

# IAPR Newsletter

Volume 33, Number 1  
January 2011

## Calls for Papers on Page 2

### In this issue...

**In Memoriam...Piero Mussio, IAPR Fellow** .....Page 3  
Paolo Bottoni and Stefano Levialdi warmly recall their colleague who passed away August 21, 2010.

**From the ExCo**.....Page 5  
Ingela Nyström, newly elected IAPR Secretary, shares news from the IAPR Executive Committee.

**INSIDE the IAPR** .....Page 6  
J.K. Aggarwal discusses his term as IAPR President from 1992-94.

**BOOKS BOOKS BOOKS** ..... 8  
A list of book reviews previously published in the *IAPR Newsletter*.

#### **New book reviews in this issue:**

Review #1 .....Page 11  
Eleazar Jimenez Serrano reviews **NETLAB: Algorithms for Pattern Recognition** by Ian T. Nabney

Review #2 ..... Page 12  
Tanish Zaveri reviews **Image Processing: the Fundamentals, 2nd Edition** by Maria Petrou and Costas Petrou

#### **IAPR Conference and Workshop Reports:**

**DAS 2010: 9th IAPR Workshop on Document Analysis Systems** .....Page 14

**ICMB 2010: Second International Conference on Medical Biometrics**.....Page 16

**ICISP 2010: 4th International Conference on Image and Signal Processing**..... Page 17

**MCPR 2010: 2nd Mexican Conference on Pattern Recognition** .....Page 19

**IWCF 2010: 4th IAPR International Workshop on Computational Forensics** ..... Page 21

#### **Non-IAPR Conference and Workshop Reports:**

**DAGM 2010: 32nd Annual Symposium of the German Association for Pattern Recognition** ..... Page 22

**Of Interest...** ..... Page 26  
Lots of free books available for review.

**Conference Planner 2011-12** ..... Page 27  
Chart of some upcoming IAPR and non-IAPR conferences of interest to the IAPR community.

## ***Calls for Papers***

### MCPR 2011

*3rd Mexican Conference on Pattern Recognition*  
Cancun, Mexico  
Deadline: February 14, 2011  
June 29-July 2, 2011

### ICDAR 2011

*11th International Conference on Document Analysis and Recognition*  
Beijing, China  
Deadline: March 1, 2011  
September 18-21, 2011

### ICIAP 2011

*16th International Conference on Image Analysis and Processing*  
Ravenna, Italy  
Deadline: March 15, 2011  
September 14-16, 2011

### CAIP 2011

*14th International Conference of Computer Analysis of Images and Patterns*  
Seville, Spain  
Deadline: March 25, 2011  
August 29-31, 2011

### CIARP 2011

*16th Iberoamerican Congress on Pattern Recognition*  
Pucón, Chile  
Deadline: April 18, 2011  
November 15-18, 2011

### GREC 2011

*9th IAPR International Workshop on Graphics REcognition*  
Seoul, Korea  
Deadline: May 15, 2011  
September 15-16, 2011

### IJCB 2011

*IEEE/IAPR International Joint Conference on Biometrics*  
Washington, DC, USA  
Deadline: May 27, 2011  
September 26-28, 2011

### ICPR 2012

*21st International Conference on Pattern Recognition*  
Tsukuba Science City, Japan  
Deadline: March 31, 2012  
November 11-15, 2012

## ***Call for Submissions***

### ***IAPR Newsletter***

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

Contact the editor:

Alexandra Branzan Albu, [aalbu@ece.uvic.ca](mailto:aalbu@ece.uvic.ca)

**Deadline: March 18, 2011**



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# In Memoriam...

## Piero Mussio, IAPR Fellow

by [Paolo Bottoni](#) and  
[Stefano Levialdi](#), IAPR Fellow

*A few days before ICPR 2010 in Istanbul, Piero Mussio, IAPR Fellow and former President of GIRPR the IAPR Member Society from Italy, passed away.*

*This In Memoriam article will also help the IAPR community get to know another of its Fellows.*

*~ A. Branzan Albu, editor*

Our colleague and friend Piero Mussio, IAPR Fellow since 1998, passed away on August 21, 2010, after a long illness which, despite its severity, did not shatter his enthusiasm for research and teaching, until the very end.

All those who have known Piero in his 40 years of activity, even for a short time, have received the impression of a person of great, though unassuming, culture, interested in a number of subjects, both scientific and social. Piero was a hydraulic engineer who turned into a computer scientist very soon in his career by starting to analyze astronomical data, biomedical signals, and mechanical blueprints, collaborating with physicists, biologists, physicians, and engineers. His approach had always been that of a systems scientist, armed with a rich set of techniques stemming from pattern recognition and image analysis.

Piero's activity in the field of Pattern Recognition was devoted to building systems for users (to him always domain experts) who had to analyse and interpret data or to control and automate processes involving the use of images. Even when developing original algorithms for coding segmented images,

*(Continued on page 4)*

### **Piero Mussio—Curriculum Vitae (as found at the web site of the [Computer Semiotics Laboratory](#) )**

#### **Scientific interests**

Evolved from Structural Pattern Recognition in images ([see publications](#)) and Complex System Behaviors ([see publications](#)) to Pattern Recognition in Human Computer Interaction ([see publications](#)), Visual Computing ([see publications](#)) and End User Development ([see publications](#)). He was elected IAPR Fellow in 1998.

#### **Professional experience**

Evolved from researcher in Data Analysis and Pattern Recognition at the Laboratory of Cosmic Physics of the Natl. Research Council of Italy in Milan to professor in Computer Science at the University of Milan. From 1983 to 2007, he served as scientific coordinator and principal investigator of national, regional and local research units in several international and national projects and industrial contracts.

#### **Teaching experiences**

Evolved from top-down (from theory to practice) teaching of System Theory to bottom-up teaching of Computer Organization and Human Computer Interaction.

#### **Private**

Evolved from happy single to joyful husband and proud father.

#### **Affiliation, organizational activities**

- Fellow IAPR, member of the ACM;
- Member of the Pictorial Computing Laboratory, headed by Prof. Levialdi, University 'La Sapienza', Rome;
- President of the International Association for Pattern Recognition Italian Chapter from 1992 to 1994.
- Associate editor of Journal of Visual Languages and Computing;
- Program chair for the 1999 IEEE Workshop on Visual Languages Tokyo, 1999;
- General Co-chair of 2000 IEEE Workshop on VL, Seattle, 2000;
- Scientific co-chair of AVI 2006, Venice;
- Committee member for PR, HCI and machine vision conferences, schools and workshops.

(Continued from page 3)

for recognising structures in satellite images, or for interpreting data about glacier reduction, the user was the central focus of the system; the priorities, the methods used, the expected results were all defined by the user himself. It came therefore as a natural evolution of this activity for Piero to move from the field of pattern recognition to that of content-based image retrieval, to the design of user interfaces for annotation systems. In all these cases, the starting point was the identification of the structures which were relevant to the experts, and the construction of tools to facilitate their recognition and interpretation, especially in face of ambiguities which had to be resolved in the context of the interpretation process. The notion of structure, as well as the preoccupation with the integrity of the visual message conveyed by the interface, provided the foundation for the theory of visual sentences we developed together with Piero and Francesca Costabile, with the ambition of providing a framework for a coherent view of all processes involving visual communication.

As for all things, science for Piero went together with social commitment, and he did not shy away from taking roles in the community, promoting conferences, participating in the annual school on Machine Vision and serving as Chair of the Italian IAPR Member Society from 1994 to 1995.

Together with science, Piero's other great passion was teaching. The relationship with students was not that of knowledge transmitter, but of mentor along the personal path he thought one had to walk. So, what he really taught was how to look at problems in different, even non-standard and personal ways. Everybody who followed one of Piero's courses came out of it not only with a bag of techniques, but with a cultural enrichment on many levels.

As an engineer, Piero was not afraid of technology. At the same time, he recognized its dangers - one of his favourite sentences being

"technology always betrays the user" - when the user is not armed with the culture to manage it. Again, what he taught, not only to students, but also to workers and shop-stewards, was how to develop such a culture. Sentences such as the one above, and many others, were witnesses to one of the main features of his character: his self-irony that burst forth in many unexpected moments, particularly when things did not go in the right way (possibly after one of his phenomenal rages had receded).

We all feel that his passing away was really too soon and that the Italian research community has lost a very precious person on both the human and the scientific level.

### **Other articles in the Getting to Know...Series:**

*Image Analysis with Discrete Tools*  
by Gabriella Sanniti di Baja  
July 2010 [\[html\]](#) [\[pdf\]](#)

*Has the time for telepresence finally  
come?* by Larry O'Gorman  
April 2010 [\[html\]](#) [\[pdf\]](#)

*Biometrics: The key to the gates of a  
secure and modern paradise* by  
Nalini K. Ratha  
January 2010 [\[html\]](#) [\[pdf\]](#)

*Recognition of Human Activities: A  
Grand Challenge* by J.K. Aggarwal  
October 2009 [\[html\]](#) [\[pdf\]](#)



## News from the IAPR EXECUTIVE COMMITTEE

by Ingela Nyström (Sweden)

This is the first “From the ExCo” column from me. I am very honoured to have been elected IAPR Secretary for this term. I have been involved in the IAPR since I became Governing Board member representing the Swedish Society for Automated Image Analysis (SSBA) in 2002. The insights I have gained into the Association during these years are manifold, one of the strongest being my wish to become further involved and to spread knowledge about IAPR.

Let me encourage you to visit the IAPR webpage [www.iapr.org/](http://www.iapr.org/) on a regular basis. There is plenty of information there to be found. Even though 2011 is not an ICPR year, there are many other conferences taking place, which are sponsored and endorsed by IAPR. Go to [www.iapr.org/conferences/](http://www.iapr.org/conferences/), where you can find the most current list of upcoming conferences. In fact, there are a number of conferences with submission deadlines within the next few months, for example, MCPR 2011, ICDAR 2011, ICIAP 2011, CAIP 2011, , CIARP 2011, GREC 2011, and IJCB 2011 (see the [CFP section](#) in this issue).

The newly appointed IAPR Standing Committees and Technical Committees are listed at [www.iapr.org/committees/](http://www.iapr.org/committees/). We thank the members of these committees for accepting to contribute to the development of the association. IAPR would be nothing without these voluntary efforts. For the Nominating Committee, the King-Sun Fu Prize Committee, and the J.K. Aggarwal Prize Committee; the members were nominated by the President and elected by the Governing Board in a ballot.

The ExCo has noted that the number of prizes for best papers has increased significantly in recent years, both for conferences sponsored or endorsed by the IAPR as well as for the ICPR. The ExCo has also noted that there is a wide variability in the procedure for the selection of recipients of these prizes. According to the ExCo, this variability serves these prizes poorly and lowers their prestige. The Advisory Committee, chaired by Professor Herb Freeman, IAPR Fellow, has been entrusted with a mandate to define a generic procedure to be followed for the selection of best papers, which aims to avoid conflict of interest situations as one of the issues.

It is my pleasure to welcome two new IAPR member Societies, the Argentine Association of Pattern Recognition and the Iranian Society of Machine Vision and Image Processing, respectively. The memberships were approved at the last Governing Board meeting held in Istanbul in conjunction with ICPR 2010. Their contributions to the IAPR will be greatly appreciated. Herewith, our Association now consists of 43 member societies and the Governing Board has 58 members. Please visit the IAPR web site to see the full list or member organizations and their contact information [www.iapr.org/aboutus/organizations.php](http://www.iapr.org/aboutus/organizations.php).

I hope you enjoy reading this Winter edition of the IAPR Newsletter, professionally put together by the editors Alexandra Branzan Albu, Arjan Kuijper, and Linda O’Gorman. From the ExCo, we extend to you our best wishes for a successful 2011!

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# INSIDE the IAPR: Membership Committee

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## Reminiscences of J.K. Aggarwal, IAPR Fellow, IAPR President 1994-94

by J.K. Aggarwal (USA)

I am honored and grateful for having had the opportunity to serve as the President of IAPR for the 1992-94 term. It was one of my more satisfying professional experiences. In the following I describe a few reminiscences.

The initiation of the [Fellow Program](#) of the IAPR was one of the highlights of my tenure. I touched the lives of 35 new fellows. The presentation ceremony took place immediately after the Bedouin Feast held in conjunction with ICPR 1994. It was a surrealistic scenario – in the middle of the desert, very little light, I was reading the [citations](#) under highly improvised lighting. The program was created and administered by the Fellow Committee under the leadership of Professor Saburo Tsuji, IAPR Fellow. The citations and the names were hand printed in Austin, Texas USA, framed in Jerusalem, Israel, and distributed in the desert.

Dr. Masakazu Ejiri, IAPR Fellow, chaired the Industrial Liaison Committee and initiated an Industrial Affiliates Membership Program. This program enhanced our visibility with industry and provided an important link between academia and industrial research in pattern recognition.

Other important business transacted during the 1992-94 period included:

The abolition of the “individual” membership category;

Amendment of voting procedures to permit voting by email and fax for Executive decisions;

The creation of permanent award for the best industrial paper selected by the Industrial Liaison Committee;

The formalization of the procedures for the sponsorship of conferences and workshops and the distribution of IAPR funds for such activities;

The creation of a new Technical Committee on Image Processing;

IAPR sponsorship of the journal Machine Vision and Applications and the improved distribution of the journal Pattern Recognition Letters to individual IAPR members.

*(Continued from page 6)*

The highlight of any president's tenure is the ICPR, which in my case was the 12th ICPR in Jerusalem. The ICPR in Jerusalem was an outstanding success. In addition to the exchange of technical information that is the hallmark of any ICPR, the visits to the cultural and historic sites, the Bedouin feast, and the visit to the show at Masada were truly memorable. The sites, sounds, and food of Jerusalem added to the success of the ICPR. At a more personal level, my wife Shanti and I took a two week tour of Israel after the end of the ICPR in Jerusalem. It provided a view of Israel that I shall never forget. We visited many places including: Sea of Galilee (Lake Kinnereth), Tagbha (Miracle of Loaves and Fishes), Golan Heights, Kibbutz Hago Shrim, Safed, Haifa, and Tel Aviv. I would like to take this opportunity to thank Drs. Shimon Ullman, Shmuel Peleg and Y. Yeshuran for making ICPR 1994 a success.

Another highlight of any Presidency is the award of the K.S. Fu Prize. Professor Herbert Freeman, IAPR Fellow, received the K.S. Fu Prize at the ICPR in Jerusalem. Professor Martin Levine, IAPR Fellow, was the Chairman of the committee that recommended Professor H. Freeman to the Governing Board. The award was made at a special session of the ICPR. Professor Freeman gave a talk entitled "How Does a Computer Perceive a Line Drawing". I believe that after the excellent talk by Professor Freeman, it became customary for the K. S. Fu Prize winner to give a seminar on their research.

I like to reminisce about a dinner while Michael Duff, IAPR Fellow, was President of IAPR and I was the Treasurer. We had a meeting of the Executive Committee in London. After the meeting, Michael and Susan Duff invited the Committee to their home for dinner. It was a great English dinner. Professor Steve Tanimoto, IAPR Fellow, and I really remember it well. It was very gracious and kind of Duffs to invite us all to their home.

My association with IAPR has been a satisfying experience both at the professional and personal levels. At the professional level I have achieved world wide recognition. In addition, Shanti and I have visited almost every part of the world and we have been honored guests at fabulous dinners and parties.

Also, I like to express my sincere thanks to my Executive Committee including Michael Duff (Past President) Dr. Gunilla Borgfors, IAPR Fellow (Secretary), Professor Steve Tanimoto (Treasurer), and Professor Saburo Tsuji (Vice President). Their support made a success of my presidency. Another person who contributed significantly to my success was my assistant Ms. Debi Paxton. She helped me during the time I served as the treasurer as well the president. It is pleasure to acknowledge her support.

# BOOKSBOOKSBOOKS

Book reviews previously published in the IAPR Newsletter

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*NETLAB: Algorithms for Pattern Recognition Series: Advances in Computer Vision and Pattern Recognition* by Ian T. Nabney (reviewed in this issue)

*Image Processing: the Fundamentals, 2nd Edition* by Maria Petrou and Costas Petrou (reviewed in this issue)

*Progress in Pattern Recognition, Series: Advances in Pattern Recognition*, by Sameer Singh and Maneesh Singh, Editors, Oct '10

*Algebraic Geometry and Statistical Learning Theory* by Sumio Watanabe, Jul '10

*Statistical Learning and Pattern Analysis for Image and Video Processing* by Nanning Zheng and Zianru Xue, Jul '10

*Augmented Vision Perception in Infrared: Algorithms and Applied Systems* by Riad Ibrahim Hammoud, editor, Apr '10

*Handbook of Texture Analysis* by Majid Mirmehdi, Xianghua Xie, and Jasjit Suri, editors, Oct '09

*Markov Random Field Modeling in Image Analysis* By Stan Z. Li, Oct '09

*Pattern Recognition and Neural Networks* by B.D. Ripley Apr '09

*Close Range Photogrammetry: Principles, Methods, and Applications* by Luhmann, Robson, Kyle, and Harley, Oct '08

*Classification and Learning Using Genetic Algorithms: Applications in Bioinformatics and Web Intelligence* by Bandyopadhyay and Pal, Oct '08

*Learning Theory: An Approximation Theory Viewpoint* by Cucker and Zhou, Oct '08

*Character Recognition Systems—A Guide for Students and Practitioners* by Cheriet, Kharma, Liu, and Suen, Oct '08

*Geometry of Locally Finite Spaces* by Kovalevsky, Oct '08

*Machine Learning in Document Analysis and Recognition* by Marinai and Fujisawa (Editors), Oct '08

*From Gestalt Theory to Image Analysis—A Probabilistic Approach* by Desolneux, Moisan, and Morel, Oct '08

*Numerical Recipes: The art of scientific computing, 3rd ed.* by Press, Teukolsky, Vetterling and Flannery, Jul '08

*Feature Extraction and Image Processing, 2nd ed.* by Nixon and Aguado, Jul '08

*Digital Watermarking and Steganography: Fundamentals and Techniques* by Shih, Jul '08

(Continued on page 9)



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*Springer Handbook of Speech Processing* by Benesty, Sondhi, and Huang, eds., Jul '08

*Digital Image Processing: An Algorithmic Introduction Using Java* by Burger and Burge, Jul '08

*Bézier and Splines in Image Processing and Machine Vision* by Biswas and Lovell, Jul '08

*Practical Algorithms for Image Analysis, 2 ed.* by O'Gorman, Sammon and Seul, Apr '08

*The Dissimilarity Representation for Pattern Recognition: Foundations and Applications* by Pekalska and Duin, Apr '08

*Handbook of Biometrics* by Jain, Flynn, and Ross (Editors), Apr '08

*Advances in Biometrics – Sensors, Algorithms, and Systems* by Ratha and Govindaraju, (Editors), Apr '08

*Dynamic Vision for Perception and Control of Motion* by Dickmanns, Jan '08

*Bioinformatics* by Polanski and Kimmel, Jan '08

*Introduction to clustering large and high-dimensional data* by Kogan, Jan '08

*The Text Mining Handbook* by Feldman and Sanger, Jan '08

*Information Theory, Inference, and Learning Algorithms* by Makay, Jan '08

*Geometric Tomography* by Gardner, Oct '07

*“Foundations and Trends in Computer Graphics and Vision”* Curless, Van Gool, and Szeliski., Editors, Oct '07

*Applied Combinatorics on Words* by M. Lothaire, Jul '07

*Human Identification Based on Gait* by Nixon, Tan and Chellappar, Apr '07

*Mathematics of Digital Images* by Stuart Hogan, Apr '07

*Advances in Image and Video Segmentation* Zhang, Editor, Jan '07

*Graph-Theoretic Techniques for Web Content Mining* by Schenker, Bunke, Last and Kandel, Jan '07

*Handbook of Mathematical Models in Computer Vision* by Paragios, Chen, and Faugeras (Editors), Oct '06

*The Geometry of Information Retrieval* by van Rijsbergen, Oct '06

*Biometric Inverse Problems* by Yanushkevich, Stoica, Shmerko and Popel, Oct '06

*Correlation Pattern Recognition* by Kumar, Mahalanobis, and Juday, Jul. '06

*Pattern Recognition 3rd Edition* by Theodoridis and Koutroumbas, Apr. '06

*(Continued on page 10)*

*(Continued from page 9)*

*Dictionary of Computer Vision and Image Processing* by R.B. Fisher, et. Al, Jan. '06

*Kernel Methods for Pattern Analysis* by Shawe-Taylor and Cristianini, Oct. '05

*Machine Vision Books* Jul. '05

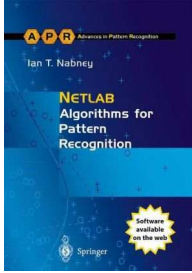
*CVonline: an overview*, Apr. '05

*The Guide to Biometrics* by Bolle, et al, Jan. '05

*Pattern Recognition Books*, Jul. '04

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# BOOKSBOOKSBOOKS



## *NETLAB: Algorithms for Pattern Recognition*

by Ian T. Nabney

Springer, 2001

Series: Advances in Computer Vision and Pattern Recognition

Reviewed by

Eleazar Jimenez Serrano (Japan)

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The book is solely dedicated to explaining the theoretical background of a group of functions inside a MATLAB toolbox called NETLAB. The toolbox is available for free and contains 175 different functions in the form of .mat files for the simulation of neural networks and pattern analysis. Each function has its own .htm HELP file. The functions, as well as the book, are divided in parameter optimization algorithms, density clustering and clustering, single layer networks, multiple layer perceptron, radial basis functions, latent variable models, sampling, Bayesian techniques and Gaussian processes. The execution of the functions as well as their results was not checked as part of the book review.

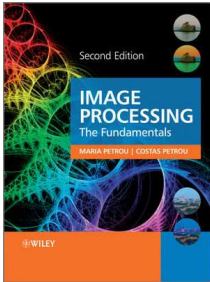
The book mainly presents the algorithms of the functions, their MATLAB program, the formulas used and the required inputs from the users in order to use the functions. A few examples are included to support the explanation of how to use the functions.

Distribution of the material seems ad hoc due to the variety of functions and their purpose. All notations in the formulas appear uniformly presented. Examples are short but self-explicative. Exercises are included which are not always dependent on the software. And an excellent list of references is included at the end of the book.

The book is the technical manual of the NETLAB software, useful as an illustrative reference when used with the actual software, but also containing enough scientific explanations and theory to be considered a good reference book alone.

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# BOOKSBOOKSBOOKS



## *Image Processing: the Fundamentals, 2nd Edition*

by Maria Petrou and Costas Petrou  
John Wiley & Sons, 2010

Reviewed by  
Tanish Zaveri (India)

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Although many books are available in the area of image processing, this book “Image Processing, the Fundamentals” by Maria Petrou and Costas Petrou explains this subject in a distinctive way. In this book, the authors have attempted to capture new insights with a lot of examples in all the fundamental topics of image processing. The book introduces the mathematical foundations of image processing in a state of the art way. Basic topics like image enhancement, image restoration, and feature extraction are discussed in detail with various examples supporting the theory.

The chapters of the book are written in an interactive format where many questions and answers describe the theoretical concepts of each topic discussed. The examples are supported by simulated image results which offer more clarity of results in the reader’s mind. The book is accompanied by a CD with all of the MatLab programs for each chapter. The MatLab programs are intended to support the examples explained in the book. The CD also contains a collection of slide presentations in pdf format which to go along with the book’s web page. This material may help the lecturer to teach this subject. In this book, the authors have made a great effort to explain all the nuts and bolts behind the image processing concepts which increases the reader’s interest while reading this book. This book would definitely help students to

improve their example-solving skills.

The book contains seven chapters. The first chapter provides an introduction to image processing where all the basic terms like resolution, restoration, and point spread function properties of a system are explained with examples. In the second chapter, image transforms, such as SVD, Haar, Walsh, and Hadamard transforms, are explained. DFT is also explained, with concepts of odd and even symmetry, in much detail with many examples.

The third chapter mainly focuses on the statistical description of images, which is the background required to understand many image processing algorithms. In the previous chapter, the formation of the bases of an elementary image were discussed. In this chapter, the basic concepts of probability and random variables are described in the spatial domain. The transformations of an image into a basis of elementary images for optimal expression are explained with different transforms, like the KL transform and independent component analysis (ICA).

The fourth chapter addresses details of the image enhancement process. It is a very basic and important pre-processing step. The elements of linear filter theory are explained in the frequency

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domain with various examples. It also describes types of noise and spatial and frequency domain filtering methods. Contrast enhancement can be better achieved by histogram manipulation techniques which are also illustrated in detail.

The fifth chapter focuses on image restoration and the basic methods, like inverse filtering, Wiener filtering, and homogenous and inhomogeneous linear image restoration techniques, are described with the required basic mathematical derivations. Nonlinear image restoration MAP estimation and geometric image restoration techniques are also explained.

The sixth chapter is about image segmentation and edge detection methods. In this chapter all the basic segmentation methods, like histogram based, split and merge, and morphological watershed method, with their limitations and advantages are presented. Edge detectors play an important role in object recognition, so the most widely used ones—Sobel, Canny, Laplacian, and the Gaussian edge detector—are explained with lots of details and the derivations

of each one. I must say that authors have taken lot of effort to clarify all these concepts with examples. For instance, phase congruency, monogenic signal, and non-maxima suppression are some of the difficult topics that are clarified with derivations and examples.

In the last chapter, multispectral image processing methods and basic concepts of color image processing are addressed. The physics and psychophysics of color vision are described with more detail than I have found elsewhere in the literature. The color image system spaces and different color image processing methods used in practice to enhance color image are illustrated with a number of simulated results, which are depicted at the end of chapter.

Overall, the book is written after a lot of original and creative work that has been done this area. This book does not aim to cover the most recently proposed algorithms presented at conferences or in the latest journal issues, but to emphasize the algorithms which have already been established and earned their worth in recent years.

# Workshop Report: DAS 2010

## 9th IAPR Workshop on Document Analysis Systems

9-11 June 2010

Boston, Massachusetts, USA

Workshop and Program Co-Chairs:

[David Doermann](#) (USA)

[Venu Govindaraju](#), IAPR Fellow (USA)

[Daniel Lopresti](#) (USA)

[Prem Natarajan](#) (USA)

Report prepared by:

[Daniel Lopresti](#)

A successful Ninth IAPR Workshop on Document Analysis Systems was held in Boston, Massachusetts, a location situated in the heart of beautiful New England in the northeastern United States. Nearly 100 members of the international research community gathered to attend what has become one of the signature events for TC-11.

DAS 2010 is the ninth workshop in a series. The first DAS was held in

Kaiserslautern, Germany in 1994, and was followed by Malvern, PA (1996); Nagano, Japan (1998); Rio de Janeiro, Brazil (2000); Princeton, NJ (2002); Florence, Italy (2004); Nelson, New Zealand (2006) and Nara, Japan (2008). Boston, with its rich history dating back to the 1600's and its role as a major focal point in the history of the American Revolution and America's fight for independence, proved to be an ideal location for the 2010 workshop. Boston attracts millions of visitors each year as a center for industrial, academic and cultural excellence, and there is no doubt this proved one the attractions for DAS 2010.

The DAS tradition is to bring together industry, academic, and government researchers interested



DAS 2010 Planning Committee enjoying the banquet.  
From left: Srirangaraj (Ranga) Setlur,  
David Anthony Frampton, Rohit Prasad, Daniel Lopresti,  
Venu Govindaraju, Laura Stephens, Matin Kamali,  
Premkumar Natarajan, John Makhoul

in many aspects of document analysis systems and to provide opportunities for fruitful interaction and collaboration. This year's workshop was organized as a three-day, single track event, with oral and poster presentations, as well as Working Group discussions on the second and third afternoons. Special sessions on contributed datasets and a keynote talk by George Nagy on this same topic provided a compelling theme – a

focus that will hopefully help guide the field toward greater sharing of data and accepted standards for evaluation. This year, we received 91 submissions from 25 countries on six continents. The papers were reviewed by 45 members of our research community and an international program committee representing 16 different countries. The overall quality was excellent and the workshop co-chairs chose 28 full papers for oral presentation and 37 as poster papers, as well as 15 short papers that were presented either as posters or in a special short oral format. In addition, six groups presented live demos during the poster sessions. There were 99 paid registrations of all kinds (students were offered a lower rate to encourage their attendance).

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Full papers underwent the standard peer review process and appear in the official workshop proceedings published in the ACM International Conference Proceedings Series.

All papers, including short papers, were included in the unofficial hardcopy proceedings distributed at the event, with short paper authors also given the option of having their papers appear on the DAS 2010 website. In addition, we have announced a call for PowerPoint slides and posters from the workshop and, if authors choose, we will place these materials on the website as well.

George Nagy, a founding father in the field of Document Image Analysis, kicked-off the workshop with an entertaining and thought-provoking keynote talk entitled “Document Systems Analysis: Testing, Testing, Testing.” His PowerPoint slides appear on the DAS website at the following URL: [cubs.buffalo.edu/DAS2010/GN\\_testing\\_DAS\\_10.pdf](http://cubs.buffalo.edu/DAS2010/GN_testing_DAS_10.pdf)

The IAPR Nakano Award for the best paper at



The IAPR Nakano Award for the DAS 2010 best paper went to Masakazu Iwamura (right), Tomohiko Tsuji (not pictured), and Koichi Kise (left).

the workshop was announced at the banquet and presented to Masakazu Iwamura, Tomohiko Tsuji, and Koichi Kise for their paper “Memory-Based Recognition of Camera-Captured Characters.” This award was established in memory of the late Professor Yasuaki Nakano,

the honorary chair of the DAS 2008 workshop and the general chair of DAS 1998, and includes an engraved trophy, certificates for each of the co-authors, and a \$1,000 prize from a special fund established separately for this purpose.

Proceedings of DAS 2010  
are available online as part of the  
ACM Digital Library

The IAPR Best Student Paper Award was given to Mudit Agrawal for his paper coauthored with David Doermann titled “Context-Aware and Content-Based Dynamic Voronoi Page Segmentation,” with Honorable Mention going to Pingping Xiu for his paper co-authored with Henry Baird titled “Analysis of Whole-Book Recognition.” Each student winner received a printed certificate, with Mudit Agrawal receiving a \$400 prize and Pingping Xiu receiving a \$200 prize, both supported through partial use of the IAPR levy.

As with past DAS workshops, an important feature of DAS 2010 was the lively Working Group discussions, this time led by Marcus Liwicki. The scribes and the moderators of the Working Groups are currently writing up their reports in collaboration with group members. When finished, full reports for each Working Group will be posted on the DAS website, with a summary version prepared for a special issue of the *International Journal on Document Analysis and Recognition*, which will also include journal-length versions of selected papers chosen from those presented at the workshop.

Socially, the local organizers arranged an exciting set of activities including an opening reception, a duck boat tour of Boston and its harbor, and a banquet at the “Top of the Hub” overlooking the city. Raytheon BBN Technologies and Hitachi provided generous financial support for the DAS 2010 workshop.

The broad consensus from attendees is that DAS 2010 was a great success.

## Second International Conference on Medical Biometrics

28-30 June 2010  
Hong Kong

### General Chairs

[David Zhang](#), IAPR Fellow (Hong Kong)  
Milan Sonka (USA)

### Program Chairs

Jane You (Hong Kong)  
Xiaoyi Jiang, IAPR Fellow (Germany)  
Prabir Bhattacharya, IAPR Fellow (USA)

### Report prepared by the General Chairs

The theme of the 2010 International Conference on Medical Biometrics (ICMB 2010) was “Advancement of Medical Biometric Technologies and Systems for Healthcare”. ICMB2010 provides a platform for researchers, engineers, doctors and vendors from different disciplines to present their latest research findings, to identify future directions and challenges, and to initiate R&D collaborations.

We were most honoured to have Prof. Timothy Tong, the president of the Hong Kong Polytechnic University give an opening address and Mrs Regina IP, Legislative Councillor of Hong Kong, Prof. LIU Zhiyong, Former Executive Director of Department of Information Science, National Natural Science Foundation of China, and other eminent speakers from around the world to attend this important event.

We were pleased that this conference attracted a large number of high-quality research papers that reflect the increasing interest in and popularity of this fast-growing field. The conference proceedings contain 45 papers which were selected through a strict review process, with an acceptance rate at 38%. Each paper was assessed by three independent reviewers. All of the accepted papers were presented in either oral (20) or poster (25) sessions at the conference in conjunction with three special sessions on State-of-the-Art of Computer-Aided Detection/Diagnosis

(CAD), Modernization of Traditional Chinese Medicine (TCM), and Effective Healthcare. The total number of attendees was around 120.

We would like to take this opportunity to thank our invited keynote speakers for their inspiring talks at ICMB 2010 and sharing their valuable experience: Ching Suen, IAPR Fellow, Yueting Zhang, Hiroshi Fujita, and Lianda Li. In addition, we would like to express our gratitude to all the contributors, reviewers, Program Committee and Organizing Committee members who made their contribution to the success of ICMB 2010 in different ways. Once again, we greatly appreciate the continuing support from the International Association of Pattern Recognition (IAPR), IEEE Computational Intelligence Society (IEEE-CIS), National Natural Science Foundation in China (NSFC), and Springer. Last but not least, we sincerely wish that the fruitful technical interactions during this conference will benefit everyone concerned.



**Proceedings of the  
conference have been  
published by  
Springer in the series  
Lecture Notes in  
Computer Science  
(Volume 6165)**



# Conference Report: [ICISP 2010](#)

## 4th International Conference on Image and Signal Processing

June 30-July 2, 2010  
Université du Québec à Trois-Rivières, Canada

General Chairs:

[Fathallah Nouboud](#) (Canada)  
[Abderrahim Elmoataz](#) (France)

Program Chairs:

[Olivier Lezoray](#) (France)  
[Driss Mammass](#) (Morocco)  
[Jean Meunier](#) (Canada)

Report prepared by O. Lezoray and F. Nouboud

The fourth International Conference on Image and Signal Processing brought together about 80 researchers from more than 25 countries. Historically, ICISP is a conference resulting from the actions of researchers of Canada, France, and Morocco. The first and second editions of ICISP were held in Agadir, Morocco in 2003 and 2001. The third edition was held in Cherbourg-Octeville, in Normandy, France. ICISP 2010 was sponsored by EURASIP (European Association for Image and Signal Processing) and IAPR (International Association for Pattern Recognition).

From 165 full papers submitted, 69 were finally accepted (54 oral presentations, and 15 posters) giving an acceptance rate of 41 percent. We took pride in arranging a one-track conference and could not accept more contributions. The Program Committee members carried out the review process. Each paper was reviewed by at least two reviewers and also checked by the conference co-chairs. All the accepted papers have been published in the Springer LNCS 6134 volume.

The conference program includes three keynote talks by three world renowned experts. The first keynote was given by Yann Lecun, Silver Professor of Computer Science and Neural Science at the New York University, USA. The second keynote was given by Theo Gevers,

Associate Professor at the University of Amsterdam in the Netherlands. The third keynote was given by Leo Grady, Senior Member of Technical Staff with Siemens Corporate Research in Princeton, USA.

The best papers of the conference will be invited for publication in special issues of either the International Journal of Future Generation Communication and Networking or the International Journal on Graphics, Vision and Image Processing.



**Proceedings of the  
conference have been  
published by  
Springer  
in the series  
Lecture Notes in  
Computer Science  
(Volume 6134)**

*(Continued on page 18)*

*(Continued from page 17)*

The best paper was selected out of a short list of papers that received the highest scores during the review process. The award went to Samy Metari and François Deschênes for the paper entitled “A Novel polychromatic model for light dispersion”. The award was handed out at the conference banquet.

Highlights of the conference were also the social events. The welcome reception and the conference banquet took place at Hotel Gouverneurs, downtown Trois-Rivières. A typical dinner was organized at “la cabane à sucre chez Danny” and a boat cruise concluded the conference.

The next edition of ICISP will be organized in Agadir, Morocco in 2012.



Olivier Lezoray (right) presenting the Best Paper Award to Samy Metari (left) for the paper he co-authored with François Deschênes entitled “A Novel polychromatic model for light dispersion”. Also pictured is Fathallah Nouboud (center).

# Conference Report: [MCPR 2010](#)

## 2nd Mexican Conference on Pattern Recognition

September 27-29, 2010  
Puebla, Mexico

Honorary Chair:

[Josef Kittler, IAPR Fellow \(UK\)](#)

Chairs:

[José Francisco Martínez Trinidad \(Mexico\)](#)

[Jesús Ariel Carrasco Ochoa \(Mexico\)](#)

Report prepared by the Organizers



MCPR2010 was held at the National Institute for Astrophysics Optics and Electronics in Puebla, Mexico. The conference was organized by the Computer Science Department of the INAOE, and it was sponsored by the Mexican Association for Computer Vision, Neural Computing and Robotics (MACVNR) and the International Association for Pattern Recognition (IAPR).

We received contributions from 20 countries. In total 89 papers were submitted, out of which 39 were accepted for publication in the proceedings and for presentation at the conference. The review process was carried out by the Scientific Committee, each paper being assessed by three reviewers who prepared an excellent selection dealing with ongoing research.

The 39 accepted papers were published by Springer Verlag in the volume *Advances in Pattern*

*(Continued on page 20)*

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Recognition, LNCS 6256, edited by Jesús Ariel Carrasco-Ochoa, José Francisco Martínez-Trinidad, and Josef Kittler.

Three professors were invited to give keynote addresses on topics in Pattern Recognition. The IAPR Invited Speaker was Professor Edwin Hancock, IAPR Fellow, University of York, United Kingdom, who presented a talk entitled “Graph-based methods in pattern recognition”. Professor Guozhu Dong, Wright State University, USA, gave a speech about Emerging/ Contrast pattern based clustering and clustering quality evaluation. And, Dr. Ernesto Bribiesca, IIMAS-UNAM, Mexico, talked about “3D chain codes for representing objects”.

The welcome refreshment for attendees was offered in the hotel San Leonardo at Puebla’s

historic center (downtown). During the event, meals took place at the INAOE’s garden. The conference finished with a dinner where a quartet played classical music.

The conference was organized in one track for oral presentations and additionally, all the participants presented a poster. We consider that MCPR2010 served as a forum for scientific research exchange and establishing contacts that improve cooperation among national and international research groups in pattern recognition.

The MCPR steering committee decided the place where the next conference will be held. The [3rd Mexican Conference on Pattern Recognition](#) will be held in Cancun, Mexico during the last week of June, 2011.



**Proceedings of the  
conference have been  
published by  
Springer  
in the series  
Lecture Notes in  
Computer Science  
(Volume 6256)**

# Workshop Report: IWCF 2010

## 4th IAPR International Workshop on Computational Forensics

November 11-12, 2010  
Tokyo, Japan

Co-chairs:

Hiroshi Sako (Japan)  
Katrin Franke (Norway)  
Shuji Saitoh (Japan)

Report prepared by Hiroshi Sako and Katrin Franke

IWCF 2010, co-sponsored by IAPR TC-6 and Hitachi Ltd., was held in November 11 and 12, 2010. The workshop took place in conjunction with the 16th Annual Scientific Meeting of the Japanese Association of Forensic Science. The venue, Aoyama, is a largely up-market youth-orientated shopping and cultural area of Tokyo.



IWCF2010 participants at the lobby of the hotel in Aoyama, Tokyo, Japan

IWCF 2010 was the fourth workshop in the series. Previous workshops were held in The Hague, The Netherlands (2009), Washington D.C., USA (2008), and Manchester, UK (2007). Once again, IWCF 2010 attempted to bring together academics and industrialists, theoreticians and practitioners from numerous related disciplines involved in computational forensics. The preliminary call for papers was issued in September 2009. Each of the submitted manuscripts received from 10 countries was peer-reviewed by members of the program committee. Of these 16 papers were selected for oral presentation. The presentations covered a wide

range of computational forensics related to authentication, document, face, footwear, fingerprints, multimedia, and evaluation tools. The workshop could provide active interactions between participants.

This time, we were honored to have two renowned researchers as

IAPR distinguished speakers: “Gestalt Laws of Vision in Computational Forensics - Friend or Foe?” by Professor Mario Köppen, Network Design and Research Centre, Kyushu Institute of Technology, Japan and “Physical Security Technologies at Hitachi” by Dr. Minoru Sakairi, Central Research Laboratory, Hitachi Ltd., Japan.

Finally, we would like to express our sincere thanks to participants, reviewers, members of the Program Committee and the Organizing Committee for their various contributions. We are very much looking forward to the next IWCF 2011 which will be held in Bern, Switzerland.

## 32nd Annual Symposium of the German Association for Pattern Recognition

September 21-24, 2010  
Darmstadt, Germany

### General Chairs:

[Arjan Kuijper](#) (Germany)  
[Bernt Schiele](#) (Germany)

### Program Chairs:

[Michael Goesele](#) (Germany)  
[Stefan Roth](#) (Germany)

### Workshop and Tutorial Chair:

[Konrad Schindler](#) (Switzerland)

### Report prepared by Arjan Kuijper

DAGM is the German section of the IAPR. Every year a conference is held in Germany (or one of the surrounding countries). This year, DAGM took place in Darmstadt. The main conference was preceded by a day at [Fraunhofer IGD](#) (see “Global Pattern Recognition, Fraunhofer IGD”, IAPR Newsletter October 2009 [\[html\]](#) [\[pdf\]](#)) with a workshop on “[Pattern Recognition for IT Security](#)”, organized by Stefan Katzenbeisser (Darmstadt), Jana Dittmann (Magdeburg) and Claus Vielhauer (Brandenburg), as well as four [tutorials](#) given by renowned experts:

- Sparse Linear Models: Reconstruction and Approximate Bayesian Inference – by Matthias Seeger (MPI & University of Saarbrücken, Germany)
- Computer Vision on GPUs – by Jan-Michael Frahm (UNC, USA) and P.J. Narayanan (IIIT Hyderabad, India)
- Color in Image and Video Processing – by Joost van de Weijer (CVC Barcelona, Spain)
- MAP Inference in Discrete Models – by Carsten Rother (Microsoft Research Cambridge, UK)

This warming-up day was attended by over 80 participants, enjoying the lectures during the day, and the cocktails during the welcome reception that was held afterward.

## Proceedings of the conference have been published by Springer in the series Lecture Notes in Computer Science (Volume 6376)



(Continued on page 23)

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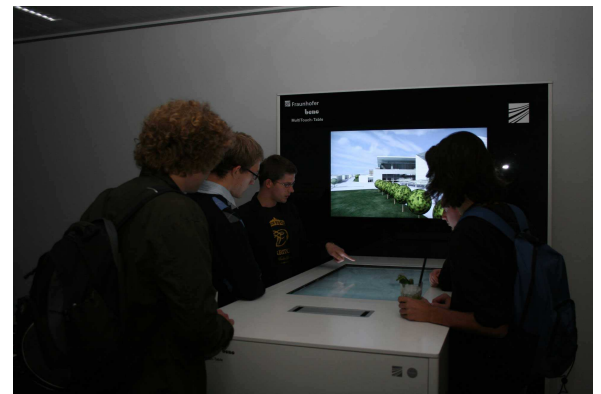
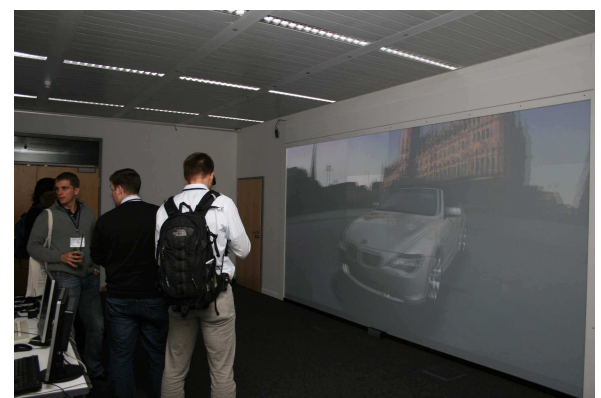
During the reception the participants had the opportunity to attend a demo program, including a huge high resolution video wall, a multi-touch table, integrated augmented reality graphics with a cultural heritage touch on a digital camera, and a 3D face capturing device.

The main conference attracted 200 participants and was held at the [Darmstadtium](#), a new conference center in the center of the city, named after the [chemical element Ds](#) that was created / discovered in Darmstadt in 1994.

Traditionally, the conference starts off with the Olympus prize ceremony. This prize is awarded by a scientific committee of established researchers to a creative young researcher with excellent achievements in pattern recognition and computer vision.

This year, the prize was awarded to [Stefan Roth](#). Cited the jury: “He has made outstanding contributions to computer vision, particularly to probabilistic approaches at the interface to machine learning“. For instance, he developed the Fields of Experts framework, a high-order Markov random field with spatially-extended neighborhood interactions which can be automatically learned from training data.[1] This expressive prior has not only been shown to lead to robust image restoration algorithms, e.g., for inpainting, scratch removal and noise compensation, but has also inspired new high-order random fields models for images and scenes. Moreover, he made a variety of contributions to the area of optical flow, i.e., he characterized the spatial statistics of optical flow, he reconstructed specular surfaces from specular flow and, last but not least, he designed, with collaborators the [Middlebury optical flow benchmark](#), a de-facto standard benchmark in this area. [2]

The technical program covered all aspects of pattern recognition ranging from 3D reconstruction to object recognition and medical



Demo program at during the welcome reception.

(Continued on page 24)

(Continued from page 23)

applications. The call for papers resulted in 134 submissions from institutions in 21 countries. Each paper underwent a rigorous reviewing process based on which the program committee selected a total of 57 papers, corresponding to an acceptance rate of below 45%. Out of all accepted papers, 24 were chosen for oral and 33 for poster presentation.

In addition to the presentations from the technical program, there were also three internationally renowned invited speakers at the conference: [Richard Szeliski](#) (Microsoft Research Redmond), [Yair Weiss](#) (The Hebrew University of Jerusalem), and [Andrew Zisserman](#) (University of Oxford)

Szeliski spoke on “*Weaving the World's Photos into a 3D Web*”. The explosion of imagery available on the Internet has opened up a host of new applications in computer vision, image-based modeling, and image-based rendering. It is now possible to automatically reconstruct 3D models of heavily photographed scenes and objects, such as tourist locations, and to recognize these from novel images such as cell phone queries. Szeliski surveyed some of the work in this field, starting with the Photo Tourism image-based modeling and navigation system and then discussed the complexity issues (and solutions) engendered by the huge scale of these datasets. He also discussed work in interactive and automated 3D modeling with a particular emphasis on architectural reconstruction and location recognition in urban environments.

Weiss' talk was entitled “*Learning and Inference in Low-Level Vision*”. Low level vision addresses the issues of labeling and organizing image pixels according to scene related properties, such as motion, contrast, depth and reflectance. He described attempts to understand low-level vision in humans and machines as optimal inference given the statistics of the world. In particular, he showed how message passing

algorithms allow one to solve real-world instances of NP-hard problems and to efficiently learn energy functions despite an exponential number of constraints.

Finally, Zisserman talked about “*Human Focussed Video Analysis*”. Determining the pose and actions of humans is one of the central problems of image and video analysis. The visual problem is challenging because humans are articulated animals, wear loose and varying clothing, self-occlude themselves, and stand against difficult and confusing backgrounds. Nevertheless, the area has seen great progress over the last decade due to advances in modeling, learning, and in the efficiency of algorithms. He described approaches for recognizing human actions and inter-actions, and for determining 2D upper body pose. Examples included various TV videos and feature films, and applications demonstrated learning the gestures of sign language and pose based video retrieval.

Due to its success last year at DAGM 2009 in Jena, again a [Young Researchers' Forum](#) was organized to promote scientific interaction between excellent young researchers and our community. This year the contributions of six students were accepted, who presented their Bachelor or Master thesis work during the conference and interacted with the community.

The (excellent) conference dinner was held at the [Orangerie](#) in Darmstadt, a historic building built in 1720 in a scenic park. During the dinner, Prof [Hans Burkhardt](#), IAPR Fellow, from the University of Freiburg was appointed as honorable member of the DAGM for his numerous activities in pattern recognition and contributions to the society. He has been active as a DAGM board member, e.g. taking the initiative for reforming the DAGM structure and introducing English as the conference language. He has been promoting ICPR attendance in the German society, and is active within the IAPR,

(Continued on page 25)



(Continued from page 24)

for instance in the K.S. Fu prize committee. Two years before the often cited Geman & Geman paper on the Bayesian paradigm using Markov Random Fields for the analysis of images, he introduced Markov processes for image restoration. [3]

As organizers, we could say much more, for instance that we found it a great successful conference and that we spend much more time on it than we thought! Something that we want to emphasize is our sincere thanks to all local organizers and student volunteers who helped plan and run DAGM 2010 in Darmstadt. We would also like to sincerely thank all our sponsors for their significant financial support, which helped to keep the registration fees as low as possible, especially those of the student attendees.

We were happy to host the 32nd Annual Symposium of the German Association for Pattern Recognition in Darmstadt and look forward to [DAGM 2011](#) in Frankfurt!

**Footnotes:**

[1] Stefan Roth and Michael J. Black: *Fields of experts*. International Journal of Computer Vision (IJCV), 82(2):205-229, April 2009.

[2] Simon Baker, Daniel Scharstein, J.P. Lewis, Stefan Roth, Michael J. Black, and Richard Szeliski. *A database and evaluation methodology for optical flow*. International Journal of Computer Vision (IJCV), 2010. To appear. An extension of their ICCV 2007 paper.

[3] "[Maximum-A-Posteriori Restoration of Images - An Application of the Viterbi Algorithm to Two-Dimensional Filtering](#)", ICPR 1982 in Munich.

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# Of interest...

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## Free Books!

The *IAPR Newsletter* is looking for reviewers for the books listed below.

If you have interest and some knowledge in the topic, email us with your mailing address. We will send you a copy of the book—which you may keep—and will expect in return a review for the *Newsletter*.

[Arjan Kuijper](#), IAPR Newsletter Associate Editor for Book Reviews

The following titles are available to be reviewed:

***Grammatical Inference: Learning Automata and Grammars***

Colin de la Higuera

Cambridge University Press, 2010

[www.cambridge.org/asia/catalogue/catalogue.asp?isbn=9780521763165](http://www.cambridge.org/asia/catalogue/catalogue.asp?isbn=9780521763165)

***Machine Learning for Vision-Based Motion Analysis***

L. Wang, G. Zhao, L. Cheng, and M. Pietikänen

Springer, 2011

[www.springer.com/computer/image+processing/book/978-0-85729-056-4](http://www.springer.com/computer/image+processing/book/978-0-85729-056-4)

***Biodata Mining and Visualization: Novel Approaches***

Ilkka Havukkala

World Scientific, 2010

[www.worldscibooks.com/lifesci/6709.html](http://www.worldscibooks.com/lifesci/6709.html)

An electronic version of the following book is also available for review:

***Image Processing for Embedded Devices, Volume 1: Applied Digital Imaging***

Sebastiano Battiato, Arcangelo Ranieri Bruna, Giuseppe Messina, Giovanni Puglisi, eds.

Bentham eBooks

[www.bentham.org/ebooks/9781608051700/index.htm](http://www.bentham.org/ebooks/9781608051700/index.htm)

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# Conference Planner: 2011

*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](#) (A. Branzan Albu, ed.)*

Highlighting indicates that paper submission deadline has not yet passed.  
An asterisk \* denotes a non-IAPR event.

## 2011

<a href="#">DGCI 2011</a>	DGCI 2009 report in Jan '10 issue	16th IAPR International Conference on Discrete Geometry for Computer Imagery	Nancy, France	6-8 Apr 11
<a href="#">CCIW 2011</a>	CCIW 2009 report in Jul '09 issue	2011 Computational Color Imaging Workshop	Milan, Italy	20-21 Apr 11
<a href="#">GbR 2011</a>	GbR 2009 report in Jul '09 issue	TC-15 Workshop on Graph-based Representations in Pattern Recognition	Münster, Germany	18-20 May 11
<a href="#">SCIA 2011</a>	SCIA 2009 report in Oct '09 issue	17th Scandinavian Conference on Image Analysis	Ystad Saltsjöbad, Sweden	23-27 May 11
<a href="#">MVA 2011</a>	MVA 2009 report in Jul '09 issue	12th IAPR Conference on Machine Vision Applications	Nara City, Japan	13-15 Jun 11
<a href="#">MCS 2011</a>	MCS 2010 report in Jul '10 issue	10th International Workshop on Multiple Classifier Systems	Naples, Italy	15-17 Jun 11
<a href="#">MCPR 2011</a>	MCPR 2010 report in this issue	3rd Mexican Conference on Pattern Recognition	Cancun, Mexico	29 Jun-2 Jul 11
<a href="#">ISMM 2011 *</a>		10th International Symposium on Mathematical Morphology	Intra, Lake Maggiore, Italy	6-8 Jul 11
<a href="#">ICVSS 2011 *</a>		International Computer Vision Summer School	Sicily, Italy	11-16 Jul 11
<a href="#">CAIP 2011</a>	CAIP '09 report in Jan '10 issue	14th International Conference of Computer Analysis of Images and Patterns	Seville, Spain	29-31 Aug 11
<a href="#">IMVIP 2011 *</a>		Irish Machine Vision and Image Processing Conference 2011	Dublin, Ireland	7-9 Sep 11
<a href="#">ICIAP 2011</a>	ICIAP 2009 report in Oct '09 issue	16th International Conference on Image Analysis and Processing	Ravenna, Italy	14-16 Sep 11
<a href="#">GREC 2011</a>	GREC 2009 report in Oct '09 issue	9th IAPR International Workshop on Graphics Recognition	Soeul, Korea	15-16 Sep 11
<a href="#">ICDAR 2011</a>	ICDAR 2009 report in Oct '09 issue	11th International Conference on Document Analysis and Recognition	Beijing, China	18-21 Sep 11
<a href="#">IJCB 2011</a>		IEEE/IAPR International Joint Conference on Biometrics	Washington, DC, USA	26-28 Sep 11
<a href="#">ISVC11 *</a>		7th International Symposium on Visual Computing	Las Vegas, Nevada, USA	26-28 Sep 11
<a href="#">CIARP 2011</a>	CIARP 2010 report in Jul '10 issue	16th Iberoamerican Congress on Pattern Recognition	Pucón, Chile	15-18 Nov 11

# Conference Planner: 2012

*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](#) (A. Branzan Albu, ed.)*

Highlighting indicates that paper submission deadline has not yet passed.  
An asterisk \* denotes a non-IAPR event.

## 2012

<b>ICFHR 2012</b>		13th International Conference on Frontiers in Handwriting Recognition	Bari, Italy	Sep 12
<a href="#">ICPR 2012</a>	ICPR 2010 Special Issue: Oct '10	21st International Conference on Pattern Recognition	Tsukuba Science City, Japan	11-15 Nov 12