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From the Editor's Desk:
Getting your paper rejected --
Part 2
Understanding the Reviewer

by Arjan Kuijper
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In the previous "From the editor's desk" (*IAPR Newsletter, January 2015*, I started this series thinking I could present my top 10 reasons for a paper to get rejected straightaway. Then I realized that having a coach and a buddy (could be one or multiple persons) is probably the most important starting point of producing a paper at all. So, with this article, I assume this constraint has been met. You have a coach and a buddy. You have written a paper. And, your paper has been rejected. Somehow, the reviewers didn't understand at all what you did. What went wrong? The easiest thing to do is to blame the reviewers. I admit that that is usually the thing I do as well. But when multiple reviewers agree that a paper cannot be accepted, we have to accept that the problem could be the paper.

Now the interesting journey starts. Is it the paper content that is wrong, or is the packaging? When it is the content, reviewers will mostly write something like "limited novelty", "insufficient validation", or something equivalent. That is obviously reason number one in my list. Something is simply done and written down. That's all. That is what colleagues call "me too". I can do something that others can do as well. I can segment

EDITORIAL HUMORS

HOW ABSURD! WHO WRITES THESE REVIEWS, THE GUY'S DOG ???

SORRY CHAMP. I'M AFRAID THE JIG'S UP.

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

For the most up-to-date information on IAPR-supported conferences, workshops and summer schools, please visit the IAPR web site: *www.iapr.org/conferences/*

GREC 2015
11th International Workshop on
Graphics Recognition
Sousse, Tunisia
Dates: Aug. 20-21, 2015
Deadline: May 10, 2015

CIARP 2015
XX Iberomamerican Congress on
Pattern Recognition
Montevideo, Uruguay
Dates: Nov. 9-12, 2015
Deadline: May 15, 2015

HIP 2015
3rd International Workshop on
Historical Dicument Imaging and Processing
Gammarth, Tunisia
Dates: Aug. 22, 2015
Deadline: Jun. 1, 2015

ACPR 2015
3rd IAPR Asian Conference on
Pattern Recognition
Kuala Lumpur, Malaysia
Dates: Nov. 3-6, 2015
Deadline: Jun. 1, 2015

DICTA 2015
International Conference on
Digital Image Computing:
Techniques and Applications
Adelaide, Australia
Dates: Nov. 23-35, 2015
Deadline: Jun. 29, 2015

ICVNZ 2015
Image and Vision Computing New Zealand
Auckland, New Zealand
Dates: Nov. 23-24, 2015
Deadline: Sep. 18, 2015

PSIVT 2015
7th Pacific Rim Symposium on
Image and Video Technology
Auckland, New Zealand
Dates: Nov. 23-27, 2015
Deadline: Jul. 24, 2015

2016

ICPR 2016
23rd International Conference on
Pattern Recognition
Cancun, Mexico
Dates: Dec. 4-8, 2016
Paper Submission Deadline: May 2, 2016
Contest, tutorial and workshop proposal Deadline: January 13, 2016

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an image, too. I can recognize bikes, too. I can add noise to Lena and remove it, too.

Okay, you'll say, I did a bit more than that. Still my paper got rejected. Still the reviewers didn't get the point. Well, then it is time to get to understand the reviewers.

Understanding reviewers:

What helped me quite a lot is being a reviewer for quite a few journals and conferences, as well as talking with colleagues in the same position. Reviewers need to find time to do reviews. This sounds trivial, but it isn't. In most cases, there's a deadline and plenty of time (one month or more) to do the reviews. In theory. However, in reality, there are other deadlines to be met, courses to give, presentations to prepare, grant and project proposals to write, committee work to be done. And, there is the stack of papers with "To Do" on it. In the worst scenario, it happens that after a reminder slightly before the review deadline, the reviewer has, say, less than a day to review 10 conference papers. This means there may be only about half an hour per paper to read it and to write a review. The quick and dirty way to do it

is to scan the papers to get an impression (which works quite well in many cases, I must confess). A similar sequence of events can play out when reviewing a journal paper.

So, what does the reviewer look for when scanning a paper? This is where the packaging comes into play. Packaging may give good hints as to whether the contents are good or not. My numbers six to ten reasons deal with this issue. So let me count backwards.

Reason 10: Bad Figures.

Figures should be a visual explanation of the contribution. If I get no idea of what the figures should tell me, then something is wrong. If I have to guess what lines and points mean, if the caption is very, very, brief, if I only have a "before" and "after" and a statement like "as one clearly can see", I get annoyed. The figures should clearly show what is supposed to be seen and why it is relevant. So, basically, a reviewer does not like it when (s)he has to guess.

Reason 9: No comparison with state of the art.

Most papers have an obligatory State of the Art section. This is very nice, as it sketches the related approaches. However, when it is a section that can be removed without affecting the paper, something is wrong. If you say that what others did is relevant, then you will have to say why your approach is better is some sense (faster, more accurate, being able to derive something additional). Equivalently: a scientific contribution is suitable for a paper only when it goes beyond state of the art. The author(s) should mention that!

Reason 8: No experiments.

Surprisingly, I still get papers to

review in which the authors only present an idea. At most they may show a 'visual proof of concept'. This is rather insufficient as we, the scientific community, welcome ideas that work, that are proven to work. So we need numbers: tables, graphs, whatever. This relates to Reason 9. It is not enough just to say that your method is nice; the authors need to state and deomonstrate how "nice". Does it segment / denoise / recognize better than what we have? Without serious experiments this is difficult to support and is a quite straightforward reason for rejection.

Reason 7: Old references.

References are important for several reasons. They show that you know the state of the art – that is, cite recent papers! They also show that you know what other people do. So, incomplete and old references are very, very, bad. You may have compared your approach with other methods, but when they come from the previous century, the reviewer will have serious problems with your paper. Does this imply that you don't know the actual work? Is there actual work – is the topic relevant at all? For most conference contributions, the chances are quite big that at least in previous years at this conference series papers discussing similar topics have appeared. So… didn't you care about related work? Outperforming a method that is more than ten years old isn't that difficult in many applications.

Reason 6: No State of the Art.

Need I say more? This relates to the previous points. Without state of the art, all experiments are void. You simply stick to "me too". Papers without this section are usually implementations of existing methods. Obviously, as a reviewer

no novelty can be found. This also holds for old references: what was state of the art for ten, twenty years is not state of the art today.

Writing these points about packaging, I realize that there are many more, so, I include Reason 11, which I have seen too often in my career, below. What about Reasons five, four, three and two? They are more content-related, so I'll keep those for next time

Reason 11: Wrong template.

Nothing is more annoying than seeing an IEEE template formatted paper for conferences having their papers as LNCS proceedings (or vice versa). Especially when a template is available and often obligatory, this is an almost straight reject. It suggests that your paper has been rejected somewhere else. Why should I read your paper?

Happy Writing!:

For those who do not want to wait until the next newsletter: my list is available in the pdf [10 ways to get your paper rejected](). Remember: "Writing a paper is not about describing the system you programmed or the algorithm you improved, it is about 'conveying your idea from your head to your reader's head'" ([Simon Peyton Jones](), from his excellent slides [How to write a great research paper]()).

Getting to know...

Brian Lovell, IAPR Fellow

Brian C. Lovell, IAPR Fellow
ICPR 2008, Tampa
For contributions to video and medical image analysis and service to the IAPR.

Professor Lovell is Director of the Advanced Surveillance Group in the School of ITEE, UQ. He was President of the International Association for Pattern Recognition (IAPR) [2008-2010], and is Fellow of the IAPR, Senior Member of the IEEE, and voting member for Australia on the Governing Board of the IAPR. He was General Co-Chair of the IEEE International Conference on Image Processing in Melbourne, 2013 and Program Co-Chair of the International Conference of Pattern Recognition in Tampa, 2008. His interests include non-cooperative Face Recognition, Biometrics, and Pattern Recognition.

by Brian Lovell, University of Queensland, Australia

During my engineering studies at the University of Queensland (UQ), my most memorable undergraduate course was Digital Signal Processing – I found this topic absolutely fascinating. After graduating I worked for Schlumberger from 1983 to 1986. We would lower hugely expensive equipment into oil wells to map the oil reserves. Part of my work involved processing seismic surveys with a large array processor called a Sky Warrior connected to two DEC PDP11 minicomputers. In its day, this was amazing technology and it stimulated my interest in signal processing once again. So after Schlumberger, I went back to UQ to begin a PhD in signal processing where I concentrated on the analysis of non-stationary signals. While completing my PhD, I was offered a lecturing position and I have been at UQ ever since.

Image and video processing was largely inaccessible in those days

as the digitization equipment was hugely expensive. In the early 90s I really wanted to work on surveillance video analysis, but the video digitizer would have cost over AUD$200,000 (about US$150,000). Yet, within a few years even a mobile phone could perform this task. In these early years, I mainly worked on machine learning, speaker verification and cell image analysis which were all topics in pattern recognition.

In 1998, I had a life changing experience with the organisation of ICPR 1998. I was helping my friend and colleague Anthony Maeder who was General Co-Chair, but my own role was relatively minor at that stage. Unfortunately, Anthony had a terrible car accident about six months before the conference, so I had to take over most of the organisation of this huge international event. I had never even been to ICPR before this, but I have attended every single one since then to meet up with my IAPR friends. The IAPR community has had a huge impact on my

career and research interests. My major role in ICPR 1998 introduced me to hundreds of new friends in the pattern recognition community. At ICPR 1998, Sandy Pentland from the MIT Media Lab was one of the keynote speakers, and he spoke on face recognition. This inspired me to work on face and other biometrics over the next 14 years.

Some of my work on robust face recognition had considerable national press coverage as we had developed some interesting face and video surveillance demonstration systems. This was good timing as the government released significant funds from the Department of Prime Minister and Cabinet in 2006 to develop national security technologies in the wake of the 7/7/2005 London Tube Bombing. I was invited to apply and won the first grant on advanced surveillance technologies. This allowed me to establish a strong research team in surveillance. We then won a larger grant from the same funding

source, and we doubled the team size. Originally I saw the grants as a way to fund CVPR research, but later I engaged more broadly with National agencies in Australia, USA, and UK and started to truly appreciate their needs. So now my primary goal is developing CVPR technologies that solve real problems in the field.

Recently my group has been extending and refining non-cooperative recognition systems to mobile and wearable platforms. We can now perform fast and reliable multi-person live video face recognition from Android and iOS platforms. A long term goal is to develop the tools so that all computing hardware can recognise people. Eventually I hope that face recognition services will be as common and ubiquitous as location services on mobile devices.

Another current area of interest is Digital Pathology where we have a very successful collaboration with [Sullivan and Nicolaides Pathology](#). We are looking at ways to convert from optical microscopes and slides to a fully digital infrastructure. The collaboration is generating huge pathology datasets that we have been releasing to the IAPR community for competitions and workshops to stimulate research in the field. Some of our analysis work is based on statistical manifolds and my group has published widely on this topic also.

In 2008, I was awarded Fellow of the IAPR and was then elected President of the IAPR. Although I was always active in the IAPR community serving in many committee roles, my nomination for President came as a complete surprise. The IAPR was by now my scientific home, so to be able to serve my community at the very highest level was an immense honour for me. It was also a privilege to work closely with such esteemed colleagues and friends on the Executive Committee.

My advice to every young academic is simply to get involved in the IAPR by helping with the committees, meetings, and activities. Like me, you will find the IAPR to be an immensely welcoming community where friendships and scientific collaborations will blossom and bear fruit for many years to come.

IAPR Then and Now: *IAPR Newsletter* ICPR 1998 Special Issue

IAPR

Winter 1999
Volume 21 No 1

Newsletter of the International Association for Pattern Recognition Inc
(An affiliate member of the International Federation for Information Processing)

Jagera Jarjum

Aboriginal

Dance Group

This year's International Conference on Pattern Recognition was hosted by the Australian Pattern Recognition Society and held in Brisbane, Australia, from the 16th to 20th of August. It was the first time ICPR had been held in the Southern Hemisphere and there was some concern expressed at the IAPR Executive Committee that the attendance would be significantly lower than for previous events. However, reduced participation from North America and Europe was offset by an increase in Asian participation so that at the final count, 620 delegates attended ICPR98. Although this was a lower attendance figure than the Vienna ICPR in 1996 where almost 800 people attended, it is a respectable figure considering the high average distance travelled by delegates.

IAPR...The Next Generation

In this series of Feature Articles, the IAPR Newsletter asks young researchers to respond to three questions:

- *Briefly: How did you get involved in pattern recognition and what technical work have you done?*
- *In more detail: What is/are your current research interest(s)?*
- *How can the IAPR help young researchers?*

~Arjan Kuijper, Editor -in-Chief

Adrián Pastor López-Monroy

by [Adrián Pastor López-Monroy](#), National Institute of Astrophysics, Optics and Electronics, Mexico

Briefly: How did you get involved in pattern recognition and what technical work have you done?

I got involved in pattern recognition during the years of my bachelor's degree, as an undergraduate at the Technological Institute of Celaya (ITC). At ITC, students are encouraged to participate in different events related to technological innovation and science. When I was in my third undergraduate year, I was interested in participating in different tracks of events related to computer science and enrolled in a set of Artificial Intelligence (AI) courses. In these courses,

Adrián Pastor is a PhD. student in the Computer Science Department at the National Institute of Astrophysics, Optics and Electronics (INAOE), Puebla, Mexico, where he is part of the Language Technologies Laboratory. His research focuses on, but is not limited to, the intersection of the fields of computer vision and natural language processing. In his research he studies image analysis and text mining algorithms to design novel methods to improve the use of specific visual features in computer vision tasks.

He received the Best Student Paper Award at the Postgraduate Students' Meeting of 6th Mexican Conference on Pattern Recognition, MCPR 2014 for the paper entitled "Image Classification through Text Mining Techniques". Other highlights include, the first prize award twice, at the International Competition on Author Profiling at CLEF-PAN 2013 in Valencia-Spain and 2014 in Shefield-U.K.

Before joining INAOE, He obtained his B.Eng. degree from the Technological Institute of Celaya, and M.Sc. degree from INAOE, in 2009 and 2012, respectively.

students were encouraged to initiate a research experience, developing systems that contribute to solving real life problems. I decided to develop an Expert System based in Fuzzy Logic. I built a Fuzzy Expert System, that, based on a previous patient survey, helps to estimate the risk of certain types of heart diseases. By 2008, using this project, I was participating in several forums of Technological Innovation of the Mexican Technological Institutes.

After learning about a few topics in AI, I was sufficiently motivated to pursue a master's degree in

computer science and enrolled in the Master in Computer Science program of the National Institute of Astrophysics, Optics and Electronics (INAOE). There I had the opportunity to take advanced courses in Pattern Recognition, Machine Learning, Text Mining and Information Retrieval. By the first year of my master, under the main direction of Prof. Dr. Manuel Montes y Gómez, I was working on topics related to pattern recognition and text mining, in particular with Authorship Attribution (AA). From a computer perspective, AA consists in build supervised models that, based in the writing style and other specific textual features, can discriminate documents of a set of suspicious authors. The ideas presented in my master's thesis were taken to the Automatic Author Profiling task where the aim is to build supervised learning models that can discriminate among specific profile classes like age and gender. In 2013 and 2014, these ideas won the first prize at the International Competition on Author Profiling at the Conference and Labs of the Evaluation Forum CLEF. After finishing my MS program, and having known more about pattern recognition and text mining, I decided to pursue a PhD degree in Computer Science and joined the Language Technologies Laboratory at INAOE.

In more detail: What is/are your current research interest(s)?

In my PhD research, I work in Image Classification, which is an important task for the organization and analysis of visual information. In particular, I work on specific visual features that are extracted from the images, then I design methods inspired in text mining to capture new information. For example, one of the most popular visual feature is the visual word. A visual word is a visual element

(say a prototype) that in some way represents a set of visual-similar regions. Visual words are used by a number of methods in computer vision to solve specific tasks. One example of this is the Bag-of-Visual Words (BoVW), which uses a histogram of the occurrence of visual words in each image. BoVW is an analogous idea to the typical Bag-of-Words (BoW) used in text mining tasks. However, just as its base idea (the Bag-of-Words in text mining), the BoVW inherits the same limitations, for example: the overlook of the spatial context. In my research I want to take the analogy visual-textual features to a new higher level. The main idea is to design novel methods inspired in natural language processing (NLP) to consider contextual (e.g., spatial, sequential), and distributional semantic information among visual words. NLP inspired methods could help to capture new discriminative information in order to better explain image collections and improve the performance of the classification models.

The idea of approaching computer vision tasks exploiting the properties of NLP methods, raises several research relevant problems. For example, defining

truly analogous visual-text features, defining strategies to interpret images, defining distributional semantical information among visual elements, etc. There are many real life vision applications that typically ignore such information. Thus, I am currently interested in researching the usefulness of this information inside computer vision tasks like image classification and image retrieval.

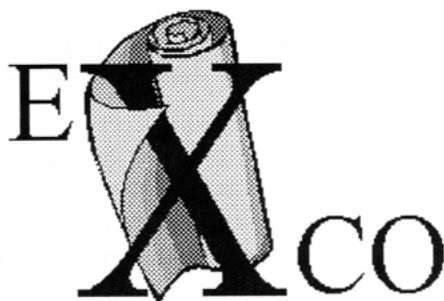### How can the IAPR help young researchers?

I think the IAPR already helps young researchers through workshops and support to attend conferences.

Nonetheless, one suggestion could be to increase the interaction with senior researchers and young researchers. For example, organizing panel discussions where young researchers can learn from the experience of senior researchers. This kind of feedback could provide young researchers with a new perspective about how to approach typical research circumstances and of course helping to avoid common pitfalls in research.

ICPR 2016 will take place in Cancun, Mexico December 4-8, 2016

From the ExCo

News from the Executive Committee of the IAPR

by Alexandra Branzan-Albu
IAPR Secretary

IAPR Standing Committees

Advisory Committee

Conferences & Meetings Committee

Constitution & Bylaws Committee

Education Committee

Fellow Committee

ICPR Liaison Committee

Industrial Liaison Committee

J. K. Aggarwal Prize Committee

King Sun Fu Prize Committee

Maria Petrou Prize Committee

Membership Committee

Nominating Committee

Publications & Publicity Committee

Photo © Alexandra Branzan-Albu

Victoria, April 14 2015

Spring has finally arrived in most of the Canadian provinces and territories, providing relief from a fierce, stormy, and extremely cold winter on the East Coast and the Prairies. In Victoria, we have been blessed with a mild winter this year, which means that we enjoyed a very early spring, with cherry trees in blossom since mid-February. For me, the arrival of the month of April means that my most intensive teaching term is over and that from now on I can focus more on research, and on my IAPR-related work.

The ExCo is currently preparing for its interim meeting in August 2015, which will be hosted by Prof. Kim Boyer, Past President of the IAPR, at the Rensselaer Polytechnic Institute in Troy, New York. Several topics have already been identified for discussion at this meeting, such as the elaboration of new procedures and criteria for supporting summer schools, the re-organization of the IAPR web page, general criteria for the web presence of IAPR-sponsored meetings, new IAPR awards etc.

The ExCo has completed the appointment of new members for the 2014-2016 term for most of the Standing Committees, as follows: the Education Committee (chaired by Dr. Josep Llados), the Fellow Committee (chaired by Dr. Sudeep Sarkar), the Industrial Liaison Committee (chaired by Dr. Jianying Hu), the Membership Committee (chaired by Dr. Luc Brun), and the Publications and Publicity Committee (chaired by Dr. Bart Lamiroy). We thank all chairs for their support in building their committees and all members for their service, and we wish them a very productive term.

After a thorough evaluation of their applications, two summer schools have received financial support from the ExCo. The Summer School for Advanced Studies in Biometrics *http://biometrics.uniss.it* will take place in Alghero (Italy) from June 22-26, 2015. The International Computer Vision Summer School *http://svg.dmi.unict.it/icvss2015/* will take place in Sicily from July 12-14, 2015. Both summer schools offer excellent opportunities for keeping up to date with recent progress in their fields, so I would highly recommend them to the young members of the IAPR community.

I hope that you will enjoy the April 2015 issue of the IAPR Newsletter, skillfully planned and put together by Arjan Kuijper, Zeeshan Zia and Linda O'Gorman. Happy reading!

Students' Interactive Video Display Unveiled at W Hotel in Hoboken

Butterflies Alight! Celebrates Collaboration Between Stevens Students and Scientists from Bell Labs

Group shot of Stevens students and Bell Labs partners in front of the River Street display.

Photo © Jeffrey Vock

The IAPR Newsletter is interested in highlighting other examples of collaborations between academia and industry. Please send your project descriptions to me for publication in forthcoming issues.

~ Arjan Kuijper, EiC, IAPR Newsletter
arjan.kuijper@igd.fraunhofer.de

by Julie Farrell, Stevens Institute of Technology

Spring is in the air, and if you pass the W Hotel on River Street in Hoboken, you will be greeted with a lively screen display of colorful butterflies reacting to your every move.

This interactive, crowd-driven display was created from a partnership between a multi-disciplinary team of students from Stevens Institute of Technology and scientists from Bell Labs, the industrial research arm of Alcatel-Lucent. The team completed the project, titled "Butterflies Alight!" for their summer research through the Office of Innovation and Entrepreneurship at Stevens.

"In the true spirit of Stevens' multidisciplinary mission, this unique team comprised of students from Computer Science, Visual Arts and Technology and Music and Technology worked together to create a computer-driven, beautiful interactive installation, marrying industry partners and collaborative research opportunities," said Professor Rob Harari, a faculty advisor for the project. "It was a pleasure to see these students work so seamlessly together."

Developed by a team at Bell Labs led by Bell Labs Fellow Lawrence O'Gorman, the original Motion Engine source code was designed as a social experiment to see if

Call for IAPR Industrial Membership: Rationale

There is a need to bridge the gap between academia and industry in the Pattern Recognition community at large. The International Association for Pattern Recognition (IAPR) is a renowned organization for pattern recognition researchers around the world.

The IAPR Industrial Liaison Committee (IAPR-ILC) has established an IAPR Industrial Affiliation Program (IAPR-IAP) to encourage the affiliation of companies to the IAPR. The general goal is to define a protocol to build lasting, strong and bilaterally fruitful ties with companies active in our field:

- *To foster the establishment of knowledge transfer pathways between the academia and the industry.*
- *To leverage R&D impact and innovation in applied domains through collaboration under the IAPR umbrella and the sponsored activities.*
- *To help keep research focused on problems that interest industry.*
- *To increase industry access to research publications, students and faculty.*

Who can join the IAPR Industrial Affiliation Program (IAPR-IAP)?
Companies whose activity is related to products or services concerned with pattern recognition, computer vision, and image processing in a broad sense are encouraged to have a corporate affiliation. The affiliation is free of charge.

Industrial Liaison Committee Chair
c/o Jianying Hu
jyhu@us.ibm.com

people would notice the monitor changing as they walked by in an open environment. By producing motion, the technology could then be used to measure the flow of people and vehicles to aid in efficient and safe design for public spaces and buildings.

Bell Labs provided this source code to the students and challenged them to make improvements to the code and enhance its artistic functionality. The students spent the summer of 2014 employing the tools of computer video analysis to incorporate an added dimension of viewer engagement to their art. Using the Motion Engine to control animation, the students created a unique kind of video where the viewer can control speed and storyline based on his or her movement on the street.

O'Gorman said he was thrilled to work with students with such a diversity of expertise and interests.

"After explaining the Bell Labs Motion Engine to the students, what we had done with it in the past, and the general direction of where I'd like to see it go in the future, the students worked largely independently of me. I recall that the extent of my direction included phrases like, 'whimsical', 'put a smile on people's faces', and 'surprise people who have never seen anything like this in public'. When I saw their beautiful artwork and seamless use of the Motion Engine, I found they had exceeded my expectations. The only improvement could be to display this in a prominent spot on a very large screen, and for that Steve Smith from Stevens' Office of Development and the W Hotel made this happen. This installation is a merger of art and technology in a location that befits its novelty and accomplishment," he said.

The work resulted in a 3D outdoor environment in which caterpillars populate the space, undergo metamorphosis into butterflies, and then fly around the space. Using a webcam, an audience's motion can be tracked and interpreted inside the program. If motion is detected

Stevens Research Scholars from L-R: Alex Thieke, Emily Rautenberg, Sarah Quiles, Jay Simms, and Julian Chaves.

where a butterfly lands around the greenhouse, the butterfly will take off and fly away from the motion.

"Working on this program was a great experience as it allowed me to combine what I have learned while pursuing both of my degrees," said senior Emily Rautenberg. "As a Computer Science major, I contributed to the functionality of the display by writing and editing sample code originally provided by Bell Labs. We were tasked with completely changing the file reading system of the program and determining the best way to load all of the art assets, as well as determining the criteria for changing the given assets.

"Similarly, as a Visual Arts and Technology major I was able to also contribute to the creation of these assets using 3D modeling and texturing my own butterfly, as well as creating a standard butterfly skeleton to bind and rig

"Butterflies Alight!" on display in Hoboken.

all butterflies used in the program. This rig allowed for the butterfly to be animated and rendered into the movements seen in the program."

In collaboration with Stevens and Bell Labs, the W Hotel in Hoboken provided the space needed to install "Butterflies Alright!" in one of its display cases overlooking River Street. On April 1, the installation was officially unveiled at a celebration attended by the students, faculty advisors and team members from Bell Labs and the W Hotel, as well as President Nariman Farvardin and Hoboken Mayor Dawn Zimmer.

"It is really interesting to watch the collaboration and see what's happening at Stevens and how you're integrating into our community," Mayor Zimmer remarked. "I can see the applications of this technology here in Hoboken."

"I consider myself an especially fortunate person in that I have the opportunity to serve these young women and men coming to the university, learning a lot, becoming better human beings, going out into society, and making the world a better place," President Farvardin said.

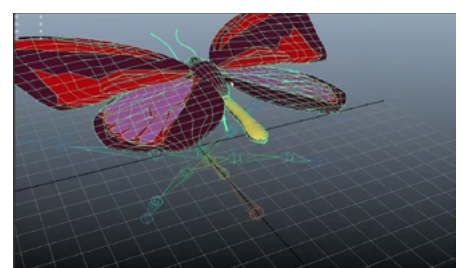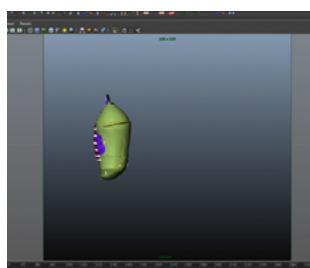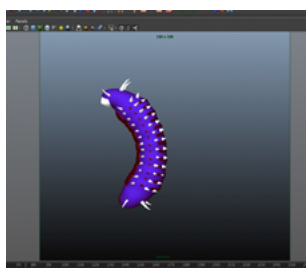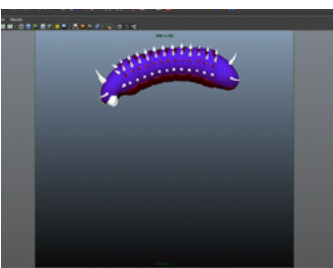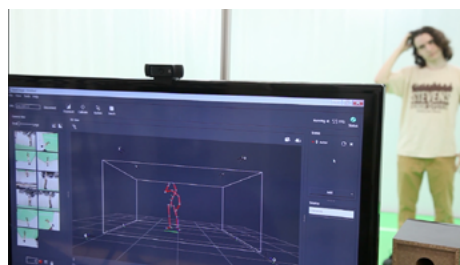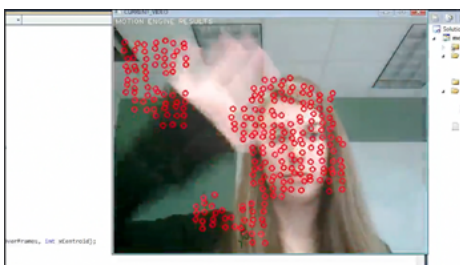To learn more about Innovation & Entrepreneurship Summer

Stevens President Nariman Farvardin discusses the project with Bell Labs Fellow Lawrence O'Gorman.

Scholars Research Program at Stevens, visit their [website](#).

Stevens Institute 2014 Summer Research: "Bell Labs Motion Software Interactive Installation"
Sarah Quiles, Emily Rautenberg, Jay Simms and Alex Thieke with Advisor Robert Harari
(The images and text below are taken from a video about the project by Jay Simms, which can be seen at the bottom of this web page: *http://www.stevens.edu/news/content/students-interactive-video-display-unveiled-w-hotel-hoboken*)

The Bell Labs motion capture software is unique. Unlike technologies such as Microsoft Connect, it can analyze motion amongst large groups of people instead of just one individual, making it ideal for locations with a lot of traffic, such as shopping malls or plazas and major transit stations.

In order to demonstrate the capabilities to the average onlooker, our Stevens research team was tasked with creating a game with an engaging interface to use the motion capture software. Out team proposed a 3D greenhouse environment in which caterpillars populate the space, undergo metamorphosis into butterflies then fly around the environment.

Using a webcam, an audience's motion is tracked and algorithmically interpreted inside the program. If motion is detected where a butterfly lands around the greenhouse, the butterfly will take off and fly away from the motion. In addition, the length of time the life cycle of a butterfly

lasts as well as the number of caterpillars, cocoons and butterflies present is dependent on the amount of people involved in creating motion in the space.

All installation assets as well as code for the assets' behavior were created by the Stevens research team and integrated with the motion capture software provided by Bell Labs.

14th INTERNATIONAL CONFERENCE ON FRONTIERS IN HANDWRITING RECOGNITION

1-4 September

ICFHR 2014

Crete Island-Greece

http://www.icfhr2014.org/

Conference Chairs:

[Basilis Gatos](#) (National Center for Scientific Research "Demokritos", Greece)
[Vassilis Katsouros](#) (Athena Research and Innovation Center, Greece)
[Ioannis Pratikakis](#) (Democritus University of Thrace, Greece)

by the Conference Chairs

ICFHR 2014 was sponsored by the International Association for Pattern Recognition (IAPR) as well as by the following industries: [MyScript Labs](#), [Neuroscript](#), Google, [a2ia](#), [HiPac](#) and [AMS archiving services ltd](#).

The conference was attended by 172 registered participants from 32 countries all over the world. ICFHR 2014 received 192 submissions. Each submitted paper was peer reviewed by at least three reviewers from the 90 program committee members, with the help of 79 additional reviewers. The final evaluation led to the acceptance of 127 papers (66% of the total submissions) of which 40 papers were selected for oral presentation and 87 papers for poster presentation. The [proceedings](#) were electronically published and are available at

IEEE Xplore. The topics covered by the collection of papers appearing in the proceedings represent key state-of-the-art research issues in handwriting recognition.

On the first day of ICFHR 2014 three tutorials were hosted, and the rest of the program in the next three days was organized into a single track with ten oral sessions, three poster sessions, two invited talks and one session dedicated to the presentation of the competitions' results.

The ICFHR 2014 [tutorials](#) included one full-day tutorial on "Handwritten Text Recognition: Word-Graphs, Keyword Spotting and Computer Assisted Transcription" (given by Moisés Pastor, Verónica Romero, Joan Andreu Sánchez, Alejandro H. Toselli and Enrique Vidal) and two half-day tutorials, "Statistical Models for Handwriting

Recognition and Retrieval" (given by Gernot A. Fink) and "Automatic signature verification: state of the art and current trends" (given by Angelo Marcelli, Guiseppe Pirlo, Marcus Liwicki, and Michael Blumenstein).

During ICFHR 2014, two [IAPR invited talks](#) were given. The first invited talk entitled ["Jeremy Bentham and the Computer Age: Reflections on Crowdsourcing the Transcription of Handwritten Documents"](#) was given by

ICFHR 2014 proceedings are available through [IEEE Xplore](#)

Professor Philip Schofield, Bentham Project, Faculty of Laws, University College London. The second invited talk was given by Hans-Leo Teulings of NeuroScript at Tempe, Arizona, USA, entitled "Handwriting: New Times, New Needs".

The oral sessions included the presentation of research works on the following topics: (i) Document Image Pre-processing Techniques (ii) Language Models for Handwriting Recognition (iii) Neural Networks for Handwriting Recognition (iv) HMMs for Handwriting Recognition (v) Word Spotting (vi) Writer identification (vii) Signature Verification (viii) Online Handwriting Recognition (ix) Applications I and (x) Applications II. The presentations of the papers presented in the oral sessions can be found at the URL of the conference (*http://www.icfhr2014. org/detailed-program/*).

A panel discussion was also realized, moderated by Ioannis Pratikakis with the participation of three members from academia—Robert Sabourin, Volker Märgner and Michael Blumenstein—and three members from the industry—Shawn Reid, Christopher Kermorvant, and Pierre-Michel Lallican. They presented their

views on the current status of unconstrained HR technology, the availability of proper benchmarks for HR algorithms, ways to bridge the gap between academia and industry and killer apps envisioned in the short-term future.

In conjunction with ICFHR 2014, seven competitions were organized that were dedicated to benchmarking challenging issues in handwriting recognition, including handwritten digit string recognition, handwritten text recognition, recognition of handwritten mathematical expressions, Arabic writer identification, word recognition from segmented historical documents, handwritten document image binarization and handwritten keyword spotting.

In addition to the aforementioned scientific activities, ICFHR 2014 had social programs, including a welcome reception at the conference hotel, a guided tour to the Palace of King Minos at the Knossos archeological site and a banquet. At the banquet, there were presented nice shows of traditional folk dances from various regions of Crete and many participants took part in the dancing party that followed.

In the opening ceremony, the Conference Chairs nominated the ICFHR 2014 participants to accept the ice bucket challenge showing a video of them having a bucket of ice water poured on their heads.

There was also a presentation of one bid for hosting ICFHR 2018 in Rochester, New York, USA, which was approved after the voting of the participants.

The following winning teams of the competitions were announced during the dedicated session:

Competition on Handwritten Digit String Recognition in Challenging Datasets (HDSRC 2014):
- Yi-Chao Wu, Fei Yin, Chang Zhong, and Cheng-Lin Liu, National Laboratory of Pattern Recognition (NLPR), Institute of Automation of Chinese Academy of Sciences, Beijing, China

Competition on Handwritten Text Recognition on Transcriptorium Datasets (HTRtS) winning teams:
- Restricted track : Tobias Strauß, Tobias Grüning, Gundram Leifert, and Roger Labahn, Computational Intelligence Technology Laboratory at University of Rostock in collaboration with PLANET intelligent systems

GmbH and
- Unrestricted track: Faouzi BenZeghiba, Théodore Bluche, Christopher Kermorvant, Jérôme Louradour, Ronaldo Messina, and Bastien Moysse, A2IA

Competition on Recognition of On-Line Handwritten Mathematical Expressions (CROHME 2014) winning teams:
- Best system by VisionObjects and
- Best system trained on CROHME 2014 Dataset by Francisco Álvaro, Universitat Politècnica de València, Spain

Competition on Arabic Writer Identification Using AHTID/MW and KHATT Databases winning team:
- Vincent Christlein, David Bernecker, Florian Hönig and Elli Angelopoulou, Members of the Pattern Recognition Lab of the Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany

Competition on Word Recognition from Historical Documents: ANncestry Word REcognition from Segmented Historical Documents (ANWRESH) winning team:
- Gundram Leifert, Tobias Grüning, Tobias Strauß, Roger Labahn, Welf Wustlich and Jesper Kleinjohann, CITlab, Institute of Mathematics, University of Rostock, Germany

Handwritten Document Image Binarization Competition (H-DIBCO 2014) winning team:
- Rafael Galvão Mesquita, Carlos Alexandre Barros de Mello, Ricardo Martins de Abreu Silva and Péricles Barbosa Cunha de Miranda, Centro de Informática, Universidade Federal de Pernambuco, Brazil

Competition on Handwritten Keyword Spotting (H-KWS 2014) winning teams:
- TRACK I - Segmentation-based KWS: Jon Almazán, Albert Gordo, and Ernest Valveny, Computer Vision Center, Universitat Autònoma de Barcelona, Spain
- TRACK II - Segmentation-free KWS: Alon Kovalchuk, Lior Wolf, and Nachum Dershowitz, Blavatnik School of Computer Science, Tel-Aviv University, Israel

Three paper awards were presented. The winning papers were selected based on an evaluation that took into account both the review scores and quality of presentation. The selection was made by corresponding committees consisting of members appointed by the technical program chairs. The recipients of the paper awards are as follows:
- Best Paper: Yi Jean-Paul Van Oosten and Lambert Schomaker for the paper entitled "A reevaluation and benchmark of hidden Markov models"
- Best Student Paper: Moises Diaz-Cabrera, Miguel Ferrer and Aythami Morales Moreno for the paper entitled "Cognitive Inspired Model to Generate Duplicated Static Signature Images"
- Best Poster Paper: Yi-Chao Wu, Fei Yin and Cheng-Lin Liu for the paper entitled

"Evaluation of Geometric Context Models for Handwritten Numeral String Recognition"

We would also like to mention the best dancer award winner, Tanmoy Mondal, for his performance at the Banquet Dinner dance session!

Undoubtedly, ICFHR 2014 was a great success both scientifically and socially thanks to all the participants. This success is credited to the contributions of many people, among them the Organizing Committee Members:
- Technical Program Chairs Josep Llados, R. Manmatha, and Chew Lim Tan
- Competition Chairs Apostolos Antonacopoulos, Umapada Pal, and Volker Märgner
- Tutorial Charis Michael Blumenstein, and Marcus Liwicki (Tutorial Chairs),
- International Liaisons Koichi Kise, Thierry Paquett, Venu Govindaraju, Haikal El Abed,
- Publicity Chairs Masaki Nakagawa, and David Doermann

We also wish to thank the International Program Committee and the additional Reviewers for their work and professionalism during the reviewing process. We are also very grateful to our sponsors for their support to the conference.

Last but not least, we would like to wish good luck to the organizers of the next ICFHR edition in Shenzen, China, in 2016.

15th International Conference on Frontiers in Handwriting Recognition

ICFHR 2016

Shenzhen, China
October 23-26, 2016

ANNPR 2014

6th IAPR TC3 International Workshop on
Artificial Neural Networks in Pattern Recognition

October 6-8, 2014, Montreal, Canada
http://www.annpr2014.com/

General Chairs:
Ching Suen (Concordia University, Canada)
Friedhelm Schwenker (Ulm University, Germany)
Neamat El Gayar (Cairo University, Egypt/Canada)

by the General Chairs

ANNPR 2014 in Montreal, Canada follows the success of the ANNPR workshops held in Florence (Italy, 2003) , Ulm (Germany, 2006), Paris (France, 2008), Cairo (Egypt, 2010) and Trento (Italy, 2012).

The series of ANNPR workshops have acted as a major forum for international researchers and practitioners working in all areas of neural network- and machine learning-based pattern recognition to present and discuss their latest research, results, and ideas in these areas.

The ANNPR 2014 was sponsored by the Technical Committee on Neural Networks and Computational Intelligence (TC3) of the International Association for Pattern Recognition (IAPR). The scope of TC3 includes computational intelligence approaches, evolutionary computing and artificial neural networks and their pattern recognition applications.

For the ANNPR 2014, a total of 37 papers were submitted from which 24 high-quality papers were selected for oral presentation. Papers presented original research in neural networks, machine learning and pattern recognition focusing on both theoretical and applied aspects.

The ANNPR 2014 proceedings was published in the Springer LNCS/LNAI series. Participants from different part of the world (Europe, Asia, North America and Africa) attended the workshop.

During three days, the attendees presented their papers organized in multiple focused sessions on Learning and Architectures, Ensembles, Support Vector Machines, Character Recognition and Image Processing. For each session the allotted time was 25 minutes for paper presentation and discussion. The attending researchers were very interested and had plenty of questions and suggestions. The discussion often extended to breaks and lunches.

Additionally three enriching invited talks were given during the program. The invited talk "Large Margin Distribution Learning" by Prof. Zhi-Hua Zhou (Nanjing University, China) presented recent results and theoretical evidence showing the superiority of large margin distribution learning for algorithm design compared to large margin learning.

Prof. Dr. Yoshua Bengio (University of Montreal, Canada) gave an inspiring talk on "Deep Learning", summarizing the advances and breakthroughs is this topic and outlining the major challenges still ahead of researchers.

On the third day, Dr. J. Michael Herrmann (University of Edinburgh, UK) gave a talk entitled "Active Learning in Biologically Inspired Robotics", where he demonstrated several theoretical and practical

aspects of guided self-organization and how pattern formation can improve learning capabilities in critical systems.

The participants enjoyed a friendly welcome reception at the 11th floor of Concordia University Sir George Williams Campus overlooking downtown Montreal. Both the Dean of the Faculty of Engineering and Computer Science at Concordia University and the Chair of the Computer Science and Software Engineering Department attended the reception and were pleased to welcome the ANNPR participants.

On the second day the attendees enjoyed a nice walk through the streets of Montreal where they finally reached the destination of the conference banquet at the Vieux-Port Steakhouse in Old Montreal. The participants enjoyed the good food in a welcoming and warm atmosphere. Little awards were distributed and the sponsors and organizing team were dearly acknowledged.
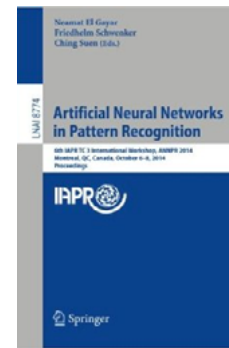
Click above to go the publisher's web site for this volume.

BOOKSBOOKSBOOKS

Person Re-Identification
by Shaogang Gong, Marco Cristani, Shuicheng Yan, Chen Change Loy (Editors)

Springer, 2014
http://www.springer.com/gp/book/9781447162957

Reviewed by Donatello Conte (Ecole Polytechnique de l'Université de Tours (EPU - Polytech'Tours, France)

The topic of the book is the person re-identification problem, which is the problem of associating a person at different moments in time at the same or at different physical locations. The book is intended for researchers that work, or want to start working, on this research topic. It is a collection of invited chapters, inspired by the First International Workshop on Re-Identification held in Italy in October 2012. It is divided into three parts dealing respectively with Features and Representations, Matching and Distance Metrics, Evaluation and Applications.

The book editors are Shaogang Gong (Queen Mary University of London, UK), Marco Cristani (University of Verona, Italy), Shuicheng Yan (National University of Singapore) and Chen Change Loy (The Chinese University of Hong Kong), all very active in the field of computer vision, particularly in the field of people re-identification.

The book is very interesting and allows having an insight into the problem of person re-identification and its potential applications. It provides a presentation of the current state-of-the-art and recent progress on this topic. I think that researchers who intend to work on person re-identification can benefit from reading this book. They will be introduced to the many interesting challenges to be faced. The problem of person re-identification is in fact still open and the merit of this book is to be the first entirely dedicated to this specific subject.

The chapters are described in the following.
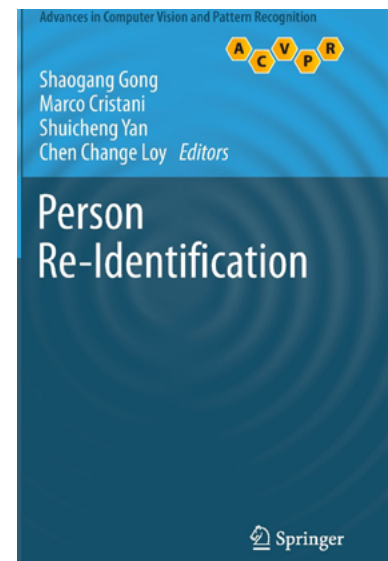
Click above to go the publisher's web site for this volume.

Chapter 1, by the book's editors, is the Introduction of the book. It highlights the challenges encountered in doing person re-identification in a multi-camera surveillance setup, presenting the most recent developments in this research field and discussing some new potential applications of person re-identification.

Chapter 2, by B. Ma, Y. Su and F. Jurie, proposes two novel

image representations for person re-identification. The first is a covariance descriptor using biologically inspired features and the second is based on local features encoded by Fisher Vectors. The authors experimentally demonstrate their effectiveness on two public datasets (VIPeR and ETHZ).

Chapter 3, by L. Bazzani, M. Cristani and V. Murino, presents a person descriptor, named SDALF, based on asymmetry/symmetry principles. Then SDALF is used in a person re-identification procedure and in a tracking scenario. A detailed assessment on several public datasets is made at the end of the chapter.

S. Bak and F. Brémond, in Chapter 4, propose two different human models for re-identification tasks based on Mean Riemannian Covariance Grid in which MRC cells are weighted by a fast discriminative analysis, and on a selection of features for different image regions based on learning in a Covariance Metric Space. iLIDS is used in the experiments.

Chapter 5, by R. Layne, T.M. Hospedales and S. Gong, proposes the use of semantic mid-level attributes for person re-identification. They introduce an ontology of attributes based on a human expert defined attribute set, and then propose a person representation based on posterior probabilities of the presence of these attributes by low-level features classification. VIPER and PRID datasets are used in the experiments.

A. Li, L. Liu and S. Yan, in Chapter 6, propose a part-based representation approach for person re-identification. Clothing appearance attributes are learned by latent SVM and used for re-identification. They formulate the

problem as a binary classification problem because they want to deal with the open-set re-identification problem. They built their own (open-set) dataset to provide a new benchmark for person re-identification.

The authors of the Chapter 7, D.S. Cheng and M. Cristani, propose a person signature, based on body parts detection, and they use it for matching pedestrians. In multi-shot re-identification they improve the human signature based on the appearance evidence. They test their approach on several public benchmarks.

In Chapter 8, M. Munaro, A. Fossati, A. Basso, E. Menegatti and L. Van Gool propose a different approach to person re-identification by using Depth Cameras. They propose two techniques for re-identification: the first based on skeleton data of a person and the second based on human point clouds matching after pose normalization. They propose their own dataset of RGBD videos to validate their method.

Chapter 9, by W.-S. Zheng, S. Gong and T. Xiang, proposes a solution to the group association problem, i.e. identifying group of people in proximity across different camera views. The authors propose some descriptors for representing groups and then use them for associating groups. They further propose a method for person re-identification using group descriptions as visual context. Group association is validated using the i-LIDS MCTS dataset (2008).

C. Liu, S. Gong, C.C. Loy and X. Lin, in Chapter 10, study the importance of features according to the appearance of a person. They propose a method for defining prototypes of individuals with similar appearance as well as

an unsupervised method to learn features weights for each class represented by specific prototypes. The unsupervised method is used in the test phase, to choose the best features weights for re-identification purposes.

T. Avraham and M. Lindenbaum, in Chapter 11, suggest that, when sufficient training data is available, explicit camera-transfer approaches outperform camera-invariant methods. Camera-transfer approaches try to learn a Transfer Function that an object's color undergoes when passing between the viewpoints of two cameras. The Transfer Function is used to provide an estimation of the person's appearance when she/he is captured on a second camera; this estimation is then used in a classifier for person re-identification.

After providing an overview of the main Mahalanobis Distance Learning approaches, P.M. Roth, M. Hirzer, M. Kostinger, C. Beleznai and H. Bischof, in the Chapter 12, analyze the applicability of this methodology to the person re-identification problem. Metric learning methods proved to be very effective on publicly available benchmarks (VIPeR, CAVIAR4REID, PRID2011, PRID450S and ETHZ).

In Chapter 13, the authors, Q. Qiu, J. Ni and R. Chellappa, deal with a different problem than person re-identification: re-identification of faces. They propose a modification of Domain Adaptation Methods by means of dictionary learning and sparse representation approaches.

Chapter 14, by S. Karaman, G. Lisanti, A.D. Bagdanov and A. Del Bimbo, introduces the identity inference problem as a generalization of the single-versus-all person re-identification. The authors propose a CFR-based

approach to solving the identity inference problem and use the CAVIAR and i-LIDS datasets to validate their method.

A different problem than Person Re-identification was addressed in the Chapter 15. F. Fleuret, H.B. Shitrit and P. Fua propose a solution for multiple people tracking. They formulate the problem as a minimum-cost maximum-flow linear program on a specific graph representation of the scene. The method also allows person re-identification in the presence of occlusions, in a tracking scenario.

Chapter 16, by R. Vezzani and R. Cucchiara, reviews all the benchmarks available for Person Re-Identification problem. The authors also discuss the metrics used to evaluate and compare re-identification systems.

X. Wang and R. Zhao, in Chapter 17, present a general architecture of a person re-identification system resulting from an examination of literature on the topic. Next, for each step of the system they discuss and compare different state-of-the-art approaches.

The authors of the Chapter 18, R. Satta, F. Pala, G. Fumera and F. Roli, also address a different but closely related problem. The problem consists of retrieving images or video sequences of individuals who match a query given in terms of a textual description of person appearance (e.g. color of clothing, type of clothing, etc.). They use dissimilarity-based appearance descriptors as features of a supervised classifier in order to cope with the considered issue. They use the VIPER dataset to validate their method.

In Chapter 19, A. Dick, A. van den Hengel and H. Detmold, show a method for determining the topology mapping (overlapping information) of a network of thousands of cameras. Then they use this information to reduce the search space for the people re-identification task. In fact they claim that the size of the search space is independent of the number of cameras in the network, instead depending only on their connectivity.

Finally, in Chapter 20, Y. Raja and S. Gong explore the Key Mechanisms for designing and implementing an open world scenario of person re-identification, in which the number of cameras, spatial size of the environment and numbers of people are all on a significantly larger scale, with a search space of unknown size and potentially unlimited number of candidate matches.

Pending Book Reviews

We are looking forward to reports on the following books under review:

1. *Airborne and Terrestrial Laser Scanning* by George Vosselman, Hans-Gerd Maas (Whittles Publishing, 2010). Reviewer: Giuseppe Maino. Under review since February 2010.

2. *Support Vector Machines for Pattern Classification, 2nd Ed.*, by Shigeo Abe (Springer, 2010). Reviewer: Huthaifa Abderahman. Under review since July 2013.

3. *Concise Computer Vision* by Reinhard Klette (Springer 2014). Reviewer: Tayyab Naseer. Under review since February 2014.

4. *Decision Forests for Computer Vision and Medical Image Analysis* by Antonio Criminisi and Jamie Shotton, Eds. (Springer 2013). Reviewer: Zeeshan Zia. Under review since April 2014.

5. *Imaging Spectroscopy for Scene Analysis* by Antonio Robles-Kelly and Cong Phuoc Huynh (Springer 2013). Reviewer: Tanish H. Zaveri. Under review since August 2014.

6. *Scalable Pattern Recognition Algorithms* by Pradipta Maji and Sushmita Paul. Reviewer: Munish Kumar. Under review since February 2015.

7. *Handbook of Biometric Anti-Spoofing* edited by Sebastien Marcel et al. Reviewer: George A. Papakostas. Under review since February 2015.

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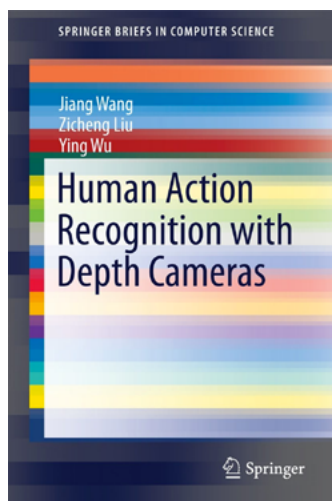
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web site for this volume.

**Human Action Recognition with
Depth Cameras**
by J. Wang, Z. Liu, Y. Wu

Springer, 2014
http://www.springer.com/gp/
book/9783319045603

Reviewed by Nicola Bellotto
(University of Lincoln, UK)

The book is part of the Springer's "Briefs in Computer Science" series and, as the name suggests, it is a relatively short but self-contained volume that presents recent advances in the popular research area of human action recognition. In particular, the authors focus on their work with depth cameras, partly covering research published in previous venues such as ECCV, CVPR, and TPAMI, but here presented to the reader within a single volume.

Before getting to the core of this review, I would like to provide some anecdotal information regarding my original motivation to read Wang et al.'s book (which might be the same for other potential readers) and how the latter actually met my expectations. Indeed, my initial interest was driven by the necessity to provide one of my postgraduate students, who has recently embarked on a research project about exactly

the same topic, with some good references to start his literature review. Therefore, I was quite pleased when the student, to whom I passed the book for a thorough read, told me at the end that he found it very useful and a good start for his research.

The following is hopefully a decent introduction to the book and a review that will help the reader in deciding whether it is worth investing his/her time (not much needed, actually) and money on this. I shall go through the four main chapters that make up the book and give details for each one of them.

In the first one, a general overview of the 3D action recognition problem is given, with references in particular to existing methods based on RGB-D cameras. The authors divide between skeleton-based and depthmap-based features representations, shortly describing various recognition paradigms that can be applied to them. Besides the concise introduction of the topic, what I found particularly interesting in this chapter is the information about a few public datasets that can be used for comparing the performance of previous and new action recognition systems, which are also often referred to in the remainder of the book.

The second chapter enters more specifically into the core of the topic by describing the authors' solution for 3D human action recognition using a novel actionlet ensemble model, i.e. a conjunctive structure of base features, which are defined as temporal pattern representations of individual joints in a skeleton model. The chapter is relatively self-contained, providing information about related work and details of the proposed methods, as well as a comprehensive evaluation against many of the

aforementioned datasets. Perhaps the only part that left me a little disappointed was the section about Fourier Temporal Pyramid which, despite being at the core of the actionlet ensemble model, has only been described very briefly (one can always look for the references, I suppose...).

Chapter three extends the authors' work further by integrating a new feature, called random occupancy pattern (ROP), based on a novel sampling algorithm to perform human action recognition directly from depth data, rather than using a skeleton model as in the previous chapter. Several experiments on a couple of public datasets for 3D human actions and gesture recognition show the good performance of the proposed solution. I noticed that at one point the book refers to "supplemental material" for the derivation of some formula, but this material does not actually exists on the publisher's website. From further checks, it appears indeed that the content of this chapter was presented previously at ECCV, but unfortunately the supplementary material of that submission was not available at the time of reading.

Finally, the fourth and last chapter is essentially just a brief wrap-up of the previous ones, with some considerations about current challenges and a suggestions for future research. Perhaps, given the very short length of this chapter (one page!), I would have preferred a little more effort to critically analyse the proposed research and extend the discussion about possible directions for future research in this area. However, editorial requirements and limitations on the total length of the book could have imposed the choice of such a short chapter.

In conclusion, I think Wang et al.'s

book is a good read for someone with an existing background in depth camera technology and research about human action recognition. The field is evolving so rapidly, of course, that in a few years some of the proposed methods could become completely obsolete. However, if you are a new student (or his/her supervisor) in this area and do not mind spending some money on a relatively compact little book, instead of reading several loosely papers, I would definitely recommend it.

F R E E   B O O K S

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.   ~Zeeshan Zia, Associate Editor for Book Reviews

We are offering the following latest titles for review. These have been published (or will very soon be available) in the "Advances in Computer Vision and Pattern Recognition" series from Springer.

* **Computer Vision in Sports** by Thomas B. Moeslund et al. (ISBN 978-3-319-09395-6):*http://www.springer.com/computer/image+processing/book/978-3-319-09395-6*

* **Smart Information Systems** by Frank Hopfgartner (ISBN 978-3-319-14177-0): *http://www.springer.com/computer/information+systems+and+applications/book/978-3-319-14177-0*

* **Advances in Embedded Computer Vision** by Branislav Kisačanin and Margrit Gelautz (ISBN 978-3-319-09386-4):*http://www.springer.com/computer/image+processing/book/978-3-319-09386-4*

* **Video Text Detection** by Tong Lu et al. (ISBN 978-1-4471-6514-9):*http://www.springer.com/computer/image+processing/book/978-1-4471-6514-9*

* **Computer Vision and Machine Learning with RGB-D Sensors** by Ling Shao et al. (ISBN 978-3-319-08650-7):*http://www.springer.com/computer/image+processing/book/978-3-319-08650-7*

Other Springer titles of interest recently published include:

* **Advanced Video Coding Systems** by Wen Gao and Siwei Ma (ISBN 978-3-319-14242-5):*http://www.springer.com/computer/theoretical+computer+science/book/978-3-319-14242-5*

* **Visual Cryptography for Image Processing and Security** by Feng Liu and Wei Qi Yan (ISBN 978-3-319-09643-8):*http://www.springer.com/computer/image+processing/book/978-3-319-09643-8*

* **Natural User Interfaces in Medical Image Analysis** by Marek R. Ogiela and Tomasz Hachaj (ISBN 978-3-319-07799-4): *http://www.springer.com/computer/image+processing/book/978-3-319-07799-4*

* **Fusion in Computer Vision** by Bogdan Ionescu et al. (ISBN 978-3-319-05695-1): *http://www.springer.com/computer/image+processing/book/978-3-319-05695-1*

* **Biometrics in the New World** by Julian Ashbourn (ISBN 978-3-319-04158-2): *http://www.springer.com/computer/image+processing/book/978-3-319-04158-2*

* **Image Blending Techniques and their Application in Underwater Mosaicing** by Ricard Prados, Rafael Garcia, and László Neumann (ISBN 978-3-319-05558-9): *http://www.springer.com/computer/image+processing/book/978-3-319-05557-2*

And recently published from MIT Press:

* **Developmental Robotics: From Babies to Robots** by Angelo Cangelosi and Matthew Schlesinger (ISBN 978026202801): *http://mitpress.mit.edu/books/developmental-robotics*

This bulletin board contains items of interest to the IAPR Community

ACPR
3rd Asian Conference on Pattern Recognition

WORKSHOPS

Call for Workshops

Deadline of proposals: May 1st, 2015

Notification of proposal acceptance: May 15th, 2015

Date of workshops: November 3rd, 2015

The 3rd Asian Conference on Pattern Recognition (ACPR2015) will be held on November 3-6, 2015, Kuala Lumpur, Malaysia. The Organizing Committee invites proposals for workshops to be held at ACPR2015. All the workshops are one-day or half-day and will be held on November 3rd, 2015, before the start of the main conference.

Click anywhere on this posting to learn more.

Suggestions for the IAPR?
Comments and suggestions can be sent to the IAPR via the Office of the Secretariat: Linda O'Gorman
secretariat@iapr.org

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Meeting and Education Planner

The IAPR web site has the most up-to-date information on IAPR events. Click here.
NOTE: Highlighting indicates that the paper submission deadline has not yet passed.
* Asterisks denote non-IAPR events *

		Meeting	Report on previous edition	Venue
2015	MAY	GbR 2015: 10th IAPR TC-15 Workshop on Graph-based Representations in Pattern Recognition	GbR 2013	**China**
		MVA 2015: 14th IAPR International Conference on Machine Vision Applications	MVA 2013	**Japan**
		ICB 2015: 8th IAPR/IEEE International Conference on Biometrics	IJCB 2014	**France**
	JUN	ChaLearn2015: 2015 CVPR ChaLearn Looking at People: Challenges in Action Spotting, Cultural Event Recognition, and Workshop on Looking at People		**USA**
		SCIA 2015: 19th Scandinavian Conference on Image Analysis	SCIA 2013	**Denmark**
		Biometrics 2015: 12th Summer School for Advanced Studies on Biometrics for Secure Authentication: Biometrics in Forensic, Security and Mobile Applications	Biometrics 2014	**Italy**
		MCS 2015: 12th International Workshop on Multiple Classifier Systems	MCS 2013	**Germany**
	JUL	ICVSS 2015: International Computer Vision Summer School, Learning to See	ICVSS 2014	**Italy**
		GREC 2015: Eleventh International Workshop on Graphics Recognition	GREC 2013	**Tunisia**
		HIP 2015: 3rd International Workshop on Historical Document Imaging and Processing	HIP 2013	**Tunisia**
	AUG	ICDAR 2015: 13th International Conference on Document Analysis and Recognition	ICDAR 2013	**Tunisia**
	SEP	ICIAP 2015: 18th International Conference on Image Analysis and Processing	ICIAP 2013	**Italy**
		* ICIP 2015: IEEE International Conference on Image Processing *		**Canada**
		ACPR 2015: 3rd Asian Conference on Pattern Recognition	ACPR 2013	**Malaysia**
		CIARP 2015: XX Iberoamerican Congress on Pattern Recognition		**Uruguay**
		DICTA 2015: International Conference on Digital Image Computing: Techniques and Applications	DICTA 2012	**Australia**
		ICVNZ 2015: Image and Vision Computing New Zealand		**New Zealand**
	NOV	PSIVT15: 7th Pacific Rim Symposium on Image and Video Technology	PSIVT13	**New Zealand**
2016	DEC	ICPR 2016: 23rd International Conference on Pattern Recognition	ICPR 2014	**Mexico**