

# IAPR Newsletter

Volume 33, Number 4  
October 2011

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## **Calls for Papers**

### [ICISP2012](#)

*5th International Conference on  
Image & Signal Processing*  
Agadir, Morocco  
Deadline: January 6, 2012  
June 28-30, 2012

### [CIP2012](#)

*3rd International Workshop on  
Cognitive Information Processing*  
Parador de Baiona, Spain  
Deadline: January 15, 2012  
May 28-30, 2012

### [ICFHR2012](#)

*13th International Conference on  
Frontiers in Handwriting Recognition*  
Bari, Italy  
Deadline: February 28, 2012  
September 18-20, 2012

### [ICPR2012](#)

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

### [S+SSPR2012](#)

*Joint IAPR International Workshops on  
Structural and Syntactic Pattern Recognition (SSPR)  
and  
Statistical Techniques in Pattern Recognition (SPR)*  
Tsukuba, Japan  
Deadline: March 31, 2012  
November 11-15, 2012

### [K.S. Fu Prize](#)

*To be presented at ICPR 2012*  
Deadline: April 6, 2012

### [J.K. Aggarwal Prize](#)

*To be presented at ICPR 2012*  
Deadline: April 11, 2012

## **Call for Submissions**

### ***IAPR Newsletter***

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

Contact the editor:

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**Deadline: January 4, 2012**

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The logo for the IAPR Newsletter features the acronym 'IAPR' in a bold, sans-serif font. To the right of 'IAPR' is a circular emblem containing a stylized globe or network diagram. Below 'IAPR' and the emblem, the word 'Newsletter' is written in a large, elegant, cursive script.

Published in association with the  
IAPR website, [www.iapr.org](http://www.iapr.org)

#### **IAPR Newsletter Publication Schedule:**

The IAPR Newsletter is published four times per year  
during the third week of January, April, July, and October.

## Getting to know...

### Sergey V. Ablameyko, IAPR Fellow



#### How IAPR helped me to become Rector of the Belarusian National University

By [Sergey V. Ablameyko](#), IAPR Fellow (Belarus)

*Professor Sergey V. Ablameyko, IAPR Fellow  
ICPR 1998, Brisbane, Australia*

*For contributions to document image analysis  
and for service to IAPR.*

International communities like IAPR can play an important role in the scientific career of every scientist. It was my case, and I would like to tell you, and especially young researchers, about this successful story.

I graduated from the Belarusian State University as mathematician in 1978 and immediately started to work in the Institute of Engineering Cybernetics of the National Academy of Sciences of Belarus. My supervisor gave me the task to vectorise automatically scanned maps. These investigations were just beginning in the world and we, in Soviet Union, started to do it, also. My first paper appeared in 1979, and in 1984, I published my first book entitled "Methods and algorithms for processing of raster graphical information". I got the PhD degree in 1984 and then the DSc degree in 1990 for research in cartographical image recognition. It was done for military applications, and we could not publish these results widely.

My first trip abroad was in 1988 to Italy, where I visited the Institute of Cybernetics of CNR (Napoli) and met Gabriella Sanniti di Baja and Carlo Arcelli. At that time, I first heard about IAPR. As you possibly know, in 1988, ICPR was moved from China to Italy and fortunately many scientists came to Italy for the conference. Some of them also visited Napoli, and I had the opportunity to meet Gunilla Borgefors, Eiji

**Sergey V. Ablameyko** graduated from Belarusian State University (BSU), Minsk (1978) with a Diploma in Mathematics. In 1984 he got his PhD in the field of Information Processing Systems from the Institute of Cybernetics, Ukrainian Academy of Science and, in 1990, his [DSc](#) degree in the same institution. At present Prof. Ablameyko is the academician of the National Academy of Science (since June 2009), Chairman of the UIIP Academic Council of awarding of PhD and DSc degrees, and Chairman of the BSU Scientific Council. He combines scientific research (image analysis, pattern and graphics recognition, digital geometry, knowledge-based systems, geographical information systems and medical imaging) with organization and editorial activities being the head of BSU (since 2008).

He is on the Editorial Board of *Pattern Recognition Letters*, *Pattern Recognition and Image Analysis*, *Machine Graphics and Vision* and other international and national journals. He is Editor-in-Chief of two national journals. Moreover, he leads a number of international projects in image analysis and GIS and national programs and projects in Informatics and Image Processing. He also manages several Russian-Belarusian joint Programs in Space, Supercomputers and GRID-technologies (each Program has a budget

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Kawaguchi, and other scientists. I did not attend the 1988 ICPR, but learned well about it. The Soviet Society for Pattern Recognition was accepted as an IAPR member in that year, but then in 1991 Soviet

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Union stopped its existence and Soviet IAPR society consequently did too.

In Autumn 1992, Belarusians received agreement from IAPR to create their own society. We organized all researchers working in the pattern recognition area, had a meeting, prepared all documents, and registered the society in our Ministry of Justice. Then, we applied to join IAPR and, in Spring 1993, the Belarusian society was accepted as an IAPR member, and I became IAPR Governing Board (GB) member. At that time, I was head of the image processing laboratory at the Institute of Engineering Cybernetics of National Academy of Sciences.

In 1993, we started to organize the International Conference "Pattern Recognition and Information Processing" that since then is held every two years in Minsk and, starting from 1997, became an IAPR-sponsored conference.

At that time, I started to write my first papers in English. In mid-1990s, I wrote several articles in *IAPR Newsletter* about the state of PR research in countries of former USSR. From 1994 to 2000, I was a member of Publicity & Publications Committee. From 1998 to 2003, I served as the IAPR Newsletter Area Editor. My first book in English was published in 1997 in the USA by SPIE Press. At that time I already had several good journal papers and many proceedings papers.

A really important event for my career happened in 1998: at the Brisbane ICPR, I was elected as an IAPR Fellow for contributions to document image analysis and service to IAPR. Simultaneously from 1998, I became a deputy director of my Institute.

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higher than US\$10 million).

Sergey is a Senior member of IEEE, Fellow of IAPR, Fellow of Belarusian Engineering Academy, Academician of National Academy of Sciences of Belarus. In the International Association for Pattern Recognition (IAPR), he was a First Vice-President of IAPR (2006-2008), President of Belarusian Association for Image Analysis and Recognition.

His publications include more than 350 scientific works, of which nine are authored/co-authored books, 34 edited books and proceedings, and more than 180 refereed papers (in English). Nine PhD dissertations and two DSc dissertations have been prepared and defended under the supervision of Sergey V. Ablameyko.

Sergey is a regular member and chair/co-chair of various conferences, forums, and congresses devoted to computer and engineering problems. For his active participation in the scientific life of his country and in the world research continuum, he was awarded numerous national honors such as the State Prize of Belarus (highest national scientific award), 2002, Award of the National Academy of Sciences for the best scientific work, 2007, Belarusian Medal of F.Skoryna, Russian Award of Friendship and many other awards. He also won several

In 2000, I became a member of IAPR Membership Committee, and in 2002, Chair of that Committee. At that time, several new member societies joined IAPR. For my activity within the IAPR Membership Committee, in 2004, I received an IAPR Certificate of Appreciation.

In 2000, a book that I wrote together with T.Pridmore about line-drawing image

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interpretation was published by Springer. In 2002, I became Director of my Institute. In 2005, I became member of the Presidium of National Academy of Sciences and Chair of Mathematics, Informatics and Physics Division in the National Academy of Sciences.

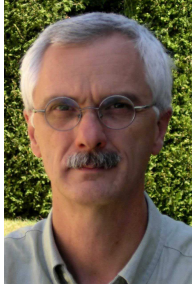
In 2004, I was elected as IAPR second Vice-President, responsible, besides other duties, for the links between IAPR and IFIP (the International Federation for Information Processing). My position as second Vice-President allowed me to understand from the inside all the IAPR activities. In 2006, I was elected as IAPR first Vice-President, responsible for all the IAPR Technical Committees, which required a lot of efforts and time.

Based on my scientific and administrative experience, in the summer of 2008, I was nominated as Rector of the National University—Belarusian State University (BSU)—and in the autumn I was actually appointed. BSU is the main university in Belarus and has around 35,000 students and 8,000 staff members. It became immediately clear for me, that this job would require all my time. I was nominated as IAPR Vice-President for a second term. However, by taking into account that I could have devoted too little time to IAPR, I preferred to withdraw my candidature.

Summarizing, my career evolved along two parallel paths, allowing me to grow: (1) within the IAPR community, and (2) at the administrative level in my country. Of course, my main achievements are the scientific ones. My area of research started from graphics recognition, namely map processing, then extended to processing of engineering drawings, remote sensing images, medical images, etc. Up to now, I have published 13 authored/co-authored books in Russian, English, and Polish, 40 edited/co-edited books and proceedings, more than 130 journal papers, and several hundred conference papers. These scientific results were also obtained due to my deep involvement in the IAPR community. Many papers have been published together with my Italian, Japanese, British, Polish, Russian, etc. colleagues.

I would also add that IAPR helped me to understand and what working at an administrative international level. Moreover, the positions I had within IAPR are well-appreciated in my native country and are very useful for the CVs of all scientists.

Concluding, I would strongly recommend for young researchers to be become involved with their IAPR Member Societies. This will definitely give them many benefits.



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## **A Special Message from the IAPR President**

### **Position of the IAPR ExCo on the next ICPR2012 in Tsukuba**

by [Denis Laurendeau](#), IAPR President (Canada)

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Dear Member of IAPR Community,

The sad events that happened in Japan in the Spring of 2011 have raised many concerns on the organization of the next ICPR2012 in Tsukuba on November 11-15, 2012.

The ExCo has monitored the unfolding of events since then and has been in contact with the ICPR Liaison Committee and the ICPR2012 Organizing Committee.

The IAPR ExCo held its mid-term meeting in Brisbane, Australia on August 8-9, 2011. The organization of the next ICPR in 2012 in Tsukuba was discussed at length by the ExCo.

In addition to the usual issues raised by the organization of an event the size of the ICPR, the ExCo has also taken into account additional issues such as the living conditions (power outage, food supplies, radiation levels, etc.) in Japan after the earthquake and tsunami in its appraisal of the situation in the Tokyo/Tsukuba area and on the opportunity to hold the next ICPR in this part of the world.

Based on the content of the progress report submitted by the ICPR 2012 Organizing Committee, the thorough analysis of this report that was made by the ICPR Liaison Committee, and the complementary information provided by the ICPR 2012 Organizing Committee to the ICPR Liaison Committee on a number of issues (including living conditions in the Tsukuba/Tokyo area), the ExCo has concluded that the organizing process is going well and that solutions to the remaining issues should be found in the near future.

The ExCo wishes to inform the IAPR community of its decision to support the ICPR 2012 Organizing Committee and to maintain Tsukuba as the venue for ICPR 2012, as approved by the GB at its meeting in Tampa. Members of the IAPR community are invited to participate actively in the conference by submitting papers and attending the conference.

The IAPR ExCo provides its full support to the ICPR 2012 Organizing Committee and encourages its members to continue as planned with the organizing process.

The work conducted by the ICPR 2012 Organizing Committee in very difficult professional and personal situations is very much appreciated by the ExCo. The Organizing Committee is invited to maintain regular contact with the ICPR Liaison Committee and the ExCo as the organization process evolves.

Sincerely,  
Denis Laurendeau, IAPR President



## News from the **IAPR EXECUTIVE COMMITTEE**

by Ingela Nyström (Sweden)

Uppsala, September 30, 2011

Between ICPRs the Executive Committee has one physical meeting. Traditionally, this meeting is hosted by the Past President. On August 8-9, we visited Professor Brian Lovell at the University of Queensland in Brisbane, Australia. On the agenda was to check the current status of the Standing and Technical Committees, review the finances, and discuss many other issues. As input to this meeting, we had received mid-term reports from the various committees with many activities reported and suggestions for further actions.

Some of the things we discussed thoroughly were:

- the scholarship program suggested at the GB meeting in Istanbul (the Education Committee is asked to prepare a proposal);
- how IAPR can be made more visible via the publications linked to IAPR (agreements with the publishers should be reviewed);
- the financial risk of organising a conference (an insurance policy should be available);
- and the status of upcoming ICPRs. Please, read IAPR President Denis Laurendeau's message on Page 6 in this Newsletter , where the ExCo supports ICPR 2012 in Tsukuba. The organisers are encouraged to continue their excellent work.

In this edition of the IAPR Newsletter, we are "Getting to Know" Professor Sergey Ablameyko (see Page 3) who brought the Belarusian member society to IAPR. He has served on the Executive Committee and other IAPR committees for a number of years. Since 2008, he is the Rector of the Belarusian State University in Minsk. Due to this prestigious office, he has not been able to contribute to IAPR activities as much, but I know that Sergey continues to strongly support IAPR and our community. This was clear to me when I participated in the 10th International Conference on Pattern Recognition and Information Processing organised by his research group. Enjoy reading his text.

Please, find various information in this newsletter and visit the IAPR webpage [www.iapr.org/](http://www.iapr.org/) for additional IAPR-related information.



## Communication

by Linda J. O'Gorman (USA)

*This article intends to be informative. While specific products are used as examples, it is not the aim of this article to advertise these technologies.*

—A. Branzan Albu, Ed.

“How can communication be improved?” Taken out of context, this question might relate to any number of PR disciplines (and subjects of past and future articles published in the IAPR Newsletter!) from improving communication between advertisers and consumers (see [“Pattern Recognition in the Media: Data Mining”](#), April 2010) to improving communication between individuals (see [Larry O’Gorman’s article “Has the time for telepresence finally come?”](#), April 2010) to improving communication between a prosthetic and the brain (brain-computer interface is a planned topic for an article in this series).

These examples illustrate an increasingly narrow focus on the question of communication. This article presents three examples of systems designed to improve communication. The first builds speech from text using recorded phonemes, the second creates speech from facial muscle movement, and the last turns speech into text.

### Text-to-speech

Text-to-speech is a great feature of navigation systems, and I am amazed (and sometimes amused) by the quality of the synthesized speech. My navigation system has a bit of trouble with the letter “r”, but other than that does quite well. Not, however, nearly as well as what I heard last year in an interview with Matthew Aylett, Chief Technical Officer and co-founder of CereProc, a Scottish company started in 2005. The company has created voices that, according to its home page, sound *real* and have *character*. Their focus is on speech synthesis that is vibrant and contains emotion.

Scott Siegel of National Public Radio (NPR) interviewed Aylett the day before film critic Roger Ebert was scheduled to appear on the Oprah Winfrey Show to unveil the voice created for him by CereProc. According to Aylett, having a prominent figure for their voice creation services has helped improve their technology. CereProc will use a combination of unit selection (breaking recordings into individual “phones” and then

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putting them back together based upon the text entered) and the Hidden Markov Model Speech Synthesis System (which “creates a statistical model of captured sounds over time and then inverts it to produce speech” [1]) to help the synthesized Ebert sound like the real Ebert once did.

Of course, the ability to create a natural sounding voice depends upon the availability of high quality recordings. For their standard [Voice Creation/Voice Selection](#) services, CereProc uses scripted studio recordings. The quality of the [“Voice Creation from Your Speech”](#) of course depends upon the quality of the recordings. In the case of Roger Ebert, the challenge has been the inconsistency in the quality of the available recordings, which were done in different studio environments and using different microphones.

### **Speech from muscle movements**

I heard about this next technology while listening to a morning news program. Through the life experiences of a man who lost his voice to cancer 16 years ago, listeners were taken through the technological developments in the area of soundless speech: from white board and pen to the electrolarynx (a small metal device that creates a robotic voice when held to the throat while speaking) to a voice prosthesis (a surgically implanted valve in the throat that creates a raspy, breathy voice).

Listeners were then introduced to a new

technology that had been presented in February, 2011, at the American Association for the Advancement of Science (AAAS) fair in Washington, D.C. Michael Wand of the Cognitive Systems Laboratory at the Karlsruhe Institute of Technology in Germany discussed and demonstrated the Silent Speech Recognition Program, which is based on his Ph.D. thesis research.

“The technology is based on Electromyography, i.e. the capturing and recording of electrical potentials that arise from muscle activity.” The electrical potentials are currently captured through electrodes applied to the skin. While the system currently recognizes about 2,000 words with a 90% accuracy rate, it can get confused by non-speech facial movements such as laughing and frowning. In future, the electrodes and software will be incorporated into a mobile phone held to the side of the face.

### **Text-from-speech**

While investigating the topics of this article further, I also came upon a blog entry in PCWorld that discussed BMW’s announcement that they would have a new dictation option available in about three years. Currently, some car manufacturers, Ford and BMW among them, have text-to-speech systems (Ford and BMW both use Nuance technology) that allow drivers to “stay connected” while driving by reading aloud through the car’s audio system emails, text messages, status updates, and news feeds. That’s half of the

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communication: incoming messages. Earlier this year, BMW announced that it would enable outgoing messages to complete the communication by offering a voice-to-text option (available within three years) to enable those in the car to dictate email messages.

While many cars and other devices have voice-activation options, these use limited, special-purpose vocabularies. The new technology announced by BMW will use speech-recognition algorithms with a database of over a million words and will include voice commands for editing functions. The focus is on staying safe while staying connected.

## References:

[1] Grossman, Wendy M. "Getting Voice: New Speech Synthesis Could Make Roger Ebert Sound More Like Himself." *Scientific American*, September 13, 2011.

## For more information:

### ***Text-to-speech***

[CereProc web site](#)

### ***Speech from muscle movements***

[Cognitive Systems Lab Silent Speech Interfaces web page](#)

### ***Text-from-speech***

[Nuance Automotive Driving Innovation and Safety for Today's Drivers](#)

## Sources:

### ***Text-to-speech***

["Software Mimics Person's Voice,"](#) *All Things Considered*, National Public Radio, February 25, 2010.

### ***Speech from muscle movements***

Cuda-Kroen, Gretchen ["Speech Device Gives Hope To Those With No Voice,"](#) *Morning Edition*, National Public Radio, February 28, 2011.

### ***Text-from-speech***

Gain, Bruce ["BMW Aims For Cars to Take E-mail Dictation,"](#) *PCWorld: Business Center*, March 6, 2011.

# BOOKSBOOKSBOOKS

Book reviews recently published in the IAPR Newsletter

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*Handbook of Geometric Computing*  
by Eduardo Bayro Corrachano (Ed.)  
Jul '11

*Essential Image Processing and GIS for Remote Sensing*  
by Jian Guo Liu and Philippa Mason  
Jul '11

*Handbook of Pattern Recognition and Computer Vision, 4th Edition*  
by C.H. Chen, July 2011  
Jul '11

*Multi-Sensor Data Fusion with MATLAB*  
by Jitendra R. Raol  
Apr '11

*Embedded Computer Vision*  
Series: *Advances in Computer Vision and Pattern Recognition*  
by Branislav Kisacanin, Shuvra S. Bhattacharyya, and Sek Chai (Eds.)  
Apr '11

*NETLAB: Algorithms for Pattern Recognition*  
Series: *Advances in Computer Vision and Pattern Recognition*  
by Ian T. Nabney  
Jan '11

*Image Processing: the Fundamentals, 2nd Edition*  
by Maria Petrou and Costas Petrou  
Jan '11 [

*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

# Conference Report: MVA 2011

## 12th IAPR Conference on Machine Vision Applications

June 13-15, 2011  
Nara, Japan

General Chair  
Keiji Yamada (Japan)

Program Chair  
Yasuyo Kita (Japan)

### Report prepared by the General Chair

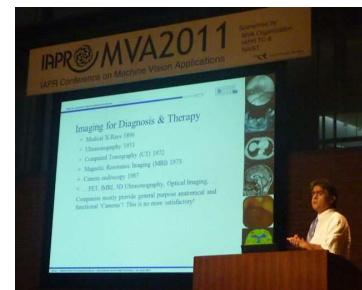
The Twelfth IAPR Conference on Machine Vision Applications (MVA2011) was co-sponsored by the MVA Organization, IAPR TC-8, and the Nara Institute of Science and Technology. The venue was Nara Centennial Hall at the center of Nara city. The oral sessions were held in Harmony Hall, with a capacity of over 400; the posters were presented in the foyer around the conference room. In the hall and room for the presentations, wireless network was provided to all the participants.

In spite of the disaster that struck Japan in March, 2011, there were 217 participants from 29 countries. The topics of the conference were algorithms and architectures of machine vision applications. From 208 submissions, 36 oral presentations and 108 poster presentations were selected. In addition to the accepted papers, there were three [IAPR invited talks](#): “Model Guided Multimodal Imaging and Visualization for Computer Assisted Interventions” by Prof. Nassir Navab of the Technical University of Munich, Germany; “Behavior Imaging: Using Computer Vision to Study Autism” by Prof. James M. Rehg of the Georgia Institute of Technology, USA; and “Stereo Vision System on Automobile for Collision Avoidance” by Prof. Keiji Saneyoshi, of the Tokyo Institute of Technology, Japan.

The first MVA workshop was held in Tokyo in 1988,

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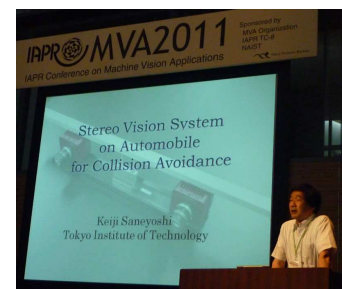
### IAPR Invited Speakers



Prof. Nassir Navab



Prof. James M. Rehg



Prof. Keiji Saneyoshi

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and at every MVA conferences after MVA'98, the Most Influential Paper over the Decade Award is given to the authors of papers appearing in the conference 10 years earlier which have been recognized as having had the most significant influence on machine vision technology over the subsequent decade. At MVA2011, three papers presented at MVA2000 were selected for this award:

- "Dense Disparity Map Estimation Respecting Image Discontinuities: A PDE and Scale-Space Based Approach" by Luis Alvarez, Rachid Deriche, Javier Sanchez, and Joachim Weickert;
- "Radial Distortion Snakes" by Sing Bing Kang.
- "Optimized Camera Viewpoint Determination System for Soccer Game Broadcasting" by Keisuke Matsumoto, Satoshi Sudo, Hideo Saito, and Shinji Ozawa;

At MVA2011, a Best Paper Award, Best Application Paper Award, and Best Poster Award were established, and the papers listed below were selected for the awards from those presented at the conference.

#### **Best Paper Award**

"Homogenous Superpixels from Random Walks" by Frank Perbet and Atsuto Maki

#### **Best Application Paper Award**

"A Head-Wearable Short-Baseline Stereo System for the Simultaneous Estimation of Structure and Motion" by Hernan Badino and Takeo Kanade

"Fast and Structure-preserving Inpainting Based on Probabilistic Structure Estimation" by Takashi Shibata, Akihiko Iketani, and Shuji Senda

#### **Best Poster Award**

"Fast Combined Separability Filter for Detecting Circular Objects" by Yasuhiro Ohkawa, Chendra Hadi Suryanto, and Kazuhiro Fukui

The awards were handed out at the banquet held at Hotel Nikko Nara, which is located just a few minutes walking distance from the conference venue.

In addition to the presentations, an exhibition of machine vision-related products was held to stimulate participants and promote their discussions about future research topics of machine vision applications which those products can innovate.

Furthermore, a technical tour was held to visit the National Institute of Information and Communications Technology, the Advanced Telecommunications Research Institute International, and the Nara Institute of Science and Technology. The participants enjoyed demonstrations of augmented reality, robot vision, large 3D display without glasses, and so on.

The MVA Organization is now planning MVA2013. We wish to once again have a lot of excellent papers and discussions with many researchers from all over the world..

# Conference Report: [MCPR 2011](#)

## 3rd Mexican Conference on Pattern Recognition

28 June-2 July 2011  
Cancun, Mexico

Honorary Chair: [Edwin Hancock](#), IAPR Fellow (UK)

Chairs:

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

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

[Cherif Ben-Youssef Brants](#) (Mexico)

Report prepared by the Chairs



MCPR2011 was held at the hotel Cancun Caribe Park Royal Grand in Cancun, Mexico. The conference was organized by the Computer Science Department of the INAOE and the Cancun Technological Institute. MCPR2011 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 17 countries. In total 69 papers were submitted, out of which 37 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 37 accepted papers were published by Springer Verlag in the volume [Pattern Recognition](#), LNCS 6718, edited by José Francisco Martínez-Trinidad, Jesús Ariel Carrasco-Ochoa, Cherif Ben-Youssef Brants, and Edwin Hancock.

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Three professors were invited to give keynote addresses and tutorials on topics in Pattern Recognition: Prof. Kim Boyer (IAPR invited speaker), Head of the Department of Electrical, Computer, and Systems Engineering at Rensselaer, USA; Prof. Joachim M. Buhmann, Department of Computer Science, Institute of Computational Science, ETH Zurich, Switzerland; and Prof. Carlos Coello Coello, Department of Computer Science, CINVESTAV-IPN, Mexico.

During the event, meals took place at the hotel Cancun Caribe Park Royal Grand in Cancun. The conference finished with a dinner where a violinist played classical music.

The conference was organized in one track for oral presentations. We consider that MCPR2011 served as a forum for scientific research exchange and to provide a fruitful forum to enrich the collaboration among the Mexican Pattern Recognition researchers and the broader international Pattern Recognition community.

The MCPR steering committee decided that the 4th Mexican Conference on Pattern Recognition will be held in Huatulco, Mexico, in the last week of June 2012.

## Invited Speakers



IAPR Invited Speaker Prof. Kim Boyer, IAPR Fellow



Prof. Carlos  
Coello Coello



Prof. Joachim M.  
Buchmann



**Proceedings of the  
conference have been  
published by Springer  
in the series  
Lecture Notes in  
Computer Science  
(Volume 6718)**

Please check the ICPR 2012 web site [www.icpr2012.org](http://www.icpr2012.org) frequently.

# ICPR

The 21st International  
Conference on Pattern Recognition

# 2012

November

# 11-15, 2012

Tsukuba International Congress Center  
Tsukuba Science City, JAPAN

The International Conference on  
Pattern Recognition (ICPR)  
is the  
major scientific event  
organized under the auspices of  
the  
International Association for  
Pattern Recognition (IAPR).

The aim of this conference is to  
bring together international ex-  
perts to share their experiences  
and to promote research and de-  
velopment in  
Pattern Recognition.

ICPR2012  
Paper Submission Deadline:  
March 31, 2012

## General chairs

Jan-Olof Eklundh (Sweden), Yuichi Ohta (Japan), Steven Tanimoto (USA)

## Program chairs

Alberto Del Bimbo (Italy), Kim L. Boyer (USA), Katsushi Ikenouchi (Japan)

## Track chairs

### Computer & Robot Vision

Richard Bowden (UK)  
Sing Bing Kang (USA)  
Long Quan (China)

### Virtual Reality & Medical Applications

Tobias Höllerer (USA)  
Gudrun Klinker (Germany)  
Naokazu Yokoya (Japan)

### Pattern Recognition & Applications

Noboru Babaguchi (Japan)  
Rita Cucchiara (Italy)  
Qiang Ji (USA)

### Signal, Speech, and Video Processing

Tsuhan Chen (USA)  
Touradj Ebrahimi (Switzerland)  
Kyoung Mu Lee (Korea)

### Document Analysis

Bidyut B. Chaudhuri (India)  
Koichi Kise (Japan)  
Daniel P. Lopresti (USA)

## Advisory committee

Herst Dunke (Switzerland), Masakazu Ejiri (Japan), Panga Kasturi (USA),  
Josef Kittler (UK), Takashi Matsuyama (Japan),  
Gabriella Sanniti di Baja (Italy), Yoshiaki Shirai (Japan),  
Ching Y. Suen (Canada), Johji Tajima (Japan)

### Workshop Co-Chairs

### Tutorial Co-Chairs

### Demos, Exhibits and Contests Co-Chairs

### Publication Co-Chairs

### Finance Co-Chairs

### Publicity and Sponsorship Co-Chairs

### Award Chair

### Web Chair

### Local Arrangement Co-Chairs

Yoichi Sato (Japan), Rahul Sukthankar (USA)

Andreas Dengel (Germany), Eisaku Maeda (Japan)

Robert Fisher (UK), Yasuyo Kita (Japan)

Hideo Saito (Japan), Yoshimitsu Aoki (Japan)

Hiroshi Sako (Japan), Keiji Yamada (Japan)

Atsushi Imiya (Japan), Kazuhiro Fukui (Japan)

Ken-ichi Maeda (Japan)

Kenji Suzuki (Japan)

Itaru Kitahara (Japan), Takeshi Kurata (Japan)

### Important Dates

Deadline for paper submission

March 31, 2012

Notification of paper acceptance

June 15, 2012

Camera ready papers and author registration

July 15, 2012

Deadline for workshop proposal

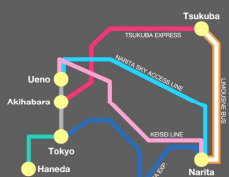
January 6, 2012

Deadline for tutorial proposal

April 30, 2012

Deadline for contests proposal

July 15, 2011





# Call for Nominations

## King-Sun Fu Prize

**Nominations deadline: 6 April 2012**

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

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.

This biennial prize is given to a living person in 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 nomination must be made 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 nominator. The prize recipient shall be selected by the Prize Committee, subject to approval by the IAPR Governing Board. Members of the IAPR Executive Committee, as well as of the Prize Committee, shall be ineligible for the prize and may not serve as nominators or endorsers.

The 2012 prize will be presented at the

21st International Conference on Pattern Recognition (ICPR)  
Tsukuba Science City, Japan  
November 11 - 15, 2012

The nomination must be made on special nomination and endorsement forms, and must be received by the Prize Committee Chairman no later than April 6, 2012. Completed and signed nomination and endorsement forms must be submitted in electronic form. The nominator as well as endorsers should send their completed forms by email to the chairman of the Prize Committee:

Prof. Horst Bunke  
Chair, K-S. Fu Prize Committee  
University of Bern, Switzerland  
email: [bunke@iam.unibe.ch](mailto:bunke@iam.unibe.ch)

### **Past winners of the K-S Fu Prize:**

**Professor Horst Bunke**  
2010 Istanbul

**Professor Anil K. Jain**  
2008 Tampa

**Professor Josef Kittler**  
2006 Hong Kong

**Professor J. K. Aggarwal**  
2004 Cambridge

**Professor Thomas S. Huang**  
2002 Quebec City

**Professor Theo Pavlidis**  
2000 Barcelona

**Professor Jean-Claude Simon**  
1998 Brisbane

**Professor Teuvo Kohonen**  
1996 Vienna

**Professor Herbert Freeman**  
1994 Jerusalem

**Professor Levin Kanal**  
1992 The Hague

**Professor R.L. Kashyap**  
1990 Atlantic City

**Professor Azriel Rosenfeld**  
1988 Rome

# ICPR 2012

## Additional Calls for Nominations: J.K. Aggarwal Prize and IAPR Fellow Awards

\*\*\*Nomination and Endorsement Forms are available at "Fellows and Awards" page of the IAPR web site\*\*\*

### Call for Nominations for the J. K. Aggarwal Prize

Deadline for Submission of Nomination and  
Endorsement Forms is April 11, 2012

The International Association for Pattern Recognition (IAPR) is pleased to announce a call for nominations for the third 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.

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 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 2012 prize will be presented at the  
21st International Conference on Pattern Recognition  
(ICPR)  
Tsukuba, Japan  
November 11-15, 2012

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

The nomination must be made on special nomination and the endorsement forms and 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:

Song-Chun Zhu Chair, J.K. Aggarwal Prize Committee  
8125 Math Science Bldg. Box 951554  
University of California, Los Angeles  
Los Angeles, CA 90095  
USA  
email: [sczhu@stat.ucla.edu](mailto:sczhu@stat.ucla.edu)

### Call for Nominations: IAPR Fellow Award

Deadline for Submission of Nomination and  
Endorsement Forms is January 28, 2012

We welcome nominations for the award of FIAPR. Anyone is eligible to be nominated, except for the current members of the Executive Committee and of the Fellow Committee.

To initiate a nomination, a nominator must submit an [IAPR Fellow Nomination Form](#). Any member of an IAPR Member Society can serve as nominator, except for the nominee himself and the current members of the Fellow Committee.

Each nomination must be endorsed by at least one recommendation letter (submitted [Endorsement Form](#)), either from a member of an IAPR Member Society (different from the nominator) or from an IAPR Fellow.

Electronic [Nomination](#) and [Endorsement](#) forms should be submitted no later than January 28, 2012

Each electronic submission will be acknowledged by an email containing the submitted form. In case of difficulty please address your data and the problem encountered through email to the chair of the Fellow Committee, Mark Nixon,

To: [msn@ecs.soton.ac.uk](mailto:msn@ecs.soton.ac.uk)  
Subject: IAPR fellowship 2012  
CC: [iaprwebmaster@cedar.buffalo.edu](mailto:iaprwebmaster@cedar.buffalo.edu)

For detailed information about the nomination and the endorsement please download these [instructions](#). [Electronic versions](#) of the nomination forms are also available.

IAPR appreciates your efforts to support our fellowship program!

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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](mailto:Arjan.Kuijper@iapr.org), IAPR Newsletter Associate Editor for Book Reviews

The following titles are available to be reviewed:

### ***Handbook of Augmented Reality***

**Furht**, Borko (Ed.)

Springer, 2011, 2011, XXII, 746 p. 375 illus.

[www.springer.com/computer/image+processing/book/978-1-4614-0063-9](http://www.springer.com/computer/image+processing/book/978-1-4614-0063-9)

In the series: [Springer Briefs in Computer Science](#) :

### ***Markov Models for Handwriting Recognition***

**Plötz**, Thomas, **Fink**, Gernot A.

Springer, 2011, VI, 78 p. 5 illus., Softcover

[www.springer.com/computer/image+processing/book/978-1-4471-2187-9](http://www.springer.com/computer/image+processing/book/978-1-4471-2187-9)

### ***Traffic-Sign Recognition Systems***

**Escalera**, S., **Baró**, X., **Pujol**, O., **Vitrià**, J., **Radeva**, P

Springer, 2011, V1, 96 p. 34 illus.

[www.springer.com/computer/image+processing/book/978-1-4471-2244-9](http://www.springer.com/computer/image+processing/book/978-1-4471-2244-9)

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

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

2011				
<a href="#">CIARP 2011</a>	CIARP 2010 report in Jul '10 issue	16th Iberoamerican Congress on Pattern Recognition	Pucón, Chile	15-18 Nov 11
<a href="#">ACPR 2011</a>		First Asian Conference on Pattern Recognition	Beijing, China	28-30 Nov 11
<a href="#">DICTA 2011</a>	DICTA 2010 report in Apr '11 issue	International Conference on Digital Image Computing: Techniques and Applications	Noosa, Queensland, Australia	6-8 Dec 11
2012				
<a href="#">CTIC 2012 *</a>		4th International Workshop on Computational Topology in Image Context *	Bertinoro, Italy	6-8 Feb 12
<a href="#">DAS 2012</a>	DAS 2010 report in Jan '11 issue	10th IAPR International Workshop on Document Analysis Systems	Gold Coast, Queensland, Australia	27-29 Mar 12
<a href="#">ICB2012</a>	ICB 2009 report in Oct '09 issue	5th IAPR/IEEE International Conference on Biometrics	New Delhi, India	30 Mar-1 Apr 12
<a href="#">ICIEV12 *</a>		International Conference on Informatics, Electronics & Vision *	Dhaka, Bangladesh	18-19 May 12
<a href="#">CIP2012</a>	CIP 2010 report in Apr '11 issue	3rd International Workshop on Cognitive Information Processing	Parador de Baiona, Spain	28-30 May 12
<a href="#">Summer School *</a>		10th IEEE EMBS International Summer School for Biomedical Imaging *	Berder, France	22-30 Jun 12
<a href="#">ICISP2012</a>	ICISP 2010 report in Jan '11 issue	5th International Conference on Image & Signal Processing	Agadir, Morocco	28-30 Jun 12
<a href="#">ICFHR 2012</a>	ICFHR 2010 report in Apr '11 issue	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
<a href="#">S+SSPR2012</a>	S+SSPR 2008 report in Apr '09 issue	Joint IAPR International Workshops on Structural and Syntactic Pattern Recognition (SSPR) and Statistical Techniques in Pattern Recognition (SPR)	Tsukuba, Science City, Japan	11-15 Nov 12
2013				
<a href="#">CAIP 2013 *</a>	CAIP 2009 report in Jan '10 issue	15th International Conference on Computer Analysis of Images and Patterns *	York, UK	27-29 Aug 13