

IAPR Newsletter

Volume 30, Number 2
April 2008

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The deadline is 31 May 2008. Nominations are being accepted for the J.K. Aggarwal Prize that will be awarded at ICPR 2008.

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* Contact Larry O'Gorman for free books!

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

Calls for Papers

2008

IWCF 2008

*2nd International Workshop on
Computational Forensics*
Washington, D.C., USA
Deadline: April 20, 2008
August 7–8, 2008

King-Sun Fu Prize 2008

*To be presented at the 19th International Conference on
Pattern Recognition (ICPR 08)*
Tampa, Florida, USA
Deadline: April 20, 2008
December 8-11, 2008

S+SSPR 2008

*Joint IAPR International Workshops on
Structural and Syntactic Pattern Recognition
and
Statistical Techniques in Pattern Recognition*
Orlando, Florida, USA
Deadline: May 4, 2008
December 4-6, 2008

J.K. Aggarwal Prize 2008

*To be presented at the 19th International Conference on
Pattern Recognition (ICPR 08)*
Tampa, Florida, USA
Deadline: May 31, 2008
December 8-11, 2008

PRRS 2008

*5th IAPR Workshop on
Pattern Recognition in Remote Sensing*
Tampa, Florida, USA
Deadline: June 16, 2008
December 7–7, 2008

AGACSE 2008

*3rd International Conference on Applied Geometric
Algebras in Computer Science and Engineering*
Leipzig, Germany
Deadline: June 1, 2008
August 17-19, 2008

2009

MVA 2009

IAPR Conference on Machine Vision Applications
Yokohama, Japan
Deadline: November 7, 2008
May 20–22, 2009

ICB 2009

3rd International Conference on Biometrics
Alghero, Italy
Deadline: November 1, 2008
June 2–5, 2009

ICDAR 2009

*10th International Conference on
Document Analysis and Recognition*
Barcelona, Spain
Deadline: January 12, 2009
July 26-29, 2009

The logo for the IAPR Newsletter. It features the acronym "IAPR" in a bold, purple, sans-serif font. To the right of "IAPR" is a circular icon containing a stylized globe or network of nodes. Below "IAPR" and the icon, the word "Newsletter" is written in a large, black, cursive script font.

Published in association with the IAPR website, www.iapr.org

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Call for Submissions

IAPR Newsletter

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

Contact the editor: logorman@avaya.com

Deadline: March 27 2008

Feature Article

Global Pattern Recognition Series: India's Center for Soft Computing Research

The Center for Soft Computing Research is established at the Indian Statistical Institute, Kolkata, and funded by the Department of Science and Technology, Government of India, *New Delhi*

IRHPA (Intensification of Research in High Priority Areas) is a complementary program to the [SERC \(Science and Engineering Research Council\)](#) program of the DST (Department of Science and Technology), Government of India, with activities consisting of setting up groups around an eminent scientist and major national facility to focus research activities in these areas. The scheme has contributed to augment general R&D capabilities at academic institutions and national laboratories.

One of the groups that has been set up by the IRHPA program is the Center for Soft Computing Research at the Indian Statistical Institute (ISI), Kolkata. The center is aimed at conducting research both theoretical and applied, of international standard, in the fields of soft computing and machine intelligence. The Center was formally inaugurated by Prof. M. G. K. Menon on 25 October 2005.

The Center focuses mainly on basic research and, to some extent, on manpower development, keeping in mind that the research excellence is the main objective. The activities of the center include:

- Conducting basic research in pattern recognition, image processing, data mining, computer vision, video image processing, fuzzy sets, rough sets, neural networks, genetic algorithms, wavelets, support vector machines, fractals, hybrid techniques etc.
- Demonstrating applications to some focused areas like web mining (e.g., page ranking, personalization etc.), bioinformatics (e.g., protein structure analysis), medical image (e.g., ultrasonographic and MRI) analysis, and VLSI layout design, to be decided time to time,
- Developing manpower : (i) imparting training to researchers/students from industry and academia including R&D labs; (ii) disseminating teaching and training material for distance education using multimedia and video facilities; and (iii) offering regular short term advanced courses on upcoming research areas,
- Organizing seminars/workshops/schools by eminent faculty from abroad and India,

- Providing a forum of exchanging ideas or establishing a linkage among scientists of leading institutions and industry working in similar areas by inviting interested faculty/research personnel,
- Providing fellowships for helping faculty and scholars from less endowed institutions, especially from neighboring regions.

With these objectives in mind, the Center is involved in the following ongoing research activities:

- Bioinformatics and Data Mining
 - ⇒ Bi-clustering
 - ⇒ Microarray data analysis
 - ⇒ Rough-fuzzy clustering
 - ⇒ Swarm Intelligence
- Image Processing and Vision
 - ⇒ Cognitive vision
 - ⇒ Rough set based segmentation and feature detection
- Logic and games
- Medical Image Processing
 - ⇒ Identification of fatty livers from ultrasound images
- Nonmonotonic reasoning and belief revision
- VLSI and image processing architecture
- Web Intelligence and Mining
 - ⇒ Web page classification
 - ⇒ Advanced crawling techniques
 - ⇒ Web services categorization
 - ⇒ Text categorization

In the interest of providing a forum for the exchange of ideas, the Center has undertaken two collaborative projects. **Debasis Majumdar and Soma Mitra**, *CDAC, Ministry of IT, Govt. of India, Kolkata*, are the investigators on the project "Automatic Feature Detection and Pose Recovery for Faces"; **P. K. Nanda and Priyadarshi Kanungo**, *Dept. of Electrical Engineering, REC Rourkela, Orissa*, on "Object Detection and Object Recognition Using Deformable and Evolving Models".

For more information, contact the Center at scc@isical.ac.in.

News from the IAPR EXECUTIVE COMMITTEE

By [Denis Laurendeau](#)

The IAPR Statement of Ethics that was prepared by the Advisory Committee has been approved unanimously in a recent Governing Board ballot (see next page). The Statement of Ethics marks an important step in the evolution of the IAPR since it defines the conduct that members of IAPR member societies should follow. The Statement of Ethics clearly defines the rules to which authors of papers published in the proceedings of IAPR sponsored/endorsed events should adhere. The Statement of Ethics is appended to this article.

It is our pleasure to inform the IAPR community that the Moroccan Pattern Recognition Section of Moroccan Association for Development of Electrical and Electronic Engineering, Computer Science and Automation (AMADEIA - MPRS) has been reinstated as a member society after a short suspension of its membership.

The next ICPR will be held in Tampa, Florida, December 8-11, 2008. This is IAPR's main conference and should, again, be an exciting event to attend. The new Executive Committee will be elected by the Governing Board at this time. Please see the Call for Nominees below.

Call for Nominations for the

IAPR Executive Committee 2008-2010

The International Association for Pattern Recognition (IAPR) is pleased to announce a call for nominations for the following offices of the IAPR: president, 1st and 2nd vice president, secretary, and treasurer.

Informal suggestions are welcome from all members of the IAPR governing board (GB) and other members of the IAPR community. The nomination must include

1. the name,
2. the office for which the person should be considered and
3. a brief case for support (person's qualification for the office).

These suggestions, which are not considered as formal nominations, should reach the Chairman of the Nomination Committees until April 30, 2008 at the following address:

Subject: IAPR nomination
Walter G. Kropatsch
Vienna University of Technology
Institute of Computer Aided Automation
Pattern Recognition and Image Processing Group
Favoritenstr. 9/2/4, 1832
A-1040 WIEN / Austria
email: krw@prip.tuwien.ac.at (preferred)

Further details about the nomination process can be found in the IAPR Constitution (www.iapr.org/constitution/index.php), the Bylaw section 5 (www.iapr.org/constitution/bylaws.php#a5) and the Guidelines section 5.2 (www.iapr.org/committees/guidelines.php#scnc)

Walter G. Kropatsch
IAPR Chair of Nominating Committee

IAPR Statement of Ethics, unanimously approved by the Governing Board

IAPR Statement of Ethics (for IAPR members in general)

We, the members of the IAPR and its member societies, commit ourselves to the highest ethical and professional conduct and declare that:

1. We faithfully perform our work by paying utmost attention to the safety, health, and welfare of the public throughout the world and never endanger the public or the environment in which we live;
2. We faithfully and honestly disclose the results of our work by fully acknowledging, respecting, and crediting the contributions of others;
3. We faithfully accept criticism of our work and correct errors whenever necessary to avoid misleading others in their future work and to avoid damaging others and their reputations.

IAPR Ethical Requirements for Authors (more specific version for authors)

The IAPR requires that all authors wishing to present a paper declare that the paper is substantially original; that is, the manuscript as a whole, or for the most part, is novel, has not been published in (or even submitted to) any journals and has not been presented at any other conferences. If previous versions of the manuscript were published or presented, appropriate references must be given and substantial justification for presentation of the current version must be presented.

The IAPR strictly prohibits any plagiarism; that is, the work of others must not be "borrowed" and presented as the authors' own work, regardless of the size of the borrowed portion.

The IAPR frowns upon "no-show behavior" at IAPR-related conferences and workshops, meaning that an author registers to make a presentation but does not show up for it. If such behavior is unavoidable due to urgent and unexpected personal matters, the author is strongly urged to notify the event organizer of the situation as soon as possible. If prior notification is impossible, the organizer should be advised after the fact of the reason for the author's absence.

The IAPR retains the rights to eliminate any papers in violation of these Requirements and to take appropriate action against individuals repeatedly violating these Requirements and assumes no responsibility for any resulting loss of reputation or opportunity of such individuals or for any inconvenience related to the future work of such individuals.

IAPR Ethical Requirements for Authors (Shortened version for authors)

The IAPR requires that all authors wishing to present a paper declare that:

1. the paper is substantially original and has not been submitted to any other conferences or journals,
2. the paper does not contain any plagiarism, and
3. the paper will be presented by the author or a coauthor in person.

The IAPR retains the right to eliminate any papers in violation of these requirements and to exclude the authors of such papers from future IAPR community activities.

BOOKSBOOKSBOOKS



Practical Algorithms for Image Analysis, 2nd Edition

by Lawrence O’Gorman, Michael J. Sammon and Michael Seul
Cambridge University Press, 2008

Reviewed by [Jason Dowling](#)

The authors of this useful and well-written book (including Larry O’Gorman the IAPR Newsletter editor) have a wealth of experience in applying image processing to various tasks. This understanding is reflected in the practical cookbook style used in the second edition of this book

As a student I found the first edition of this book (published in 2000) particularly useful as an introduction to a number of image processing topics. Coming from a programming background, I found it very useful to take an image, run one or more operations, view the results and then look through the C source code to see how it worked. The book doesn’t overwhelm the reader with details but has a logical and concise structure. Each of the six main chapters consists of four to eight page sections discussing a single image processing operation.

Binary and source code for the programs discussed in each section are provided on the CD (Windows and Linux). The source code is written in C, which I think is a lot more useful than using Matlab or Java. The choice of the Visual C++ v6.0 workspace files for Windows users seems a little strange, but I think most users would read the code to learn from it rather than extend it.

This new second edition has an additional 54 pages. Some typos and bugs have been fixed from the first edition and the index is now much improved. For those averse to the

command line, a useful new addition on the CD is a Java GUI for running the book’s programs.

The first chapter of the book provides an introduction, discusses the code organization and provides an annotated section overview for the book. The second part of this chapter provides an image analysis example (a “guided tour”) using various command line commands.

Chapter two deals with a number of global operations for image analysis, including histogram transformations, operations for combining images (addition, subtraction, etc), geometric transformations (rotation, translation and interpolation) and colour transformations. The clear discussion and code for nearest neighbour and bilinear interpolation are highlights of this chapter.

The third chapter focuses on grey-scale image analysis. Spatial domain convolution is discussed followed by sections on noise reduction, edge enhancement and flat fielding, edge detection (gradient filter masks, and the Boie-Cox algorithm), subsampling, multiresolution analysis and template matching. An additional section for this edition on Gabor wavelet analysis has been added, with an emphasis on texture and pattern detection. The final section presents binarization, with examples based on text image analysis (this edition also includes a new discussion of connectivity-

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preserving thresholding).

Chapter four addresses binary image analysis. An introduction to mathematical morphology is given, followed by sections on binary noise removal, region detection and encoding, shape analysis (including moments and Fourier descriptors), convex hull construction, thinning, line width determination, global features, and finally a nice introduction to the Hough transform.

The analysis of lines and line patterns is the focal point of the fifth chapter and covers chain coding, line features and noise reduction, polygonalization, detection of critical points (by curvature estimation), straight line fitting (least squares and eigenvector evaluation), cubic spline fitting, morphology and topology of line patterns (including segment cluster analysis).

The sixth chapter focuses on the analysis of point patterns. The construction and display of Voronoi diagrams are discussed. Then the spatial statistics of point patterns are described (to assess the degree of randomness in an image), followed by a section on the topology and geometry of cellular patterns. Finally the k -nearest neighbour problem is discussed, including code to find the k -nearest neighbours based on Voronoi analysis or for each point in a list with given x - y coordinates.

The focus of the final “algorithm chapter” (chapter seven) is frequency domain analysis. The first section is a very accessible introduction to the 2D Discrete Fourier Transform and the fast Fourier transform. The second part of this chapter discusses frequency domain filtering (image smoothing, edge detection, etc).

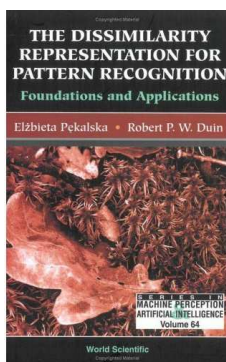
A new addition for this edition is the list of program descriptions, sorted by chapter and title

provided in chapter eight. The notes on each program and the interactions between each program and others are quite useful. For example, many of the line analysis programs in chapter five require input data in the primitives chain code format (which can be produced from the “pcc” program in section 5.1). Also in this edition a new eight page chapter has been added with suggested student projects. These appear to be reasonably simple (mainly using programs from the CD) and working through them should provide a useful introduction to various image processing applications. The book concludes with an appendix providing a more formal mathematical summary of some of the concepts presented earlier in the book (the Fourier transform, sampling theorem, special purpose filters, convolution, etc).

I enjoyed reading through the new edition of this book and particularly like the writing style and logical layout of sections. Sample input and output from each program is either shown in the book or clearly explained. I didn't notice any editing errors. References to original papers and further reading notes are well written. A minor criticism is that the website for the book (www.mlmssoftwaregroup.com) has not been updated for this edition. I think it would be great to have a future edition or separate volume that uses a similar style to introduce more advanced segmentation or registration methods. Also I think a chapter on 3D image processing could be useful, as would a section on B-spline image warping.

I think this book would be excellent for a short course on image processing or as a supplementary text for students new to this field. I would recommend it also as a valuable reference for practitioners in this field.

BOOKSBOOKSBOOKS



The Dissimilarity Representation for Pattern Recognition: Foundations and Applications

by E. Pekalska & R.P.W. Duin
World Scientific, 2007

Reviewed by: [Arjan Kuijper](#)

IAPR die-hards know that the IAPR has 20 Technical Committees. The first and second are called “[TC1: Statistical Pattern Recognition Techniques](#)” and “[TC2: Structural & Syntactical Pattern Recognition](#)”. These TCs have been organising joint biannual “S+SSPR” workshops in conjunction with the biannual ICPR conferences. Often these workshops are held in a relatively close neighbourhood of the ICPR location (Florida 2008, Hong Kong 2006), although the “dissimilarity representation” applies recently where the neighbourhoods were further apart (Cambridge – Lisbon 2004....). The acronym S+SSPR stands for *Statistical + Syntactical and Structural Pattern Recognition*, showing the relation to the TCs. The authors of this book, as well as the group from which they come at Delft University of Technology, the Netherlands, have been active in these IAPR sub-communities for quite some time.

The TCs deal with two different approaches in pattern recognition. The *Statistical*, quantitative, approach uses for instance well-developed mathematical theories of vector spaces and feature vector-based methods of learning. On the other hand, the *Syntactical and Structural*, qualitative, approach focuses on human cognition and perception inspired methods, and uses graphs, trees, etc. with appropriate grammars. One of the intensions for organising the *combined* workshops is to facilitate a possibility for researchers in one area to learn from those in the other one, vice versa. This book can be seen as an attempt to record some of the progress that has been made in getting the best of both worlds.

The book consists of two main parts, both covering roughly 250 pages - this is quite a comprehensive

book, I must admit! In the preceding introductory chapter, the motivation is given for this work. The main observation is that there is no such thing as “general object similarity”. A comparison always takes place with respect to a reference frame. One can think of two brothers who may look very similar when viewed within a large group, but who appear to be rather dissimilar when they are seen without other persons. Similarly, throwing features in a vector (or a weighted graph) and applying sophisticated mathematical tools on it often give results that heavily depend on the underlying structure (e.g. function space) that is chosen. Consequently, the outcome may be *mathematically* optimal, but *practically* unsatisfactory. The authors apply the dissimilarity concept to both approaches. Although this book serves as only a starting point for further research, the results shown in this book are already promising.

Before getting to the practical results, the first part of the book gives relevant theory of dissimilarity representations and learning paradigms. It consists of four chapters dealing with i) spaces, ii) characterisation of dissimilarity matrices, iii) learning aspects, and iv) dissimilarity measures. The underlying principles and mathematical framework are described well. A very nice overview of existing (similarity-based) methods is given, together with their relation to the dissimilarity approach.

The second part contains applications in unsupervised learning (visualisation and data exploration) and supervised learning (domain descriptors, classification, and combining), followed by perspectives (representation review and conclusions / open prob-

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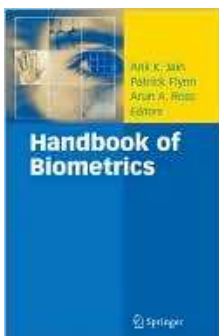
(Continued from page 8)

lems). The authors show many examples and results. Some of them are already published – the book is actually an (extremely!) extended version of the PhD thesis of the first author, but this is never disturbing. Only every now and then one can detect a trace of the merging of the original journal papers. It is definitely much better than a lot of other PhD theses that end up as books; I enjoyed reading this. The less-mathematically interested reader will probably get a little bit scared by the eight pages

“notation and basic terminology” and the most mathematical chapter on spaces, but even excluding these, readers will find much interesting and accessible material.

All in all, I think that this is a very useful book for researchers working in the IAPR TC1 &2 areas. It is useful to have an overview of methods and mathematics used in these fields – to peek in the kitchen of neighbouring colleagues and understand that together a very promising meal can be prepared.

BOOKSBOOKSBOOKS



Handbook of Biometrics

by A. K. Jain, P. Flynn, A. A. Ross, (ed.s)
Springer, 2008

Reviewed by: [Lawrence O’Gorman](#),

Although it is not specifically stated in the book, this appears to be an update of a previous book (*Biometrics – Personal Identification in Networked Society*, by Jain, Bolle, and Pankanti, Kluwer Press, 1999). Both books contain fundamental material on biometrics. Both contain chapters that are written individually by experts in the field. However, in light of the explosive growth of work in this field, innovations, and new deployments in the last seven years, this recent publication is well warranted.

The chapters in this new book are organized into three sections. The first section has twelve chapters describing different biometric modalities. Can you name all twelve? Here they are: fingerprint, face, iris, hand, gait, ear, voice, palm-print, signature, 3-D face, dental, and vascular. Each chapter describes all or some subset of the following information: the physical nature of the modality, what makes it distinctive, how it is captured, and how it distinguishes itself from other biometrics. Most chapters comprise material that is algorithmic in nature, written by researchers whose main focus is extracting features and matching the particular biometric. Most chapters contain performance evaluation statistics, which cannot be directly compared between modalities (chapters), but which give a basis for understanding how the different biometrics perform relative to one another.

The second section consists of four chapters: introduction to multi-biometrics, multi-spectral face recognition, face and ear, and ancillary information. Both the introduction to multi-biometrics and the ancillary information chapters deal with the issue of how to combine multiple pieces of information most effectively for matching – a

process called fusion. “Ancillary information” refers to the extra information that might accompany a biometric such as the weight or height of the person (termed “soft biometrics” in the book). The paper on ear and face describes both modalities in isolation and the result of fusion of these two. The multi-spectral face recognition chapter does not deal with multiple biometrics, but rather multiple image capture modalities, which include visible and infrared light image reflectance.

The third section consists of eight chapters dealing with: law, system security, spoofing, forensic science, government use, commercial use, standards, and databases. I found this eclectic section to be particularly interesting. Just to focus on one of these chapters, the one describing linkages between biometrics and forensics discusses the law enforcement side of biometrics, its history, and how new developments are also used for forensics. This chapter traces from the beginnings of forensic biometrics, the field of anthropometry as pioneered by the French ethnologist Bertillon. It describes AFIS (Automatic Fingerprint Identification Systems) that began computer biometrics in the late 1960s, the more recent revolution in the use of DNA for forensics, and also includes handwriting, voice, face, ear, and dental.

A researcher, practitioner, or student in the field of biometrics will want to have at least one fundamental book in this field. This book is an excellent choice. However, one should note that there are two types of fundamental texts. One is this edited text, where each chapter is written by different authors. The other is a text written in full by

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one or more authors – call this a traditional academic text. An advantage of the edited text is that authors of each chapter are most familiar with their topic and can offer particular insights gained from working in depth in that area. An advantage of a traditional academic text is that it can have a more cohesive and consistent presentation. Of course there are overlaps between the two because editors encourage chapter authors to follow a consistent style, and an academic text is written by experts as

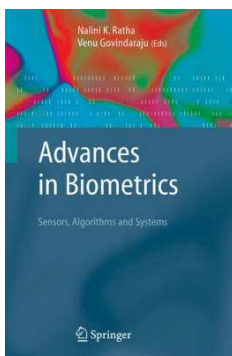
well. An example of a biometric book that follows the format of a traditional academic text is, *Guide to Biometrics* by Bolle et al. ([reviewed Jan '05 issue of the IAPR Newsletter](#)).

Handbook of Biometrics provides a valuable addition to the biometrics section of my own bookcase. I anticipate that I will consult it frequently as I did the previous Jain text.

As a postscript, I received another biometrics book published concurrently to the book reviewed above. The book, Advances in Biometrics – Sensors, Algorithms, and Systems, edited by Ratha and Govindaraju also contains chapters written by various experts, but its stated purpose is different: it focuses on advances rather than covering mainly the fundamentals of the field. I found these two books to be complementary.

[See the review of this book in this issue.](#)

BOOKSBOOKSBOOKS



Advances in Biometrics – Sensors, Algorithms, and Systems

by N. Ratha, V. Govindaraju, (ed.s)
Springer, 2008

Reviewed by: [Lawrence O’Gorman](#),

When I received this book, I looked at the table of contents and immediately read two chapters that piqued my interest. This is the nature and intention of this book; even people with considerable biometrics experience are sure to find topics that are new and interesting.

Unlike fundamental textbooks that will form the basis for instruction in a biometrics course or provide reference for anyone new to the field, this book presumes its readers have a basic (or advanced) knowledge of the field. Since one of the co-editors of this book is also a co-author of a fundamental biometrics textbook (reviewed in the [Jan. '05 issue of the IAPR Newsletter](#)), it is logical that this book is complementary in intention. The book focuses on advances that are either new in the last five or so years, or they are beyond the scope of fundamental tasks. This is the reason that even knowledgeable biometrics practitioners or those experts in a particular biometric modality will likely find material that is new to them here.

This is an edited text, with each chapter written by a different author, each having expertise in the chapter topic. The book is organized into three sections: sensors, algorithms, and systems. Under the sensor section, there are 9 chapters on the following acquisition topics: multispectral fingerprint, touchless fingerprint, fingerprint swipe, ultrasonic fingerprint, palm vein, finger vein, iris, retina and iris (together), and thermal face. Some of these technologies, like ultrasonic acquisition have been available for over a decade; and some, like thermal imaging and single-line swipe

are more recent and not commercially available (to my knowledge). But, all papers contain up-to-the-publication-date descriptions. New sensor technology can lead a biometric modality to new levels either by reduction of cost or enhanced imaging ability. To my knowledge, this is the first time biometrics sensors have been brought together in a book, and I found the section extremely interesting.

The second section on algorithms contains ten chapters on: speaker recognition, conversational biometrics, signature verification, writer identification, iris recognition, headprint recognition, face and gait issues with pose and illumination, face reconstruction from degraded images, improving face recognition from videos, and large population face recognition. Not having heard about headprint recognition, this is the first paper I went to (admittedly with some initial skepticism). The chapter described the advantages of this new modality. The main advantage – and scenario for use – is unobtrusively tracking people from overhead cameras in a crowd, reacquiring identities after tracking interruptions.

The final section on systems contains five chapters: fingerprint spoofing, match-on-card, privacy and security, adaptive biometrics, and standards.

This book will be of interest to those in the field who already know the basics and want to discover a range of possibilities that are being examined in research and some of which will soon be commercially available. For those who have not been able to keep up with the high volume of

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technical papers published in biometrics in the last five or so years in a spectrum of journals and conferences, this will give that reader a good survey of the state-of-the-art. It will also be useful to those who want more information than is usually covered in the basic texts (most basic texts do not give details on sensors, for instance, nor discuss more than one matching algorithm per modality). Furthermore, it will make a good project book for a biometrics graduate class.

The field of biometrics has achieved a degree of maturity in the last few years. Thus I believe this is an excellent time for a book that is complementary to the introductory texts on biometrics, one that explores beyond the fundamentals.

As a postscript, I received another biometrics book published concurrently to the book reviewed above. The book, Advances in Biometrics – Sensors, Algorithms, and Systems, edited by Ratha and Govindaraju also contains chapters written by various experts, but its stated purpose is different: it focuses on advances rather than covering mainly the fundamentals of the field. I found these two books to be complementary.

[See the review of this book in this issue.](#)

First International Conference on Medical Biometrics ICMB 2008

Hong Kong
4-7 January 2008

General Chair:
David Zhang



Prof. Heinz-Otto Peitgen delivering his keynote talk.



Prof. Max A. Viergever receiving a souvenir from General Chair Prof. David Zhang after delivering his keynote talk.



Prof. Chung-kwong Poon, President of the Hong Kong Polytechnic University, delivering his welcome address.

The past decade has seen a rapid growth in the demand for the usage of human behavioral and physiological characteristics for e-security and forensics applications. The significant advances in biometrics techniques are increasingly incorporated in a number of other applications in this context, and medicine has emerged as the largest and the most promising area. Medical biometrics primarily refers to the usage of human behavioral and physiological characteristics for medical diagnosis and body care. Thus, the goal of medical biometrics is to explore solutions to the open problems in medicine using biometric measurements, technologies, and systems.

ICMB 2008 was the first major gathering in the world devoted to facilitate this interaction. This conference provided a forum to discuss practical experiences in applying state-of-the-art biometric technologies for medical diagnosis and body care which will further stimulate research in medical biometrics. ICMB 2008 witnessed 40 technical presentations and 9 invited talks. In addition to the regular sessions, this conference also organized a workshop on Computerized Traditional Chinese Medicine (C-TCM) that focused on oriental techniques in medical biometrics. The conference attracted several quality presentations on medical diagnosis using tongue imaging, iris imaging, MRI, ultrasound imaging, and pulse measurements.

The conference featured three keynote talks from Prof. Max A. Viergever, Prof. Heinz-Otto Peitgen, and Prof. Tadashi Watsuji. The keynote talks were presented on topics of increasing importance in medical biometrics. While delivering the opening, the President of the Hong Kong Polytechnic University Prof. Chung-kwong Poon, noted that the research in medical biometrics is opening new frontiers. The new efforts in biometrics have resulted in new technologies for e-security and forensics. However, these technologies remain largely unexplored for their usage for medical diagnosis and healthcare. The Natural Science Foundation of China (NSF-C) was one of the key sponsors of this conference. Dr. Zhang Zhao Tian, Director (Information Dept.) NSF-C, welcomed the conference delegates for fruitful technical interactions to further stimulate the research in medical biometrics.

The conference was the first in a series to provide a forum to discuss experiments in applying biometric technologies for medical diagnosis and body care. The papers presented in this conference are available in Springer Lecture Notes in Computer Science, Volume 4901, Medical Biometrics.

ICPR 2008

www.icpr2008.org/



ICPR 2008 will be an international forum for discussions on recent advances in the fields of
Computer vision,
Pattern recognition (theory, methods and algorithms),
Image, speech and signal analysis,
Multimedia and video analysis,
Biometrics,
Document analysis, and
Bioinformatics and biomedical applications.

ICPR 2008 will be held at the Tampa Convention Center. With pristine beaches, numerous parks, arts and science museums, and vibrant night life, Tampa Bay is a popular destination for tourists



See you in Tampa!

CONTACT INFORMATION:

ICPR Secretariat,
Dept. of Computer Science and Engineering,
4202 E.Fowler Ave, ENB118,
Tampa, FL 33620, USA
[email: secretary@icpr2008.org](mailto:secretary@icpr2008.org)

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Call for Nominees

King-Sun Fu Prize

The International Association for Pattern Recognition (IAPR) is pleased to announce a call for nominations for the [King-Sun Fu Prize](#) in honor of the memory of Professor King-Sun Fu.

Professor Fu was instrumental in the founding of IAPR, served as its first president, and is widely recognized for his extensive contributions to the field of pattern recognition.

**Nominations deadline:
30 April 2008**

**Nomination and endorsement
forms can be downloaded
from the [KS Fu Prize](#)
page of the IAPR web site.**

This biennial prize is given to a living person in the recognition of an outstanding technical contribution to the field of pattern recognition, and consists of a cash amount and a suitably inscribed certificate. The prize is derived from interest income from a special fund set up for this purpose.

The prize recipient shall be selected by the Prize Committee, subject to approval by the IAPR Governing Board, upon nomination by a member of a national member society of IAPR and by endorsement of at least five members, representing at least two member societies different from that of the nominators.

Members of the IAPR Executive Committee, as well as of the Award Committee, shall be ineligible for the prize and may not serve as nominators or endorsers.

The 2008 prize will be presented at the

[19th International Conference on Pattern Recognition \(ICPR\)](#)

Tampa, Florida, USA

8-11 December 2008

The nomination must be made on a [special nomination and the endorsement forms \(in the MS Word format\)](#), and must be received by the Award Committee Chairman no later than 30 April 2008. Both completed and signed nomination and endorsement forms must be submitted in the paper form (no electronic submission). The nominator as well as endorsers should mail their completed forms directly to the chairman of the Prize Committee:

Prof. Josef Kittler,
Chair K-S. Fu Prize Committee
Centre for Vision, Speech and Signal Processing
University of Surrey
Guildford GU2 7XH
United Kingdom
email: J.Kittler@surrey.ac.uk

Call for Nominees

J.K. Aggarwal Prize

The International Association for Pattern Recognition (IAPR) is pleased to announce a call for nominations for the second [J.K. Aggarwal Prize](#) in honor of Professor J.K. Aggarwal.

Professor Aggarwal is widely recognized for his extensive contributions to the field of pattern recognition and for his participation in IAPR's activities.

**Nominations deadline:
31 May 2008**

Nomination and endorsement forms can be downloaded from the [J.K. Aggarwal Prize](#) page of the IAPR web site.

The recipient is a young scientist, under the age of 40 at the date of the deadline for nominations, who has brought a substantial contribution to a field that is relevant to the IAPR community and whose research work has had a major impact on the field. The prize consists of a cash amount and a suitably inscribed certificate. The prize is derived from interest income from a special fund set up for this purpose.

The prize recipient shall be selected by the J. K. Aggarwal Prize Committee, subject to approval by the IAPR Governing Board, upon nomination by a member of a national member society of IAPR and by endorsement of four members, representing at least two member societies different from that of the nominators and nominee.

Members of the IAPR Executive Committee, as well as of the J.K. Aggarwal Prize Committee, shall be ineligible for the prize and may not serve as nominators or endorsers.

The 2008 prize will be presented at the

[19th International Conference on Pattern Recognition \(ICPR\)](#)

Tampa, Florida, USA

8-11 December 2008

The recipient is expected to present an invited talk to the conference.

The nomination must be made on special nomination and the endorsement forms (in MS Word format), and must be received by the Appointed J.K. Aggarwal Prize Committee Chairman no later than 31st May 2008. Both completed nomination and endorsement forms must be submitted in electronic form. The nominator as well as endorsers should email their completed forms directly to the Appointed Chairman of the J.K. Aggarwal Prize Committee via the specified email address:

Professor Brian C. Lovell, Appointed Chair J.K. Aggarwal Prize Committee
School of Information Technology and Electrical Engineering
The University of Queensland
St Lucia 4072
Brisbane, Queensland
Australia
aggarwal-prize@itee.uq.edu.au

Of interest...

Free Books!

I have a number of books that need to be reviewed. If you have interest and some knowledge in the topic, let me know. I will send you the book — which you will be able to keep — and expect in return a review for the *Newsletter*. 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 to see more book detail.

Below are some of the books I'd appreciate help reviewing. If interested, Please email me at logorman@avaya.com,

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

Bézier and Splines in Image Processing and Machine Vision, Sambhunath Biswas and Brian C. Lovell (Springer, Dec 2007)

Digital Signal Processing: An Experimental Approach (Signals and Communication Technology), Shlomo Engelberg (Springer- Feb 2008)

Machine Learning in Document Analysis and Recognition (Studies in Computational Intelligence), Simone Marinai and Hiromichi Fujisawa (Springer - Feb 2008)

Pattern Recognition and Neural Networks, Brian D. Ripley (Cambridge - Feb 2008)

Probability and Computing: Randomized Algorithms and Probabilistic Analysis, Michael Mitzenmacher and Eli Upfal (Cambridge - Jan 2005)

Calls for Submissions...

Call for Submissions to a special issue:

Machine Vision and Applications Journal— Integrated Imaging and Vision Techniques for Industrial Inspection Deadline for submission: August 31, 2008

Imaging- and vision-based techniques play an important role in industrial inspection. The sophistication of the techniques assures high-quality performance of the manufacturing process through precise positioning, online monitoring, and real-time classification. Advanced systems incorporating multiple imaging and/or vision modalities provide robust solutions to complex situations and problems in industrial applications. A diverse range of industries, including aerospace, automotive, electronics, pharmaceutical, biomedical, semiconductor, and food/beverage, etc., have benefited from recent advances in multi-modal imaging, data fusion, and computer vision technologies. The purpose of this special issue is to highlight such advances and demonstrate the successful applications of multi-modal imaging and vision technologies in industrial inspection.

Papers that advance the theories of multi-modal imaging, data fusion, and vision techniques or tackle challenges in practical applications are invited. In addition to conventional vision technologies, imaging modalities of interest include X-ray, Terahertz imaging, and ultrasonic testing. The contributions should be original and must not have been presented and/or published (or currently under consideration) in any other form.

Machine Vision and Applications accepts high-quality technical contributions which are within its aims and scope in both long and short paper formats. Long papers may not be over 30 manuscript pages in length (12 point type, double-spaced, 5 cm margins (2 inch) on one side of the paper only) including figures, references, acknowledgements, footnotes, tables, and captions. All papers should be written in English. Further guidelines can be viewed at

<http://www.springerlink.com/content/100522/>.

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For further information regarding Machine Vision and Applications, please contact: **Sheli Carr, Editorial Coordinator**
mva_ec@bellsouth.net

To the editor...

These letters were received in response to the feature that appeared in the January 2008 issue of the IAPR Newsletter, "The (Frustrating) State of Peer Review" [\[html\]](#) [\[pdf\]](#).
~L. O'Gorman, ed

Dear Lawrence,

I certainly recognise the problem as associate editor, but also as reviewer when receiving the comments of zero or one, in exceptional cases of two other reviewers. We all are terribly busy with our teaching, research and other duties, but reviewing must be done.

As associate editor I try to act as a first filter. Therefore I take 10 minutes for a quick look at the English, organisation, math and illustrations. If not OK I reject right away, but telling them of course why, and do not bother other colleagues.

I just reviewed a paper which claimed perfect results of inverse filtering in the case of camera rotation up to a complete rotation (360 degrees). The math was perfect, but you don't need to be a genius to realise that this is impossible (all pixels on a circle will have the same value).

We had a good laugh, but as associate editor I would not have sent this paper to reviewers.

Regards,
Hans

--

Prof.dr.ir. J.M.H. du
Buf
<mailto:dubuf@ualg.pt>
University of Algarve

Dear Dr. O'Gorman,

Concerning your essay "The (Frustrating) State of the Peer Review" from the IAPR Newsletter (January 2008), this is to point you to a similar reading by Donald Geman (in case you were not aware of it): "Ten Reasons Why Conference Papers Should Be Abolished" <http://cis.jhu.edu/people/faculty/geman/>

While I agree with many of the ideas you expressed, in particular that good reviewers are overloaded these days, here are some points that I think should be touched if you plan to publish a "2nd edition" of your essay:

1. The peer review process is still the best alternative we have. I believe that the scientific method is the most honest effort humanity has produced to this day to explain "life, the universe and everything", and it largely achieved this through the peer review process, especially in the last three hundred years.
2. Computer Science is different from other sciences in that conference papers are peer reviewed publications. This may come from the high pressure the field is submitted to, both from government, society and industry: grants, money, research positions, they all come at a price: # of papers we publish and where (as an "objective" measure of quality).
3. Many more papers are published today compared to 20 years ago. There are thousands of universities, institutes and research facilities on this planet. They all want recognition from international forums, and this is normal.
4. Although the peer review process is far from perfect, there is a sort of "natural selection" process: the thing that counts is not to have published hundreds of papers, but how many times they are cited. I see this like a sort of impact factor of somebody's work: how much other researchers refer to it.

However, as a reviewer, I tend to agree with you: as the number of submissions increases, it becomes more and more difficult to peer review them. Moreover, the quality of the submissions have decreased a lot, and I think this is a real problem. So many times I accepted to review a paper after reading an abstract only to find later that it was just not worth it. Let me explain: as a reviewer I "donate" to the author of the paper one or two days of my working time, time I could have spent on my own projects and I feel very frustrated when I see that the paper I committed to review is badly written, the authors did not pay attention to the structure and organization of their ideas, often use incorrect or improper English language (difficult to understand) or simply the ideas presented are trivial or just a slight rework of previous published work. In a word, since there is no penalty, many authors shoot in the dark at conferences, and sometimes get papers accepted. I would very much like that the research community become more aware that when submitting a paper we also ask several persons to spend time to review it. We thus, should pay them with a rewarding insightful paper.

In this regard, I think that the system used at ICCV07 last year, was a good idea: 10 reviewers voted after only a light reading of the paper if the paper should be considered for peer review or not.

Best regards,
Marin Ferecatu
Institut TELECOM - TELECOM ParisTech
Marin.Ferecatu@enst.fr

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.)

Highlighting indicates that paper submission deadline has not yet passed.

2008			
DGCI 2008	14th International Conference on Discrete Geometry for Computer Imagery	Lyon, France	16-18 Apr 08
OAGM/AAPR *	* 32nd OAGM/AAPR Workshop	Linz, Austria	26-27 May 08
CRV 2008	5th Canadian Conference on Computer and Robot Vision	Windsor, Ontario, Canada	28-30 May 08
CIP 2008	1st IAPR Workshop on Cognitive Information Processing	Santorini, Greece	9-10 Jun 08
*_	* 5th Summer School for Advanced Studies on Biometrics and Secure Authentication	Alghero, Italy	9-13 Jun 08
DAGM 2008 *	* 30th Annual Symposium of the German Association for Pattern Recognition	Munich, Germany	10-13 Jun 08
ICISP 2008	International Conference on Image and Signal Processing	Cherbourg-Octeville, France	1-3 Jul 08
ANNPR 2008	3rd International Workshop on Artificial Neural Networks in Pattern Recognition	Paris, France	2-4 Jul 08
AMDO 2008	V International Conference on Articulated Motion and Deformable Objects	Puerto de Andratx, Mallorca, Spain	9-11 Jul 08
IWCF 2008	2nd International Workshop on Computational Forensics	Washington, D.C., USA	7-8 Aug 08
AGACSE 2008	3rd International Conference on Applied Geometric Algebras in Computer Science and Engineering	Leipzig, Germany	16-18 Aug 08
ICFHR 2008	11th International Conference on Frontiers in Handwriting Recognition	Montreal, Quebec, Canada	19-21 Aug 08
EVA VIENNA 2008	IAPR-TC19 Workshop on Computer Vision for Cultural Heritage	Vienna, Austria	25-28 Aug 8
CIARP 2008	13th Iberoamerican Congress on Pattern Recognition	Havana, Cuba	9-12 Sep 08
DAS 2008	8th International Workshop on Document Analysis Systems	Nara, Japan	17-19 Sep 08
BTAS 08 *	IEEE Second Conference on Biometrics: Theory, Applications and Systems	Washington, D.C.	29 Sep—1 Oct 08
PRIB 2008	3rd IAPR International Conference on Pattern Recognition in Bioinformatics	Melbourne, Australia	15-17 Oct 08
S+SSPR 2008	Joint IAPR International Workshops on Structural and Syntactic Pattern Recognition and Statistical Techniques in Pattern Recognition	Orlando, Florida, USA	4-6 Dec 08
PRRS 2008	5th IAPR Workshop on Pattern Recognition in Remote Sensing	Tampa, Florida, USA	7 Dec 08
ICPR 08	19th International Conference on Pattern Recognition	Tampa, Florida, USA	8-11 Dec 08
2009			
ICB 2009	3rd International Conference on Biometrics	Alghero, Italy	2-5 Jun 09
MVA 2009	IAPR Conference on Machine Vision Applications	Yokohama, Japan	20-22 May 09
ICDAR 2009	10th International Conference on Document Analysis and Recognition	Barcelona, Spain	July 26-29, 2009