

IAPR



Newsletter

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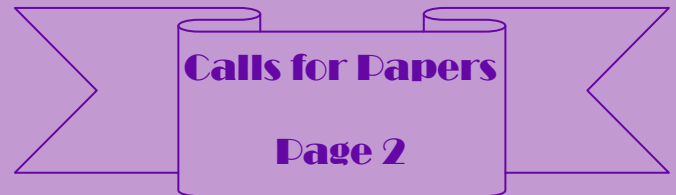
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Chart of some upcoming IAPR and non-IAPR conferences of interest to the IAPR community.

Calls for Papers

[AECRIS 06](#)

Atlantic Europe Conference on Remote Imaging and Spectroscopy

Preston, UK

Deadline: April 26, 2006

September 11-12, 2006

[CIARP 2006](#)

11th Iberoamerican Congress on Pattern Recognition

Cancun, México

Deadline: May 19, 2006

November 14-17, 2006

[MVA 2007](#)

10th IAPR International Conference on Machine Vision Applications

Tokyo, Japan

Deadline: December 15, 2006

May 16-18, 2007

[ICDAR 2007](#)

9th International Conference on Document Analysis and Recognition

Curitiba, Parana, Barzil

Deadline: January 15, 2007

September 23-26, 2007

[CIVR 2007](#)

6th International Conference on Image and Video Retrieval

Amsterdam

Deadline: February 5, 2007

July 18-20, 2007

Call for Submissions

IAPR Newsletter

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

Contact the editor: logorman@avaya.com

Deadline: June 16, 2006

Feature Article

Pattern Recognition at the US Postal Service: A Decade of Achievement



By
[Sargur Srihari](#) and [Srirangaraj Setlur](#)
[CEDAR, University at Buffalo](#)
[State University of New York](#)

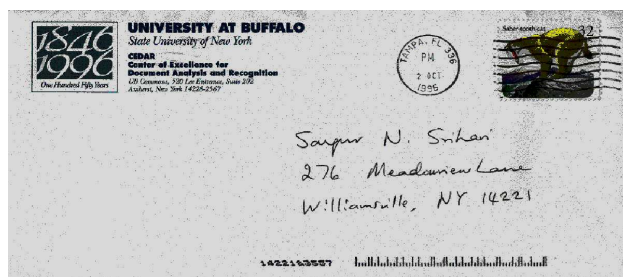
The early 1990s brought an upsurge of interest in document image processing. This was partly the result of scanners becoming inexpensive thanks to the prevalence of fax machines, and also due to improvements in computer speed and memory size to deal with document images that were about 9Mbyte (scanned at 300 dpi). The popularity of the field was evidenced by a new conference, [ICDAR](#) (International Conference on Document Analysis and Recognition), which began in 1991.

One of the most exciting applications of document image processing was in the postal area. The purpose was to recognize information in the address fields of envelopes and boxes to route this mail more efficiently and inexpensively. This required the techniques of machine- and hand-written character recognition, automatic page layout analysis, and low-level processing such as noise reduction and binarization. There were two reasons that this was a perfect application for document image recognition. One was that the fields on envelopes have a well-defined syntax, and, though there are deviations, this constrained a very difficult problem to be more manageable. The other reason was that the impact that could be made, even by small improvements, was huge, given the volume of mail.

Professor Sargur Srihari and his group at [CEDAR \(Center of Excellence for Document Analysis and Recognition\)](#), were early pioneers in applying document image recognition techniques to the postal application. At this time, roughly a decade after the work began, I asked for a recap of the work and current status of deployment.
(L. O’Gorman, ed.)

The United States Postal Service (USPS) is a major consumer of pattern recognition technology. Systems for sorting printed addresses for letter mail have been in existence since the mid-sixties. Systems for sorting handwritten addresses were introduced in 1996.

The task of handwritten address interpretation (HWAI) is illustrated in the letter image shown below. The goal of the interpretation is to determine the ZIP+4+2 Postnet barcode from the handwriting—the result of which is sprayed at the bottom of the envelope. This barcode is used for further sorting of the mail at each post office that it has to go through. The envelope shown below was among those in the first deployment of the HWAI system in Tampa, Florida in 1996.



Today, at the USPS, Remote Computer Readers (RCRs) automatically scan non-barcoded letter mail for address information, match the information against the

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Address Management System (AMS) databases—which contains addresses only and no individual names—and imprint the mail with barcodes for processing. When the RCRs are unsuccessful at finding a match, an image of the address is sent to a Remote Encoding Center (REC) where operators manually key the address information. The results are transmitted to the facility that has the mail piece, thereby keeping it in the automated mail stream. These failures are typically due to varying address formats from patron errors such as directionals in grid addresses (e.g., SW), illegible or missing address elements and technical problems that include inserts misaligned with envelope windows.

The RCR-driven, USPS letter mail address recognition program is a major success story that has resulted in substantial cost savings for the USPS and more accurate and efficient mail delivery for US residents and businesses.

During the past several years computer-based image recognition improvements have significantly reduced the amount of images requiring manual keying at the RECs. From 1996 to 2004, the encode rate for RCRs has increased from 35

percent to 90 percent, reducing the need for manual matching at RECs from 24 billion pieces per year to 6 billion annually. As a result, the USPS has been able to reduce the number of RECs in the national network from a high of 55 in 1998 to only 15 today.

Moving forward, the USPS hopes to reduce the amount of manual intervention even further. The USPS will begin testing a commercial database to improve the performance of RCR devices that scan mail for address information. Using the commercial database, the USPS hopes to improve the percentage of non-barcode mail it can process automatically. While the USPS in-house database of addresses doesn't include individual name information, the commercial database does. So, when mail compared to the AMS database fails to produce a match or produces multiple matches, the USPS plans to try to match the mail against the commercial database. For example, while mail addressed to John Doe at 123 Main St. might produce multiple matches against the AMS database (123 Main St S and 123 main St N), a comparison against the commercial database would reveal that a John Doe lives at 123 Main St. S, and a match would be made.

INSIDE the IAPR

Against the rules: not for the weak-hearted

By Maria Petrou—IAPR Treasurer

As IAPR Treasurer, Maria Petrou is a member of the ExCo. She is an IAPR Governing Board member from the UK and is also a former editor of the IAPR Newsletter, where her editorial cartoons were featured on a regular basis. (L.O’Gorman, ed.)

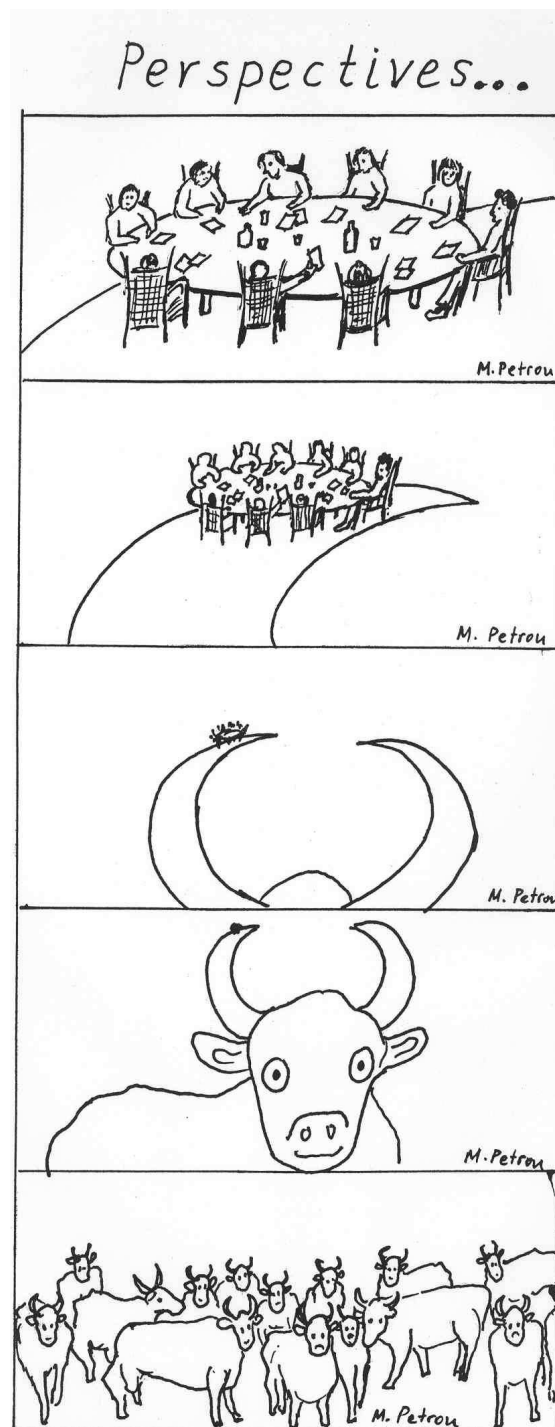


There are two kinds of people: male and female; good and bad; scientists and not; members of an IAPR member organisation and not! And, there are people who believe that IAPR should be very careful who is a member and who is not, and those who think that rigour is not necessary when it comes to that.

There are people who think that IAPR should grow in strength and power by carefully controlling its boundaries and offering its services only to its members, and there are people who think that IAPR is not there in order to have power, but in order to serve the community. So, one thing both agree on is that the main objective of IAPR is to serve the community. Where they disagree is in the definition of the community.

The former consider that the community consists of all pattern recognisers who pay their subscription to a member society; they want name lists that are updated every so often, in case somebody somewhere misleads somebody-else somewhere-else. They want the *IAPR Newsletter* to advertise only conferences that bowed to the might of IAPR and asked for its sponsorship and blessing. They want careful allocation of the votes in the Governing Board (GB) in case some country deceives the others and has more votes than its current membership count deserves.

Then comes the other definition of the community: as long as you work in a pattern recognition related topic, you are a member, whether you pay your subscription or not. As long as you are interested in pattern recognition matters, you are one of us. As long as the conference is of interest to pattern recognisers, it should be advertised and the community notified of its existence.



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But, I can hear some people saying: "What about the voting rights? If a country declares that it has more members than it actually has, it has more votes in the GB of IAPR! This is unfair!" Well, well, well, let's put things into perspective. The GB of IAPR does not exactly make earth-shattering decisions; it is not the Security Council; it does not declare wars, and it does not impose sanctions. In terms of the world scene, it is a Mickey-mouse body, making Mickey-mouse decisions. Sorry guys, for offending your sense of importance, but please note the "in terms of" in front of the offending sentence.

I am very proud to be a member of the GB, and I take decision-making seriously (perhaps that is why I am risking your wrath and writing this article), but let us not take ourselves too seriously. If, for whatever reason, a country cannot prove, by supplying a list of names, that it actually has the number of members it claims it has, does it really, really, really matter? Can't we recognise the pattern that some countries have many universities, many scientists, many pattern recognisers, much research output, and leave it to that, instead of alienating members, creating a climate of mistrust and suspicion and propagating bureaucratic procedures? Can't we have a web page and a newsletter full of goodies for ALL the community, whether or not they are named in some list somewhere? Can't we claim that ICCV and ECCV and CVPR and BMVC are OUR conferences, too, since they are organised by members of the community, OUR community, the everybody encompassing community? Can't we make do without those name lists member societies have to supply every so often? After all, really serious matters, like aid distribution and subsidies by the EU and the UN, are managed according to the population each country declares she has, and I do not know of any country that has to supply a list of the names of its citizens in order to prove its claims.

Well, as I said at the beginning, there are two kinds of people: those who divide the world into two kinds and those who do not. I belong to the second.

News from the IAPR EXECUTIVE COMMITTEE

By [Denis Laurendeau](#)

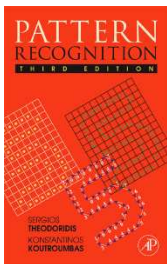
During the past months, the ExCo has worked in close cooperation with Dr. Sargur Srihari, Chair of the IAPR Publications and Publicity Committee, in setting up the requirements for the new IAPR website. In addition to the publication of the *IAPR Newsletter* in electronic format, more electronic services will be offered to the IAPR community in the next months through an improved website. The contents of current IAPR website, which is managed by Dr. Srihari's team at CEDAR, will be transferred to Conbrio's servers and the website will be redesigned in order to i) offer site search functionality, ii) provide more efficient and faster publications and database search capabilities, iii) offer a web admin front end for publications import, and iv) offer a front end for managing website contents. Conbrio Design, Inc., is the professional web service provider that has been identified for designing the new IAPR website and for hosting the website contents. Conbrio is looking for image and graphic materials that reflect IAPR's history and areas of interest that could be added to the website. If you have such material available in electronic format, please send it by e-mail to the IAPR Secretary at

Denis.Laurendeau@gel.ulaval.ca.

At the moment of writing this column, the review process for the next ICPR is under way and the notification of acceptance should be sent to authors by April 15, 2006. Over 2000 manuscripts were submitted to ICPR 2006 and the ExCo acknowledges the effort that is being carried on by the ICPR organizing committee, the members of the program committee, and the reviewers. Authors of accepted papers will find important information on the IAPR travel stipends in the notification of acceptance message they will receive from the ICPR 2006 Organizing Committee.

The sad news about the unexpected demise of Prof. Mikio Takagi on February 2, 2006 has been brought to the IAPR community. Prof. Takagi was an emeritus professor of the University of Tokyo and a professor of Shibaura Institute of Technology. He was the founding father of Machine Vision and Applications (MVA) Conference. He was a well respected and most distinguished member of our community. Prof. Takagi participated actively in numerous IAPR activities especially as IAPR 1st Vice-President during 1988 to 1990. The ExCo expresses its condolences to Prof. Takagi's family, colleagues, and friends.

BOOKSBOOKSBOOKS



Pattern Recognition, 3rd Edition

By Sergios Theodoridis, Konstantinos Koutroumbas
Academic Press, 2006

Reviewed by: [Larry O'Gorman](#)

The release of the third edition of [Pattern Recognition](#) by Theodoridis and Koutroumbas warrants a review of this general text covering our field. The book is aimed at the university course market and it achieves that goal well. This is an excellent choice to accompany an advanced undergraduate or graduate school course. The book is extensive enough to offer the option of teaching from it for one- or two- semesters. To supplement the coursework, there are many problems at the end of each chapter. In addition, each chapter's reference section provides a one-stop resource for students to choose papers for advanced work or projects.

The book is written in a very readable, no-nonsense style. I found that there was just the right amount of text to describe a concept, without extraneous verbiage. The same is true for the mathematics, enough for description, not too much to overwhelm. Explanatory text always accompanies the math, allowing the reader to understand first by text before delving into the equations or vice versa, depending upon their preference.

Like the text and equations, figures contain no extra details other than those needed to illustrate the pertinent topics. These are usually point plots, line drawings, and graphs that complement the textual descriptions. Most, although not all, of the topics have accompanying figures.

Although there are some example problems worked

out in the body of many of the sections, the number of these is relatively few, certainly many fewer than the 20-30 problems at the ends of the chapters. This is one reason that the text is not aimed at levels lower than advanced undergraduates. The book is also not aimed at practitioners who are looking for a quick “cookbook” text to implement algorithms in their fields (e.g., speech, image, motion, etc.) quickly. It would be better for these practitioners to buy a book devoted to that topic. However, if the practitioner wants to understand the basics of pattern recognition, this book is well-suited.

The content follows a traditional sequence for teaching a pattern recognition course. The topics of the first chapters are: Bayes classifiers, linear classifiers, non-linear classifiers, and feature selection. Then the book turns to global transforms, including Fourier, Karhunen-Loeve, and wavelet. Less general, more application-dependent features are then discussed, including chain codes and fractals for image processing, and the cepstrum for speech processing. Following this is a chapter on template matching. This might end a one-semester (or quarter) course on pattern recognition, perhaps with a little extra material from the following chapters.

The remaining chapters in the book, Chapters 11-16, all deal with aspects of clustering. These chapters begin with basic clustering concepts. Following this,

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sequential and hierarchical algorithms for clustering are treated in separate chapters. Clustering algorithms are described that are based on functional optimization, including the Isodata and k-methods algorithms. More clustering algorithms are described that use learning, graph theory, and binary morphology. The last chapter delves into methods for testing cluster validity.

I tried to see if any popular topics – now or at some time in the past – were missing in the book, but coverage appears to be comprehensive. As a sampling, all the following topics were included: neural networks, fuzzy clustering, wavelets, morphology, simulated annealing, and hidden Markov models (HMMs).

Although many references accompanied each chapter, one suggestion for the next edition of the book is to update this to include more recent references. Most references are from the 1970's, 80's, and 90's (decades of great productivity in the pattern recognition field). However, there are more papers in the late 1990s and post-2000 that might also be included – especially if one purpose for inclusion of these references is for

students to choose project work.

In summary, I very much enjoyed reading through this book. I believe it would be an excellent choice for coursework, meeting the satisfaction of both professor and students. Obviously, as this is the 3rd edition, it has been used in this way for many classes and good professors will continue to choose it.

Benchmark for Visual Information Search

By Michael Grubinger, [Paul Clough](#) and Clement Leung

Introduction

The development of visual information retrieval systems has long been hindered by the lack of standardised benchmarks for the evaluation and comparison of emerging techniques. In recent years, researchers have built numerous systems and proposed new techniques in a continual way. However, although different systems clearly have their particular strengths, there is a tendency to use different datasets and queries in order to highlight the advantages of a particular algorithm. A degree of bias might therefore exist which makes a meaningful comparison between new techniques difficult to establish.

Thus, there is an acknowledged need for a standardised benchmark in order to assess the performance of image retrieval systems. One of the main components of any benchmark is a representative collection of documents (e.g. images, texts or videos). However, finding such resources for general use is difficult as image collections are expensive and often copyrighted, which restricts both the distribution and future access of the data for evaluation purposes (e.g. consider the [Corbis Image Database](#) or [Getty Images](#)). The Corel CDs, currently the de-facto standard for the evaluation of image retrieval systems and techniques (and used in many publications to demonstrate performance), is one example dataset which falls into this category.

There are a few image collections that are free of charge and copyright-free, like the [dataset provided by the University of Washington](#) which contains about 1,000 images that are clustered by the location from which the images were taken. Amsterdam Library of Objects and Images ([ALOI](#)) and [LTU Technologies](#)

have large databases with colour images of small objects with varied viewing (and illumination) angles. The [Benchathlon Network](#) created an evaluation resource, but without query tasks and ground truths. There are a few royalty-free databases available in specialised domains like [Casimage](#) for medical imaging or the [St. Andrews collection](#) for retrieval of historic (mainly black and white) photographs. Yet, there is still a lack of more general image collections in order to cater to the growing research interest in information access to personal photographic collections.

Benchmark History

In 2000, IAPR TC-12 recognized the need for such a standardized benchmark and began an effort to create a freely available database with annotated images. This was initiated by first developing a set of recommendations and specifications of an image benchmark system [1]. Based on these criteria, a first version of a benchmark (consisting of 1000 multi-object, colour images, 25 queries, and a collection of performance measures) was set up in 2002 and published in 2003 [2].

Developing a benchmark is an incremental and ongoing process. The IAPR benchmark was refined, improved and extended to 5,000 images in 2004, using a specially developed benchmark administration system [3]. At the end of that year, an independent travel company provided access to around 10,000 images with raw multilingual annotations in three different languages (English, German, Spanish), increasing the total number of available images in the benchmark to 15,000.

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A benchmark is not beneficial unless it also used by researchers. Discussions began in 2005 for using the IAPR TC-12 Benchmark for an ad-hoc image retrieval task at the Cross Language Evaluation Forum's (CLEF) text and/or content-based image retrieval track ([ImageCLEF](#), see related article, "[The ImageCLEF benchmark on multimodal, multilingual image retrieval](#)") from 2006 onwards. With 10,000 additional images from the travel company, the total number of available images rose to 25,000 images [4] but was soon reduced to 20,000 images due to the strict benchmark image selection rules [2].

Benchmark Composition

At present, the image collection of the IAPR TC-12 Benchmark consists of 20,000 images (plus 20,000 corresponding thumbnails) taken from locations around the world and comprising an assorted cross-section of still, natural images. This includes pictures of different sports and actions, photographs of people, animals, cities, landscapes and many other aspects of contemporary life (Fig. 1).



Fig. 1 Example images from the IAPR TC-12 database

Each photograph is associated with a text caption that consists of the following seven fields: a unique identifier, a title of the picture, a free-text description of the semantic content of the image, notes for additional information about the photograph, the originator of the photo and the location and date of where and when the photo was taken. These annotations exist in three different languages, with the English and German versions manually checked and corrected to provide a reliable set of annotations, and the Spanish version currently being processed. Annotations are stored in a database which is also managed by a benchmark administration system that allows the specification of parameters according to which different subsets of the image collection can be generated. More information on the benchmark can be found on the web page of [IAPR TC-12](#).

The IAPR TC-12 Benchmark at ImageCLEF

ImageCLEF has been provided with such a subset for its upcoming evaluation event ([ImageCLEF 2006](#)) for a task concerning the ad-hoc retrieval of images from photographic image collections (ImageCLEFphoto). Participants are provided with the full collection of 20,000 images, however will not receive the complete set of annotations, but a range from complete annotations to no annotation at all. Data will be provided in English and German in order to enable the evaluation of multilingual text-based

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retrieval systems. In addition to the existing text and/or content based cross-language image retrieval task, ImageCLEF will also use the IAPR TC-12 Benchmark in an extra task for Content Based Image Retrieval. ImageCLEF has also expressed interest in having just one text annotation file with a randomly selected language for each image for ImageCLEF 2007, making full use of the benchmark's parametric nature.

The IAPR TC-12 Benchmark in the Future

It is recognised that the benchmarks are not static, as the field of visual information search might (and will) develop, mature and/or even change. Consequently, benchmarks will have to evolve and be augmented with additional features or characteristics, and the IAPR TC-12 Benchmark will be no exception here. Apart from the planned completion of the Spanish annotations, this could comprise the addition of several different annotation formats following a structured annotation defined in MPEG-7, an ontology-based keyword annotation or even non-text annotations like an audio annotation.

The method of generating various types of visual information might produce different characteristics in the future, and databases might have to be searched in different ways accordingly. Hence, benchmarks with several different component sets geared to different requirements will be necessary, and the parametric IAPR TC-12 Benchmark has taken a significant step towards that goal.

References

- [1] Leung, C., Ip, H.: Benchmarking for Content Based Visual Information Search. In Proceedings of the Fourth International Conference on Visual Information Systems (VISUAL'2000), number 1929 in Lecture Notes in Computer Science, Springer Verlag, Lyon, France (2000) 442 – 456.
- [2] Grubinger, M., Leung, C.: A Benchmark for Performance Calibration in Visual Information Search. In Proceedings of The 2003 International Conference on Visual Information Systems (VIS 2003), Miami, FL, USA (2003) 414 – 419.
- [3] Grubinger, M., Leung, C.: Incremental Benchmark Development and Administration. In Proceedings of The Tenth International Conference on Distributed Multimedia Systems (DMS'2004), Workshop on Visual Information Systems (VIS 2004), San Francisco, CA, USA (2004) 328 – 333.
- [4] Grubinger, M., Leung, C., Clough, P.: The IAPR Benchmark for Assessing Image Retrieval Performance in Cross Language Evaluation Tasks. In Proceedings of MUSCLE/ImageCLEF Workshop on Image and Video Retrieval Evaluation, Vienna, Austria (2005).

Web sites of interest mentioned in this article:

Corbis Image Database pro.corbis.com/

Getty Images www.gettyimages.com/

Dataset provided by the University of Washington
www.cs.washington.edu/research/imagetdatabase

Amsterdam Library of Objects and Images (ALOI)
staff.science.uva.nl/~aloi/

LTU Technologies www.ltutech.com/

The Benchathlon evaluation source
www.benchathlon.net/

Casimage for medical imaging www.casimage.com/

St. Andrews collection for historic photographs
www-library.st-andrews.ac.uk

Cross-language Evaluation Forum
www.clef-campaign.org/

Text/Image retrieval track of CLEF
ir.shef.ac.uk/imageclef/

ImageCLEF 2006 ir.shef.ac.uk/imageclef/2006/

The ImageCLEF Benchmark on Multimodal, Multilingual Visual Images

By Henning Müller and [Paul Clough](#)

ImageCLEF is aiming to create a publicly-available benchmark for the evaluation of multilingual multimodal information retrieval systems. The goal is to create collections and realistic topics (based on real user needs) to help researchers evaluate and compare their algorithms.

This is only possible if the research community is giving feedback to us and helping to create new tasks following active research area. Participation in ImageCLEF enables access to freely accessible databases for image retrieval system evaluation.

Registration for ImageCLEF is free of charge and there are no hidden obligations to submit results. We appreciate active participation and hope to see many of you at the CLEF workshop where techniques from the participating systems are compared.

ImageCLEF is not a “competition” to be won but a place to share experiences and problems with other researchers to improve future retrieval systems.

INTRODUCTION

Image retrieval has been an extremely active area of research in the fields of computer vision and pattern recognition for almost 20 years [1]. Many prototypes and techniques have been developed and explored, but still there is no general breakthrough in visual analysis and indexing techniques to bridge the semantic gap, although a few commercial companies such as Look-ThatUp technologies are very successful. Early systems used either purely visual features or textual metadata associated with images and involved little user interaction. However, modern systems increasingly use multimodal features (a combination of images, text, speech and structured data) and extensive user interaction to help improve the success of accessing visual information. Success is also based on analyzing the user’s information needs and searching behavior to dictate the design and functionality provided by multimedia retrieval systems (e.g. studies have shown that certain classes of users prefer to access images using text queries rather than visual features because they enable semantically-orientated searches [2]). However, accessing images using non-visual features relies on there being such information available in the first place. Even if available, issues such as quality, quantity and consistency will affect its usefulness. Recently, interest in techniques such as automatic (and semi-automatic) image annotation can be seen as one way of propagating semantic information between visually similar im-

ages that have little or no other metadata [3].

With large multimedia retrieval projects such as [Quaero](#) and search engine giants such as Google and Yahoo! investing massively in the multimedia retrieval market (e.g. Yahoo! buying the image exchange platform [FlickR](#)), it is clear that multimedia retrieval is more than just a research domain, it is also an important strategic market.

To really advance the multimedia retrieval field, it has been increasingly accepted that systematic evaluation is needed. The evaluation of most early systems was limited, with semi-realistic queries (or examples) based on privately-held databases of images. Early initiatives, such as the [Benchathlon](#), stimulated the discussion of benchmarking issues but without a concrete evaluation event in which systems could be compared. Many papers discussed running an evaluation event similar to TREC ([Text REtrieval Conference](#)), an initiative run by the US National Institute of Standards and Technology ([NIST](#)) for Information Retrieval [4]. TREC has an annual circle of events for different search tasks: data release, topic release, results submission, evaluation, and finally a workshop in which to discuss and exchange ideas. A highly successful task has been [TRECVID](#) which provides an evaluation framework for video retrieval. This started as part of TREC in 2001,

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but has since turned into an independent entity with an increasing number of participants. Another less-known benchmark is [ImageEval](#), a French initiative that has successfully run a first test benchmark and will have its first official evaluation in 2006. [CLEF](#) (Cross Language Evaluation Forum) is also a spin-off from TREC that focuses on multilingual information retrieval, held independently since 2000. In 2003, [ImageCLEF](#) [5] began as part of CLEF, focused on text-based image retrieval from historic photographs. Since 2004, the focus has shifted towards combining visual and multilingual textual features for multimodal multilingual retrieval of images from medical and more general photographic collections. ImageCLEF has continued to address the barriers between research interests and real-world needs by offering application-driven evaluation tasks.

IMAGECLEF 2005

[ImageCLEF 2005](#) offered four separate evaluations: retrieval from historic photographs, medical image retrieval, medical image annotation (or image classification) and interactive image retrieval. In addition, a one-day workshop on visual information retrieval evaluation was held the day before the CLEF workshop. The [proceedings](#) of this workshop are available on the web.

A total of 36 participants registered for ImageCLEF 2005 and 24 research groups from 14 countries submitted results.

Retrieval from a collection of historic photographs

The collection of this retrieval task contained 28,133 historical images from [St. Andrews University Library](#). All images have a structured annotation in British English. Example queries were from analyzing typical user needs and were selected to test different aspects of visual and textual search. 28 queries were given to participants consisting of a written statement (and translated into various languages) plus two example images.

Pictures of English lighthouses
Fotos de faros ingleses
Kuvia englantilaisista majakoista
Bilder von englischen Leuchttürmen
صور لمناارات انجليزيه
Изображения английских маяков
イギリスにある灯台の写真



Record ID:	JV-044609
Short title:	The Smeaton Tower, Plymouth.
Long title:	Plymouth Hoe. The Smeaton [Lighthouse] Tower.
Location:	Devonshire, England
Description:	Red and white striped lighthouse on coastal cliff with harbour and town beyond, and substantial building on cliff terrace below.
Date:	Registered 1904
Photographer:	J Valentine & Co
Categories:	lighthouses beacons & lighthouses Devon all views Collection - J Valentine & Co
Notes:	JV-44609 pc/mb(or possibly 44610)TECH: Coloured.

Figure 1: An example of a query for the photographic retrieval task (left) and example image and caption (right).

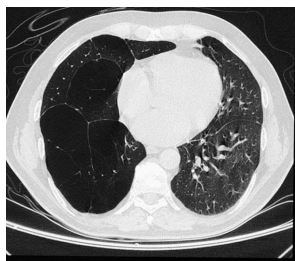
Figure 1 shows an example query plus a relevant image and its structured annotation. Challenges included: the use of British English and colloquial language for the annotations, short captions presenting problems of vocabulary mismatch between query-captions, and the majority of images being grey-scale and varying quality (making visual analysis hard). Best systems reached a Mean Average Precision (MAP) of 0.4135 for English-English (monolingual) retrieval and of 0.3993 for X-English (bilingual) retrieval.

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Medical image retrieval

The medical retrieval task combined four datasets giving a total of 50,000 images with varying annotations partially in English, French and German. 25 written queries based on a survey among medical professionals were made available in the three collection languages, plus 1-3 query images (with one query also containing a negative feedback image).



Show me chest CT images with emphysema

Zeige mir Lungen CTs mit Emphysem

Montre moi des CTs pulmonaires avec un emphysème

Figure 2: An example query for the medical image retrieval task.

Figure 2 shows an example written query and example image. Challenges in this task included: varying quality and quantity of annotation of the images, domain-specific knowledge including unusual abbreviation and spelling errors. Best systems reached a MAP of 0.2821 for multimodal retrieval, 0.2084 for textual retrieval and 0.1455 for purely visual retrieval.

Medical image annotation

The automatic annotation task was a purely visual task. 9,000 images were given to participants as training data, each one labeled with one out of 57 classes. Participants then had to automatically assign class labels to 1,000 previously unseen images. The distribution of images among classes was very heterogeneous: the largest class containing 2,563 images; the smallest class containing 9 training images. Inter-class differences between the images were sometimes small. Best systems reached an error rate of 12.6%.

Interactive image retrieval

The goal of this track was to evaluate interaction strategies for cross-language image retrieval. The same database was used as for the historic photographic task, and participants had to design a system to offer multilingual access to it. An evaluation framework was provided that included 16 example images from the collection that users were required to find (a target search task). Participation in this task was low due to a higher demand on resources needed. However, user-centered evaluation is an extremely important topic in determining the success of a visual retrieval system

[IMAGECLEF 2006](#)

For 2006, another pre-CLEF workshop on visual information retrieval evaluation is foreseen and [submissions of papers](#) are invited. As the deadlines for participation have not yet passed, we encourage people to contact us for more information. Until the submission deadline, it is possible to register and submit results for ImageCLEF, later it is still possible to register for getting access to the data but no official submis-

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sion is possible. New information will be made available regularly on the ImageCLEF web pages. The following description gives only a short introduction.

Retrieval from a personal photographic collection (ImageCLEFphoto)

A new database of photographs taken from an independent travel company will replace the St. Andrews collection. This database will help to improve the use of visual retrieval methods, particularly for multi-modal retrieval, as images are high-quality color photographs. 20,000 images have been annotated in English and German, and realistic queries will be made available in a variety of languages enabling both monolingual and multilingual search tasks. Visual queries in the form of query images will also be made available. The task fits well with the growing interest in information access to personal photographic collections.

Medical image retrieval

For medical image retrieval the databases will stay the same but the tasks will be based on two user studies, plus the analysis of search terms for a medical web search engine ([HONmedia](#) search). Three groups of tasks will be created: visual query tasks mainly aimed at purely visual retrieval, mixed queries tasks where visual and textual information seem important and semantic tasks where visual information does not seem important.

Medical image annotation

The medical, automatic annotation task will have 10,000 images as training data set for this year and will offer a larger number of classes: 122 in place of the 57 classes from 2005. This is expected to create a harder task and also pave the way for multi-hierarchical classification in a future task (maybe 2007).

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Web sites of interest mentioned in this article:

Quaero: www.quaero.org/

Flickr: www.flickr.com/

Benchathlon: www.benchathlon.net/

TREC REtrieval Conference: www.trec.nist.gov/

US National Institute of Standards & Technology: www.nist.gov

TRECvid: www-nlpir.nist.gov/projects/trecvid

ImageEval: www.imageeval.org/

Cross Language Evaluation Forum (CLEF): www.clef-campaign.org/

ImageCLEF: ir.shef.ac.uk/imageclef/

ImageCLEF 2005: ir.shef.ac.uk/imageclef/2005/

Proceedings from ImageCLEF 2005: muscle.prip.tuwien.ac.at/ws_proceedings_2005.php

St. Andrews University Library: www-library.st-andrews.ac.uk/

ImageCLEF 2006: ir.shef.ac.uk/imageclef/2006/

Overview for paper submissions for ImageCLEF 2006: muscle.prip.tuwien.ac.at/ws_overview_2006.php

HONmedia: www.hon.ch/HONmedia/

LTU Technologies: www.ltutech.com/

Non-medical image annotation

The non-medical automatic annotation task will take place for the first time in 2006. Thanks to [LTU technologies](#) (LookThatUp), a large database of common objects gathered from the web is available. New objects need to be classified into one of the available classes. 20 object classes will be used in 2006. The goal is to evaluate the quality of algorithms, attaching automatic text labels to images which are more general than in the medical annotation task.

Interactive image retrieval

In 2006, a collection of FlickrR images is foreseen for the interactive task. This should increase the interest in the user-centered search task as FlickrR is definitely one of the most popular image sharing places on the Internet and the number as well as the quality of the images is extremely high.

Acknowledgements

ImageCLEF would be impossible without the help of several people, We would particularly like to thank Michael Grubinger for supplying and annotating the collection for ImageCLEFphoto, Bill Hersh and Jeffery Jensen for their help on the medical retrieval task, Thomas Deselaers and Thomas Lehmann for organizing the medical annotation task, Allan Hanbury for organizing the non-medical annotation task and Carol Peters for organizing CLEF.

Important dates:

Topic release to participants:	Apr '06
Submission of results:	Jun '06
Release of ground truth:	Jul '06
Submission of working notes papers of all participants:	Aug '06
MUSCLE/ImageCLEF workshop	19 Sep '06
CLEF	20-22 Sep '06

MUSCLE Coin Images Seibersdorf (CIS) Benchmark Competition 2006

By [Michael Nölle](#) and [Allan Hanbury](#)

MUSCLE is a European Network of Excellence that aims at fostering close collaboration between research groups in multimedia data-mining on the one hand and machine learning on the other (www.muscle-noe.org/).

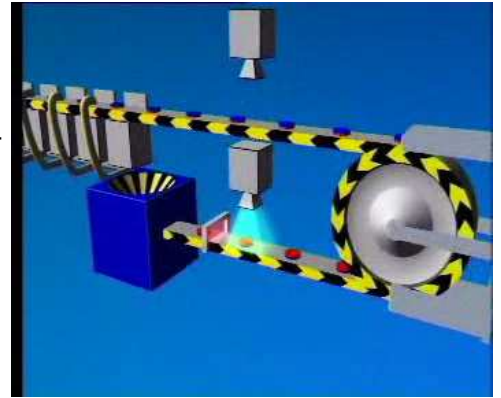
The changeover from 12 European currencies to the Euro created a unique situation. Great volumes of money had to be physically returned to the national banks of the member states. Charity organisations took the opportunity to appeal for funds. In Austria alone, the charitable donations amounted to several hundred tons of cash. Unfortunately, the coins could only be collected as a potpourri of currencies and are practically worthless unless they can be returned sorted to the national banks. The sheer volume of material rules out any attempt to separate the money manually and calls for an automatic processing device.



The coins originate from more than 100 countries. In general, the material is not in mint condition. Circulation over decades has caused abrasion and dirtiness. It might be surprising that frequently the mint process itself is less accurate than one might expect. Out of centre imprints occur as well as noticeable changes of the coin die over the years. For classification purposes, more than 2000 different coin faces of over 600 different coin types were chosen, and the necessary data was collected. This defines the training data within the CIS Benchmark. The training data together with more than 60,000 coin images to be used as the test data set constitute the MUSCLE CIS-Benchmark. The data

are available through the MUSCLE Benchmarking website muscle.prip.tuwien.ac.at.

Originally, the training data were collected for the automatic coin sorting device called *Dagobert* which was built at ARC Seibersdorf research GmbH and which successfully sorted the donations and thereby restored the face value of the coins.



(www.smart-systems.at/products/products_image_processing_en.html)

The acquired training data comprises a value in itself as it can be used to evaluate object recognition algorithms on a very large set of objects to be recognised. The test data set of the CIS Benchmark contains additional information of the true coin type and coin face for every image. This eases the performance evaluation of classification algorithms.

To foster the development of robust recognition and image search algorithms, MUSCLE is organising the [CIS-Benchmark Competition 2006](#), which will make

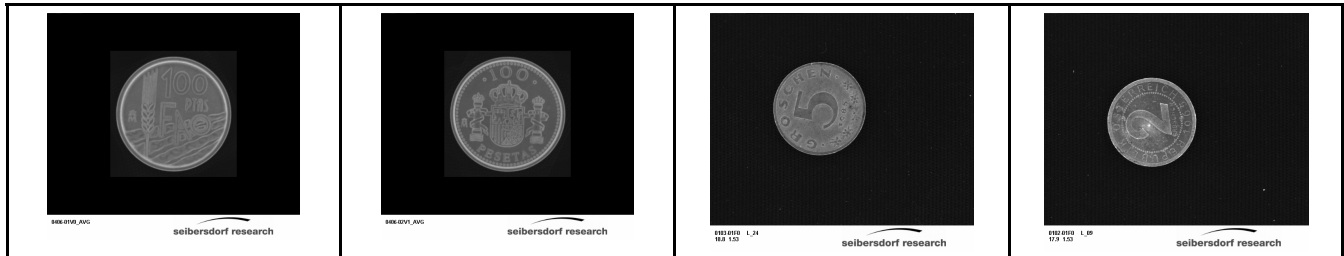
Important dates:

Registration of participation:	30 May 06
Deadline submitting the recognition program:	03 Jul 06
Deadline for paper submissions:	31 Jul 06
Notification of acceptance:	28 Aug 06

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use of the CIS-Benchmark data. The call is open to researchers/groups who want to demonstrate the recognition performance of their algorithms. In order to participate, visit the CIS – Benchmark Competition 2006 website. Training protocols, formats for the results, training data and other important information is available there.



The results of the CIS-Benchmark competition 2006 will be presented at a MUSCLE workshop which will be held in September, 2006, together with the 28th Annual Symposium of the German Association for Pattern Recognition (DAGM06) in Berlin and gives the opportunity to present your solutions. The winning approach will be awarded a prize of **€1500** sponsored by MUSCLE (although we reserve the right to split the prize in the event of a tie at first place).

For further details please visit
muscle.prip.tuwien.ac.at

or contact

[Michael Nölle](mailto:michael.noelle@arcs.ac.at)

Video and Safety Technology

michael.noelle@arcs.ac.at

Michael Rubik

High Performance Image Processing Unit

ARC Seibersdorf research GmbH

A-2444 Seibersdorf

[Allan Hanbury](mailto:hanbury@prip.tuwien.ac.at)

PRIP, Vienna University of Technology

hanbury@prip.tuwien.ac.at

Meeting Report: [DAGM 2005](#)

27th Annual Meeting of the German Association of Pattern Recognition

30 August—2 September, 2005, Vienna, Austria

Co-Chairmen

[Walter Kropatsch](#) and [Robert Sablatnig](#)

Report prepared by [Christoph Schnoerr](#)

The 27th Annual meeting of the German Association for Pattern Recognition was hosted by the Vienna University of Technology, nicely located in the center of Vienna. It was organized by the Pattern Recognition and Image Processing (PRIP) Group, co-chaired by IAPR President Walter Kropatsch and Robert Sablatnig.



The DAGM Best-paper award is given to Bodo Rosenhahn and co-authors by IAPR-President Prof. W.G. Kropatsch and Prof. R. Sablatnig for the contribution: "A System for Marker-less Human Motion Estimation"

Originally founded as a national forum for pattern recognition, the decision was made several years ago in favour of English as the conference language and for submissions. As a result, more and more researchers have been attracted world-wide, turning the annual meeting into an internationally recognized event. This year, about 150 attendees came from 15 different countries. The conference received generous support from 6 sponsors. Proceedings have been published in Springer's Lecture Notes of Computer Science Series (Vol. 3663).

This year's scientific programme was organized into sessions devoted to color analysis, stereo vision, segmentation and grouping, 3D view registration and surface modeling, motion and tracking, computational learning, uncertainty and robustness, and applications. The high-quality contributions reflect the prevailing importance of statistical pattern recognition for the performance of systems for image analysis and computer vision in uncertain environments, and the growing overlap of these fields with recent developments in machine learning. The programme was complemented with a special session on automatic speech understanding, in honor of the IAPR Fellow Professor emeritus Heinrich Niemann and his scientific achievements over three decades in the fields of statistical pattern recognition,

computer vision, speech understanding, medical imaging, and knowledge-based pattern analysis.

Three invited lectures were given. Vaclav Hlavac (TU Prague) presented an overview of ongoing research at the Center for Machine Perception headed by himself. Jan P. Allebach (Purdue University) discussed challenging basic and applied research problems related to image quality and document imaging. And, Sven Dickinson (University of Toronto) presented a lucid survey of the multi-faceted problem area of visual object recognition.

The Olympus-prize 2005 was awarded in equal parts to Michael Felsberg (Linköping University) for his contributions to multidimensional signal processing, and to Volker Roth (ETH Zurich) for his comprehensive approach to unsupervised image segmentation. The DAGM best-paper was awarded to Bodo Rosenhahn (University of Auckland), Uwe G. Kersting, Andrew W. Smith, Jason K. Gurney, Thomas Brox, Reinhard Klette for their contribution "A System for Marker-less Human Motion Estimation".

Needless to say that the beautiful environment of Vienna had no detrimental consequences for the attendees. Throughout the conference, there was a communicative and friendly atmosphere, last but not least due to the very effective and helpful local organisation. This considerably raised the standard for the next meeting to be held in Berlin 2006 ([dagm06.hhi.de/](#)) and for the 2007 meeting in Heidelberg.

Conference Report: [PReMI 2005](#)

1st International Conference on Pattern Recognition and Machine Intelligence

18-22 December 2005,

Indian Statistical Institute, Kolkata, India

Report prepared by General Chair Sankar K. Pal and Organizing Chairs C.A. Murthy and Rajat K. De

The First International Conference on Pattern Recognition and Machine Intelligence (PReMI'05) was organized by the Machine Intelligence Unit (MIU), Indian Statistical Institute, Kolkata, India, and was attended by about 100 participants from various parts

of the world including USA, Canada, Japan, Australia, China, Hong Kong, Korea, Poland, Germany, Italy, Israel, Turkey and India. The participants were mostly university/institution faculty, research scholars, and personnel from R&D organizations. The event had a two-day pre-conference tutorial, an inaugural session, keynote, evening and invited lectures, contributory paper/poster presentations, and a valedictory session.

The inaugural session was chaired by Prof. Sankar K. Pal, Director of the Indian Statistical Institute and General Chair of the conference, who welcomed the delegates. He also gave an introduction and objective of the conference. The Hon'ble Chief Minister of the Government of West Bengal, Mr. Buddhadeb Bhattacharjee, inaugurated the conference. Prof. Andrzej Skowron, Warsaw University, Warsaw, Poland, was the Chief Guest, and Prof. Sanjit K. Mitra, University of California, Santa Barbara, USA was the Guest of Honor of the function. During the session, Mr. Bhattacharjee told about the IT policies of the Government of West Bengal. This was followed by the speeches of Prof. Malay



Mr. Buddhadeb Bhattacharjee, the Hon'ble Chief Minister, Government of West Bengal, India, addressing the delegates at the Inauguration of the PReMI'05

K. Kundu, Prof.-in-Charge, CCSD, ISI and Industrial Liason of PReMI'05, Prof. Skowron, Prof. Sanjit Mitra, and Prof. Sushmita Mitra, Program Chair of PReMI'05. The session was ended with the Vote of Thanks by Prof. C. A. Murthy, Head, MIU of ISI and Organizing Chair of PReMI'05.

The objective of this international conference was to present state-of-the-art scientific results, encourage academic and industrial interaction, and promote collaborative research and developmental activities in pattern recognition, machine intelligence and related fields, involving scientists, engineers, professionals, researchers and students from India and abroad. The conference will be held every two years to make it an ideal platform for people to share their views and experiences in the said areas. Particular emphasis was placed on computational biology, data mining and knowledge discovery, soft computing, case based reasoning, biometry, apart from dealing with various pattern recognition/image processing problems. Tutorial, keynote, evening and invited speeches were delivered by scientists of international repute from both academia and industry. Technical sessions encompassed all these emergent areas. The conference gave a platform for young researchers to review the state-of-the-art, to present their research outputs, to interact and establish contacts with well-

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known senior researchers of the field.

The first two days were scheduled for tutorial presentations, and four tutorial lectures were delivered by four renowned speakers, namely, Prof. A. K. Jain (Michigan State University, USA), Prof. R. Chellappa (University of Maryland, USA), Prof. J. K. Udupa (University of Pennsylvania, USA), and Dr. S. C. K. Shiu (Hong Kong Polytechnic University, Hong Kong) before an audience of about 75 participants. There were various keynote, evening and invited speeches delivered by Prof. A. K. Jain, Prof. R. Chellappa, Dr. D. W. Aha, Naval Research Laboratory, USA, Prof. A. Skowron, Prof. M. Zhang, Cold Spring Harbor Laboratory, USA, Prof. J. K. Aggarwal, University of Texas at Austin, USA, Prof. J. K. Udupa, Dr. A. Buller, Advanced Telecommunications Research Institute International (ATR), Japan, Prof. B. Bhattacharya, Simon Fraser University, Canada, Prof. B. Lovell, the University of Queensland St Lucia, Australia, Prof. M. Gokmen, Istanbul Technical University, Turkey, Dr. M. Zaki, Rensselaer Polytechnic Institute, USA, Prof. U. B. Desai, IIT Bombay, India, Dr. L. Bruzzone, University of Trento, Italy and Prof. V. Di Gesu', University of Palermo, Italy.

More than 250 research papers were received for the conference. After the review process, about 120 papers were accepted for oral/poster presentation and publication in the conference proceedings which was published as Volume 3776 of the prestigious Lecture Notes in Computer Science Series by Springer Verlag. Among these 120 papers, about 100 papers were accepted for oral presentation and the rest for poster presentation. About 130 researchers from 20 countries registered for the conference, including 50 from outside India.

In order to encourage young researchers of India, about 35 participants were provided with fellowships covering the expenses towards a few or all items like registration fees of the conference and the tutorial, travel and local hospitality. The feedback as given by the participants during the valedictory session on December 22, 2005 was overwhelming. During the Valedictory session, where the key note speakers Prof. M. Zhang, Prof. A. Skowron and Dr. D. W. Aha were present, it was declared that the Second International Conference on Pattern Recognition and Machine Intelligence (PReMI'07) will be held in Kolkata, India, during December 18-22, 2007, and will be organized by the Machine Intelligence Unit, Indian Statistical Institute, Kolkata, India.

The conference was funded by the Indian Statistical Institute, Center for Soft Computing Research of Indian Statistical Institute, Department of Science and Technology, Government of India, and the Council of Scientific and Industrial Research, Government of India. The International Association for Pattern Recognition (IAPR), CIMPA (France), Web Intelligence Consortium (WIC), IEEE, and Webel, Government of West Bengal IT Company also co-sponsored the event.

Conference Report: ICB 2006 International Conference on Biometrics 5-7 January 2006, Hong Kong

General Chairs: Anil K. Jain and Roland Chin

Report prepared by: David Zhang, Hong Kong Polytechnic Institute

In our global information society, there is an ever-growing need to authenticate individuals. Biometrics is emerging as a reliable method that can overcome some of the limitations of the traditional automatic personal identification technologies. Automated biometrics deal with physiological and/or behavioral characteristics, such as a fingerprint, signature, palm print, iris, hand, voice or face, which can be used to authenticate a person's claim to a certain identity or establish a person's identity from a large database. With the rapid technological advances in electronics and Internet commerce and with the increased emphasis on security, there will be a growing need for secure transaction processing using biometrics technology.

The purpose of this conference was to emphasize the design and development of efficient and effective biometric technologies and systems; provide an international forum for researchers, engineers and vendors from different disciplines to exchange ideas; identify problems; evaluate system performance; explore new research directions; and initiate possible collaborative research and future system developments. The ICB series of conferences will significantly benefit biometric researchers in academic, government and industrial sectors.

The International Conference on Biometric Authentication (ICBA 2004) was the first major gathering in the Asia-Pacific region devoted to facilitating this interaction. To broaden the field, we changed the conference name to the International Conference on Biometrics with the endorsement of IAPR.



IAPR The First International Conference on Biometrics (ICB)
5-7 Jan 2006, Hong Kong

More than 190 papers from 20 countries were submitted for ICB 2006. After a thorough review by the Program Committee and a group of qualified reviewers, 104 papers were selected. The papers were separated into 7 sections, including Face, Fingerprint, Iris, Speech and Signature, Biometric Fusion and Performance Evaluation, Gait and Keystroke, others.

There were 5 keynote speakers at ICB 2006: Mr. Howard Dickson, Government Chief Information Officer, Government of the HKSAR; Prof. Vijayakumar Bhagavatula, Carnegie Mellon University, USA; Dr. Behnam Bavarian, Biometrics Business Group, Motorola, USA; Norihiro Hagita, ATR Intelligent Robotics and Communication Labs & ATR Media Information Science Labs, Japan; Mr. Raymond Wong, Immigration Department, Government of HKSAR.

The ICB 2006 Face Verification Contest based on the Xm2vts dataset was organized by Josef Kittler. More than 10 algorithms submitted by three groups were compared. Motorola Inc., Omron Corporation, Springer, The Chinese University of Hong Kong, Chinese Academy of Sciences and The Hong Kong Polytechnic University grasped the opportunity to exhibit their newest products in exhibition.

Proceedings from ICB 2006 are available in the [Springer Lecture Notes in Computer Science Series, Volume 3072](#).

Conference Report: [DASo6](#)

7th IAPR Workshop on Document Analysis Systems

13-15 February 2006, Nelson, New Zealand

Chairs: Larry Spitz (New Zealand) and Horst Bunke (Switzerland)

Report prepared by: **Simone Marinai**

The IAPR Workshop on Document Analysis Systems is a series of conferences whose goal is to bring together people who have designed systems or systems components to solve real-world problems in document analysis. This series started in 1994 and, with a biennial frequency, has served as a forum for the various groups working in this area to come together and help each other keep up with this active area of research. The seventh in this series of conferences was held last February in Nelson, “*the sunniest place in New Zealand*” under the organization of Horst Bunke (University of Bern, Switzerland) and Larry Spitz (DocRec. Ltd, New Zealand).

The DAS workshops have some characteristics that distinguish this series from other conferences in this field. DAS 2006 was not an exception, featuring a single track organization with oral presentation of each paper (including posters with a brief overview), demonstrations of working systems, and very active working groups. The 70 attendees actively participated in each event in the dense program, even if tempted by the nice weather around the conference site that was so different from the cold winter most of us had left a few days before. To enjoy this weather, the banquet took place in front of the Nelson’s bay with an inspiring view. The banquet also featured an interesting performance by a group of traditional Maori dancers.

The technical program of the workshop included 33 oral presentations and 22 posters selected from 78 submissions. The presentations were coupled with group discussions on selected topics and two invited talks. The 55 accepted papers were presented in a single track with some additional time allocated to the presentation of posters and to the introduction of sys-



Dining on the last day of the workshop

tem demonstrations made during the breaks. The contributed sessions included papers addressing traditional Document Analysis topics such as handwriting analysis, image processing, and layout analysis together with new trends like digital libraries and historical document processing. There was plenty of time for questions and discussion during the oral and poster sessions. I invite people interested in more details to browse the workshop program from the DAS2006 website (www.iam.unibe.ch/das06) and consult the proceedings (available at Springer Verlag as [Volume 3872 in the LNCS series](#)).

Besides the regular paper presentations, two invited lectures were presented. Ian Witten (Waikato University, NZ) discussed some social implications of Digital Libraries and some interesting links between Digital Libraries and the DAS research with a talk entitled

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“Digital libraries, developing countries, and document analysis systems”. James Fruchterman (CEO of Benetech), a pioneer in modern commercial optical character recognition, gave an inspiring talk titled *“Smart bombs and reading machines for the blind”*.

The discussion groups are considered by many participants as one of the most interesting and valuable times in DAS. Apart from giving a chance to each participant to exchange views and ideas, the topics selected for discussion each time reflect the current developments in the area. Well-stimulated by Henry Baird, the workshop attendees selected five topics that were deemed to be more relevant. The topics, together with the names of the moderator and of the scribe are listed below:

- *Digital Libraries and Information Retrieval* (Moderator: S. Marinai, Scribe: C.J. Jawahar)
- *Ubiquitous DAS: camera/video-based* (Moderator R. Kasturi, Scribe: K. Kise)
- *Internet and Open-source* (Moderator: M. Liwicki, Scribes: P. Xiu and P. Pearson)
- *Handwriting* (Moderator: A. Sakakihara, Scribe: Y. Hotta)
- *Image processing and restoration* (Moderator: A. Gribov, Scribe: F. Dadgostar)

Last but not least, the best student paper award was given to Weihua Huang for the paper titled “Semi-automatic ground truth generation for chart image recognition” co-authored with Li Yang and Chew Lim Tan.

The participants greatly appreciated the organization of the conference and the quality of the contributions. I would like to express my gratitude to the chairs for their unaffected but professional organization of the workshop as well as for their longstanding guidance in the field for many young researchers and colleagues.

The selection process for the organization of DAS08 is taking place now.

See you at ICPR 2006!



ICPR 2006 will be held at the [Hong Kong Convention and Exhibition Center](#)

Important Dates:

Author registration: 15 May 2006

End of early bird registration period: 30 May 2006



ICPR 2006 Contact Information:

ICPR06 Secretary

icpr06@comp.hkbu.edu.hk

The Venue

The award-winning, multi purpose-built [Hong Kong Convention and Exhibition Centre](#) is larger than any in Asia outside Japan - five exhibition halls,

two ballroom-style convention halls, two world-class theatres, 52 variously sized meeting rooms, two large lobbies for pre-function gatherings plus supporting amenities.

ICPR 2006 will consist of 5 tracks:

Computer Vision and Image Analysis

Pattern Recognition and Basic Technologies

Signal, Speech and Image Processing

Systems, Robotics and Applications (with Associated Theme : Biometrics)

Cognitive Approaches & Soft Computing

See you in Hong Kong!

Of interest...

Congratulations!

The IAPR Community wishes to extend congratulations to

Dr. Masakazu Ejiri

on receipt of the

2005

Joseph F. Engelberger Robotics Award in Technology

The Engelberger Robotics Award is the world's most prestigious robotics honor. The awards are presented to individuals for excellence in technology development, application, education, and leadership in the robotics industry.

For more information on the Engelberger Robotics Award see:

www.roboticsonline.com/public/articles/index.cfm?cat=296

Publications

CALL FOR PAPERS Pattern Recognition Letters

Special Issue on Pattern Recognition in Interdisciplinary Perception and Intelligence

DEADLINE: 15 October 2006

This special issue is intended to provide a forum for scientists to report their recent research advances and exchange knowledge in the field of Pattern Recognition in close relation to the state-of-the-art of Perception and Intelligence. More concretely, the special issue aims to gather high quality papers related to the general topics of Perception and Intelligence from both the Natural and the Artificial points of view. Thus, the global purpose is to provide a broad and interdisciplinary journal special issue for researchers in Pattern Recognition.

Submission information:

Expected contributions should be around 10 PRL pages long (approximately 5000 words, plus a reasonable number of Figures/Tables). Submissions in electronic form (PDF files) have to be sent to the Guest Editors:

Antonio Fernández-Caballero caballer@info-ab.uclm.es

Alberto Sanfeliú sanfeliu@iri.upc.es

Yoshiaki Shirai shirai@ci.ritsumei.ac.jp

Related Links:

50 Years of the Artificial Intelligence: Campus in Multidisciplinary Perception and Intelligence, CMPI-2006

(<http://www.info-ab.uclm.es/cmipi/overview.htm>)

Pattern Recognition Letters Special Issues

(http://www1.elsevier.com/homepage/sac/050/prl/prl_si.html)

CALL FOR PAPERS IEEE Transactions on Systems, Man and Cybernetics—Part B Special Issue on Recent Advances in Biometrics Systems

DEADLINE: May 1, 2006

For information see:

www.ieeesmc.org/Newsletter/dec2005/bioCFP.pdf

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. 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.)

2006

CRV 2006	<i>3rd Canadian Conference on Computer and Robot Vision</i>	Quebec City, Canada	7-9 Jun 06
VP4S-06	<i>1st International Workshop on Video Processing for Security</i>	Quebec City, Canada	7-9 Jun 06
IWCIA 2006	<i>International Workshop on Combinatorial Image Analysis 2006</i>	Berlin, Germany	19-21 Jun 06
AMDO-e 2006	<i>4th Conference on Articulated Motion and Deformable Objects</i>	Puerto de Andratx, Mallorca, Spain	11-14 Jul 06
CIVR 2006	<i>5th International Conference on Image and Video Retrieval</i>	Tempe, Arizona, USA	13-15 Jul 06
S+SSPR 2006	<i>International Workshops on Statistical, Syntactical and Structure Pattern Recognition (S+SSPR 2006) 6th International Workshop on Statistical Techniques in Pattern Recognition (SPR 2006) 11th International Workshop on Structural and Syntactic Pattern Recognition (SSPR 2006)</i>	Hong Kong	17-19 Aug 06
ICPR 06	<i>18th International Conference on Pattern Recognition</i>	Hong Kong	20-24 Aug 06
EVA-Vienna 2006	<i>Digital Cultural Heritage—Essential for Tourism</i>	Vienna Austria	27-30 Aug 06
IMVIP 2006	<i>Irish Machine Vision and Image Processing Conference</i>	Dublin City University, Ireland	30 Aug-1 Sep 06
ANNPR 2006	<i>2nd IAPR International Workshop on Artificial Neural Networks in Pattern Recognition</i>	Ulm, Germany	31 Aug-2 Sep 06
BMVC 2006	<i>17th British Machine Vision Conference</i>	Edinburgh, Scotland	4-7 Sep 06
EUSIPCO2006	<i>14th European Signal Processing Conference</i>	Florence, Italy	4-8 Sep 06
AECRIS 06	<i>Atlantic Europe Conference on Remote Imaging and Spectroscopy</i>	Preston, UK	11-12 Sep 06
IWMCRCS 2006	<i>International Workshop on Multimedia Content Representation, Classification and Security</i>	Istanbul, Turkey	11-13 Sep 06
IWFHR 10	<i>10th International Workshop on Frontiers in Handwriting Recognition</i>	La Baule, France	23-26 Oct 06
DGCI 06	<i>Discrete Geometry for Computer Imagery</i>	Szeged, Hungary	25-27 Oct 06
CIARP 2006	<i>11th Iberoamerican Congress on Pattern Recognition</i>	Cancun, Mexico	14-17 Nov 06
AVSS 2006	<i>IEEE International Conference on Advanced Video and Signal-based Surveillance</i>	Sydney, NSW, Australia	22-24 Nov 06

2007

MVA 2007	<i>10th IAPR International Conference on Machine Vision Applications</i>	Tokyo, Japan	16-18 May 07
CIVR 2007	<i>6th International Conference on Image and Video Retrieval</i>	Amsterdam, Netherlands	18-20 Jul 07
ICDAR 2007	<i>9th International Conference on Document Analysis and Recognition</i>	Curitiba, Parana, Brazil	23-26 Sep 07

2008

ICPR 08	<i>19th International Conference on Pattern Recognition</i>	Tampa, Florida, USA	8-11 Dec 08
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Highlighting indicates that paper submission deadline has not yet passed.