



Newsletter

Volume 29 Number 1
January 2007

In this issue...

[Message from the IAPR President](#)

At ICPR 2006, Karl Tombre was elected IAPR President for the 2006-2008 term. In this feature, he shares his priorities for the IAPR in the next two years.

[From the ExCo](#)

Denis Laurendeau relates the latest news from the IAPR Executive Committee.

[In Memoriam](#)

Messages honoring Professor Mikio Takagi, former IAPR Vice-President and Governing Board Member, who passed away on 2 February 2006.

[MUSCLE Coin Images Seibersdorf \(CIS\) Benchmark Competition 2006](#)

Michael Nölle and Allan Hanbury share the results of the 2006 CIS Benchmark Competition and announce the 2007 competition.

Books, Books, Books

- ◆ Kai Huang reviews [Advances in Image and Video Segmentation](#) by Yu-Jin Zhang (Editor)
- ◆ Jason Dowling reviews [Graph-Theoretic Techniques for Web Content Mining](#) by Schenker, Bunke, Last, and Kandel

Conference and Workshop Reports:

[Joint IAPR International Workshops on Structural and Syntactic Pattern Recognition and Statistical Techniques in Pattern Recognition](#)

[2nd IAPR-TC3 Workshop on Artificial Neural Networks in Pattern Recognition](#)

[Atlantic Europe Conference on Remote Imaging and Spectroscopy](#)

[International Workshop on Multimedia Content Representation, Classification and Security](#)

[10th International Workshop on Frontiers in Handwriting Recognition](#)

[11th Iberoamerican Congress on Pattern Recognition](#)

[Of Interest](#)

Free books! Publication announcements. And a job posting that may be of interest to IAPR members.

[Conference Planner](#)

Chart of some upcoming IAPR and non-IAPR conferences of interest to the IAPR community.



Calls for Papers

[CIVR 2007](#)

*6th International Conference on
Image and dVideo Retrieval*
Amsterdam, Netherlands
Deadline: February 5, 2007
July 18-20, 2007

[ICB 2007](#)

2nd IAPR/IEEE International Conference on Biometrics
Seoul, Korea
deadline: February, 15, 2007
August 27-29, 2007

[ICIAP 2007](#)

*14th International Conference on
Image Analysis and Processing*
Modena, Italy
deadline: February 16, 2007
September 10-14, 2007

[PReMI'07](#)

*2nd International Conference on
Pattern Recognition and Machine Intelligence*
Kolkata, India
deadline: March 1, 2007
December 18-22, 2007

[CCIW07](#)

2007 Computational Color Imaging Workshop
Modena, Italy
deadline: March 9, 2007
September 14, 2007

[CAIP 07](#)

*12th International Conference on Computer Analysis of
Images and Patterns*
Vienna, Austria
deadline: March 30, 2007
August 27-29, 2007

[PRIB 2007](#)

*2007 IAPR International Workshop on
Pattern Recognition in Bioinformatics*
Singapore
deadline: April 15, 2007
October 1-2, 2007

[ICPR 08](#)

19th International Conference on Pattern Recognition
Tampa, Florida
deadline: April 8, 2008
December 8-11, 2008

Call for Submissions

IAPR Newsletter

*Articles, announcements, book reviews,
conference and workshop reports*

Contact the editor: logorman@avaya.com

Deadline: March 23, 2007

Feature Article

A Message from the IAPR President Karl Tombre



It is a great honor for me to have been elected as the president of the IAPR for the term 2006-2008. I have had the pleasure of serving the IAPR in different positions for more than 10 years now—as chair of TC10, as Secretary, and last term as First Vice-

President in charge of the

Technical Committees. These different experiences have convinced me that it is a challenging but enriching task to bring together good scientists and their competencies in a structured and efficient way. This is really what the IAPR is about, and we must continue to build on our successes and on making quality visible, as Walter Kropatsch, President during the previous term, expressed it. But, there are also several items on which there is certainly room for improvement, and this sets the context of my priorities for the IAPR in the next two years.

One of them is education. Whereas there is much expertise in the IAPR technical committees, we have still not been able to capitalize upon this expertise in terms of a consistent “knowledge base” of educational material. I want to give sharp focus to the work of the Education Committee under the leadership of Prof. Bob Fisher, and I have asked

the committee to build up a strong network of connections with the member societies and the technical committees. The pathways to explore include putting together a reference curriculum for a graduate program in pattern recognition, bringing together educational material on the web in a structured way, and organizing the publication of a series of tutorials or textbooks in association with a publisher.

This brings me very naturally to our cooperation with publishers. In the last term, the Executive Committee initiated a number of contacts with publishers to go beyond the relationships we have had in the past, which were mainly based on associating the IAPR’s name with journals. We have just signed a renewed memorandum of understanding with Elsevier, and discussions are under way with a couple of other publishers. This is one of the tasks where the Publications and Publicity Committee under the chairmanship of Prof. Sargur Srihari will play an active role. This is in addition to its responsibility for continuing to improve our web services.

Another priority I have set for this term is to completely redefine the IAPR’s industrial affiliates program. My feeling is that there are a number of industrial partners who would be eager to build up lasting, strong, and bilaterally fruitful ties with our association, going past “one-shot” sponsorships of

(Continued on page 4)

(Continued from page 3)

a conference or workshop. I have set as a challenge to the Industrial Liaison Committee under the chairmanship of Dr. Josep Lladós to work out a list of propositions for the industrial affiliate program, which will then be submitted to the Governing Board for approval as soon as possible.

The fact that I have singled out these priorities does in no way mean that our other activities are not important. At the IAPR website, you will find the list of [technical committees and standing committees](#), which reflects the diversity of tasks and of scientific interests within our association. I thank all the chairs and members of these committees for the time and effort they dedicate to making the IAPR a living and thriving community. To cite a couple of other actions, the newly created Advisory Committee is currently working on a code of ethics to be proposed for our association, and the Membership Committee is already working on the first application from a

new society wanting to become a member of the IAPR.

Let me also use this opportunity to thank Larry O’Gorman for having accepted to serve another term as our *Newsletter* editor. I think we can be very grateful for Larry’s quality work in making the *IAPR Newsletter* enjoyable and enriching to read.

I wish all the members of all our member societies a fruitful and rich time; the IAPR is also your association and you are welcome to contribute to the work of our technical committees, to participate in the conferences and events held under the auspices of the IAPR, and more generally to play an active role in the pattern recognition community at large.

At the dawn of a new year, let me also extend to all members of our member societies my warmest wishes for 2007. May it be a year of professional success and of personal happiness!

News from the IAPR EXECUTIVE COMMITTEE

By [Denis Laurendeau](#)

The last weeks have been very busy for the ExCo. A major task, that is about to be completed, was to set up the various committees. Again this time, the response from members of the pattern recognition community has been very positive, and IAPR committees will be constituted by very qualified individuals. The IAPR website will be updated regularly with the information on the membership of the committees.

The ExCo is about to finalize the agreement with Elsevier that was presented to the Governing Board at the last meeting in Hong Kong. The details of the agreement will be distributed to IAPR members as soon as the documents have been signed by all parties. The discussion with two other publishers is also under way.

The result of the Governing Board ballot for the nomination of the members of the K.S. Fu Prize Committee and of the Nominating Committee is completed. It is a pleasure to announce that Professor Josef Kittler has been elected Chair of the K.S. Fu Prize Committee for 2 years and member of the committee for

6 years. Professor Ruwai Dai has been elected member of the K.S. Fu Prize Committee for 6 years. With respect to the Nominating Committee, Drs. Walter Kropatsch, Aytul Ercil, Yoshiaki Shirai and Anil Jain have been elected members of the committee.

The memorial services for the Late Professor Mikio Takagi were held on November 17, 2006 at Hotel Floracion Aoyama in Tokyo. The organizers solicited commemorative messages (see [In Memoriam](#) in this issue) honoring Professor Takagi that were delivered to participants at the gathering. Through his scientific contributions on the application of digital image processing to many fields and by his participation in IAPR activities as IAPR Vice-President (1988-1990) and as Governing Board member for Japan (1982-1990), Professor Takagi was a very active member of the pattern recognition community.



In Memoriam: Professor Mikio Takagi

These messages are taken from the Message Board at the University of Tokyo web site. www.tkl.iis.u-tokyo.ac.jp/~yasukawa/cgi-bin/takagi/light.cgi?page0=val

They were read at the Memorial Service held for Prof. Takagi on November 17, 2006.

A message from the IAPR Executive Committee appears in this issue's [From the ExCo](#) column.

Prof. Takagi and IAPR Name: [Gabriella Sanniti di Baja, Institute of Cybernetics, CNR, Italy](#) Date: 2006/10/31(Tue) 18:04

Knowing Prof. Takagi has been a great honour for me. I was already aware of his scientific achievements much before personally knowing him. We have been very often in touch through the IAPR in the period 1994-1998 when Prof. Takagi was one of the GB-members for Japan and I was the IAPR Secretary. In that period, I had the opportunity to appreciate, besides his scientific merits, also his wise suggestions. His death is a terrible loss for the scientific community and for IAPR.

Prof. Takagi's contributions to IEC Name: [Jacquemart Charles, IEC, International Electrotechnical Commission](#) Date: 2006/11/01(Wed) 18:43

During numerous years Professor Mikio Takagi has contributed in an exemplary manner to the development of international standards. In early years he was chief delegate of Japan to IEC technical committee 49, later on he became the secretary of this committee. He carried out this task with a lot of dedication. Professor Takagi was also actively involved in several other IEC technical committees. The IEC community will surely miss him for his profound knowledge and his great human qualities.

Prof. Takagi made MVA well-known in the world Name: [Heinrich Niemann, Computer Science Dep. 5, Pattern Recognition, Erlangen, Germany](#) Date: 2006/11/06(Mon) 20:07

Over the last 20 years Prof. Takagi has been the driving force and the leading spirit behind MVA, the IAPR Conference on Machine Vision Applications. He made it the renowned international event which is well-known in the world. I do not remember exactly when I met him first, perhaps at the ICPR 1978 in Kyoto; I remember many meetings and discussions with him on various occasions in various places in the world; and I do remember the last meeting during the MVA 2005 in Tsukuba. He was an exceptional person and a great scientist. His unexpected death is a tremendous loss; his name and achievements persist.

In memory of Prof Takagi Name: [Bill Emery](#) Date: 2006/11/07(Tue) 12:39

I remember Prof Takagi (I prefer to remember him as Mikio as I consider him a close friend and someone I could refer to in that way) most when he first turned up in Boulder to visit me during one of his many visits to the U.S. We shared a common interest in receiving, processing and distributing AVHRR data and exchanged ideas on how we did that. He visited my home more than once and we enjoyed his stays.

He also invited me to visit him in Japan on two different occasions and I remember working with his students and coworkers on various applications of AVHRR data. I still have a wonderful plaque in Japanese that he gave me after giving a seminar to people at his institute. I treasure that as well as my memory of a generous and active person that did a great deal to promote the use of satellite data world wide. We have lost a leader in that regard. I will miss his warm smile at meetings in the future.

In memory of Prof. Takagi Name: [Matti Pietikainen, University of Oulu, Finland](#) Date: 2006/11/10(Fri) 20:31

I have known Prof. Takagi personally since 1988, when I participated in the MVA conference and also visited his lab. In 1989 he visited Oulu participating in the Scandinavian Conference on Image Analysis. Since then I met him several times in the ICPR conferences. I learned to know him as a great person and scientist. His death is a terrible loss for the pattern recognition community.

Condolences from Kiyo Tomiyasu Name: [Dr. Kiyo Tomiyasu, retired, Pomona, California, USA](#) Date: 2006/11/11(Sat) 12:33

The first time I met Professor Mikio Takagi was in 1983 in San Francisco, California while attending the 1983 IEEE International Geoscience and Remote Sensing Symposium (IGARSS). We met over lunch and the conversation lasted a long time during which Professor Takagi inquired if an IGARSS could ever be held in Japan. I answered affirmatively, and he began discussions in Japan on a proposed event. It must have been a tireless project for a first time ever IGARSS held outside the United States, which finally occurred 10 years later in 1993. I commend him for his foresight, diligence and dedication. I shall never forget these qualities. He will be greatly missed by his numerous friends and students.

He was elected to the Administrative Committee of the IEEE Geoscience and Remote Sensing Society, and he attended every meeting of the Committee, where ever they were held. He was an admirable member of this Committee.

I last saw him in Seoul, Korea in 2005 while attending IGARSS there. He looked very healthy and I was glad to see him. We spent a little time reminiscing.

I send my very best regards to the family and relatives of Professor Mikio Takagi.

Memorial Services for Late Prof. Takagi Name: [Dr. Mike C. Tsao](#) Date: 2006/11/13(Mon) 14:29

Dr. Mikio Takagi has made great contributions to the promotion of international harmonization for Nondestructive Testing Standards. For the past 20 years, as a member of the USA delegates to the ISO TC 135 meetings, I have fond memories to have worked with Dr. Takagi and all of the Japanese delegates. We have collaborated on developing two International Standards for ultrasonic testing (ISO STD 10375 and ISO STD 12715). In personal account, I enjoyed very much visiting his laboratory at the University of Tokyo in 1987 and his friendships all these years, especially his hospitalities in many occasions, such as at Vancouver (1999) and Madrid (2001). Dr. Mikio Takagi is missed enormously and will be remembered as one of the great leaders in the International Nondestructive Testing Standards Communities.

Mike C. Tsao, Ph.D. P.E.

USA

(Continued from page 8)



Marco Reiser (centre) receives the prize from competition organisers Michael Nölle (left) and Allan Hanbury (right) (source: Fraunhofer IPK Berlin).

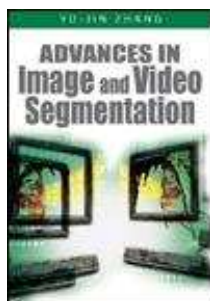
tion data. The prize of €1500 for the best performing coin classification program went to Marco Reiser, Olaf Ronneberger and Hans Burkhardt Chair of Pattern Recognition and Image Processing, at the University of Freiburg) Germany). Their program classified 9724 of the 10000 coins correctly and no coins incorrectly (all others were classified as unknown).

Their algorithm computes the similarity of two coins by the use of registration techniques. The coins are first segmented by a kind of Generalised Hough Transform. Only the directions of the edge gradient vectors are then extracted. Two coins are aligned by looking for the orientation at which the largest number of corresponding gradient vectors point in the same direction. The classification is done by a nearest neighbour search. A full description of this algorithm is in the workshop proceedings, which can be downloaded from the coin competition webpage

(muscle.prip.tuwien.ac.at/coin_proceedings_2006.php). The training dataset, competition dataset, and detailed classification results of each submitted algorithm are also available on this page.

A second MUSCLE CIS Coin Competition is planned to take place in 2007. The details can be found on the coin competition webpage (muscle.prip.tuwien.ac.at/2007_CIS_Benchmark_Competition_Flyer.pdf).

BOOKSBOOKSBOOKS



Advances in Image and Video Segmentation

by
Yu-Jin Zhang, Editor
IRM Press, 2006

Reviewed by: Kai Huang, Silverbrook Research

Image segmentation is a fundamental task in image processing, computer vision, and associated pattern recognition research efforts. This book, as stated by editor Yu-Jin Zhang, attempts to bring together a selection of state-of-the-art work on the segmentation of images and image sequences.

First, the introductory chapter (Section I) gives an overview of the collective published efforts in the last 40 years on image segmentation analysis, from the basic definitions to the statistics of the task.

The following chapters are organized according to the three levels of segmentation research, namely: algorithm development, algorithm evaluation, and the systematic study of evaluation methods.

Sections II and III comprise case studies on image and video segmentation algorithms respectively. As we know, segmentation could be equated with boundary definition and estimation. The techniques to achieve this goal generally make use of the uniformity and continuity characteristics of the image or image sequence. First, F. Escolano and M. Lozano present three case studies of optimal image segmentation using dynamic energy minimization. It is followed by the work by G. Bellettini and R. March on variational models for image segmentation to recover a piecewise smooth approximation of an image together with a discontinuity set. A

graph- and meta-heuristic-based technique is also found here as well as a technique that has originated from chaotic non-linear dynamic modelling to disambiguate the pixel clustering in image segmentation.

Mean-shift and content-based techniques are presented next. I. Gu and V. Gui utilize joint space-time-range mean-shift with success for both image and video. It is followed by automatic methods based on scene changes and active shape models that are of great practical interest.

Section IV consists of algorithm descriptions for segmenting particular types of images, e.g. multi-channel, texture, and medical images. S. Dai and Y. Zhang have proposed a two-step feature and image space segmentation framework for segmenting color images. It is followed by a texture-classification technique using variography to select the optimal neighbourhood window size. Next, 3D medical image segmentation and multi-dimensional morphology based segmentation studies are discussed.

Section V concentrates on applying image segmentation techniques using domain specific knowledge to solve ambiguities and enhance the segmented output. These applications include automatic lip

(Continued on page 11)

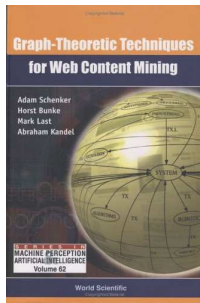
(Continued from page 10)

segmentation from color image or video, restoration and segmentation of degraded character images for OCR, segmentation of food images, and application of segmentation for blind navigation.

Finally, Section VI discusses aspects of objectively evaluating segmentation algorithms using supervised and unsupervised techniques. As one would imagine for an image analysis book, there are many line drawings and gray-scale image examples before and after the processing algorithms. This is good, however many are a bit small to view and color is not used.

This book is very rich in content due to the fact that it collects about 20 high-quality contributions from many well-known authors in this field. Each chapter is a good introduction to the particular technique discussed, and each contains a useful list of reference publications for further reading. In my opinion, this book is a handy reference for researchers and graduate students in computer science and engineering who are working on images. It is also valuable for academics and professionals who are interested in the mathematical modelling of images and video sequences. Finally, it is useful for practitioners for applying image segmentation in medical studies, the food industry, and information processing.

BOOKSBOOKSBOOKS



Graph-Theoretic Techniques for Web Content Mining

by

Adam Schenker, Horst Bunke, Mark Last and Abraham Kandel
World Scientific, 2005

Reviewed by: [Jason Dowling](#)

The World Wide Web contains a massive amount of unstructured information.

Web content mining involves processing these web pages through clustering (locating documents that are similar to each other) and classification (assigning documents to pre-determined classes). These methods can be useful for both visualizing and browsing through the structure of a collection of web documents. For example, one commercial application that uses this approach can be found at www.leximancer.com. In this book, Adam Schenker et al. describe how to apply methods from graph theory to web content mining. The advantage of this graph-based approach is that information that may be lost in the traditional vector space model (VSM) approach can be included (such as term order and document section).

Graph-Theoretic Techniques for Web Content Mining is a reasonably short book (235 pages) consisting of seven main chapters followed by 70 pages of appendices. The book appears to be based on the first author's [PhD thesis](#).

The first chapter provides a brief review of previous web mining research and an overview of the traditional information retrieval vector space model.

The second chapter is a carefully written presentation of graph similarity techniques. These techniques are used through the remainder of the book and include: graph and subgraph isomorphism; graph edit distance; state space search, probabilistic and distance approaches; and locating graph mean and medians.

Chapter three is quite short (9 pages). However, it discusses a number of different methods for representing web sites as graphs. Firstly, pre-processing is described (stop-lists and stemming), along with a brief section on latent semantic indexing. These are followed by a section on different types of representation (such as n-distance and absolute distance). Because calculating the distance between graphs is somewhat complicated, a short section on Schenker et al.'s method and some associated complexity analysis is included.

The focus of the fourth chapter is the author's extension of the popular k -means clustering algorithm to graphs. This graph-based algorithm performs well compared to the other method, especially when a large number of nodes are included. As the authors point out, one advantage of a graph-based approach is that when a new term is added only the new node and edges need to be

(Continued on page 13)

(Continued from page 12)

added to the particular graph. In contrast, a VSM approach would require an increase in dimensionality (by one) for every document in the collection.

Chapter five presents a graph-based extension to the k -nearest neighbors classification algorithm. Experimental results are given comparing the traditional VSM to the new approach. The results indicate that the graph-based method can be accurate and take approximately the same amount of classification time.

Chapter six describes a web based clustering system which accepts a query, extracts relevant web sites from a standard search engine (Google and Alta Vista were used in this book), and then organizes the resulting web documents into hierarchies of concepts from the documents. These *cluster hierarchies* attempt to represent the knowledge from these documents. The authors' system is compared (favorably) with the *Grouper* and *Vivisimo* systems. Advantages of this approach are that it enables users to focus on specific areas of interest (which could speed up web searching), and also suggests how a search query topic relates to other topics. This was a well written chapter, with clear examples and results.

The final chapter is a short three pages and presents conclusions and some ideas for future work. There seems to be plenty of scope to develop the ideas from this book, for example by processing information from tags in html documents. I think it would be interesting to

extend the work to other types of web content, such as images and music.

Two appendices are included. The first, which is 60 pages in length, presents examples of creating graphs from web sites. The rendered html, html source, and some graph portions are provided for three different web documents. These examples are interesting and clearly demonstrate the sometimes complex relationships between document terms. However, these examples are based on 'live' URLs (rather than the F-, J-, and K-series datasets used throughout the other chapters). A quick check found that two of the three web sites have been updated since this book was published.

The second appendix is a list of stop words used. A minor complaint here is that it is not clear why the authors have chosen these words rather than use a standard stop list (such as the SMART list).

In summary, I found this an interesting book, which includes a number of contributions to the web content mining and avenues for future work. The algorithms and math are presented clearly and thoughtful examples are usually provided. Some further editing would have been beneficial. For example, the chapters use a different reference style (e.g., [Lov68]) from the bibliography (which uses the familiar IEEE style) making it difficult to locate references. More importantly some references mentioned in the text aren't listed in the refer-

(Continued on page 14)

(Continued from page 13)

ences at all (for example, [SLK01a]). I also thought that it would have been useful if the book had an associated web site, for example to test out the web-based clustering system from Chapter six, or even to download the html and stop list from the appendices.

This book could be of interest to those conducting IR, Artificial Intelligence (particularly machine learning), or cognitive science research. Web search engine developers would also be inter-

ested in the type of knowledge representation possible from a graph-based approach.

In conclusion, despite the thesis-like style and lack of editing, I found this an enjoyable book that raised a number of original and interesting ideas.

Workshop Report: [S+SSPR 2006](#)

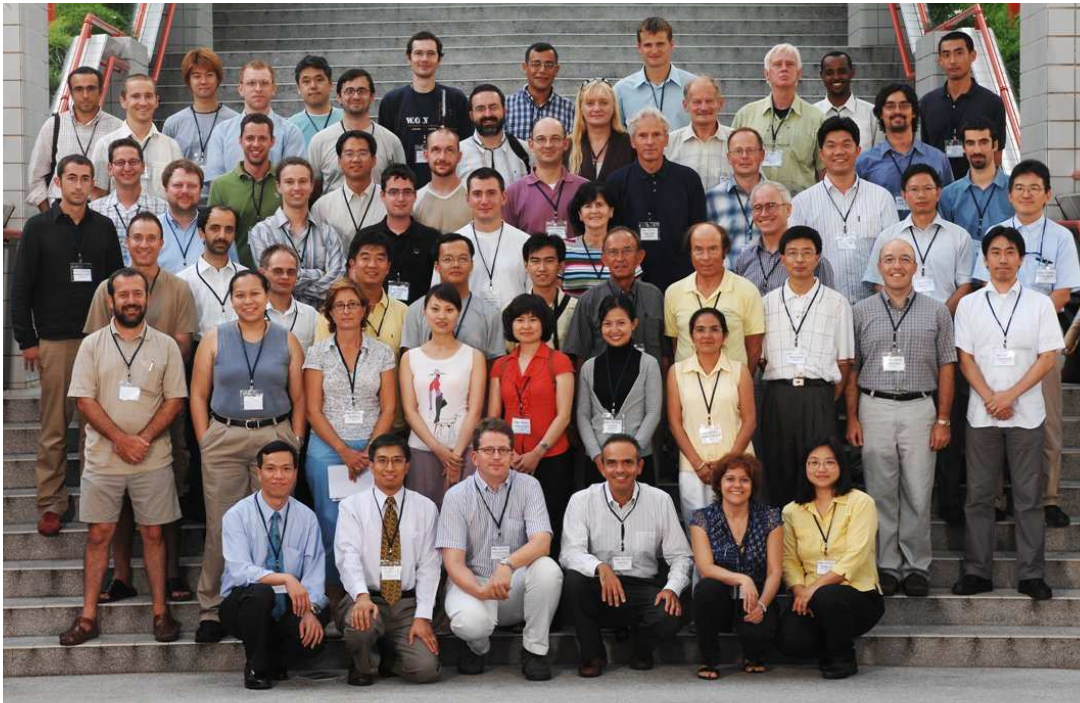
JOINT IAPR INTERNATIONAL WORKSHOPS ON Structural and Syntactic Pattern Recognition (SSPR 2006) and Statistical Techniques in Pattern Recognition (SPR 2006)

17-19 August 2006
Hong Kong, China

General Chair:
[Dit-Yan Yeung](#)

Report prepared by [Dit-Yan Yeung](#)

The S+SSPR 2006 Workshop brought together about 100 researchers in pattern recognition and related areas from more than 20 countries at the beautiful campus of the 15-year old Hong Kong University of Science and



Technology (HKUST). The workshop was held right before the 18th International Conference on Pattern Recognition (ICPR 2006), which was also held in Hong Kong. It was the fifth time that the SPR and SSPR workshops organized by technical committees TC1 and TC2 of the International Association for Pattern Recognition (IAPR) were held together. It was the first time that the joint workshop was held in the Far East. Considering its current size and participation, S+SSPR is more like a small conference than a workshop.

SPR 2006 and SSPR 2006 together received 217

paper submissions from 33 countries. Of the 217 submissions, 99 were accepted for either oral (38) or poster (61) presentation. In addition to parallel oral sessions for SPR and SSPR, there were also some joint oral

sessions with papers of interest to both the SPR and SSPR communities, such as graph-based methods and feature selection. A recent trend that has emerged in the pattern recognition and machine learning research communities is the study of graph-based methods that integrate statistical and structural approaches. Many interesting ideas along this direction were reported in papers in the special session as well as other paper sessions.

In addition to presentations by the authors of sub-

(Continued on page 16)

(Continued from page 15)

mitted papers, there were also invited talks presented by four prominent researchers:

- ◆ “Structural inference of sensor-based measurements” by Robert P.W. Duin of Delft University of Technology, The Netherlands, winner of the 2006 [Pierre Devijver Award](#);
- ◆ “Symmetries from uniform space covering in stochastic discrimination” by Tin K. Ho of Bell Laboratories of Lucent Technologies, USA;
- ◆ “Structured output prediction with support vector machines” by Thorsten Joachims of Cornell University, USA; and
- ◆ “On the theory and applications of sequence

based estimation of independent binomial random variables” by B. John Oommen of Carleton University, Canada.

All four talks were very well received.

A “highlight” of every conference or workshop held in Hong Kong is the banquet. Our workshop banquet was held in a very nice Chinese restaurant near the scenic Victoria Harbour. As many workshop participants put it: not only was the quality of the food excellent, its quantity was also sufficient for two full meals. That probably explains why many people skipped the breakfast on the following day.

Proceedings of S+SSPR 2006
are available in the
[Springer Lecture Notes in
Computer Science Series,](#)
[Volume 4109](#)



Workshop Report: [ANNPR 2006](#)

2nd IAPR-TC3 Workshop on Artificial Neural Networks in Pattern Recognition

30 August–2 September 2006
Gunzburg, Germany

General Chair:

Simone Marinai, University of Florence, Italy

Program Chair:

Friedhelm Schwenker, University of Ulm, Germany

Report prepared by **Lionel Prevost**



The second IAPR-TC3 Workshop on Artificial Neural Networks in Pattern Recognition was organized by Friedhelm Schwenker (Program Chair, University of Ulm) and Simone Marinai (TC3 General Chair, University of Florence).

From an initial 49 submissions, 19 high quality papers were selected for oral presentation, seven as posters. The workshop was organized in a single-track format and covered both theoretical and practical aspects of neural network research in pattern recognition. Three sessions were devoted respectively to supervised, semi-supervised and unsupervised learning. The other

sessions focused on Multiple Classifier Systems, Visual Object Recognition, Support Vector Machines and Set Covering Machines.

Besides the regular papers, there were two invited lectures. Gregory Baratoff (Siemens) presented the latest advances in pattern recognition for camera-based advanced driver assistance systems. Gunther Palm's (University of Ulm) talk dealt with the problem of learning and understanding the meaning of words.

There was plenty of time for fruitful discussions

(Continued on page 18)

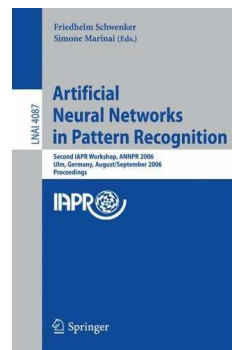
(Continued from page 17)

during the regular sessions and the coffee breaks held in the “baroque” room and in the gardens of the castle.

Reisensburg is among the oldest Alemannian castles, and a Roman watch-tower probably stood here two thousand years ago. Today's castle probably originates from the 17th century, after the earlier gothic castle burned down. It became property of the International Institute for Scientific Cooperation in 1966. Attendees were fortunate that, on the second day, a guided tour of the old city of Ulm was organized. We discovered the cathedral, “little Venice” and many other nice places.

We would like to congratulate the organizers for this excellent, human-sized workshop.

Proceedings of ANNPRO6
are available in the
[Springer Lecture Notes in
Computer Science Series,](#)
[Volume 4087](#)



Conference Report: [AECRIS 2006](#)
Atlantic Europe Conference on Remote Imaging and Spectroscopy
11-12 September 2006
Preston, UK

General Chairs:
[Lik-Kwan Shark](#) (UK)
K Chehdi (France)

Technical Chair:
[Dr. BJ Matuszewski](#) (UK)

Report prepared by Lik-Kwan Shark



Post conference visit to Lancashire County Council by sponsoring organisations

The conference was held at Preston, the administrative capital of Lancashire which is known as the Red Rose County of England. It was organised and hosted by the Applied Digital Signal and Image Processing ([ADSIP](#)) Research Centre at the University of Central Lancashire in collaboration with its European partners in the [PIM-HAI project](#) (Platform for Analysis of Multispectral and Hyperspectral Images from Acquisition to Interpretation for Environment Monitoring and Decision Making) funded by European Regional Development Fund under INTERREG IIIB—Atlantic Area.

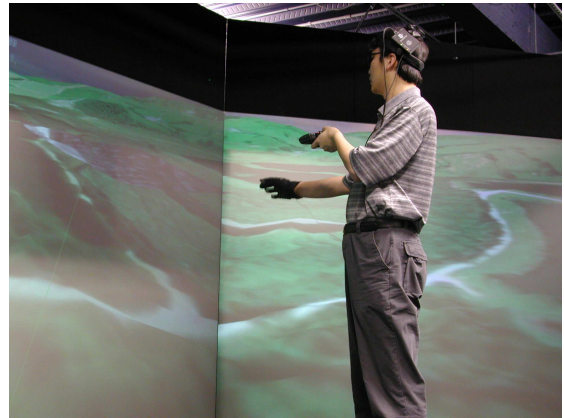
The technical programme over two days consisted of 25 papers from 19 organisations in 7

different countries. It started with an invited session with excellent presentations from Andrew Shaw (Earth Observation Coordinator from the UK Department of Environment, Food and Rural Affairs) on “Earth observation in central government: Meeting the needs of policy makers”, and Nick Holden (Science Manager for Monitoring Techniques from the UK Environment Agency) on “Remote sensing as used by the Environment Agency”. This was followed by four technical sessions and a poster session covering various topics related to remote imaging and spectroscopy. These include data analysis, visualization, registration, segmentation, clustering, classification, and applications.

(Continued on page 20)

(Continued from page 19)

A highlight of the conference was the Immersive and Interactive 3D Technology Demonstration Session at the ADSIP Research Centre. Surrounded by 3 large and reconfigurable screens displaying multi-band remote sensing data mapped on 3D digital terrain, delegates were able to fly through a local area in stereoscopic mode and to perform interactive data manipulation and visualization in real-time.



Immersive and interactive visualisation of hyperspectral remote sensing images.

The conference was run in parallel with another conference on Global Built Environment: Towards an Integrated Approach for Sustainability ([GBEN 2006](#)). Sessions were synchronized to facilitate mutual attendance, thereby enabling cross-fertilisation of ideas between researchers and practitioners working on environmental monitoring and built environment sustainability.

The awards were given during the conference dinner attended by the Vice Chair of the Lancashire County Council, County Councillor Wendy Dwyer. The best paper award went to Julio Martín Herrero from University of Vigo in Spain for his paper on “Real colour in hyperspectral remote sensing”, and the best poster award went to Bo Tang from the University of Central Lancashire in the UK for his poster on “Features correspondence of remote sensing images”.

The conference benefited from the support of the IAPR and IET as well as ADETTI in Portugal, Institute of Grassland and Environmental Research in the UK, Instituto Superior Técnico in Portugal, Université Bordeaux 1 in France, Universidade de Vigo in Spain, Université de Poitiers in France, and Université de Rennes 1 in France.

**The AECRIS 2006
proceedings
will be published by
Inderscience**

Workshop Report: [MRCS 2006](#)

International Workshop on Multimedia Content Representation, Classification and Security

11-13 September 2006
Istanbul, Turkey

General Chairs

[Bilge Günsel](#), Istanbul Technical University, Turkey
[Anil K. Jain](#), Michigan State University, USA

Program Chair

[A. Murat Tekalp](#), Koc University, Turkey

Report prepared by the General Chairs

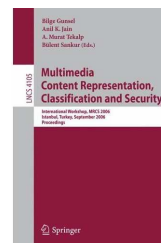
The scope of the MRCS workshops is to bring together researchers working in multimedia systems and to promote research in multimedia content extraction, representation, classification and content security by providing a forum for the presentation of technical achievements and future directions.

MRCS 2006 was endorsed by the International Association of Pattern Recognition (IAPR) and was organized in cooperation with The European Association of Signal Processing (EURASIP). MRCS 2006 was also sponsored by İTÜ— Istanbul Technical University and TÜBİTAK—The Scientific and Technological Research Council of Turkey.

A total of 100 technical papers were presented during the three days of the workshop. These papers were selected from 190 submissions based on a peer-review process that engaged 155 reviewers. Distributed over six special, three regular and six poster sessions, these technical contributions were complemented by four keynote talks on content-based indexing and search (John Smith, IBM T. J. Watson Research Center, USA), content representation (Tamás Szirányi, Hungarian Academy of Sciences, Hungary), semi-supervised learning of content (Mario Figueiredo, IST, Lisbon, Portugal), and multimedia security (Pierre Moulin, University of Illinois at Urbana-Champaign, USA). The social program included a welcome dinner on September 11 and a Conference Banquet with a Bosphorus Cruise on September 12.



The International Workshop on Multimedia Content Representation, Classification and Security (IWMRCS) was held from September 11-13, 2006 on the campus of Istanbul Technical University.



Proceedings of MRCS 2006
are available in the
[Springer Lecture Notes in
Computer Science Series,](#)
[Volume 4105](#)

Workshop Report: IWFHR-10

10th International Workshop on Frontiers in Handwriting Recognition

23–26 October 2006

La Baule, France

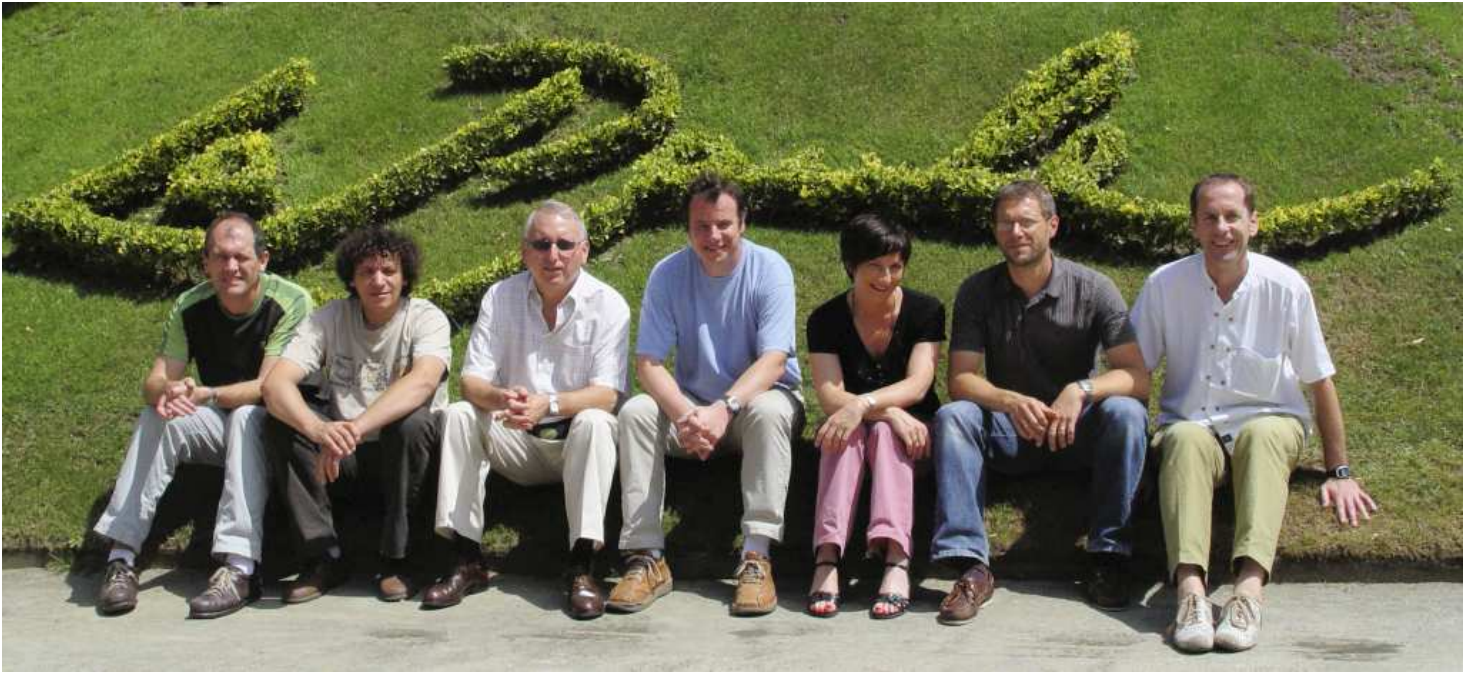
General Co-Chairs:

Guy Lorette (France)

Horst Bunke (Switzerland)

Lambert Schomaker (The Netherlands)

Report prepared by the Co-Chairs



10 th IWFHR 2006 in La Baule (France): The organizing committee on the green!

Previous editions of the International Workshop on Frontiers in Handwriting Recognition (IWFHR) were held in Montreal (1990), Bonas (1991), Buffalo (1993), Taipei (1994), Colchester (1996), Taejon City (1998), Amsterdam (2000), Niagara-on-the-Lake (2002), and Tokyo (2004). The workshop was organized under the auspices of the IAPR Technical Committee 11 on 'Reading Systems'.

The aim of IWFHR is to provide a forum for the exchange of knowledge in the field of handwriting recognition. Both modalities, on-line and off-line, are considered. There are a number of well-

established applications of handwriting recognition, for example, reading of postal addresses, bank checks, and forms. However, in the recent past, we have seen new applications emerging, for example, from novel digital pen and paper devices and from pen-based man-machine interfaces for PDAs, smart phones, and tablet PCs. Also, the development of digital libraries—in particular, the task of converting historical archives into electronic format—has led to a new interest in handwriting recognition.

The workshop received 133 submissions from 24

(Continued on page 23)

(Continued from page 22)

countries and four continents. Out of these submissions, 38 papers were selected for oral presentation and another 60 for the poster sessions. The workshop was attended by 140 participants from 21 different countries. Because of many potential commercial applications, there was a good mixture of people from industry and academia at the workshop.

The papers were organized in nine oral and three poster sessions. Posters were orally introduced by the authors in a so-called “poster teaser” session, where each author was given one minute to highlight the main contributions of his or her poster.

There were two invited talks, one on “Some Recent Advances in Machine Learning” by Olivier Bousquet and the other on “Language Models for Handwriting Recognition” by Joshua Goodman. Also, there was an invited session where the projects RIMES and InkML were addressed, and the results of a competition on on-line Tamil handwritten character recognition were announced. The winner of the contest was Zsolt Wimmer from Vision Objects. The best student paper award was given to the paper “A new algorithm for detecting text line in handwritten documents” by Y. Li, Y. Zheng, D. Doerman, and S. Jaeger. Prof. C. Y. Suen received an award for having initiated this workshop series.

Interest in Japanese and Chinese handwriting recognition has been traditionally high at IWFHR. This time, one could recognize rising interest in the recognition of other non-Roman languages and scripts, particularly in Arabic and Indian handwriting recognition. The fact that there are 24 official languages with 12 different scripts in

India clearly underlines the need for research in non-western languages and scripts.

La Baule, the location of the workshop, is a lovely resort town in South Brittany on the Atlantic coast in France. In addition to purely scientific aspects, there was ample room for social interactions among the participants. Conference registration started on the evening before the first day, accompanied by a reception where the participants were welcomed by the deputy mayor of the town. On the evening of the first workshop day, a dinner with specialities from the regional cuisine was served. The banquet on the evening of the second day was surely a highlight of the

RELATED LINKS:

Slides from Olivier BOUSQUET’s keynote speech:
ml.typepad.com/publications.html

Slides from Joshua GOODMAN’s keynote speech:
research.microsoft.com/~joshuago/publications.htm

The RIMES Project:

English version:

www.int-evry.fr/rimes/article.php?id_article=48

French version:

www.int-evry.fr/rimes/

InkML which is also a part of the
"Multimodal Interaction Activity"

www.w3.org/TR/InkML/

and

www.w3.org/2002/mmi/

On-line Tamil Handwritten Character Recognition
Competition:

algoval.essex.ac.uk:8080/iwfhrr2006/index.jsp?page=intro.html

(Continued on page 24)

(Continued from page 23)

social program. It was served during a cruise on the Erdre river in the region of Nantes. Before the dinner there was an opportunity to participate in a city tour of Nantes and visit a local winery.

In addition to IAPR, there were a number of sponsors of this workshop, including the Universities of Nantes, Rennes, and Rouen; INSA Rennes; the Laboratoire Informatique de Paris 6 (LIP6); the Fondation Michel Métevier; the Région Pays de la Loire; the International Unipen Foundation; Microsoft Research; Vision Objects; A2iA; HP Labs India; France Télécom R&D; SELISA/Ladservices; and Parascript LLC.

The next edition of IWFHR will be held at Concordia University, Montreal, Canada from August 19 to 21, 2008. It has been decided to “promote” the workshop to a conference and organize it as ‘11th International Conference on Frontiers in Handwriting Recognition’ (11th ICFHR). Also, the location of 12th ICFHR has been decided. It will take place in Siliguri, Darjeeling, India from September 27 to 30, 2010.

The IWFHR-10 proceedings are
available online at :

<http://hal.inria.fr/IWFHR10/en/>

and

<http://hal.ccsd.cnrs.fr/IWFHR10/en>

Conference Report: [CIARP 2006](#)

11th Iberoamerican Congress on Pattern Recognition

14-17 November 2006
Cancun, Mexico

General Co-Chairs:

Jose Francisco Martinez Trinidad (Mexico)
Jesus Ariel Carrasco Ochoa (Mexico)
Josef Kittler (UK)

Report prepared by the General Co-Chairs

CIARP'2006 was held at the Gran Caribe Real Hotel located in Cancun, Mexico. The congress was organized by the Computer Science Department of the INAOE, and was endorsed by the International Association for Pattern Recognition (IAPR). It was sponsored by the Mexican Association for Computer Vision, Neurocomputing and Robotics (MACVNR), the Cuban Association for Pattern Recognition (ACRP), the Spanish Association for Pattern Recognition and Image Analysis (AERFAI), the Special Interest Group on Pattern Recognition of the Brazilian Computer Society (SIGPR-SBC), the Portuguese Association for Pattern Recognition (APRP), and the Chilean Association for Pattern Recognition (AChRP), which soon will be an IAPR association.

We received contributions from 36 countries. In total 239 papers were submitted, out of which 99 were accepted for publication in the proceedings and for presentation at the conference. The review process was carried out by the Scientific Committee, each paper being assessed by at least two reviewers who, in conjunction with other reviewers, prepared an excellent selection dealing with ongoing research.

The 99 accepted papers were published by Springer Verlag in the volume Progress in Pattern Recognition, Image Analysis, and Applications, LNCS 4225, edited by José Francisco

Martínez Trinidad, Jesús Ariel Carrasco Ochoa and Josef Kittler.

Two keynote addresses were presented: "Maximin Initialization for Cluster Analysis" by James Bezdek of the University of West Florida, and "Hierarchies Relating Topologies and Geometry" by Dr. Walter Kropatsch of the Vienna University of Technology. In addition, two tutorials were offered: "Fuzzy Models for Pattern Recognition" by Dr. James Bezdek and "Overview of Feature Selection Techniques in Statistical Pattern Recognition" by Dr. Pavel Pudil. We especially want to thank Dr. Kropatsch and Dr. Pudil for stepping in at the last moment to fill in for previously invited speakers who unfortunately could not attend..

The conference was organized in three parallel sessions with two plenary talks, two tutorials, a work session of the CIARP's steering committee and a Final Meeting in which the organization of this conference was evaluated. During the steering committee session several suggestions for future CIARPs were proposed, including the creation of IAPR best paper and best student paper awards. In addition in this session, the place for the next two conferences was decided. The [12th Iberoamerican Congress on Pattern Recognition](#) will be held at the Valparaiso University, Chile, in November, 2007, and the 13th

(Continued on page 26)

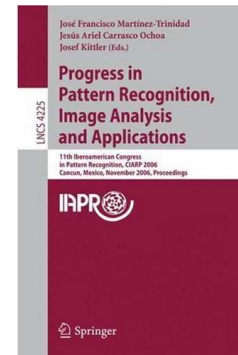
(Continued from page 25)

Iberoamerican Congress on Pattern Recognition will be held in Havana, Cuba, in 2008.

During the event, meals took place at the Gran Caribe Real Hotel restaurants. The conference finished with a pool-side dinner, commanding a beautiful view of the azure Caribbean Sea and the newly expanded white sand beach.

We consider that CIARP'2006 served as a forum for exchange of scientific research and establishment of contacts that will improve cooperation between Iberoamerican research groups and other well-established pattern recognition groups from the around the world.

Proceedings of CIARP 2006
are available in the
[Springer Lecture Notes in
Computer Science Series,](#)
[Volume 4225](#)



Of interest...

Free Books!

Now that I've got your attention, there are a couple things I'd like to mention about the book reviews in the *IAPR Newsletter*.

Book Authors - I request that authors of newly published books in pattern recognition and related fields please inform me of this so a review can be written for the *Newsletter*.

Potential Book Reviewers—Again, I find that I have a backlog of books that need to be reviewed, and I would appreciate experts in areas related to the books' topics to offer to review these. I will send the book to reviewers, and you will be able to keep the book. If you think you might like to review a book, but need more information, just go to the web site of the publisher or a web book seller. Below are some of the books I'd appreciate help reviewing:

- ◆ *Rippling: Meta-Level Guidance for Mathematical Reasoning* ([Cambridge University Press Tracts in Theoretical Computer Science Series](#)) by Alan Bundy, David Basin, Dieter Hutter, Andrew Ireland (Hardcover - Aug 8 2005)
- ◆ *Prediction, Learning, and Games* ([Cambridge University Press](#)) by Nicolo Cesa-Bianchi and Gabor Lugosi (Hardcover - Mar 13, 2006)
- ◆ *Applied Combinatorics on Words* ([Cambridge University Press, Encyclopedia of Mathematics and its Applications Series](#)) by M. Lothaire (Hardcover - Jul 25, 2005)
- ◆ *Information Theory, Inference & Learning Algorithms* ([Cambridge University Press](#)) by David J. C. MacKay (Hardcover - Jun 15, 2002)

Please email me at logorman@avaya.com,

[Larry O'Gorman](#), *IAPR Newsletter* Editor

Of interest...

Publications

International Journal for Computational Vision and Biomechanics (IJCv&B)

Dear Colleague,

It is a pleasure to **announce** the new **International Journal for Computation Vision and Biomechanics (IJCv&B)** and its first **call for papers**.

For further details, including Aims & Scope and instructions for manuscripts, the Editors invite you to visit the website of IJCv&B at: www.fe.up.pt/~ijcvb.

The Imaging Science Journal

The Imaging Science Journal is the official Journal of The Royal Photographic Society that covers exclusively both fundamental and applied scientific aspects of imaging. The content of the journal includes most areas of activity concerned with conventional, analogue chemical, electronic, digital and hybrid imaging systems.

For more information, please refer to the Maney Publishing website at:

www.maney.co.uk/search?fwaction=show&fwid=501

Of interest...

Positions

Horton International, a global executive search firm, is currently looking for:

Numerical Analyst: Statistical Pattern Recognition PhD

This is an opportunity for PhD graduate with a background in statistical pattern recognition.

- ◆ The graduate must be from a numerate discipline (engineering, mathematics, computer science, a physics background or background in spectral analysis would be a bonus)
- ◆ The candidate should have excellent programming and numerical modeling skills, preferable with experience in one or more of C++, C, C#, Matlab, Labview.
- ◆ The candidate will require good communication skills and the ability to assimilate information from a number of different perspectives.

The candidate will be responsible for defining the future direction of the company's isotopic identification software. This is a key role for the company. For the correct candidate this will be a dream job, devising, modeling and implementing pattern recognition solutions.

Day to Day Responsibilities:

- ◆ Algorithmic development
- ◆ Drawing up programmes of work and work packages
- ◆ Liaising with other R&D team members
- ◆ The position is likely to require occasional travel both within the UK and overseas and
- ◆ Could include work at customer installations

Qualified and interested candidates should contact Srin Govindan (Govindan@horton-intl.co.uk).

Conference Planner

NOTE: This is not an exhaustive list of conferences. It is a list of conferences sponsored or endorsed by IAPR plus additional conferences that have been brought to the attention of the editor (these non-IAPR events are denoted with an *). The [IAPR web site](#) has more up-to-date information about [IAPR conferences](#) and a link to USC's Institute for Robotics and Intelligent Systems list of [Computer Vision Conferences](#) (L. O'Gorman, ed.)

2007			
VISAPP 2007*	2nd International Conference on Computer Vision Theory and Applications	Barcelona, Spain	8-11 Mar 07
ICVS 2007	International Conference on Computer Vision Systems	Bielefeld University, Germany	21-24 Mar 07
SPIE07 DS36*	Biometric Technology for Human Identification IV (DS36) Part of the SPIE Int'l Defense and Security Symposium	Orlando, Florida, USA	9-13 Apr 07
OAGM 07*	31st Workshop of the Austrian Association for Pattern Recognition (AAPR/OAGM)	Schloss Krumbach, Austria	3-4 May 07
MVA 2007	10th IAPR International Conference on Machine Vision Applications	Tokyo, Japan	16-18 May 07
PRIP 2007	9th International Conference on Pattern Recognition and Information Processing	Minsk, Belarus	22-24 May 07
MCS 2007	7th International Conference on Multiple Classifier Systems	Prague, Czech Republic	23-25 May 07
CRV2007	4th Canadian Conference on Computer and Robot Vision	Montreal, Canada	28-30 May 07
MLDM 2007	5th IAPR International Conference on Machine Learning and Data Mining	Leipzig, Germany	4-6 July 07
SCIA 2007	15th Scandinavian Conference on Image Analysis	Aalborg, Denmark	10-13 Jun 07
Gbr2007	6th IAPR-TC15 Workshop on Graph-based Representations	Alicante, Spain	11-13 Jun 07
AIPR-2007*	2007 International Conference on Artificial Intelligence and Pattern Recognition	Orlando, Florida, USA	9-12 Jul 07
CIVR 2007	6th International Conference on Image and Video Retrieval	Amsterdam, Netherlands	18-20 Jul 07
CAIP 07	12th International Conference on Computer Analysis of Images and Patterns	Vienna, Austria	27-29 Aug 07
ICB2007	2nd International Conference on Biometrics	Seoul, Korea	27-29 Aug 07
ICANN'07*	17th International Conference on Artificial Neural Networks	Porto, Portugal	9-13 Sep 07
ICIAP 2007	14th International Conference on Image Analysis and Processing	Modena, Italy	10-14 Sep 07
CCIW07	2007 Computational color Imaging Workshop	Modena, Italy	14 Sep 07
ICDAR 2007	9th International Conference on Document Analysis and Recognition	Curitiba, Parana, Brazil	23-26 Sep 07
PRIB 2007	2007 IAPR International Workshop on Pattern Recognition in Bioinformatics	Singapore	1-2 Oct 07
VIImage 2007*	ECCOMAS Thematic Conference on Computational Vision and Medical Image Processing	Porto, Portugal	17-19 Oct 07
PRemI'07	2nd International Conference on Pattern Recognition and Machine Intelligence	Kolkata, India	18-22 Dec 07
2008			
ICPR 08	19th International Conference on Pattern Recognition	Tampa, Florida, USA	8-11 Dec 08

Highlighting indicates that paper submission deadline has not yet passed.