognition."

Herbert Freeman
Piscataway, NJ (USA)

Report on the Third IAPR International Workshop on
Graphics Recognition (GREC'99)
September 26-27, 1999, Jaipur, India
http://graphics.basit.com/iapr-tc10/grec99/

The third International Workshop on Graphics Recognition (GREC'99) was
held on September 26 and 27, 1999. It took place in Jaipur, the `pink
city' of India -- a city of grand palaces and busy bazaars, where one
finds elephants and camels sharing the roads with cars and
rickshaws. This provided a very interesting backdrop for the
scientific workshop.

The workshop was organized by IAPR TC-10. 55 persons from 15 countries
participated in the workshop. The largest representation was from
India and the United States (10 participants each), followed by France
and Japan (6 persons each). Among the participants were 39 persons
from universities or academic research institutes and 16 from
industry.

GREC'99 was held a few days after the International Conference on
Document Analysis and Recognition (ICDAR'99) which took place in
Bangalore, India. For the people attending both ICDAR and GREC, the
intervening days provided an opportunity to explore India. For the
first time, there was a significant non-overlap among the workshop
participants and ICDAR attendees. About 20 GREC participants came to
India solely to attend the workshop.

GREC'99 consisted of six technical sessions -- vectorization, maps and
geographic documents, graphic document analysis, graphic symbol and
shape recognition, engineering drawings and schematics, and
performance evaluation. Each session began with a half-hour invited
talk. The invited talks were followed by an average of six short talks
per session. The sessions closed with half-hour panel discussions
where the authors fielded questions from the other participants.
Several interesting new research directions were discussed at the
workshop.

The protocol for the third International Graphics Recognition Contest
was presented on the first day of GREC. This included actual scanned
images for the training and test sets (as opposed to synthetic images
used in the second contest). We did not find time to complete the
contest during the workshop. Therefore, the contest will be held
off-line and the results will be presented at ICPR 2000 (see the call
for participation below).

The proceedings of GREC'99 can be ordered through the workshop web
site (see above). There are several spare copies left. We are
currently working on the post-workshop book in Springer Verlag's Lecture
Notes in Computer Science series. This book will include revised or
enhanced versions of select papers from the workshop.

On an informal level, the workshop provided ample opportunity for
participants to interact socially. Several people traveled together on
sightseeing excursions before or after the workshop. During the
workshop, there were many breaks and an evening of extravagant banquet
for the participants to loosen up. The banquet was held in the lawns
of a palace turned hotel. The dimly lit outline of the palace provided
a nice backdrop. The participants were treated to an evening of
Rajasthani folk dances and fireworks.

The next GREC workshop will be organized by Dorothea Blostein of
Queen's University, Kingston, Ontario (Canada).

--Atul

Call for Participation
The Third International Graphics Recognition Contest

http://graphics.basit.com/iapr-tc10/contests/contest2000/
(The URL will be operational on March 4, 2000)

Results to be presented at
The 15th International Conference on Pattern Recognition
(ICPR 2000)
September 3-8, 2000, Barcelona, Spain

Sponsored by IAPR TC10

This is the third in the series of graphics recognition contests
organized by the International Association for Pattern Recognition's
technical committee on graphics recognition (IAPR TC10).

The first contest, held at the GREC'95 workshop in University Park, PA, focussed on dashed line detection [1], [2], [3]. The second contest, held at the GREC'97 workshop in Nancy, France, attempted to evaluate complete (automatic) raster to vector conversion systems [4], [5], [6], [7].

The 2000 contest shares the same goals as the second contest. This contest, like its predecessor, will test the participating systems' ability to segment text from graphics and to recognize graphical primitives such as lines, arcs, and circles. We plan to evaluate complete (automatic) raster to vector conversion systems. We have fairly mature performance metrics for evaluating and comparing vectorization systems. At the last contest, we worked with a very few number of training and test images. At the 2000 contest, we plan to have a much larger set of drawing images. Also, in 1997, we used completely synthetic images. These images were created by programmatically rendering real CAD files into raster images. Although these images included the realism of real life, and complex, CAD drawings, they lacked the artifacts introduced by the scanning process. For the 2000 contest, we will render CAD drawings into raster images, print the images, and then scan them to create realistic scanned images. This process would allow us to used the original CAD files as the vector ground truth for the images. Of course, we will have to align the CAD drawings with their scanned variants to account for the global deformations caused by the scanning process.

The contest is open to both - the manufacturers of commercial vectorization software and the university research groups with research prototypes of vectorization systems.

The results of the contest will be presented at ICPR'2000 (Barcelona, Spain, September 2000).

Classification of drawings

We hope to collect a fairly large sample of drawings in a few categories (such as mechanical drawings, architectural drawings, electrical schematics, process and instrumentations drawings, etc.). We will plot the aggregate performance results for each system over all the test drawings in a given category. We will also plot the performance results over all test drawings.

Performance evaluation of graphics recognition systems

The protocol for evaluating the performance of raster to vector conversion systems is specified in [7]. Performance metrics and the method of analyzing results are also discussed in this article. The unique contribution of [7] to the evaluation of vectorization systems is the formulation of the Edit Cost Index. By plotting the Edit Cost Index versus the Acceptance Threshold (for the goodness of match between pairs of ground truth and detected graphical elements), one can draw definite conclusions about the effectiveness of a given vectorization system for a set of drawings. These plots also enable a meaningful comparison of different vectorization systems. We will use these plots to compare the vectorization systems that participate in the 2000 contest.

Anonymous participation

To encourage participation, we will allow anonymous participation. This is how it will work. The names of all participants will be listed in the report. The participants will have to decide before the contest whether they would like to remain anonymous on the comparative plots in the contest report.

Benefits to participants

As a result of the '97 contest, we learnt that different vectorization systems worked well on different types of drawings. However, in '97, we had a very limited set of drawings and did not use any real scanned images. Through the use of a large number of real drawings, we hope to establish clear winners in different drawing categories. Ideally, there will be a clear overall winner. If not, we will announce the winners in each of the categories (provided they have not chosen to stay anonymous). This will be beneficial to both the developers and the end users of vectorization systems. The vectorization software evaluations in industry magazines such as the CADALYST [8] only provide a subjective measure of how good each software is. They concentrate less on the objective quality of auto-vectorization and more on the usability issues for each software they review. We hope to complement those kind of surveys with a scientific evaluation of the auto-vectorization capabilities of raster-to-vector conversion systems.

References

[1] R. Kasturi and K. Tombre (eds.), Graphics Recognition: Methods and Applications, First International Workshop, University Park, PA, USA, August 1995, Selected papers published as Lecture Notes in Computer Science, volume 1072, Springer, 1996

[2] B. Kong, et al., "A Benchmark: Performance Evaluation of Dashed
Line Detection Algorithms," in Graphics Recognition: Methods and
Applications, Lecture Notes in Computer Science, volume 1072,
Springer, 1996.

[3] D. Dori, L. Wenyin, and M. Peleg, "How to win a dashed line
detection contest," in Graphics Recognition: Methods and
Applications, Lecture Notes in Computer Science, volume 1072,
Springer, 1996.

[4] A. Chhabra and I. Phillips, "The Second International Graphics
Recognition Contest - Raster to Vector Conversion: A Report," in
Graphics Recognition: Algorithms and Systems, Lecture Notes in
Computer Science, volume 1389, Springer, 1998.

[5] I. Phillips, J. Liang, A. Chhabra and R. Haralick, "A Performance
Evaluation Protocol for Graphics Recognition Systems," in Graphics
Recognition: Algorithms and Systems, Lecture Notes in Computer
Science, volume 1389, Springer, 1998.

[6] A. Chhabra and I. Phillips, "A Benchmark for Graphics Recognition
Systems," in Proceedings IEEE Workshop on Empirical Evaluation
Methods in Computer Vision, Santa Barbara, CA, 1998.

[7] I. Phillips and A. Chhabra, "Empirical Performance Evaluation of
Graphics Recognition Systems," IEEE Transaction of
Pattern Analysis and Machine Intelligence, September 1999.

[8] David Byrnes, "Raster-to-Vector Comes of Age", CADALYST, December
1997, pages 48-70.

--Atul Chhabra and Ihsin Phillips
Contest co-chairs

>From: Nicole Vincent <vincent@univ-tours.fr>
>Subject: CFP: CIFED'2000

Here is the last call for paper for CIFED'2000 (Colloque International
Francophone sur l'Ecrit et le Document). The official langage of the
Conference is French. It will take place in Lyon 3-5 July 2000.
The main topic of the Conference is document analysis and understanding.
The submission deadline has been extended till February 28.
The websit is
http://rfv.insa-lyon.fr/cifed.

[I apologize I am late in posting this announcement. --Atul]

>From: Joaquim A Jorge <jaj@automatix.inesc.pt>
>Subject: CFP: Special issue of Computers & Graphics on Calligraphic Interfaces

Call for Papers

Special Issue of the Elsevier Journal "Computers and Graphics"

Calligraphic Interfaces: Towards a New Generation of Interactive Systems

- Submission Deadline: March 15, 2000
- Journal URL: http://www.elsevier.nl/locate/cag

CAD systems possessing great functionality now enable us to manufacture very
complicated models. However, computers have yet to become usable at the very
early stages of product design, where pencil and paper still reign. This is
because present-day interfaces require designers to leap a large conceptual gap
from their mental image of a desired object to the geometric model that
formally expresses its shape.

As computer systems become more sophisticaded, alternative input modalities and
interface technologies are emerging which may form the basis for a new
generation of sketching applications supporting what we call Calligraphic
Interfaces, where the artificial dialogue constraints imposed by the previous
generation of UIs are removed and designers can work with the computer much as
they would with more traditional media, to capture rough shapes and
ideas. Thus, calligraphic interfaces hold out the promise of large gains in
productivity, coupled with higher product quality.

We welcome contributions addressing one or more of the following topics:

* Architectures for Calligraphic Interaction
* Sketch-based Modeling and UIs
* Parsing Sketch-based Input
* Multimodal Integration: Pen, Speech & Gestures
* Handling Ambiguous Input
* Novel Interaction patterns
* Sketching in Augmented & Immersive Virtual Environments
* Non-desktop Interfaces
* Out of Flatland: Intelligent 3D Calligraphic Assistants
* Innovative Applications of Calligraphic Interfaces

Important Dates:

E-mail Expression of Interest: As Soon As Possible
Submission of Contributions: March 15, 2000
Notification of Acceptance / Rejection: April 21, 2000
Submission of Final Manuscripts: May 22, 2000
Publication: November, 2000

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the following URL may be helpful:
http://www.elsevier.co.jp/homepage/about/ita/styles

All papers will be peer reviewed by multiple experts. Electronic submission is
strongly encouraged. Contributions should be submitted by (preferably)
emailing the URL where the submission can be retrieved or by emailing the paper
itself as one file (PDF or Compressed Postscript or Tarball as a last resort!)
to Joaquim Jorge <jorgej+cag@acm.org>, or by ftp to ftp://virtual.inesc.pt/cag/

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Whatever the submission method, you should send an email to the editors with
the title of the paper, the authors' names and affiliations, the contact
author's address, the abstract and the submission method URL, attached file,
the filename used for ftp, or surface mail tracking information.

-J.Jorge

>From: IJDAR <ijdar@cfar.umd.edu>
>Subject: CFP: IJDAR Special Issue on Graphics Recognition

IJDAR SPECIAL ISSUE
CALL FOR PAPERS

Graphics Recognition: Enabling Machines
to Understand Line Drawings and Symbols

With the acceleration of options to convert paper documents into
digital ones, the need for advanced graphics recognition technologies
is on the rise, so as to take full advantage of the semantics conveyed
by the graphics as an important and frequently the crucial part of a
document or scene.

This special issue of IJDAR is devoted to graphics recognition. The
papers to be included in this issue will provide a broad perspective
of state-of-the-art graphics recognition technologies, systems and
techniques and their relation to document understanding and computer
vision/pattern recognition.

Areas covered may include, but are not limited to:

Basic Techniques: Vectorization; Shape recognition; Graphics/text
separation; Symbol recognition.

System Approaches: Graphics recognition; Generic graphics recognition
and reusability; Patterns and frameworks in graphics recognition;
Incorporating graphics recognition into document analysis systems.

Applications: Graphics Recognition over the Internet: Principles,
requirements and uses; Applications to E-commerce; Content-based image
retrieval. Line drawing understanding: Maps, cartography and GIS;
Engineering drawings; Diagrams and schemas; Utility drawings.
Non-textual symbol-based languages: Music, Chemistry, and
Mathematics. Robotics and navigation: Fiducial recognition for indoor
industrial and home applications; AGV homing through graphics
recognition. Outdoor applications: Traffic sign recognition; Car plate
recognition; Intelligent highway applications.

Electronic Submission of Manuscripts: Please submit your manuscript
electronically in PDF format, through the IJDAR Electronic Submission
Page by March 31, 2000.

Deadlines:

Preliminary Abstract: ASAP
Full paper: March 31, 2000
Editors' Decisions: May 30, 2000
Final Manuscript Due: June 30, 2000
Tentative Publication Date: September 2000

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Other upcoming IJDAR special issues include Document Analysis for
Office Systems and Performance Evaluation. For more information on
this and other IJDAR special issues, see http://ijdar.cfar.umd.edu

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>From: Nabeel Murshed <nmurshed@cognus.eti.br>
>Subject: CFP: DAS 2000, Rio de Janeiro, Brazil

CALL FOR PARTICIPATION

FOURTH INTERNATIONAL WORKSHOP ON DOCUMENT ANALYSIS SYSTEMS
(DAS'2000)

RIO OTHON PALACE HOTEL
COPACABANA BEACH - RIO DE JANEIRO, BRAZIL
10 -13 DECEMBER, 2000

On behalf of the program and organizing committees we would like to
invite you to participate in the Fourth International Workshop on
Document Analysis Systems (DAS'2000). The first three workshops were
successfully held, respectively, in Germany, United States, and Japan.
DAS'2000 will be a single-track and 100% participation workshop. It will
aim at bringing together outstanding research and developments in
Document Analysis Systems. The workshop will be held over four days. The
first day is reserved for tutorials. The technical program will consist
of invited talks, given by expert in the field, oral presentations, and
panel discussions. Panel discussions will focus on 10 Years of Document
Image Analysis, and will attempt to pin-point the areas where progress
has been fast and where it has been slow. In addition, panel discussions
will attempt to identify new directions toward the third millennium.
More details can be found on the workshop home
page:http://www.utp.br/das2000.
We would appreciate if you circulate this email among your
colleagues.

Best regards,
DAS'2000 General Chairs
Nabeel Murshed and Adnan Amin

>From: Donato Malerba <malerba@di.uniba.it>
>Subject: CFP: Workshop on Machine Learning in Computer Vision, Berlin, Germany

Dear colleague,

Please find enclosed the following web addresses:

o Home page of WISDOM++, an intelligent document processing system
presented at ICDAR'99. In WISDOM++ the steps of analysis,
classification and understanding of printed documents are based
on a set of rules which are automatically learned by means of three
different machine learning systems.
http://www.di.uniba.it/~malerba/wisdom++/

o Full set of slides of the ICDAR'99 tutorial on
"Learning in Document Analysis and Understanding".
http://www.di.uniba.it/~malerba/icdar99/slides/ppframe.htm

o Call for paper of the ECAI'2000 Workshop on
"Machine Learning in Computer Vision".
http://www.di.uniba.it/~malerba/ws-ecai2000/

Best regards,

Donato Malerba

CALL FOR PAPERS

ECAI 2000 Workshop on
Machine Learning in Computer Vision
http://www.di.uniba.it/~malerba/ws-ecai2000/
Tuesday, 22nd August 2000

before
14th Biennial European Conference on Artificial Intelligence
Humboldt University, Berlin
http://www.ecai2000.hu-berlin.de/

Technical Description

Learning is one of the next challenging frontiers for computer vision
research, and it has been receiving increasing attention in the recent
years. This workshop will provide a forum for discussing current
research in AI and pattern recognition that pertains to machine
learning in computer vision systems.

>From the standpoint of computer vision systems, machine learning can offer
effective methods for automating the acquisition of visual models, adapting
task parameters and representation, transforming signals to symbols, building
trainable image processing systems, focusing attention on target object.
To develop successful applications, however, we need to address the following
issues:

- How is machine learning used in current computer vision systems?
- What are the models of a computer vision system that might be
- learned rather
than hand-crafted by the designer?
- What machine learning paradigms and strategies are appropriate to the
computer vision domain?
- How do we represent visual information?
- How does machine learning help to transfer the experience gained in
creating a vision system in one application domain to a vision system for
another domain?

>From the standpoint of machine learning systems, computer vision can provide
interesting and challenging problems. Many studies in machine learning assume
that a careful trainer provides internal representations of the observed
environment, thus paying little attention to the problems of perception.
Unfortunately, this assumption leads to the development of brittle systems
with noisy, excessively detailed or quite coarse descriptions of the perceived
environment. Some specific machine learning research issues raised by the
computer vision domain are:

- How dealing with noisy observations?
- How can large sets of images with no annotation be used for learning?
- How dealing with mutual dependency of visual concepts?
- What are the criteria for evaluating the quality of learning processes in
computer vision systems?
- When a computer vision system should start/stop the learning process and/or
revise acquired models?
- When is it useful to adopt several representations of the perceived
environment with different levels of abstraction?

The workshop is aimed to be a high communicative meeting place for researchers
working on similar topics, but from different communities. In order to achieve
these goals, workshop will consist of one or two invited talks, followed by
short presentations and longer discussions. Each author will be encouraged to
read another accepted paper and to comment on it after the original talk was
given.

All ECAI'2000-MLCV workshop participants must register both for the main
ECAI'2000 conference and the workshop itself.
Workshop attendance will be limited to registered participants.

Topics

The workshop will maintain a balance between theoretical issues and
descriptions of implemented systems to promote synergy between theory and
practice. Works in areas such as statistical pattern recognition are also
welcome. Topics of interest include, but are not limited to:

- Learning to Recognize Shapes
- Supervised Learning of visual models
- Unsupervised Learning for structure detection in images
- Multistrategy Learning in Vision
- Learning and Refining Visual Models
- Multi-level Learning and Reuse of Learned Concepts
- Learning Important Features for Image Analysis
- Relational Learning in Vision
- Context in Visual Learning
- Image segmentation via learning
- Probabilistic model estimation and selection
- Applications such as medical imaging, object recognition, remote sensing,
digital maps, document image analysis and recognition, spatial reasoning

Submission Procedure

Authors are invited to submit original research contributions or experience reports in English. Submitted papers must be unpublished and substantially different from papers under review. Papers that have been or will be presented at small workshops/symposia whose proceedings are available only to the attendees may be submitted.

Papers should be no longer than 5000 words (10 pages, approximately). Papers should be sent electronically (postscript or pdf) not later than March 20th, 2000 to

Donato Malerba < malerba@di.uniba.it >

Papers will be selected on the basis of review of full paper contributions. Authors should make certain that the learning techniques they describe address the special issues that are associated with problems in computer vision.

Final camera-ready copies of accepted papers will be due by June 1st, 2000.

Important Dates

- Deadline for papers: March 20th, 2000
- Notification of acceptance: May 1st, 2000
- Camera-ready copies of papers: June 1st, 2000
- Workshop on ECAI-98: August 22nd, 2000

Organizing Committee

This workshop will be organized by the following people:

- Joachim M. Buhmann, University of Bonn, Germany
- Terry Caelli, The University of Alberta, Alberta, Canada
- Floriana Esposito, University of Bari, Italy (cochair)
- Donato Malerba, University of Bari, Italy (cochair)
- Maria Petrou, University of Surrey, UK
- Petra Perner, Institute of Computer Vision and Applied CS, Leipzig, Germany
- Tomaso A. Poggio, MIT, Boston, MA
- Alessandro Verri, University of Genoa, Italy
- Tatjana Zrimec, University of Ljubljana, Slovenia

Workshop Home Page:

http://www.di.uniba.it/~malerba/ws-ecai2000/

>From: DGCI 2000 organising committee <dgci2000@cb.uu.se>
>Subject: CFP: Discrete Geometry for Computer Imagery, Uppsala, Sweden

9th Discrete Geometry for Computer Imagery (DGCI 2000)

13-15 December 2000

Centre for Image Analysis, Uppsala, Sweden

Information: http://www.cb.uu.se/~dgci2000
Contact: dgci2000@cb.uu.se

DEADLINE FOR PAPER SUBMISSION: 28 April 2000

SCIENTIFIC TOPICS

Theory and applications, especially within image analysis and computer graphics, on

* Topology * Surfaces and Volumes
* Geometrical Transforms * Shape Representation
* Models for Discrete Geometry * Shape Understanding
* Visualisation * Image Generation and Reconstruction
* Tilings and Patterns * Discrete Tomography

PROCEEDINGS and SPECIAL JOURNAL ISSUES

Proceedings will be published in the Springer-Verlag LNCS series.

Extended versions of selected papers will be published in special issues of either Pattern Recognition Letters or Discrete Applied Mathematics.

INVITED SPEAKERS

Dr. Pieter Jonker, The Netherlands
Dr. Pierre Soille, United Kingdom
Prof. Angela Wu, USA

For more info about the conference, committees, paper submission, registration, accomodation, venue, etc., see http://www.cb.uu.se/~dgci2000

A paper version of the 2nd CfP has been mailed.

If you for some reason have not received a CfP,
please e-mail dgci2000@cb.uu.se and ask for one.

Do not hesitate to ask any questions to dgci2000@cb.uu.se

Gunilla Borgefors Gabriella Sanniti di Baja Ingela Nystr?

>From: Sameer Singh <S.Singh@exeter.ac.uk>
>Subject: CFP: Special issue of PAA journal on Image Indexation

PATTERN ANALYSIS AND APPLICATIONS JOURNAL

SPECIAL ISSUES CALL for PAPERS ON:

I M A G E I N D E X A T I O N

(Guest Editor- Prof. Jean-Michel Jolion, INSA Lyon, France)
(deadline: 15 May, 2000; expected publication date: Summer
2001)

The field of Visual Information Management is constantly
growing till several years. It relates to new areas of
research in the field of image analysis and pattern
recognition as well as to many applications due to the
unlimited expansion of the web and large databases of
images. More particularly, the "image indexation" domain
refers to how should we use the content of a query image
provided by a user to search similar images in a possibly
large database.

The aim of this special issue is to show the
state-of-the-art achievements in Image Indexation.
Submitted papers should report the solution of a
significant open problem: theoretical, algorithmic, and
systems-architectural studies are welcome, as are papers
describing practical applications supported by performance
evaluation on a large database.

Topics appropriate for this special issue include, but not limited to

New representation of images,
Feature extraction,
Image content characterization,
Data structure for feature and image indexation,
Similarities and distances for images and features,
Relevant feedback,
Performance criteria,
Benchmark,
System architecture,
Innovative and industrial tools.

Send four copies of your manuscript (marked "II SPECIAL
ISSUE") by May 15, 2000 to the following address:
Sameer Singh, Editor-in-Chief, Pattern Analysis and
Applications, Department of Computer Science, University of
Exeter, Exeter EX4 4PT, UK

For instructions to authors, please see JOURNAL WEBSITE:
http://www.dcs.ex.ac.uk/paa

>From: Ginny Limtiaco <ginny@vislab.ucr.edu>
>Subject: CFP: IEEE Wkshp. Applications of Computer Vision (WACV 2000), Palm Springs, California

CALL FOR PAPERS

Fifth IEEE Workshop on Applications of Computer Vision (WACV '2000)
December 4-6, 2000 ~ Palm Springs, California

General Chair:
Bir Bhanu, University of California, Riverside

Program Co-Chairs:
Terry Boult, Lehigh University
Alok Gupta, Siemens Corporate Research, Inc.
David Michael, Cognex Corp.

Demos Chair:
Bahram Parvin, Lawrence Berkeley National Laboratory

Local Arrangements Chair:
Matthew Barth, University of California, Riverside

We would like to invite computer vision researchers and practitioners
to participate in the Fifth IEEE Workshop on Applications in Computer Vision
to be held in Palm Springs, California, December 4-6, 2000.

The goal of this workshop is to bring together an international forum
of academic, industrial, and government researchers in order to present
and discuss various applications of computer vision. This will allow
researchers in the different applications areas to interact and
interchange ideas, so that applications are thoroughly understood

and there is a transfer of concepts from one application to another.

The program will consist of high quality contributed papers,
invited talks, panels and demonstrations covering
computer vision applications that include, but are not limited to,

Photo-interpretation/cartography
Navigation/transportation
Automatic target recognition
Graphics recognition/engineering drawings
Security/surveillance/human motion
Gesture/face/hand recognition
Image and video databases
Augmented reality
Human-computer interaction
Inspection/quality control
Robotics/manufacturing
Model recovery (shape from x)
Space operations
Document analysis
Medical analysis
Biometrics
Performance evaluation
Scientific Imaging Applications

Emphasis should be on novel research aspects and/or extensive
experimental analysis
for a given application domain; purely applying standard techniques
to a new application problem using a few test images is not sufficient.

SUBMISSIONS: Details on submission process and the electronic forms can be
found at wacv2000.eecs.lehigh.edu/. After filling out the electronic forms
(which will assign a paper number), send four (4) copies of the paper,
written in English, along with a sheet giving the paper number and
a summary page, described below, at the address given below by May 25, 2000:

Prof. Terrance E. Boult
304 Packard Laboratory
19 Memorial Drive West
Lehigh University
Bethlehem, PA 18015, USA
e-mail: tboult@eecs.lehigh.edu

Include a summary page -- no more than one page containing answers to
the following questions (answer each question separately and in order;
please number your answers):

1) What is the application area of the work reported in this paper?
2) What is the paper about?
3) What is the significance or original contribution of this work?
4) How does your work relate to work by others?
5) How can your work be applied or used by others?

Papers should be limited to 8 pages of formatted paper in
IEEE style (double column). The files can be down loaded from the
workshop website. Papers should include a title page containing the
names and addresses of the authors, and an abstract
of up to 200 words. For paper reviews only, please do not include the
names or affiliations of the authors, so that the review process remains
anonymous.

FURTHER INFORMATION: For further information or a copy of the advance
program, when available, please check the workshop website at (Terry -
please fill in) or check with

Workshop on Applications of Computer Vision, IEEE Computer Society,
1730 Massachusetts Ave., NW, Washington, DC, 20036

IMPORTANT DATES:

Paper Submission Deadline: May 25, 2000
Notification of Acceptance: August 1, 2000
Final Paper Due: September 1, 2000

**** THERE WILL BE A SPECIAL ISSUE OF MACHINE VISION AND
APPLICATIONS - AN INTERNATIONAL JOURNAL BASED ON WACV 2000 WORKSHOP.
TENTATIVE PUBLICATION DATE FOR THIS ISSUE IS JUNE/JULY 2001. *****

>From: IWVF4 <IWVF4@imagm.cib.na.cnr.it>
>Subject: CFP: Intl. Wkshp. on Visual Form, Capri, Italy

4th International Workshop on Visual Form
27-29 May 2001
Capri, Italy

IWVF4 Website (in preparation): http://amalfi.dis.unina.it/iwvf4/
(Please, add a bookmark for the above IWVF4 URL)

Contact: iwvf4@imagm.cib.na.cnr.it

DEADLINE FOR SUBMISSION: 30 September 2000

SCIENTIFIC TOPICS
All aspects of 2D and 3D Shape in:
- Human and Machine Perception,
- Pattern Recognition,
- Computer Vision
Areas such shape perception, representation, decomposition, description,
recognition, and related topics are expected to be covered.

More info about IWVF4, Scientific Committee, paper submission procedure,
registration, accomodation, venue, etc., will be placed at the IWVF4 Website
currently in preparation.

Luigi P. Cordella Carlo Arcelli Gabriella Sanniti di Baja

IWVF4 Chairpersons:
- Carlo Arcelli, Ist. Cibernetica-CNR, I-80072 Arco Felice
phone +39 0818534206, Fax +39 0815267654, car@imagm.cibna.cnr.it
- Luigi P. Cordella, DIS-Universita' di Napoli, I-80125 Naples
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- Gabriella Sanniti di Baja, Ist. Cibernetica-CNR, I-80072 Arco Felice
phone +39 0818534234, Fax +39 0815267654, gsdb@imagm.cibna.cnr.it

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>From: Sameer Singh <S.Singh@exeter.ac.uk>
>Subject: CFP: Int. Conf. on Advances in Pattern Recognition, Exeter, UK

INTERNATIONAL CONFERENCE ON ADVANCES IN PATTERN RECOGNITION
(icapr'2001)

Rio Othon Palace Hotel, Rio de Janeiro, Brazil
11-14 MARCH, 2001

CONFERENCE HOMEPAGE
http://www.utp.br/icapr2001

<<CALL FOR TUTORIAL AND EXHIBIT PROPOSALS>>

CALL FOR TUTORIALS
Proposals for tutorials are now invited from researchers.
Tutorials will be held on the first day of the conference
and they will last for approximately two hours each.
Tutorial proposals should be sent to as a 500 word summary
of the tutorial contents and a 150 word biography of the
author(s) no later than <15 April, 2000>. Tutorial
acceptances will be notified within a period of four weeks
after the deadline to allow enough time for presenters to
prepare their work. A standard paper based on the tutorial
will also be published in the proceedings following the
same guidelines as for standard papers.

CALL FOR EXHIBITS
Proposals for exhibits are now invited from researchers. An
exhibit is defined as hardware or software application of
pattern recognition technology. Hardware examples include
sensors, wearable computers, mobile robots, parallel
systems for pattern recognition, image processing hardware,
medical hardware systems and hardware based neural or
evolutionary systems. Software examples include software
systems with visual interfaces for solving a range of
pattern recognition problems including, but not limited to,
biometrics, OCR, scene analysis, vision applications,
medical image analysis and retrieval, forecasting systems,
speech recognition and robot control. Exhibit proposals
should be sent as a detailed summary of 500 words on the
exhibit and a 150 word biography of the author(s) no later
than <15 April, 2000>. Exhibit acceptances will be notified
within a period of four weeks after the deadline to allow
enough time for presenters to prepare their work. A
standard paper based on the exhibit will also be published
in the proceedings following the same guidelines as for
standard papers. It is expected that the exhibit presenters
will be responsible for bringing their own laptop and
software.

NOTE: Partial financial asistance is available for tutorial
and exhibit presenters. Contact the conference secretariat
for details.

CONFERENCE SECRETARIAT
ICAPR'2001
Department of Computer Science, University of Exeter, Exeter EX4 4PT, UK
Email: espaa@ex.ac.uk

CONFERENCE CHAIR
Sameer Singh, Exeter University, UK

PROGRAM CHAIRS
Walter Kropatsch, Technical University of Vienna, Austria
Nabeel Murshed, Tuiuti University of Paran, Brazil

ORGANIZING COMMITTEE
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Ricardo Nassif, National Laboratory of Scientific Computing, Brazil
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Mahesan Niranjan, University of Sheffield, UK
Enrique Ruspini, SRI International, USA
Jacek Zurada, University of Louisville, USA.

>From: "ISR2000" <isr2000@goldenplanners.com>
>Subject: Call for participation: Vision Interface 2000, Montreal, Canada

May 14-17, 2000, Palais des Congr?, Montreal (Canada)

As you know, we're only a few months away from ISR 2000, AI 2000, GI 2000,
VI 2000, the 10th Annual Conference of PRECARN/IRIS and the Robotics of
Tomorrow Trade Show.

If we have your mailing address in our database, you will be receiving
shortly our detailed Preliminary Program and Registration Information
brochure. Please take note of the advance registration deadline of March
15th and the opportunity to save on your registration fees.

All the information contained in the Preliminary Program brochure and more
is being posted on our web site on an on-going basis. For additional
details or updates on the program, please visit www.precarn.ca/isr2000. As
of next week, you will be able to register on-line!

If you would like to receive a copy of the Preliminary Program brochure,
please send us your request by Email (isr2000@goldenplanners.com), giving us
your complete mailing address.

We look forward to welcoming you May 14-17, in Montreal. Join us at ISR
2000, the Robotics of Tomorrow Trade Show, Artificial Intelligence (AI
2000), Graphics Interface (GI 2000), Vision Interface (VI 2000) and the 10th
Annual Conference of PRECARN/IRIS. One registration fee gives you access to
all these events!

Helene S. Lamadeleine
Canadian Federation for Robotics
ISR 2000 Secretariat

That's all for now.

Your TC10 chairman.

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TC10 member enrollment: http://graphics.basit.com/iapr-tc10/membership/
TC10 News submissions to: atul@basit.com