INTERNATIONAL ASSOCIATION FOR PATTERN RECOGNITION



Calls for Papers on Page 2

In this issue...

In Memoriam.....Page 3 Virginio Cantoni, Domenico Tegolo, and Bertrand Zavidovique remember their friend and colleague Professor Vito Di Gesù who passed away on March 15, 2009.

INSIDE the IAPR: Message from the President

......Page 5 Brian Lovell, newly elected IAPR President, discusses key IAPR issues.

From the ExCo.....Page 6 IAPR Secretary Denis Laurendeau shares news from the IAPR Executive Committee.

Conference and Workshop Reports:

IVCNZ 2008 23rd International Conference Image and Vision Computing New Zealand.......Page 10

DICTA 2008 Digital Image Computing: Techniques and ApplicationsPage 11
S+SSPR 2008 Joint IAPR International Workshops Structural and Syntactic Pattern Recognition (SSPR) and Statistical Techniques in Pattern Recognition (SPR)Page 13
PRRS 2008 5th IAPR Workshop on Pattern Recognition in Remote SensingPage 15
<i>Of Interest</i> Page 17 Free books available for review.

<u>Conference Planner</u>Page 18 Chart of some upcoming IAPR and non-IAPR conferences of interest to the IAPR community.

The views expressed in this newsletter represent the personal views of the authors and not necessarily those of their host institutions or of the IAPR.

Calls for Papers

AND 2009 Third Workshop on Analytics for Noisy Unstructured Text Data Barcelona, Spain Deadline: April 20, 2009 July 23–24, 2009

<u>IWCF09</u>

3rd International Workshop on Computational Forensics The Hague, The Netherlands Deadline: April 24, 2009 August 13-14, 2009

CIARP 2009

14th Iberoamerican Conference on Pattern Recogniton Guadalajara, México Deadline: June 7, 2009 November 15–18, 2009

ICFHR 2010

International Conference on Frontiers in Handwriting Recognition Kolkata, India Deadline: ? November 16–18, 2010

ICPR 2010

20th International Conference on Pattern Recognition Istanbul, Turkey Deadline: January 15, 2010 August 23-26, 2010

Call for Submissions

IAPR Newsletter

Articles, announcements, book reviews, conference and workshop reports

Contact the editor: Alexandra Branzan Albu, <u>aalbu@ece.uvic.ca</u>

Deadline: June 19, 2009



Published in association with the IAPR website, <u>www.iapr.org</u>

IAPR Newsletter Publication Schedule:

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

To contact us:

Newsletter Editor:

Alexandra Branzan Albu email: <u>aalbu@ece.uvic.ca</u> Home page: <u>www.ece.uvic.ca/~aalbu/</u>

Layout Editor:

Linda J. O'Gorman email: <u>logorman@alumni.duke.edu</u>

In Memoriam

A Pleasant Traveling Companion and Tireless Worker Has Left Us

By Virginio Cantoni (Italy), Domenico Tegolo (Italy), and Bertrand Zavidovique (France)

"Don Vito" Di Gesù was often joking on his heaven connection. This time, despite a last joke about working a miracle the Monday before, he left us a few days later.

Vito has been our traveling companion, and a friendly figure of the whole scientific community in Pattern Recognition, for thirty years. We met him first at the time he was evolving from his primary interest in astrophysics, a field he always kept relations with, towards data analysis and further computer architecture concerns. With his characteristic sleight of mind and never inhibited curiosity, he was bringing us the rigor of fundamental



Vito Di Gesù

25 March 1945 Torino, Italy–15 March 2009 Palermo, Italy
Full Professor in Computer Science, University of Palermo
Researcher in Image and Data Analysis, Statistical Pattern Recognition, Parallel Architecture for Image Processing, Quantum Information.
Applications to Biomedical Images, Astronomical Data, Bioinformatics, Remote Sensing
IAPR Fellow in 1994
Mahalanobis Prize in 1994
President of GIRPR from 1990 to 1994

Initiator and Chair of IAPR - TC 13 from 1986

One story among so many: Vito comes to Pavia for a national project meeting. Let us precise that he was the spitting image of Fabio Mussi, the Italian Minister of the University at that time, a fellow from Tuscany. After a full morning of intensive work, we soon agreed on a gag. Coming from the dean's office. Vito-the-Minister meets a first colleague who is duly introduced and, under surprise, begins right away an obsequious long and inaccurate speech briefly answered by "the Minister" in a quasi-Tuscan parlance. Comes a second professor who submits a formal legalistic request which Vito-the-Minister. in

physics and novel ideas or lighting.

But curiously enough that is not the recall we have in mind of these times. From the start, a major contribution of his was his incredibly optimistic manner of taking life, of mixing its many facets. We soon got to know his families, the civil one and the academic one. Vito was treating his students like colleagues and, we ought the truth to say, some colleagues – the one who deserved it, of course – like students. a fluent Tuscan fashion, swears to pay attention to very soon. About to come back to the meeting and waiting for a late member, each of us stands at a different corner of the square: a third beggar asks after the Minister: "He is the watchman in that corner, Fabioooooo !". Vito who is now fully in his political character, runs fast to join and starts a long electoral argument with a genuine Tuscan accent!

Indeed, Vito had this unique way of approaching

(Continued from page 3)

questions, however it was, with affability and never taking himself seriously. Over thirty years, we surely drank quite a lot together and with many respected characters in our community, we ate quite significantly, too, hunting for good small restaurants over the world. Many of our generation remember passionate discussions about politics, cinema or music, religion, or human stupidity. Some of us keep in mind hilarious, after-meal parodies of Italian opera. A happy few know how well he played several instruments, such as the violin or the guitar, and how enjoyable was a working session with him.

Of course in thirty years we worked a lot, too. From the first interests in Computer Architecture as Pyramids, shared by a few teams over Europe, to our recent little theory on Symmetry, passing through his extensive research achievements on intelligent clustering, Vito was a hard worker always ready for new techniques or cross fertilization between various disciplines. He is certainly at the origin of a rapprochement between the fields of soft computing and artificial vision, not only doing research by himself in Fuzzy Clustering or Genetic Algorithms, but also participating actively to the success of the WILF conference. His interest in Parallel programming and efficient implementations of machine vision, more recently on heterogeneous systems, never faded. Here again he contributed significantly to spread results through conferences like the CAMP(s) workshops as a supportive participant and organizer. As for applications, on top of his maintained interest in Astronomy and Astrophysics to which he was applying his research on Data Mining and Information Fusion, we can cite Remote Sensing and, among other medical contributions, diagnosis, e.g. from tomography image analysis. These last years, inspired by his new interest in Quantum Computing, Vito was campaigning actively for Interdisciplinary Science, a concept he had practiced over years. For instance, his contribution to our series of workshops on Human-Machine Perception had been decisive. He first organized a meeting to prove the existence: that was the very successful

Workshop on Data Analysis in Astronomy (Erice, April

<u>2007</u>) where surprisingly enough Cosmology got to connect with Bioinformatics in view of cross fertilization. Then he devoted quite some energy to gather a dozen concerned colleagues from over the world into the ICIS consortium and to actually foster the idea up to a concrete activity.

Professor Di Gesù was very anxious about spreading knowledge over the scientific community and especially to the young researchers. He co-edited more than two dozen books and organized a dozen conferences, not to forget about sixty conferences where he served as a committee member. On top of event organizations and committee memberships, he took his fair share of Presidencies and Project leadership roles. Former President of GIRPR (the IAPR Italian Society), he was initiating since 1986 its TC13 on PR in Astronomy and Astrophysics. He was responsible of several projects for the Italian Ministry of Scientific Research and the Italian Space Agency, and was also the national coordinator and member of Governing Boards of several European projects. More locally, he was the Director of the session on Systems and Man-Machine interaction of the CINI - Italian Interuniversity Consortium in Informatics – and a member of its Governing Board. He took responsibility for the consortium COMETA and for the SOCRATES/ ERASMUS on Informatics.

There is no surprise that he received the IAPR fellowship at the very first assignment in 1994 and the Mahalanobis prize the same year.

Vito was like this rock in the bay of Palermo that was supporting another favorite joke of ours. We allegedly planned to buy it for half price, because it was underwater half the year long. It was never for sale, but it virtually hosted various dreamlike constructions with the ultimate cybernetic and communication technology. The more secret and often hidden part of his character was the more solid and a foundation for our group. Sadly, unlike the rock, Vito will not emerge this spring.

INSIDE the IAPR



Professor Brian C. Lovell The University of Queensland, Australia

I believe that the IAPR is an excellent organisation, so I have always felt very privileged to serve in any way. So, it is indeed a great honour for me to serve as IAPR President for 2008-2010. I am also privileged to have a wonderful ExCo team with both enthusiasm and experience, and I look forward to great outcomes in the coming months.

The ExCo made a good start at the first meeting in Tampa where we drafted the new committee memberships.

These committees are now almost complete and some are already very active with their tasks. The <u>standing committees</u> take on much of the workload of the IAPR, and their activities keep the organisation healthy and facilitate change. We have encouraged younger members by recruiting new people, including recent fellows. As a society we need to build the new generation of future leaders, and committee service is an excellent introduction to IAPR activities.

The IAPR has a long history but memories of the early years are fading, and there are few founding

members left to recall events. Through the Advisory Committee we are making a concerted effort to collect and collate this information before it is lost. There was a history page on the old IAPR website, but there is very little information on the current site. If members do have any information about the early days that they wish to share please contact the committee.

Another task of the Advisory Committee is to decide what to do when there are breeches of the IAPR policies on ethics. For example, at ICPR2008 in Tampa some people registered but did not attend the conference and also did not inform the organisers. This is guite unacceptable and resulted in some embarrassing holes in the oral program. At ICPR2008, the problem was exacerbated by a clash with the NIPS (Neural Information Processing Systems) conference, but there is still no excuse for not informing the organisers of absence. So the IAPR needs to not only state a policy on ethics, it needs to encourage professional ethics by fair and practical mechanisms to reduce the impact of such poor behaviour on its events and publications. These policies will be developed over the coming months and will be discussed with the Governing Board before release on the IAPR website in time for ICPR2010 in Istanbul.

At the last Governing Board meeting it was decided that the ICPR Standing Committee will take a much stronger role in ensuring the quality of future ICPRs.

(Continued on page 6)

(Continued from page 5)

The Standing Committee will take a leadership role in technical quality, so the bid team can concentrate on local organisation. This will effect the shape of future ICPR bids, so the relevant committees are revising the ICPR bid guidelines accordingly.

There will be a two-day ExCo meeting in Nancy on the 15th and 16th of July to discuss IAPR issues in detail and obtain early feedback from the committees. I will report on this in a future letter.

As with any organisation, the Newsletter serves a major role as the major contact for our membership. So, finally, I wish to thank Larry O'Gorman our former Newsletter editor and congratulate Alexandra Albu as incoming editor (see article in January 2009 issue).

Regards,

Brian Lovell, President of the IAPR

See related article in this issue,

News from the IAPR Executive Committee

Do you have information about IAPR's history?

Contact the Advisory Committee

Herb Freeman, Chair <u>hfreeman@comcast.net</u>



News from the IAPR EXECUTIVE COMMITTEE

By Denis Laurendeau (Canada)

It has been a very busy period for the IAPR ExCo since the last article appeared in the January issue of the Newsletter which happened to be the first issue following ICPR 2008 in Tampa. While writing this article in my office in Quebec City with outside temperatures still way under zero, I miss the warm weather we all experienced in Tampa last December!

Indeed, the ExCo has been working intensively on the nomination of the chairs of the IAPR standing committees and technical committees. Again this time, the response from the researchers in our community ready to serve on the various IAPR committees has been outstanding. There is no doubt that the IAPR is a very dynamic association. However, the IAPR still needs to attract young researchers in its committees and workgroups, so don't hesitate to promote the association in your member society and to raise the interest of young colleagues for IAPR activities.

See related article in this issue, Letter from the President

A proof of this dynamism is the creation of a new Technical Committee on Computational Forensics (TC-06) that has been approved by the Governing Board at its last meeting in Tampa.

The Governing Board has also approved that a part of the budget be allotted for supporting IAPR committees, which would wish to initiate development on targeted topics. The ExCo is now thinking of how proposals for financial support could be submitted and approved. More information on this topic will be made available in the next months. It is our pleasure to announce that the Governing Board has approved the venue of the 2012 ICPR. The ICPR will be hosted in Tsukuba, Japan, on November 12-15, 2012, with Tutorial day on November 11. Meanwhile, the Organizing Committee for the <u>ICPR 2010</u> in Istanbul is already at work for preparing the next edition of IAPR's main event.



While preparing the post-mortem of the ICPR 2008 in Tampa, Prof. Kasturi's team has found that a significant percentage of non-member registrations came from participants whose country is already a member society of the IAPR. This means that ICPR participants may not always be informed of the existence of their national society. It would be important to increase the visibility of the national societies in order to better publicize IAPR's activities and to increase its membership.

Finally, it is relevant to congratulate the new editor of this Newsletter, Dr. Alexandra Branzan-Albu, and her team for the excellent work done in preparing the January issue of the newsletter. The past editor, Larry O'Gorman, had set very high standards for the electronic Newsletter, and it is comforting to see that the new team is maintaining the quality of this important communication channel between the IAPR and its community of researchers and partners.

Conference Report: CIVR 2008

7th International Conference on Image and Video Retrieval

7-9 July 2008 Niagara Falls, Ontario, Canada

General Co-Chairs:

<u>Jiebo Luo</u> (USA) <u>Ling Guan</u> (Canada)

Report prepared by:

Jiebo Luo



Breathtaking view from the conference hotel, the Sheraton Fallsview



Some of the conference organizers celebrate another successful edition of CIVR.

The <u>ACM</u> (Association for Computing Machinery) International Conference on Content-based Image and Video Retrieval (CIVR) is a prominent technical conference in this field. After 5 editions, CIVR has now become an official ACM Conference and an IAPR co-sponsored event since 2007 in Amsterdam (thanks to the initiatives by 2007 co-chairs Marcel Worring and Nicu Sebe).

The 2008 edition was chaired by Jiebo Luo and Ling Guan. CIVR is the dedicated annual professional meeting for communicating the state-of-the-art research and technology in image and video retrieval. As in previous years, starting with the first CIVR conference in 2002 and continuing to the first ACM-branded CIVR in 2007, the conference seeks to illuminate the state of the art in image and video retrieval between researchers and practitioners throughout the world and provide an international forum for the discussion of challenges in the fields of image and video retrieval. In a nutshell, CIVR covers all aspects of image and video retrieval, from underlying technologies and theories to applications and practice. The three-day conference consisted of three major parts: the regular and special session tracks on Monday and Tuesday, a full Practitioner's Day on Wednesday, and the VideoOlympics exhibition showcasing live-action video search and retrieval. We were excited to host two research keynote presentations by Prof. Jiawei Han of the University of Illinois at Urbana-Champaign and Prof. Alberto Del Bimbo of University of Florence, as well as one application key-

(Continued from page 8)

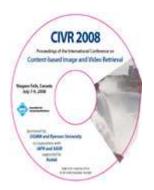
note by Dr. Edward Chang of Google Research, China.

The program co-chairs, Alan Hanjalic, Mohan Kankanhalli, and Ivan Lee, were responsible, along with a program committee of 70 members, for selecting the full paper program for the regular paper track. The regular paper track received 123 paper submissions. The rigorous review process resulted in the acceptance of 15 oral presentations and 42 poster presentations. This represents an acceptance rate of 12% for oral and 34% overall.

To highlight important and emerging topics, the number of special sessions increased from one in 2007 to three in the research track and one in the practitioner track in 2008. The special sessions cochairs Lexing Xie and Qi Tian did an excellent job identifying and coordinating the various special topics. The co-chairs of the Practitioners' Day program, James Wang and Nozha Boujemaa, put together an impressive line-up of talks for the application side of CIVR. The co-chairs of the VideoOlympics, Marcel Worring, Cees Snoek, Rong Yan, and Alex Hauptmann, made the much anticipated event another great success with more participating teams and a highly involved audience. All the organizers put in an enormous amount of work to bring an exciting and high quality conference, and their contributions are much appreciated by us and the entire CIVR community. In particular, Ivan Lee received a special recognition for doing double and triple duties for the conference since its genesis (and well after the conference concluded).

With the strong technical program and social program, 120 participants, and healthy finance, the CVIR 2008 conference was a great success.

Proceedings of the conference are available at the ACM Digital Library PORTAL



ACM CIVR 2009 will be held in Santorini, Greece 8-10July 2009

Conference Report: IVCNZ 2008

23rd International Conference Image and Vision Computing New Zealand

26-28 November 2008 Lincoln University, Christchurch, New Zealand

Conference Chair:

Kenji Irie (New Zealand)

Report prepared by the Conference Chair



IVCNZ Chair, Kenji Irie



IAPR Distinguished Speaker, Matt Aitken

Proceedings of the conference are available at IEEE Xplore IVCNZ is New Zealand's premier conference on all aspects of Computer Vision, Image Processing, Visualisation and Computer Graphics. In late, 2008 the conference was held on the beautiful campus of Lincoln University, in the South Island of New Zealand.

IVCNZ 2008 was an extremely successful conference, and one of the biggest in its 23 year history. With endorsement by the IAPR and also IEEE New Zealand South Section, a record number of 166 submissions were received for the conference spanning 21 countries. The quality of received papers was high, with 98 accepted for presentation. Each paper was reviewed at least twice and an online plagiarism system was used to check papers, which was a useful process.

The IAPR distinguished speaker was Matt Aitken, Visual Effects Supervisor at Weta Digital, who was involved in providing graphics to movie blockbusters such as the Lord of the Rings trilogy and King Kong. He provided an excellent audio-visual presentation on the technical aspects behind the visual effects developed for King Kong. There were industry visits en route to the conference dinner, which was held at the WillowBank Wildlife Sanctuary.

The conference was run single-stream over 3 days with only one nonshowing author in 37 oral presentations. This resulted in very well populated oral sessions, right through to the last presentation of the conference. The poster sessions were bustling, and were an excellent forum for discussion and feedback. The proceedings of the conference have been post-published in IEEE Xplore, a first for the conference, which allows for global access to all presented papers at the conference.

The organisation for IVCNZ 2009 is moving ahead, with a late 2009 date to be confirmed. Links to more pictures from the conference can be found at the IVCNZ 2008 website: <u>www.lvl.co.nz/ivcnz2008</u>.

Conference Report: DICTA 2008

Digital Image Computing: Techniques and Applications

1-3 December 2008 Canberra, Australia

General Chair:

Antonio Robles-Kelly (Australia)

Report prepared by the General Chair



DICTA 2008 participants in front of the entrance to the Old Parliament House, Canberra, venue for the conference dinner.

DICTA is the main Australian venue for the presentation of advances and research results on digital image computing and is the major event of the <u>Australian Pattern Recognition Society</u>. From its establishment in 1991, DICTA has been a biannual meeting. In 2008, for the first time, it became an annual conference. DICTA 2008 was held at the Rydges Lakeside Hotel in Canberra and was endorsed by the <u>IAPR</u>. The IEEE (Institute of Electrical and Electronics Engineers, Inc) published the proceedings and the IET (Institution of Engineering and Technology) will publish a selection of the

best papers in a Special Issue in its Computer Vision Journal. In 2008, DICTA had 146 submissions and was sponsored by <u>CiSRA</u> (Canon Information Systems Research Australia), <u>NICTA</u> (National ICT Australia) and <u>DSTO</u> (Defence Science and Technology Organisation). Each full paper manuscript was reviewed by at least two members of the Program Committee.

The conference included four keynote addresses by Peter Corke (CSIRO), P. Anandan

(Continued on page 12)

(Continued from page 11)

(Microsoft Research), Fatih Porikli (Mitsubishi MERL), and Rama Chellappa (The University of Maryland). Topics included image coding, tracking and surveillance, medical imaging, and remote sensing. Dinner was held at the Historic Old Parliament House and participants enjoyed posing in the parliamentary speaker's chair and wearing the robes of office. DICTA 2008 also had two paper prizes. The first of these was the Best Student Paper Prize presented by NICTA and awarded to Huy Tho Ho for the paper entitled "Multi-scale Feature Extraction for 3D Models using Local Surface Curvature." The Best Paper Prize sponsored by the APRS and IAPR was conferred to Tony Scoleri for the paper "Post-hoc correction techniques for constrained parameter estimation in computer vision."

DICTA 2008 Proceedings are available through

www.proceedings.com

and at

IEEE Xplore



David Everitt, NICTA Canberra Lab Director, presents the Best Student Paper Prize to Huy Tho Ho



Murk Bottema, APRS President, presents the APRS/IAPR Best Paper Prize to Tony Scoleri

Workshop Report: <u>S+SSPR 2008</u>

Joint IAPR International Workshops Structural and Syntactic Pattern Recognition (SSPR) and Statistical Techniques in Pattern Recognition (SPR)

4-6 December 2008 Orlando, Florida, USA

General Chair:

Michael Georgiopoulos (USA)

Report prepared by:

David Tax (The Netherlands) Member of the SPR Program Committee

Proceedings of the conference have been published by Springer-Verlag in Lecture Notes in Computer Science Series (volume number 5342).



S+SSPR is a three-day workshop held prior to the International Conference on Pattern Recognition (ICPR 2008, Tampa). This workshop was a collaboration of two IAPR Technical Committees, TC1 on Statistical Pattern Recognition and TC2 Structural and Syntactical Pattern Recognition, and it was organized by Niels da Vitoria Lobo, Takis Kasparis, Fabio Roli, James T. Kwok, Michael Georgiopoulos, Georgios C. Anagnostopoulos, and Marco Loog (Eds). The workshop is a joint workshop that tries to tighten the links between the structural and statistical fields in pattern recognition (PR) research area. The collaboration between structural and statistical PR was reflected in the setup of the presentations: two parallel tracks, one on structural and one on statistical pattern recognition. By the careful synchronization of the starting and ending times of the presentations, it was easy for the participants to jump between either side of field.

Around 100 people traveled to the University of Central Florida in Orlando. From the 175 paper submissions 98 papers were accepted: resulting in 56 oral presentations, and 42 posters. On the extensive campus, several presentations, meetings, poster sessions and social evens were organized. Often the events were in different buildings, so the participants had to stroll through the campus from one location to the other. This was especially

(Continued on page 14)

(Continued from page 13)

pleasant, because we had perfect 24C sunny days with blue sky, and the paths were narrow, winding, and it was always a surprise in which building we ended up.

The choices for the keynote speakers also reflected this combination of structural and statistical pattern recognition. Two keynote speakers tried to be explicitly on the boundary between structural and statistical pattern recognition. The first keynote speaker was Horst Bunke who discussed graph representations of objects, and how objects can be classifier based on their graph representation. The key ingredient is to compute a dissimilarity matrix between the objects, and to use this dissimilarity matrix for finding a well-generalizing classified. Extra challenges appear when the dissimilarity matrix is not used as 'just' features that characterize an object, but then the true distance-character is exploited. It appears that non-metric feature spaces appear, which introduces all new, interesting problems.

The second keynote speaker that tried to mix structural and statistical information into one model was Pedro Domingos. He discussed the topic of 'Markov Logic', which is a combination of (first order) logic and probability. It allows certain logic statements to be expressed in a Markov Random Field. Each logic statement has a weight, or strength, that expresses how strongly this statement has to be satisfied. A Markov Logic Network contains a set of atomic formulas as nodes (each with their weight), and a set of edges that represent functions of the atomic formulas. Using this network, a distribution of possible worlds can be inferred, even when contradictory statements are supplied.

In the other oral and poster presentations, the complete range of statistical and structural pattern recognition was present. Talks were given on cluster validity measures, data complexity analysis, multilevel thresholding, soft feature selection, histogram matching, combining similarity measures, combining online classifiers, graph characterization, 3D object representation, etc. To discuss all the topics takes too much time, but one new and intriguing topic was introduced to us by Fabio Roli: Adversarial Pattern Recognition. In adversarial classification, it is assumed that there is an adversary present that actively tries to deceive the classifier. This can happen, for instance, in spam detection, surveillance, fraud detection, and others. In this problem, not only



<u>Tin Kam Ho</u>, winner of the <u>Pierre Devijver Award</u> presenting the Pierre Devijver lecture at S+SSPR 2008

The lecture was titled "Data Complexity Analysis: Linkage between Context and Solution in Classification"

Presentation files for this and some of the other invited talks are available at the S+SSPR 2008 web site <u>ml.eecs.ucf.edu/ssspr/</u>

does a good classifier have to be created, but the classifier performance should also be robust against the adversary's actions to defeat the classifier. A possible approach to confuse the adversary is to introduce a stochastic element to the classifier, such that the classifier randomly switches between two operating conditions. This also forces the adversary to a suboptimal reaction.

The wide range of topics in the workshop shows that pattern recognition is very broad and that it has a wide field of application in real world problems.

Workshop Report: PRRS 2008

5th IAPR Workshop on Pattern Recognition in Remote Sensing

7 December 2008 Tampa, Florida, U.S.A.

Co-chairs: <u>Selim Aksoy</u> (Turkey) <u>Nicolas H. Younan</u> (U.S.A.)

Report prepared by: Selim Aksoy



The PRRS Workshop, which is organized by <u>Technical Committee 7 (Remote Sensing)</u> of the International Association for Pattern Recognition (IAPR), has established itself as an important event for scientists involved in the combined fields of pattern recognition and remote sensing. These two research fields have always overlapped, but the large volume of remote sensing data now coming from last generation sensors require new advanced algorithms and techniques for automatic analysis.

Following the tradition of the previous PRRS workshops in Andorra in 2000, Niagara Falls, Canada, in 2002, Oxford, UK, in 2004, and Hong Kong in 2006, the 2008 workshop was held in conjunction with ICPR 2008 in Tampa, Florida. The workshop was scientifically sponsored by the IAPR and the IEEE Geoscience and Remote Sensing Society (GRSS) and provided a setting for exchanging experiences by 30 international researchers on the use of pattern recognition methods in the analysis of data collected from satellites or airborne sensors used for Earth observation. Out of the 17 four-page papers that were submitted, 11 papers were accepted to the final program after a double-blind review process. The workshop program consisted of one plenary and three oral sessions. The presentations covered a wide range of topics including image registration, building and vehicle extraction, image segmentation, linear discriminant analysis, sea ice classification, and fast implementations on a graphics processing unit for stereo image processing and motion tracking on various types of data obtained from optical, synthetic aperture

(Continued on page 16)

(Continued from page 15)

radar, hyperspectral, and LIDAR sensors. The invited talk titled "Object-based image analysis utilizing image segmentation hierarchies" was given by Dr. James C. Tilton from the NASA Goddard Space Flight Center. The <u>proceedings</u> of the PRRS 2008 workshop are published in IEEE Xplore, and the reviews for papers submitted to a special issue in the <u>Pattern Recognition Letters</u> journal associated with the workshop are underway.

A new addition to the workshop this year was the organization of an <u>Algorithm Performance Contest</u> as part of the workshop. The contest, which was coordinated jointly by Technical Committee 7 of IAPR and the <u>ISFEREA Action</u> of the European Commission, Joint Research Centre, Institute for the Protection and Security of the Citizen, involved the running and evaluation of pattern recognition techniques on different remote sensing data sets with known ground truth. The initial results of the evaluation for building detection and digital surface model extraction tasks using very high-resolution image data were summarized in a paper included in the proceedings.

The next PRRS workshop will be organized in Istanbul, Turkey, in conjunction with <u>ICPR 2010</u>.



Proceedings of the workshop are available at IEEE Xplore

Of interest...

Free Books!

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*.

Alexandra Branzan Albu, IAPR Newsletter Editor

The following title in Springer's Series Advances in Pattern Recognition

Markov Random Field Modeling in Image Analysis 3rd Edition, Li, Stan Z. (Springer, 2009) Publisher's web site: <u>www.springer.com/computer/computer+imaging/book/978-1-84800-278-4</u>

Embedded Computer Vision, Kisacanin, Branislav; Bhattacharyya, Shuvra S.; Chai, Sek eds. (Springer, 2009) Publisher's web site: <u>www.springer.com/computer/computer+imaging/book/978-1-84800-303-3</u>

Augmented Vision Perception in Infrared Algorithms and Applied Systems, Hammoud, Riad I. ed. (Springer, 2009) Publisher's web site: <u>www.springer.com/computer/computer+imaging/book/978-1-84800-276-0</u>

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 <u>IAPR web site</u> has more up-to-date information about <u>IAPR conferences</u> and a link to USC's Institute for Robotics and Intelligent Systems list of <u>Computer Vision Conferences</u> ~ (A. Branzan Albu, ed.)

Highlighting indicates that paper submission deadline has not yet passed.				
An asterisk * denotes a non-IAPR event.				
	2009			
OAGM/AAPR 2009 *	33rd Workshop of the Austrian Association for Pattern Recognition	Stainz, Austria	14-15 May 09	
PRIP 2009	10th International Conference "Pattern Recognition and Information Processing"	Minsk, Belarus	19-21 May 09	
<u>MVA 2009</u>	IAPR Conference on Machine Vision Applications	Yokohama, Japan	20-22 May 09	
<u>CRV 2009</u>	Sixth Canadian Conference on Computer and Robot Vision	Kelona, British Columbia, Canada	25-27 May 09	
<u>CORES 2009</u>	6th International Conference on Computer Recognition Systems	Jelenia Góra, Poland	25-28 May 09	
<u>GbR 2009</u>	7th IAPR - TC-15 Workshop on Graph-based Representations in Pattern Recognition	Venice, Italy	26-28 May 09	
<u>ICB 2009</u>	3rd International Conference on Biometrics	Alghero, Italy	2-5 Jun 09	
<u>MCS 2009</u>	8th International Workshop on Multiple Classifier Systems	Reykjavik, Iceland	10-12 Jun 09	
IbPRIA 2009	4th Iberian Conference on Pattern Recognition and Image Analysis	Póvoa de Varzim, Portugal	10-12 Jun 09	
<u>SCIA 2009</u>	16th Scandinavian Conference on Image Analysis	Oslo, Norway	15-18 Jun 09	
ICDAR 2009	10th International Conference on Document Analysis and Recognition	Barcelona, Spain	26-29 Jul 09	
<u>ICVSS 2009</u> *	International Computer Vision Summer School Machine Learning for Computer Vision	Sicily, Italy	6-11 Jul 09	
<u>GREC 2009</u>	8th International Workshop on Graphics Recognition	La Rochelle, France	22-23 Jul 09	
<u>AND 2009</u>	3rd Workshop on Analytics for Noisy Unstructured Text Data	Barcelona, Spain	23-24 Jul 09	
IWCF09	3rd International Workshop on Computational Forensics	The Hague, The Netherlands	13-14 Aug 09	
<u>CAIP 2009</u>	13th International Conference on Computer Analysis of Images and Patterns	Münster, Germany	2-4 Sep 09	
PRIB 2009	4th IAPR International Workshop on Pattern Recognition in Bioinformatics	Sheffield, United Kingdom	7-9 Sep 09	
ICIAP 2009	15th International Conference on Image Analysis and Processing	Vietri sul Mare, Salerno, Italy	8-11 Sep 09	
<u>VSMM 2009</u>	15th International Conference on Virtual Systems and Multimedia	Vienna, Austria	9-12 Sep 09	
DGCI 2009	15th International Conference on Discrete Geometry for Computer Imagery	Montreal, Canada	30 Sep-2 Oct 09	
CIARP 2009	14th Iberoamerican Conference on Pattern Recogntion	Guadalajara, México	15-18 Nov 09	
2010				
<u>ICPR 2010</u>	20th International Conference on Pattern Recognition	Istanbul, Turkey	23-26 Aug 10	
ICFHR 2010	12th International Conference on Frontiers in Handwriting Recognition	Kolkata, India	16-18 Nov 10	