Newsletter 50, June 1997

TC10 news #50

Contents:
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Dear TC10 members and friends,

Welcome to TC10 news #50. The primary announcements in this newsletter are the updates on the GREC'97 workshop and the Graphics Recognition Contest and the program for the IEEE Document Image Analysis Workshop.

The contest web site http://www.iapr-tc10.or.kr/contest.htmnow has sample images and the source code for generating synthetic images in a controlled manner. Please let me know if there are any problems downloading the images and code or in compiling the code.

If you intend to participate in the contest, please let me know as soon as possible. We need to have a good idea of how many people are taking part in the contest in order to work out the logistics. Even if you are not definite at this point, but think that there may be a chance that you may participate, please let me know.

-Atul

Update on

the 2nd IAPR Workshop on Graphics Recognition (GREC'97)
Nancy, France, August 22-23, 1997
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Please visit the GREC'97 web site for detailed information.

http://www.loria.fr/~tombre/grec97.html

Here are some key deadlines coming up soon.

Deadline for final camera-ready submission: June 15
Deadline for early registration: June 30

Instructions for authors are available on-line at

http://www.loria.fr/~tombre/grec97-authors.html

The authors should send an electronic version of their abstracts to grec97@loria.fr, in ASCII or (still better) in HTML, for inclusion in the workshop's web server. If you choose to send HTML, you can add links to demos, images or other online information on your own server. Please be aware that the organizers, retain the right to edit your electronic abstract, if necessary.

You can register on-line by visiting the URL

http://www.loria.fr/~tombre/grec97-registration.html

Instruction on how to drive, fly, or take a train to Nancy are available at the URL:

http://www.loria.fr/~tombre/grec97-transport.html

Information on hotels is available at

http://www.loria.fr/~tombre/grec97-hotels.html

Second Call for Participation

Graphics Recognition Contest
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to be held in conjunction with

the 2nd IAPR Workshop on Graphics Recognition (GREC'97)
Nancy, France, August 22-23, 1997

This is the second announcement of the Graphics Recognition Contest to be held in conjunction with the 2nd IAPR Workshop on Graphics Recognition (GREC'97), Nancy, France, August 22-23, 1997. The contest will test the participants' ability to segment text from graphics and to recognize graphical primitives such as lines, arcs, and circles. The specifications and the evaluation protocol for the contest will be intentionally kept simple in order to encourage participation.

Detail on the contest including sample synthetic images, ground truth files, and source code for generating the synthetic images can be found at the web site

http://graphics.nynexst.com/iapr-tc10/contest.html

I encourage you to click on the "View Tar Archive" link for synthetic images and to further click on the "README" file in the archive. Please read this file to get in-depth information on

o how the synthetic images were created
o what is the format of the ground truth files
o how you can vary the parameters to make the text segmentation and graphics recognition easier or harder

Dr. Ihsin Phillips is working on the evaluation protocol and software. These should be available soon through the contest web site.

Prospective participants should visit the web site frequently to get updates on source code, images, evaluation, etc.

I have a small set of real AutoCAD files and TIFF G4 images that I have made available on the web site. These images were provided courtesy of Professor Bob Haralick. I am looking for more real CAD files and TIFF images for use in the contest. I would appreciate any contributions of CAD and image files.

INSTRUCTIONS FOR PROSPECTIVE PARTICIPANTS
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All prospective participants must contact the contest chair as soon as possible. In addition to stating the intent to participate, they must provide the following information:

1. Which hardware platform (e.g., Sun SPARC, Intel Pentium, ...) would you like to run your software on at the live contest?

2. Which operating system (e.g., Sun Solaris 2.5, Windows 95, NT4.0, 3.1, ...) would you like to run your software on at the live contest?

3. Any other special needs for the contest.

Please e-mail (plain text), mail, or fax your application for participating in the contest to

E-mail
atul@nynexst.com (use the subject heading "GREC Contest Application")

Fax
Atul Chhabra at (914) 644-2561

Mail
Atul Chhabra
NYNEX Science & Technology
500 Westchester Avenue
White Plains, NY 10604, USA

If you do not receive a response within a week of your submission, please try to reach me to find out if I received your application.

--Atul

> From: Luc Vincent <lucv@adoc.xerox.com>
> Subject: Advance Program for IEEE Document Image Analysis Workshop

IEEE DOCUMENT IMAGE ANALYSIS WORKSHOP

El San Juan Hotel, Puerto Rico,
Friday, June 20, 1997

Workshop URL: http://marathon.csee.usf.edu/documents.html
CVPR'97 URL: http://marathon.csee.usf.edu/cvpr97.html

CHAIRS:

Luc Vincent, Xerox Corp.

Gary E. Kopec, Xerox PARC
Jonathan J. Hull, Ricoh California Research Center
Thomas M. Breuel, IBM Almaden Research Center

The purpose of this one-day, single-track workshop, is to facilitate information exchange and critical discussion directed at advancing the frontiers of document image analysis.

The workshop will be held on June 20, the day after CVPR'97. Hotel rates for CVPR'97 have been extended. The extended abstracts of accepted papers will be compiled into a booklet that will be available at the workshop. Proceedings will be ready shortly after the workshop.

ADVANCE PROGRAM:

Session 1 - 9:00am to 10:20am
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1. "Non-uniform Skew Estimation by Tensor Voting"
Song Han, Misuen Lee, Gerard Medioni
Institute for Robotics and Intelligent Systems
University of Southern California

2. "Former Books Digital Processing: Image Warping"
Andrei Doncescu, Veronique Quillet, Alain Bouju
University of La Rochelle, France

3. "Script and Language Identification Using Texture Analysis"
G.S. Peake, T.N. Tan
Dept. of Computer Science, University of Reading, U.K.

4. "Font Attribute Recognition Using the ISL Document Image Understanding Toolbox"
Richard Rodgers, Jisheng Liang, Robert Haralick, I.T. Phillips
Dept. of Electrical Engineering, University of Washington

BREAK - 10:20am to 11:00am

Session 2 - 11:00am to 12:20pm
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5. "Logical Labeling of Document Images based on Form Layout Features"
Andreas Dengel, Frank Dubiel
German Research Center for Artifical Intelligence (DFKI GmbH)

6. "Document Image Segmentation as Selection of Voronoi Edges"
Koichi Kise, Akinori Sato, Keinosuke Matsumoto
University of Osaka Prefecture, Japan

7. "Towards a Dedicated Compression Pipeline for Document Image Archiving"
Arrigo Benedetti, Nello Scarabottolo
California Institute of Technology

8. "Predictive Coding for Document Layout Characterization"
J. Sauvola, M. Pietikainen
Infotech Oulu, University of Oulu, Finland

LUNCH BREAK - 12:20pm to 2pm

Session 3 - 2:00pm to 3:20pm
==========

9. "Telop Character Extraction from Video Data"
Hidetaka Kuwano, Shoji Kurakake, Kazumi Odaka
NTT Human Interface Laboratories, Japan

10. "Homeorphic Digitization, Correction and Compression of Digital Documents"
Ari Gross, Longin Latecki
City University of New York

11. "Utility Map Interpretation in Retrospection"
J.E. den Hartog, T.K. ten Kate, B.T. Holtrop
TNO Institute of Applied Physics, Delft, The Netherlands

12. "Utility Map Reconstruction"
J.P. de Knecht, A.M. Vossepoel, J.G.M. Schavemaker, M.J.T. Reinders
Delft University of Technology, The Netherlands

BREAK - 3:20pm to 4:00pm

Session 4 - 4:00pm to 5:20pm
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13. "Handwritten Work Recognition with OCR-based Segmenter"
Gilles Houle
TRW Wnterprise Solutions
M. Shridhar
University of Michigan-Dearborn

14. "Hypothesis Generation and Correction in a Hand-Written Word Recognition System"
Arrigo Benedetti, Zsolt M. Kovacs-V., Luca Simoncini
California Institute of Technology

15. "Indexing of Handwritten Document Images"
Tanveer Syeda-Mahmood
Xerox Webster Research Center

16. "Keyword Spotting for Cursive Document Retrieval"
Patricia A. Keaton, Hayit Greenspan, Rodney Goodman
California Institute of Technology

> From: majordomo admin <majordom@bigpine.csee.usf.edu>
> Subject: Four half-day tutorials offered at CVPR '97.

Four half-day tutorials will be offered before the
coming CVPR'97 in Puerto Rico in June 1997. The tutorials
cover a wide range of topics, from current issues in image
retrieval to new approaches to sensor design.
A brief description of the tutorials is included below.
You can register by using the general CVPR registration
form at http://marathon.csee.usf.edu/cvpr97.html.

TUTORIAL I
Sunday June 15 Morning

FINDING PICTURES IN DIGITAL LIBRARIES

Prof. David Forsyth and Prof. Jitendra Malik, U.C. Berkeley

Very large collections of pictures are now common, and there is a
desperate need to be able to index them. Since users generally
want to find images depicting particular objects, the application
focuses attention on important research problems in computer
vision. Partial solutions to these problems lead to useful systems,
because often the only alternative is to index the
collection by hand.

TUTORIAL II
Sunday June 15 Afternoon

ROBUST TECHNIQUES FOR COMPUTER VISION

Prof. Peter Meer, Rutgers University

Robust estimation techniques have become standard
tools in computer vision. The tutorial discusses robust techniques
in the context of image understanding problems, and provides
practical suggestions for achieving the best possible results.

TUTORIAL III
Monday June 16 Morning

COMPUTATIONAL SENSORS FOR VISION

Dr. Vladimir Brajovic and Prof. Takeo Kanade, Carnegie Mellon University

Computational Sensors are chips which tightly integrate
sensing and processing. Successful sensors have been
demonstrated for computer vision applications and are
typical of the next generation of vision sensors.
The tutorial will review several representative examples of
computational sensors and will cover basic (primarily analog)
techniques for computation in VLSI.

TUTORIAL IV
Monday June 16 Afternoon

SYNTHETIC APERTURE RADAR (SAR) IMAGE UNDERSTANDING

Dr. Les Novak, Lincoln Laboratory, Massachussets Institute of Technology

This tutorial presents a basic understanding of synthetic
aperture radar imagery. Basic SAR image characteristics
will be defined and demonstrated using real and simulated
SAR. Basic techniques for SAR processing, filtering, and
object recognition will be described. Advanced SAR processing
techniques, such as superresolution, will also be addressed.

> From: majordomo admin <majordom@bigpine.csee.usf.edu>
> Subject: CVPR '97 and associated workshops.

Advance progam information is now available on the web page for
CVPR '97 and for all of the associated workshops.

http://marathon.csee.usf.edu/cvpr97.html

Computer Vision and Pattern Recognition, June 17 - 19, 1997

Nonrigid and Articulated Motion Workshop, June 16, 1997

Workshop on Generic Object Recognition, June 16, 1997

Workshop on Content-Based Access of Image and Video Libraries, June 20, 1997

Workshop on Document Image Analysis, June 20, 1997

Workshop on Undergraduate Education and Image Computation, June 20, 1997

The web page also contains information on the conference hotel, links to tourist information for Puerto Rico, and a "bulletin board" page for attendees who may want to make room-sharing arrangements.

> From: Henry Selvaraj <henrys@gscit-1.fcit.monash.edu.au>
> Subject: ICCIMA'98 Second Call for Papers

ICCIMA'98

International Conference on Computational Intelligence and Multimedia Applications 9-11 February 1998

Monash University, Gippsland Campus, Churchill, Australia

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

The International Conference on Computational Intelligence and Multimedia Applications will be held at Monash University on 9-11 February 1998. The conference will provide an international forum for discussion on issues in the areas of Computational Intelligence and Multimedia for scientists, engineers, researchers and practitioners.

The conference will include sessions on theory, implementation and applications, as well as the non-technical areas of challenges in education and technology transfer to industry. There will be both oral and poster sessions. Accepted full papers will be included in the proceedings to be published by World Scientific. Several well-known keynote speakers will address the conference.

Conference Topics Include (but not limited to):
Artificial Intelligence
Artificial Neural Networks
Artificial Intelligence and Logic Synthesis
Functional decomposition
Pattern Recognition
Fuzzy Systems
Genetic Algorithms
Intelligent Control
Intelligent Databases
Knowledge-based Engineering
Learning Algorithms
Memory, Storage and Retrieval
Multimedia Systems
Formal Models for Multimedia
Interactive Multimedia
Multimedia and Virtual Reality
Multimedia and Telecommunications
Multimedia Information Retrieval

Special Sessions:

Artificial Intelligence and Logic Synthesis: intelligent algorithms for logic synthesis; functional decomposition in machine learning, pattern recognition, knowledge discovery and logic synthesis;evolutionary and reconfigurable computing with FPGAs. Chair: Lech Jozwiak, Eindhoven University, Netherlands.

Multimedia Information Retrieval: segmentation of audio, image and video; feature extraction and representation; semi-automatic text annotation techniques; indexing structure; query model and retrieval methods; feature similarity measurement; system integration issues; prototype systems and applications. Chair: Guojun Lu, Monash University, Australia.

Pre-Conference Workshops and Tutorial:
Proposals for pre-conference workshops and tutorials relevant to the conference topics are invited. These are to be held on Saturday 7th February and Sunday 8th February at the conference venue. People wishing to organise such workshops or tutorials are invited to submit a proposal at the same time as submission deadline for papers. The accepted proposals will be advertised.

Special Poster Session:

ICCIMA'98 will include a special poster session devoted to recent work and work-in-progress. Abstracts are solicited for this session (2 page limit) in camera ready form, and may be submitted up to 30 days before the conference date. They will not be refereed and will not be included in the proceedings, but will be distributed to attendees upon arrival. Students are especially encouraged to submit abstracts for this session.

Invited Sessions

Keynote speakers (key industrialists, chief research scientists and leading academics) will be addressing the main issues of the conference.

Important Dates:

Submission of papers received latest on: 7 July 97

Notification of acceptance: 19 September 97

Camera ready papers & registration received by: 24 October 97

Submission of Papers

Papers in English reporting original and unpublished research results and experience are solicited. Electronic submission of papers via e-mail in postscript or Microsoft Word for Windows format directly to the General Chair are acceptable and encouraged for the refereeing process. If not submitting an electronic version, please submit three hard copy originals to the General Chair. Papers for refereeing purposes must be received at the ICCIMA 98 secretariat latest by 7 July 1997. Notification of acceptance will be mailed by 19 September 1997.

Page Limits

Papers for refereeing should be double-spaced and must include an abstract of 100-150 words with up to six keywords.

The accepted papers will need to be received at the ICCIMA 98 secretariat by 24 October 1997 in camera ready format. A final preparation format for the camera-ready papers will be provided upon notification of acceptance. Camera ready papers exceeding 6 pages (including abstract, all text, figures, tables and references etc.) will be charged an extra fee per page in excess to the normal registration.

Evaluation Process

All submissions will be refereed based on the following criteria by two reviewers with appropriate background.

originality
significance
contribution to the area of research
technical quality
relevance to ICCIMA 98 topics
clarity of presentation

Referees report will be provided to all authors.

Check List

Prospective authors should check that the following items are attached and guidelines followed while submitting the papers for refereeing purpose.

* The paper and its title page should not contain the name(s) of the author(s), or their affiliation

* The paper should have attached a covering page containing the following information:
-title of the paper
-author name(s), Affiliation, mail and e-mail addresses, phone
and fax numbers
-Conference topic area
-up to six keywords

* The name, e-mail, phone, fax and postal address of the contact person should be attached to the submission

General Chair:

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> From: oq95@aguirre.ing.UNIFI.IT ((NESI))

> Subject: Special Issue on Defect Detaction: Journal of Real-Time Imaging (AP)

CALL FOR PAPERS
JOURNAL OF REAL TIME IMAGING
Academic Press
Special Issue on REAL-TIME DETECTION OF DEFECTS

Quality control is a crucial issue for any production process, and many of the traditional methods for defect detection in manufacturing are rapidly changing. Real-time defect detection of shape, colours and textures is becoming mandatory for many products (from tiles to cars, from food to airplane components) made of a variety of materials (fabric, marble, leather, plastic and so on) to meet increasingly demanding quality standards. For this reason, several researchers have been studying parallel architectures, special chips and algorithms for real-time defect detection. Thanks to such new technologies, many new applications have already become possible, and others, unfeasible until today because of the limitations of inspection methods, are being developed and implemented.

AIM: The aim of this special issue is to inform practitioners as well as researchers timely of innovative defect detection techniques and their possible applications.

SCOPE: The special issue is focussed on real-time techniques and architectures, both software and hardware, for
- recognition and classification of defects;
- detection of defects in texture and pattern;
- detection of shape defects;
- detection of defects in colour;
- defect modeling: fractals, statistic, etc.;
- automatic acquisition of models suitable for defect detection;
- validation techniques for defect detectors.

Guest Editors:

Paolo Nesi Emanuele Trucco
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Papers should present innovative results which can be useful for technologists and practitioners alike. Basic research on specific low-level techniques ensuring real-time performances, as well as experiences reporting the development of specific applications are welcome.

MANUSCRIPT SUBMISSION
Papers must be submitted by *October 31, 1997* to
Emanuele Trucco, JRTI Special Issue Co-Editor.
Submission guidelines and general information
regarding the Special can be found on-line at
http://www.cee.hw.ac.uk/~mtc/special/call.html
ftp: osiris.cee.hw.ac.uk (anonymous login, then cd pub/rtispecial)

Submissions must satisfy the rules of the journal (included in the WWW and ftp sites) for what concerns originality and copyright permission.
Notification of acceptance will be sent to the authors by February 1998.
Any questions, please contact one of the Editors by email, FAX or phone.

That's all for now.

Your TC10 chairman,
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