# Newsletter 33

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Dear TC10 members and friends,

Here comes again some info from TC10. First, I invite you all to access additional information on my WWW pages. My general WWW page is at URL http://www.loria.fr/~tombre/

Then you have the tc10 page at http://www.loria.fr/~tombre/tc10.html, where you can also find the archives of this mailing list. I also have a list of pointers to additional information at URL http://www.loria.fr/~tombre/vision.html, where you can also find the archives of CFPs and advance programs announced here, and some others which I don't announce here because they are too far from the scope of interest of this mailing list. Hence, I have also shortened some of the announcements in this list, as the full copy is available on the web.

I have received a report from two colleagues with some remarks about the scientific content of IWGR. They raise several good questions, which we should take into account to do it still better next time. Thank you for these comments. Of course, everybody is free to comment on these comments again; it would be to the benefit of the whole mailing list to have some discussions going on. You can send your comments directly to the whole list by sending to the address tc10@loria.fr, or you can send it to me for inclusion in the next TC10 news.

## Remarks on the IWGR

Here are some comments about the 1st IWGR:

First, congratulations for the general organization of the workshop, especially the panels which dealt with ideal situations to discuss and to combat the hot issues or serious problems. In our opinion, during the workshop the panel discussions were the most valuable ones

Secondly, we think that the principal themes were divided into 3 different categories as follows:

- 1. Basic techniques and new results
- 2. Some special real applications
- 3. Performance measures and evaluation

Although many interesting papers were presented, we found that more profound articles were sometimes missing. Therefore, we could have taken more times for discussions. The missing factors are summarized

For the first theme; the review on the posed problems, existing techniques and their performances were lacking. If the commercialized tools and the research activities were mentioned, it would have been very interesting. One of us came to the workshop looking for specific methods for solving the line extraction problem. There were actually very few articles on this topic. Adbel's article on preprinted forms, which seemed to be similar to Chhabra's article, was not presented in the correct session. If the papers had presented together, the line extraction problem on the printed forms could have been given a more precise comparison during the discussion.

The second theme was well organized. Dov's presentation gave a good overview of this domain. An excellent survey on the real problem and the principal results were demonstrated. What was maybe lacking a bit was:

- the databases: names, standards, etc.
- the performance comparison between the systems: maybe this stems from the fact that eveyrbody works on his/her own application and uses theregore ad hoc databases
- maps processing could have been given more time
- Vectorization techniques and raster processing techniques should have been added, with respect to the depth and strength of the basic ideas. However, some interesting real application papers (ex. Kwon and den Hartog) were presented.
- 3D reconstruction was a very interesting topic, but a more

general overview of its benefit and its duality with CAD was missing. - Models: few things were discussed on this matter, except Dov's work on object modeling.

The interpretation stategies could have been given more time. The difference between top-down and bottom-up methods was introduced by Jurgen, but many other approaches were also possible. Knowledge-based systems can use the best of both approaches.

- We missed references and links to similar work in hanwriting recognition.

With respect to the third theme, performance measurement is a very interesting subject, but its presentation was not adequate enough. We were expecting more concrete results and ideas For instance, Abe's paper on the comparison of several existing methods was very interesting but would have been still better if provided with a complete benchmark and a summary of the most important parameters. In each algorithm, the most important factor was the threshold. How should we calculate and adapt the threshold? This was a good discussion topic during the workshop.

We have highlighted some shortcomings and critics, but we think that the IWGR was very well organized and that the contents of the papers had good quality. We strongly recommand a second workshop for the further development of the graphics recognition topic.

Abdel Belaid, CRIN/CNRS & INRIA-Lorraine, France Young-Bin Kwon, Chungang University, Seoul, Korea

Prof. Nakano also sent me a short report about ICDAR'95:

>From: NAKANO Yasuaki <nakano@cs.shinshu-u.ac.jp>

>Subject: Report of ICDAR'95

Third International Conference on Document Analysis and Recognition Montreal, Canada, 14-16 August 1995

The IAPR Conference ICDAR'95 was held on 14-16 August 1995 at Montreal Canada, hosted by General Chair, Prof. C. Y. Suen, Concordia University.

Number of participants from 25 countries ran up to 437, and exceeded those of two predecessors, ICDAR'91 held at Saint-Malo, France and ICDAR'93 at Tsukuba, Japan. It should be noted that more than a half participants came from outside of North America. ICDAR'95 was really a worldwide forum for document analysis/recognition. In a rough count, a half members came from North and South America, and a quarter from Asia and Europe, respectively. Besides, it should also be noted that about 180 participants were from companies, so ICDAR'95 served as a junction point between academic and industrial societies.

Dr. P. E. Baier from Universitaet Mannheim in Germany gave a Keynote Speech entitled "Image Processing of Forensic Documents" which was an overview of the potential application of the document analysis/recognition techniques.

>From about 330 papers submitted, 12 long papers, 169 short papers and 96 posters were accepted. The quality of the papers is high enough and participants discussed enthusiastically in every session.

The topics of oral sessions were as follows: Document (Structure and) Analysis, Model-based Document Analysis, Layout Analysis, Skew Detection and Processing, Image Processing Techniques, Segmentation, Word (and Character) Recognition, Handwritten Character Recognition, On-line Recognition, Signature Verification, Drawing and Map Recognition, Map Interpretation, Symbol Recognition, Theoretical Approaches and Music Recognition, Modelling Methods, Learning, Neural Networks (and Systems), Postprocessing, Application Systems, Database and Document Retrieval, Storage and Retrieval.

These topics were discussed in 36 oral sessions and poster sessions. Oral sessions were arranged in four parallel tracks because of the limited schedule

As my impression, character recognition techniques are now discussed in the word level, including cursive script, rather than in the level of already separated characters. Separation of touching characters and extraction of characters from complex backgrounds are also the current problems. These problems were, of course, main themes in many sessions. Techniques of document analysis and map interpretation, corporating with character/symbol recognition as well as theoretical considerations and applications were also important aspects in the conference.

Along with Poster Sessions, demonstrations related to the papers were held using PC's or Workstations, so the audience could recognize and evaluate the achievements more quantitatively and qualitatively

>From the papers given in Poster Sessions, the following three papers were awarded as the Best Posters: # Myriam Cote, Eric Lecolinet, Mohamed Cheriet and C. Y. Suen,
"Building a Perception Based Model for Reading Cursive Script."
# Oivind Due Trier, Torfinn Taxt and Anil K. Jain,
"Data Capture from Maps Based on Gray Scale Topographic Analysis."

# Donald Sylwester and Sharad Seth,

"A Trainable, Single Pass Algorithm for Column Segmentation."

As seen from the explanation above, ICDAR is the worldwide and largest forum for introduction and exchange of academic and industrial ideas on these fields. There may be no doubt in that the researches and applications in these fields will proliferate much more in coming years.

Finally, representing all participants, I want to appreciate the labor and hospitality of the Local Arrangement Committee at Montreal.

The next conference, ICDAR'97, will be held on 18-20 August 1997 at Ulm, Germany, hosted by General Chair Prof. J. Schuermann, Daimler-Benz. ICDAR'99 will be held on 4-6 October 1999 at Bangalore, India. Prof. Srihari, SUNY Buffalo, will serve as the General Chair.

Reported by Yasuaki Nakano Shinshu University Publicity Co-Chair, ICDAR'95 nakano@cs.shinshu-u.ac.jp

Here is an announcement I received recently:

>From: Thomas M. J. Fruchterman <maverick@raf.com>

>Subject: DAFS 0.9.2 -- OCR and Document Understanding Format

DAFSLib 0.9.2 A Format for OCR and Document Decomposition

RAF Technology would like to announce the latest release of the Document Attibute Format Specification (DAFS) C-language API. Sponsored by ARPA, DAFS has been designed to be the universal OCR and document understanding format. The main feature of this release is a greatly expanded Programmer's Guide and Reference.

The key points of DAFS:

Free International Capable (uses the Unicode standard) Allows complex document structure hierarchial allows ambiguity and uncertainty Compact, extensible, single file storage of text and image

The C-language API to DAFS, DAFSLib, allows one to manipulate DAFS structures programmatically. The companion viewer/editor to DAFS is called Illuminator and is an X-windows/Motif application. This latest version of DAFS may be downloaded using this URL:

ftp://ftp.cfar.umd.edu/pub/contrib/sources/illuminator/illuminator-version0.9

In this directory are the DAFS 0.9.2, and the complementary 0.9 release of Illuminator.

## SOME ADVICE ON USING ILLUMINATOR AND DAFS

DAFS is a standard for OCR, not an OCR program. Many users have requested that we supply an example OCR program that uses DAFS, but we haven't had the resources to this point. If you have source to a free OCR program, we would be interested in converting it to use DAFS.

There are many issues in running a Motif program like illuminator under OpenWindows and Solaris. Don't give up! The TROUBLE\_SHOOTING file explains how to patch around them all.

# **FEATURES**

- ( old features
- + new features )
- sparc binaries
- linux binaries+ sai binaries
- + dafs2txt -- print out text
- + pda2dafs -- convert Calera PDA files
- dumpdafs -- dump out DAFS data in human readable form
- prall -- hierarchy text output
- sample files
- + bunch -- combine multiple DAFS files
- + updated manual

# FREE TO USE

DAFS Lib is as free as we could make it. There are no royalties, no restrictions on use, and only the disclaimer that RAF Technology and ARPA provide this software with no warranty, and that you must give credit to us. We are planning to release the source within the next 2-6 months with version 1.0. If there are any features missing in

DAFSLib that you would like to see, please let us know.

If you would like to use DAFS Lib or Illuminator but don't have a Sparc, IRIX Workstation, or Linux PC, please let us know, and we may be able to send you binaries for your machine.

#### **ACKNOWLEDGEMENTS**

The prime contractor is RAF Technology. The contact is: illcomm@raf.com. This software was developed for ARPA, under contract MDA 904-93-C-7219.

Unicode is the emerging standard for International Character Encoding. Unicode is Copyright The Unicode Consortium.

PDA is the document format of Calera Recognition Systems (now a part of Caere), and is copyright by them.

TIFF was invented by Aldus

A reminder: here is the CFP of the next DAS workshop:

>From: hull@niagara.crc.ricoh.com (Jonathan Hull)

>Subject: CFP: 1996 IAPR Workshop on Document Analysis Systems

International Association for Pattern Recognition Workshop on Document Analysis Systems Malvern, Pennsylvania, October 14-16, 1996

Call for Papers

An intensive, three-day, single-track, 100% participation workshop on the research and development of systems for the analysis of document images.

Academic and industrial researchers, end-users and students are encouraged to attend. We expect to provide several student scholarships

Attendance will be limited to 75 people. Papers will be delivered in a single-track format. A portion of the workshop will also be devoted to panel discussions and working groups. Participants will be invited to propose topics for these in advance. There will be ample opportunity for informal discussion and socializing

#### Sponsors

IAPR Technical Committee on Graphics Recognition (TC-10) IAPR Technical Committee on Text Processing (TC-11) Loral Defense Systems-Eagan Ricoh Corporation U.S. Department of Defense

#### Topics

- descriptions of complete, working document image analysis systems, including applications to large document image databases
   applications to text, graphics, maps, logic diagrams, music, etc.
   studies of system architectures

- methods of performance evaluation for whole systems or system modules
- interfaces to knowledge databases and post-processors
- algorithms for symbol recognition
- layout segmentation

# Submission of Papers

Authors are invited to submit either a full paper or an abstract of remarks. Full papers, of up to book-chapter length, will be presented formally, published in a limited number of refereed Proceedings available at the meeting, and considered for archival publication in a post-workshop book. Abstracts of remarks, one page in length, will be delivered more briefly, and will not be published in the Proceedings. Authors should submit four copies of each paper or abstract, cleanly typed and in English. If there are several authors, please indicate the author that will handle all correspondence. The email address of the corresponding author should be provided.

If any part of a full paper has been submitted to another conference, please state where it has been submitted and how it differs >from this paper.

Acceptance of a paper or abstract will result in automatic distribution of registration materials

Send full papers, abstracts, or inquiries about the technical program to:

Jonathan J. Hull Ricoh California Research Center 2882 Sand Hill Road, Suite 115 Menlo Park, CA 94025 USA

TEL: 415-496-5723 FAX: 415-854-8740 EMAIL: hull@crc.ricoh.com

Organization

#### Chairs

Suzanne Liebowitz Taylor Loral Defense Systems-Eagan (USA) Jonathan J. Hull Ricoh California Research Center (USA)

#### **Program Committee**

Henry Baird, AT&T Bell Laboratories (USA)
Horst Bunke, University of Berne (Switzerland)
Dick Casey, IBM Almaden (USA)
Andreas Dengel, German Research Center for Artificial Intelligence (Germany)
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Karl Tombre, INRIA Lorraine & CRIN/CNRS (France)
Kazuhiko Yamamoto, Gifu University (Japan)

#### Important Dates

April 1, 1996 Submission of full Papers
June 15, 1996 Acceptance of full papers
July 1, 1996 Submission of abstracts
August 1, 1996 Acceptance of abstracts
August 15, 1996 Camera-ready copy of full papers
September 1, 1996 Registration payment and hotel reservation

#### Workshop Information

Pre-registration will be required. Information about the workshop and the registration procedure will be available over the World Wide Web at:

#### http://www.vfl.paramax.com/pub/das

Other inquiries about local arrangements, registration, and scholarships should be directed to:

Suzanne Liebowitz Taylor Loral Defense Systems-Eagan 70 E Swedesford Road Paoli, PA 19301-0517

TEL: 610-648-2009 FAX: 610-648-2288 EMAIL: das@vfl.paramax.com

Here are some miscellaneous CFPs which may be of interest to some of you. As some of you find my mails too long, I have started to shorten some of the CFPs. But as an enhanced service, I give you access to my database of CFPs, which is regularly updated at the following URL http://www.loria.fr/~tombre/CFP/maillist.html

>From: "Henrik I. Christensen" <hic@vision.auc.dk> >Subject: Call for Papers for Performance Characterisation Workshop

Announcement and Call for papers for: Workshop Performance Characteristics of Vision Algorithms

Organizer: Patrick Stelmaszyk, ITMI, Grenoble Programme Chairs: Wolfgang Foerstner, Bonn and

Henrik I. Christensen, Aalborg Place: Cambridge, UK Time: 19-20 April 1996.

Friday/Saturday (morning) after the ECCV '96

#### Program Committee:

Kevin Bowyer, USF Hans Burckhard, Hamburg Adrian Clark, Essex. Patrick Courtney, ITMI Al Hanson, UMASS Bob Haralick, UW Josef Kittler, UOS Chris McGlone, Pittsburgh Peter Meer, UoR Keith Price, USC George Vosselman, Delft

The workshop is motivated by the strong belief that the lack of performance characterization of vision algorithms is responsible for the hesitation of industry to use Computer Vision as one of its tools. Reasons for this situation are manifold: the lack of commonly accepted criteria for evaluation, the lack of a methodology for testing, the lack of translating the experience in testing of other engineering areas to Computer Vision and possibly also the non-acceptance of empirical or theoretical comparisons of vision algorithms, including their replication, as original research.

The goal of the workshop is to investigate the state of the art in characterizing the performance of vision algorithms in all stages of the development and use, such as the design of algorithms with a pre-specified performance, the testing of algorithms with respect to give specifications

and the self-diagnosis of vision algorithms during their use in an automated process.

We encourage authors to submit papers on the following topics:

- \* Theory and strategies for performance analysis of vision algorithms
- \* Linking analysis of vision experiments to the theory underlying the
- \* Characterization of the limitations of vision algorithms and/or the class of image data for which a vision algorithm is suited or
- \* Demonstrations of the usefulness of performance characterization and/or the limitations of statistical testing in Computer Vision
- \* Modularization of vision tasks and the characterization of networks of vision algorithms

We will not consider plain comparisons of algorithms without explicit relation to the underlying theory, plain statistical papers without explicit relation to performance characterization of papers on the analysis of the complexity of algorithms without containing a clear cost benefit

We intend to select approx. 4 papers for long (45 min.) and approx. 8 papers for short (30 min.) oral presentations forming the basis for a common discussion. An additional 12 - 16 papers will be selected for poster presentation possibly including software demos.

#### TIMETABLE:

15. September 1995 Call for papers1. December 1995 Full papers

- 15. January 1996 Reviews
- 1. February 1996 Notification of authors
- 15. March 1996 Camera ready manuscripts are due
- 1. April 1996 Distribution of papers to participants (ftp)
- 19. April 1996 Workshop (1.5 days)
- 31. May 1996 Distribution of Proceedings to participants

Submit Papers before 1. December 1995 to:

Dr. Henrik I. Christensen Laboratory of Image Analysis Aalborg University Fr. Bajers Vej 7, Bldg. D1 DK-9220 Aalborg OE, Denmark E-mail: hic@vision.auc.dk

>From: dyer@cs.wisc.edu (Charles Dyer)

# >Subject: CVPR '96 **CALL FOR PAPERS**

IEEE Computer Society Conference on Computer Vision and Pattern Recognition

June 18 - 20, 1996 San Francisco, California. USA

## 1. Important Dates

OCTOBER 25, 1995 - Papers due (NOTE: This is a new date, and is an absolute deadline for receipt of papers) February 5, 1996 - Notification of acceptance March 25 - Camera-ready manuscripts due June 18-20 - Conference June 16-17, 21-22 - Workshops

# 2. Web Page

For complete and up-to-date information on CVPR '96, see the World-Wide Web page at http://www.cs.wisc.edu/cvpr96/

#### 3. The Program

The program will consist of high quality contributed papers on all aspects of computer vision and pattern recognition. Original (previously unpublished) manuscripts on topics in the following categories are solicited:

Segmentation, Grouping Physics-based Vision Low-Level Processing Texture Analysis Pattern Analysis Motion Analysis Integration of Modules and Cues Shape and Object Representation Object Recognition Learning in Computer Vision Active and Real-Time Vision Multi-Sensor Image Analysis **Applications** 

The conference is not limited to these topics. If a paper is not exactly on a topic in one of these categories, it may be specified that the paper falls in two or more categories, or that the paper is perhaps best not categorized at all. The categories are designed to closely match the papers with the expertise of the reviewers who will be members of the Program Committee. Every category will be represented by several Program Committee members. As is customary with CVPR, reviewing will be double-blind.

4. Paper Submission Four (4) copies of manuscripts should be received no later than OCTOBER 25, 1995 (this is a hard deadline) at the following address:

Professor Katsushi Ikeuchi Wean Hall 4212 Computer Science Department Carnegie Mellon University 5000 Forbes Ave. Pittsburgh, PA 15213-3891 USA

Telephone: (412) 268-6349

The form of the manuscript should be as follows (in this order):

(1) First Title Page Contains title, author(s), postal address(es), e-mail address(es), abstract up to 200 words, and a list of one or more categories that best describe the topic of the manuscript.

(2) Second Title Page Contains title and abstract only.

(3) Summary Page

Contains responses to each of the following questions (each answered separately):

I. What is the original contribution of this work?

II. Why should this contribution be considered important?
III. What is the most closely related work by others and how does this work differ?

IV. How can other researchers make use of the results of this work?

V. If any part of this work has been submitted to other conferences, workshops or journals, please state where it has been submitted and how it differs from this paper.

(4) The Manuscript

No more than 30 pages (double-spaced, 12-point font) including all text, figures and references (but no title or abstract).

Double submission of manuscripts to CVPR and ECCV is permitted, but double publication is not.

[Shortened]

## 6. Email Mailing List

While all information relevant to the conference will be updated on this home page, you can also subscribe to an email mailing list in order to receive occasional updates from the Organizing Committee. The name of this mailing list is CVPR96, which is managed by the Listproc software package. Only the Organizing Committee is authorized to send mail to this list. If you have any questions about this list, send email to dyer@cs.wisc.edu or to CVPR96-request@cs.wisc.edu.

To subscribe to this list, send email to cvpr96-request@cs.wisc.edu with the BODY of the message containing the line:

subscribe CVPR96 <your real name>

#### 7. Affiliated Workshops

7.1. Function, Formation, and Facilitation Workshop June 17. Organizers: Azriel Rosenfeld (ar@cfar.umd.edu) and Ehud Rivlin (ehud@cfar.umd.edu)

7.2. Third CAD-Based Vision Workshop June 21 - 22. Organizers: George Stockman (stockman@cps.msu.edu), Octavia Camps (camps@whale.ece.psu.edu), and Pat Flynn (flynn@eecs.wsu.edu)

7.3. Mathematical Methods in Biomedical Image Analysis Workshop June 21 - 22. Organizer: Amir Amini(amini@minerva.cis.yale.edu)

>From: swsymp@mipl-gw.ece.arizona.edu (Jeffrey J. Rodriguez) >Subject: CALL FOR PAPERS

**CALL FOR PAPERS** 

IEEE SOUTHWEST SYMPOSIUM ON IMAGE ANALYSIS AND INTERPRETATION

You are cordially invited to attend the IEEE Southwest Symposium on Image Analysis and Interpretation. The Symposium is sponsored by The University of Texas at San Antonio, The University of Arizona, and the Central Texas Section of the IEEE, in cooperation with the IEEE Signal Processing Society.

The Southwest Symposium will again bring together researchers in academia, industry, and government working in the area of image analysis. The program will consist of high quality papers on all aspects of image analysis and interpretation.

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

- \* Features & invariants \* Stereo image analysis
  \* Boundary detection \* Biomedial image analysis
  \* Segmentation \* Remote sensing
  \* Color image analysis \* Automated inspection
  \* Multiresolution techniques \* Document image analysis
  \* Multidimensional/multi-modality analysis \* Systems & applications

GENERAL CHAIR: Mita Desai University of Texas at San Antonio swscon@runner.utsa.edu

TECHNICAL PROGRAM: Scott T. Acton Oklahoma State University

sacton@taco.ecen.okstate.edu

Jeffrey J. Rodriguez The University of Arizona rodriguez@ece.arizona.edu

FINANCE: Tom Owen University of Texas at San Antonio towen@lonestar.utsa.edu

LOCAL ARRANGEMENTS: Keith Bartels Southwest Research Institute kbartels@swri.edu

## TECHNICAL PROGRAM COMMITTEE:

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## SUBMISSION PROCEDURES:

To propose a paper, prepare a summary of the paper using a 12-point font size and no more than three pages, including figures and references. Send four copies of the paper summary, along with a cover sheet stating the paper title, technical area(s), and corresponding author's information (telephone, FAX, mailing address, e-mail address) to

Prof. Scott T. Acton School of Electrical & Computer Engineering 202 Engineering South Oklahoma State University Stillwater, OK 74078 U.S.A.

Each accepted paper will be published in the conference proceedings, conditional upon author's advance registration. A LaTeX style file for preparing the final paper will be provided for the authors' convenience.

## AUTHOR'S SCHEDULE:

November 2, 1995: Submissions of three-page summary January 5, 1996: Notification of acceptance February 2, 1996: Final camera-ready paper & registration due

## FURTHER INFORMATION: http://www.ece.arizona.edu/conferences/swsymp96

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>From: C Bouman <cbouman@ecn.purdue.edu> >Date: Wed, 6 Sep 1995 22:51:26 -0500

Dear Image and Multidimensional Signal Processor,

The Ninth IMDSP Workshop will be held in Belize on March 3-6, 1996. In addition to providing an intimate setting for interaction with your IMDSP colleagues, Belize offers unparalleled opportunities for recreation, ranging from snorkling on coral reefs to exploration of spectacular rain forests and Mayan ruins. Belize is a British Commonwealth country with a stable, democratic government. Most Belizeans speak English.

I am writing to encourage you to submit a paper to this workshop. In response to complaints that our original submission date came at a very difficult time, we have extended the deadline to October 1, 1995. In addition, for those who are concerned about the difficulty and cost of reaching Belize, we have the following information:

Economy airfare from continental U.S. (Saturday stay required) \$650

Lodging (Sunday - Tuesday, including all meals, based on single occupancy)

Approximate registration \$300

Total cost \$1300

Belize City is approximately a 2 hour flight from Los Angeles, Houston, or Miami

The Call for Papers follows. More information about the workshop and Belize can be found at our web site. The URL is:

http://dynamo.ecn.purdue.edu/~bouman/imdsp\_workshop

Don't miss this unique event. Plan to join us in Belize in March.

Sincerely,

Jan Allebach and Jelena Kovacevic, General Co-chairs

\_\_\_\_\_

#### CALL FOR PAPERS

IEEE Signal Processing Society IS&T The Society for Imaging Science and Technology Ninth IMDSP Workshop March 3-6, 1996. Radisson Hotel Belize City, Belize

General Co-Chairs:

Jan P. Allebach Purdue University

Jelena Kovacevic AT&T Bell Laboratories

Program Chair:

Edward J. Delp Purdue University

The Image and Multidimensional Signal Processing Technical Committee of the IEEE Signal Processing Society has established a tradition of biennial workshops that have been intellectually stimulating and held in interesting places. The Ninth Workshop, to be held in cooperation with the Society for Imaging Sceince and Technology continues this tradition. It will be held in Belize which is located on the Caribbean Sea directly south of the Yucatan Peninsula and east of Guatemala, just two hours by plane from Miami. Belize has a subtropical climate. The workshop will take place in the dry season when temperatures will average 22C. There are beautiful Mayan ruins in Belize and the longest barrier reef in the Western Hemisphere. The workshop will be held in Belize City at the Radisson Hotel.

The theme of the workshop is ``Model-Based Methods in Imaging: From Content to User." This was partly motivated by the NSF-sponsored workshop on Future Directions in Signal Processing that was held in Keystone, Colorado in November 1991. At this workshop, the task group in the IMDSP area identified a need for more emphasis on model-based methods, including models for signal content and models for the human viewer. In addition, it was felt that there was a need for more work on image quality metrics. It is the intention of this workshop to address these topics:

Physics-based models Multiresolution models

Models for the human visual system Color models Image and video quality metrics Image and video compression Image and video analysis Image rendering for printing and display Color imaging Radar imaging Medical imaging

Participation in the workshop will be both by invitation and application. Prospective attendees will submit a 2-page summary in final form. If the paper is accepted the summary will appear in the workshop digest as submitted. Authors should obtain the author's kit via anonymous ftp to skynet.ecn.purdue.edu (128.46.154.48) in the directory /pub/dist/imdsp96. The author's kit provides complete information relative to the submission process. It is the intention of the Committee to conduct all communication with authors electronically. Questions should be directed to imdsp96@ecn.purdue.edu. The General Co-Chairs can be reached at:

Jan Allebach +1 317 494 3535

Jelena Kovacevic +1 908 582 6504

Authors' Schedule October 1, 1995 Submission of two page summaries October 15, 1995 Notification of acceptance November 15, 1995 Registration due with deposit

[Rest of CFP deleted -- see full text in my archives]

>From: yang+@cs.cmu.edu (Jie Yang)

>Subject: Call for Paper

CALL FOR PAPERS

First International Conference on Multimodal Interface (ICMI'96)

Beijing, China March 29-31, 1996

Sponsored by Chinese Association of Automation(CAA) Chinese Computer Federation(CCF) Center for Hi-Tech Development(CHiTD), SSTCC National R&D Center for Intelligent Computing System(NCIC)

In Cooperation with IAPR TC12 **IEEE Computer Society** 

A new generation of interactive multimodal systems is beginning to emerge with advanced technology of spoken language understanding, image processing, character recognition, natural language processing. By this technology, new interfaces are designed to permit people to speak and write in their native language, to gesture, draw, and point while speaking, to control device via human gaze, to interact with 2D or 3D visual displays involving complex graphics, maps, videos, and animated human faces, and receive feedback via speech and non-speech audio, tactile, and other media. ICMI aims at to unite people from R&D and industry for an exchange on a wide variety of topics related to this new area.

Submissions are invited on original and substantial academic and/or industrial research on all aspects of multimodal interface. Interested topics include:

A. perceptual computing model and system;

B. speech recognition;

- C. text to speech & speech to text;
- D. character recognition;
- E. handwriting and printed document to text;
- F. face, hand gesture, lip-motion recognition;
  G. hand gesture to text & text to hand gesture;
- H. natural languages and lip-motion, facial expression, hand gesture;
- I. machine translation and multi-language interface;
- J. multimodal interface and computer graphics:
- K. image retrieval, data compression and multimedia interface;
- L. platform & tools;
- M. multimodal interface in internet;
- N. multimodal interface in virtual reality
- O. other applications;

## Dates to Note:

- o Nov 15, 1995 -- Paper submission deadline
- o Dec 15, 1995 -- Notices mailed to accepted/rejected authors o Jan 31, 1996 -- Final (camera ready) papers due
- o Mar 29 31, 1996 -- Conference dates

Prospective authors are invited to submit papers relevant to

multimodal interface in any of the conference interested topics. Papers must be received by the ICMI'96 Program Committee no later than November 15, 1995. Papers will be selected by the ICMI'96 Program Committee and assigned for oral presentation. English is the working language for the conference. Submission of a paper implies a commitment to submit an eight (or less) page, camera-ready version of the paper and to present the paper in technical session if the paper is accepted.

Accepted submissions will be published in a proceedings volume. Extended versions of selected high-quality papers will be submitted to the Journal of Computer Science and Technology after the conference.

# SUBMISSION OF PAPERS

Submissions should be no longer than 8 pages single spaced (excluding title page and references), and should use a font no smaller than 12-point. The title page should include the title of the paper, a short abstract (200 words), a list of keywords, at most three choices of technical area(s) indicated in order of preference using the codes (A - O), and the authors' postal and email addresses and fax and phone numbers.

Mail 4 copies of the submission paper to: Dr. Wen Gao ICMI'96 program committee National R&D Center for Intelligent Computing System, P.O. BOX 2704, Beijing 100080 China email:wgao@rock.ncic.ac.cn

For further information about the submission, contact: Ms. Mei Du, National R&D Center for Intelligent Computing System, P.O. BOX 2704, Beijing 100080 China email:du@tango.ncic.ac.cn

#### **EXHIBITION EVENT**

An event for industry and research groups to show the new products and new prototypes and application systems is scheduled during the conference in the conference site. For further information about the ICMI'96 exhibition, contact: Minghong Shen, Exhibition Chair of ICMI'96 3rd floor, No.7, NanHeng Street, SanLiHe Rd. BeiJing, 100862 China Tel: +86-10-8513677 Ext.3303 or 3305

Fax: +86-10-8511858

[Rest of CFP deleted -- full copy in my archives]

>From: mtc@cee.hw.ac.uk (Manuel Trucco)

>Subject: CFP: Seventh British Machine Vision Conference

FIRST CALL FOR PAPERS

SEVENTH BRITISH MACHINE VISION CONFERENCE

9-12 September 1996

The University of Edinburgh

GENERAL CHAIR PROGRAMME CHAIR Robert B Fisher Emanuele Trucco University of Edinburgh Heriot-Watt University rbf@aifh.ed.ac.uk mtc@cee.hw.ac.uk

LOCAL ARRANGEMENTS INDUSTRIAL LINKS Gillian M Hayes Paul Siebert University of Edinburgh The Turing Institute gmh@aifh.ed.ac.uk P.Siebert@turing.gla.ac.uk

The British Machine Vision Conference is the main UK conference for machine vision and related topics. High quality contributed papers are sought describing recent and novel research in the areas of computer vision, image analysis and processing or pattern recognition. Papers describing research being undertaken throughout national or international collaborative projects are particularly welcome. The conference is a single-track meeting with both oral and poster presentations. In addition to the contributed papers, there will be talks by invited speakers and a pre-conference tutorial programme (free to registered students).

SUBMISSIONS AND FORMAT

Contributions are sought on any novel aspect relating to machine vision and

pattern analysis, including:

- \* image processing and feature extraction
- \* object recognition and scene analysis
- \* reconstruction of 3D shape
- \* computational issues in perception
- \* robotic vision and sensory fusion
- \* advanced pattern analysis
- \* practical applications
- \* model-based coding
- \* architectures
- \* active vision
- \* motion analysis
- \* neural network

Four copies of full papers not exceeding 10 pages (approx. 5000 words if no figures), three of which anonymous, should be submitted for review. Please include two title pages, each containing title, authors' names (on one copy only) and an abstract. Papers will be reviewed by the elected BMVA Committee with a small number of specially coopted members. By submitting a paper to BMVC, the author(s) warrant that it, and any related paper with essentially the same technical content, has not been and will not be submitted to any other conference during the BMVC review period. Papers will be accepted either for oral presentation or for presentation as posters. A printed copy of the Proceedings will be available to delegates at the conference and a selection of the best papers will be published separately in a special issue of 'Image and Vision Computing'.

Guidelines for the format of papers can be found on the PEIPA at: FTP: peipa.essex.ac.uk in ipa/info/conferences/bmvc (login: anonymous) WWW: http://peipa.essex.ac.uk (under BMVC96)

Papers should be submitted to the Conference Secretary:
Mrs Judith Gordon
Department of Artificial Intelligence
The University of Edinburgh
5 Forrest Hill
Edinburgh EH1 2QL
Tel: +44 131 650.3094
Fax: +44 131 650.6899

Email: BMVC96@aifh.ed.ac.uk

Notification of acceptance 10 June 1996 | Deadline for camera-ready copy 8 July 1996 |

The British Machine Vision Association and Society for Pattern Recognition is a Company limited by guarantee, No.2543446, registered in England and Wales. Registered Office: Granta Lodge, 71 Graham Road, Malvern, Worcs. WR14 2JS. The Association is a non-profit-making body and is registered as charity No. 1002307.

APPEL A COMMUNICATIONS/CALL FOR PAPERS

12e CONFERENCE INTERNATIONALE SUR L'ANALYSE ET L'OPTIMISATION DES SYSTEMES 12th INTERNATIONAL CONFERENCE ON ANALYSIS AND OPTIMIZATION OF SYSTEMS

IMAGES, ONDELETTES ET EDP IMAGES, WAVELETS AND PDE'S

26-28 juin 1996 June 26-28, 1996 Paris, France

Organisee par le CEREMADE et l'INRIA/Organized by CEREMADE and INRIA

#### **PRESENTATION**

This conference is devoted to image processing, wavelets and partial differential equations. Its aim is to discuss the impact on image analysis of the recent mathematical developments of mathematical theories of multiscale analysis (wavelet theory and variants: wavelet packets,...), partial differential equations, variational methods that have recently been proposed for image processing tasks like image restoration, shape recognition, etc... Presentations by image processing researchers and by mathematicians on both theoretical and practical aspects will be welcome

This conference is the 12th in the series of International Conferences on Analysis and Optimization of Systems organized by INRIA and is the third specialized conference.

[Shortened]

MOTS-CLES/KEY WORDS

Methods Image applications

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Variational methods Image restoration Multiscale analysis Segmentation Geometric PDE's Shape modelling Wavelets Motion analysis Adaptive basis Computer vision etc... Medical and satellite imagery

#### INSTRUCTIONS AUX AUTEURS/INSTRUCTION TO AUTHORS

Authors are invited to submit original and unpublished contributions. These contributions may focus on theoretical results as well as on illustrative applications. The full contribution (7 pages) with key words, abstract and e-mail address should be submitted in 5 copies to the conference secretary. The proceedings will be published by Springer-Verlag.

# DATES IMPORTANTES/IMPORTANT DATES

15 novembre/November 15, 1995

Date limite de soumission des communications completes/deadline for submission of full papers

31 janvier/January 31, 1996

Notification de l'acceptation aux auteurs/ notification of acceptance

20 mars/March 20, 1996

Communication complete prete a etre imprimee, et la version electronique du texte/ camera ready paper and electronic version of papers

#### RENSEIGNEMENTS/INFORMATION

Secretariat de la conference/Conference Secretariat

Claudie THENAULT INRIA Rocquencourt Relations Exterieures Bureau des Cours et Colloques BP 105 78153 Le Chesnay Cedex

Tel: 33 1 39 63 56 75 Fax: 33 1 39 63 56 38 email: symposia@inria.fr

>From: Andre Gagalowicz <Andre.Gagalowicz@inria.fr>

IMAGE'COM 96

Co-located with

First European Conference on MULTIMEDIA APPLICATIONS SYSTEMS & TECHNOLOGIES

ECMAST 96

BORDEAUX - FRANCE Palais des Congres Palatium d'Arcachon 20 - 24 May, 1996

Call for papers

Supported by:

European Union : ACTS, COST 237 EBU : European Broadcasting Union

Organised by

SEE : Societe des Electriciens et des Electroniciens

IREST : Institut de Recherches Economiques et Sociales sur les

Telecommunications

ADERA: Association pour le Developpement de l'Enseignement et des Recherches aupres des Universites, des Centres de Recherche et des Entreprises d'Aquitaine

With the backing of France Telecom

CONFERENCE OUTLINE

The last few years have seen technological and normative breakthroughs in the field of image computing and graphics as well as in multimedia networking. New perception and recognition techniques close to robotics are being developed. These, together with convergence of image creation, analysis and representation techniques, are leading to new developments in multimedia production and services. The access to digitised image, sound and data from the workplace and from the home relies on increasingly smarter bearer services. As added value is transferred towards production and services, strategic alliances are being built to take advantage of the multiplication of the distribution channels and media. User access is being made easier, more intuitive, by means of smarter, knowledge-based approaches. Fast retrieval of essential information and browsing ever increasing amounts of information require smart intelligent guides, software and agents, as well as multimodal interfaces. Correspondingly, adequate development of network infrastructure, architecture and protocols is essential.

This third issue of the IMAGE'COM is co-located with the first ECMAST (European Conference on Multimedia Applications, Systems and Technologies) to provide a forum to monitor and anticipate the developments that make multimedia applications possible, to exchange information and results on recent work, and to help cross-fertilisation of image and communication research activities. The following is a non exhaustive list of topics addressed.

## 1. Production, creation

Acquisition, pre-processing, knowledge extraction and recognition Computer perception, signal sensing, active vision Equipment and software for image analysis and synthesis

2. Advanced coded representation of image, sound and data Knowledge-based processing, content-based representation Advanced audio-visual functionalities Compression, coding, very low bit rate coding Computer graphics Virtual reality

#### 3. Networking Core network architectures Access network architectures (local loop) Return channels Service multiplexing

4. Servers, terminals and storage
Mobility and multimedia
Multimedia data bases
Terminal equipment architecture
Information servers
Hypermedia browsing
5. Services
Contents for multimedia services
Pilot applications, agent applications, intermediation
Conditional access, billing, customer care, service management
Service users and ergonomics, usability of terminals,
man-machine interfaces.

## CALL FOR PAPERS

Those who wish to contribute to one of these themes should send their typed summary in English (French translation optional) of between 600 to 1000 words and one or two illustrations, to the conference secretariat by September 30, 1995 It would be appreciated if the authors could mention 3 or 4 keywords.

#### **PROCEEDINGS**

Authors must produce a text in English accompanied by a summary in French if desired. Authors will be informed by the end of December 1995 of the Programme Committee's selection from papers submitted. For the selected contributions, a full length camera ready copy in English will be required by March 30,1996. The selected papers will be published in the conference proceedings at the organisers' discretion.

#### DEADLINE

October 31, 1995: (was previously September 30,1995) deadline for summaries.
December 30, 1995: acceptance of papers
March 30, 1996: deadline for full papers

## [Shortened]

Authors should provide their complet address (including fax) and send their summary to : ADERA IMAGE'COM 96 BP 196 33608 PESSAC-CEDEX FRANCE Phone (33) 56 15 11 57 Fax (33) 56 15 11 60

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Now to some Advance Programs and registration information for coming events. Soe of you have asked me to do some more editing to shorten the TC10 mailouts. So Most of the time I only keep essential information. Here also, i have an archive of the full things, which you can access at URL http://www.loria.ft/~tombre/Programs/maillist.html

>From: R.B.Johnson@bristol.ac.uk (RB. Johnson) >Subject: IEE/BMVA DIP Colloquium - 2 November 1995

PROVISIONAL PROGRAMME AND INVITATION

DOCUMENT IMAGE PROCESSING AND MULTIMEDIA ENVIRONMENTS

Colloquium organised by IEE Professional Group E4 (Image processing and vision) and co-sponsored by the British Machine Vision Association to be held at Savoy Place, London. UK on

Thursday 2 November 1995 [Full program in the archives]

For further information and application forms please contact:

Ms Janet McCready (Groups Officer) The Institution of Electrical Engineers Savoy Place London WC2R 0BL United Kingdom

Tel: +44 (0) 171 344 5421 Fax: +44 (0) 171 497 3633 E-Mail: jmccready@iee.org.uk

>From: tlee@ee.cuhk.hk (Lee\_Tong)
>Subject: ICSC'95 Call for Participation

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ICSC'95 CALL FOR PARTICIPATIONS AND ADVANCED PROGRAMME

ICSC '95 - Third International Computer Science Conference: Image Analysis Applications and Computer Graphics Nikko Hotel, HONG KONG, 11-13 December, 1995

Organised and Sponsored by the IEEE Hong Kong Section, Computer Chapter.

In cooperation with IEEE Computer Society, International Association for Pattern Recognition (IAPR), ACM (HK).

ICSC '95 is the Third International Conference on Computer Science to be held in Hong Kong. Its purpose is to provide a forum for scientific interchange among computer scientists and engineers from all over the world, especially from the Asia-Pacific region. This conference will focus on a broad spectrum of research topics related to image analysis applications and computer graphics.

The proceedings will be published in the Springer-Verlag Lecture Notes in Computer Science series in time for distribution at the conference.

[Shortened]

PLENARY ADDRESSES

DAY ONE: Prof. T. S. Huang Beckman Institute for Advance Science and Technology University of Illinois at Urbana-Champaign U. S. A.

Title: 3D MODEL-BASED VIDEO CODING: Computer Vision Meets Computer Graphics

[abstract and biography deleted]

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DAY 2: John Lasseter Director & Animator Vice President, Creative Development, Pixar, U.S.A

Title: Creating Memorable Characters with Computers

[biography deleted]

TECHNICAL SESSIONS

Image Analysis Applications Computer Graphics

Robot Navigation and Tracking Scientific Visualization Feature Extraction Geometric Modelling Document Processing Curves & Surfaces

3D Image Analysis Rendering Biomedical Imaging Image Synthesis

Application Systems Simulation and Animation Optical Character Recognition Human Models

TUTORIAL

Title: Document Image Analysis Techniques: An Overview

Prof. Rangachar Kasturi, Professor of computer science and engineering, Pennsylvania State University, U.S.A.

[abstract and biography deleted]

CONFERENCE PROGRAMME: TECHNICAL SESSIONS

Day 1 Day 2 Day 3

8:45- 9:00 Opening Remarks

9:00-10:40 IA1a / CG1a IA2a / CG2a IA3a / CG3a

10:40-11:00 Break Break Break

11:00-12:00 Invited talk Invited talk IA3b / CG3b (11:00-12:20)

T S Huang J Lasseter

12:00- 1:50 Lunch Lunch (12:20-1:30)

1:50- 3:30 IA1b / CG1b IA2b / CG2b Tutorial (1:30-5:00)

3:30- 3:50 Break Break |

3:50- 5:10 IA1c / CG1c IA Posters V

Reception Banquet

[Full program deleted]

[Registration deleted]

>From: rohini@acsu.buffalo.edu (Rohini Srihari) >Subject: AAAI Fall Symp

Schedule

AAAI 1995 Fall Symposium Series

Computational Models for Integrating Language and Vision

Nov 10-12, MIT, Cambridge, MA

Note: Registration closes on Oct 15, 1995.

For registration information, see

http://www.aaai.org/Symposia/Fall/1995/fssregistration-95.html.

For more information on this symposium, see http://www.cedar.buffalo.edu/Piction/FSS95/CFP.html.

Friday, Nov 10

9:00--10:30 Opening Session: Methods and Issues Welcome

Survey of Topic -- Rohini Srihari, CEDAR, SUNY at Buffalo

Survey, Part 2 -- To be announced

10:30--11:00 Break

11:00--12:30 Paper Session: Event Perception/Description

Session Chair: Jeff Siskind

12:30--2:00 Lunch

2:00--3:30 Paper Session: Gesture Understanding

Session Chair:

3:30--4:00 Break

4:00--5:30 Session: Knowledge Representation for Language, Vision

Session Chair: Candace Sidner

Saturday, Nov 11

9:00--10:30 Session: Spatial Reasoning Session Chair: Annette Herskovits

10:30--11:00 Break

11:00--12:30 Invited Talk: Joe Mundy, GE Corporate Research Division Image Observation Events: A Link to Linguistic Context

12:30--2:00 Lunch 2:00--3:30 Session: Image/Diagram Understanding Session Chair: Gordon Novak

3:30--4:00 Break

4:00--5:30 Panel: Hard problems, where to focus research, impact of technology
Panel: To be announced Moderator:

7:30--9:00 Public Forum (10 min overview of each symposium) Speaker: Ken Forbus

Sunday, Nov 12

9:00--10:30 Session: Image/Video Indexing Session Chair:

10:30--11:00 Break

11:00--12:30 Wrapup and Discussion Summary of issues --Final discussion (Moderator: Rohini Srihari)

[All this shortened -- see full version in my archives]

Well, despite all this shortening, this mailout was still a very long one. I hope you found some useful information...

Your TC10 chairman,

Karl Tombre - INRIA Lorraine & CRIN-CNRS --- Email: Karl.Tombre@loria.fr Post: 615 rue du jardin botanique, BP 101, 54602 Villers CEDEX, France --or-Batiment LORIA, BP 239, 54506 Vandoeuvre CEDEX, France Phone: +33 83.59.20.71 --- Fax: +33 83.27.83.19 --or-- +33 83.41.30.79 WWW URL: http://www.loria.fr/~tombre