TC10
Technical Committee on Graphics Recognition

| Newsletter | N°119 |

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Call for Contributions

Please contribute relevant news to TC10 groups.

Please send any relevant event, notice or link to the newsletter editor : Alicia Fornes.

Message from the editor

Welcome to the June edition of TC10 newsletter.

You will find information concerning the next call for papers, the call for competitions at ICFHR. We would like to highlight the ICPR 2016 Competition on Subgraph Spotting in Graph Representations of Comic Book Images (SSGCI), which is a joint collaboration of IAPR TC10-TC11-TC15.

You will also find the job offers at the University of La Rochelle (France) and the Computer Vision Center (Spain),
and the IJDAR articles alert. We also provide some extra information on the GREC 2015 LNCS Post-proceedings.

Follow us at twitter: https://twitter.com/IAPR_TC10.

Alicia Fornés, IAPR-TC10 Newsletter Editor.

ICPR 2016 competition: SSGCI

ICPR 2016 Competition on Subgraph Spotting in Graph Representations of Comic Book Images (SSGCI)
http://icpr2016-ssgci.univ-lr.fr/

Graphs are a powerful relational data structure, which are very widely used in pattern recognition. Graphs provide an expressive and convenient way to represent the structure, topology and attributes of underlying information. Searching a query graph in a database of graphs is a general problem in structural pattern recognition, which has its applications in various domains including (but not limited to) computer vision, image analysis, data mining and machine learning. This problem becomes more challenging if the nodes and the arcs of the graphs contain attributes as well.

The SSGCI competition is a result of joint collaboration of various members (chair, executive, non-executive) of the following three technical committees of the International Association of Pattern Recognition (IAPR):
 - TC10 – IAPR Technical Committee on GRAPHICS RECOGNITION
 - TC11 – IAPR Technical Committee on READING SYSTEMS
 - TC15 – IAPR Technical Committee on GRAPH BASED REPRESENTATIONS

COMPETITION
- Challenge: SSGCI is focused on the challenge of searching a query attributed graph in a database of attributed graphs and to provide the node (and arc) correspondences between query and result graphs.
- Dataset: The graph datasets for the competition have been constructed by representing the contents of scanned comic book images by attributed region adjacency graphs (RAGs) containing attributes both on nodes and arcs.
- Evaluation metrics: The evaluation metrics are based on traditional precision/recall as well as a score which is based on the quality of node (and arc) correspondences between query and result graphs.

IMPORTANT DATES
- May 30th 2016: Registration is opened
- June 6th 2016: Sample dataset is published
- June 27th 2016: Registration to is closed
- July 1st 2016: Test dataset is published
- July 15th 2016: Deadline for participants to submit results
- July 22nd 2016: Deadline for participants to submit the descriptions of their methods

HOW TO PARTICIPATE
- Registration: write to ssgci.icpr@gmail.com
- Website: http://icpr2016-ssgci.univ-lr.fr/

ORGANIZERS
BURIE Jean-Christophe, FOGGIA Pasquale, GUÉRIN Clément, LE Thanh Nam, LUQMAN Muhammad Muzzamil, OGIER Jean-Marc, RIGAUD Christophe

ICFHR 2016 competitions: Call for participation

International Conference on Frontiers in Handwriting Recognition
Shenzhen, China
October 23-26, 2016
http://www.nlpr.ia.ac.cn/icfhr2016/

The 15th International Conference on Frontiers in Handwriting Recognition (ICFHR2016, http://www.nlpr.ia.ac.cn/icfhr2016/) organizes competitions to evaluate the state of the art of handwritten document analysis and recognition in different scripts and media types.

Nine competitions are in organization. The competitions and URLs can be found in http://www.nlpr.ia.ac.cn/icfhr2016/competitions.htm and are also listed below.

For how to participate in the competitions, please visit the URLs for details.

1. **ICFHR2016 Competition on the Classification of Medieval Handwritings in Latin Script**
Organizers: Dominique Stutzmann, Véronique Eglin, Nicole Vincent, Florence Cloppet, Marlène Helias-Baron
URL: http://oriflamms.hypotheses.org/1388
Contact: dominique.stutzmann@irht.cnrs.fr

2. **ICFHR2016 Competition on Analysis of Handwritten Text in Images of Balinese Palm Leaf Manuscripts**
Organizers: Jean-Christophe Burie, Jean-Marc Ogier, Mickael Coustaty, Made Windu Antara Kesiman, Setiawan Hadi, Erick Paulus, Kimheng Sok, Dona Valy, I Made Gede Sunarya
URL: http://amadi.univ-lr.fr/ICFHR2016_Contest/
Contact: jean-christophe.burie@univ-lr.fr

3. **ICFHR2016 Competition on Arabic Online Text Recognition using Online-KHATT Database**
Organizers: Mohammad Tanvir Parvez, Hamzah Luqman, Baligh Al-Helali, Sabri A. Mahmoud
URL: http://onlinekhatt.ideas2serve.net/competition/
Contact: m.parvez@qu.edu.sa

4. **ICFHR2016 Competition on Multi-script Writer Demographics Classification Using "QUWI" Database**
Organizers: Chawki Djeddi, Somaya Al-Maadeed, Abdeljalil Gattal, Imran Siddiqi, Abdellatif Ennaji, Haikal El Abed
URL: http://mswdc2016.sciencesconf.org
Contact: djeddi_2008@yahoo.fr

5. **ICFHR2016 Competition on Recognition of Handwritten Mathematical Expressions (CROHME2016)**
Organizers: Harold Mouchère, Christian Viard-Gaudin, Richard Zanibbi, Utpal Garain
URL: http://ivc.univ-nantes.fr/CROHME/
Contact: harold.mouchere@univ-nantes.fr

6. **ICFHR2016 Handwritten Keyword Spotting Competition (H-KWS 2016)**
Organizers: Basilis Gatos, Ioannis Pratikakis, Joan Puigcerver, Alejandro H. Toselli, Enrique Vidal, Konstantinos Zagoris
URL: https://www.prhlt.upv.es/contests/icfhr2016-kws/index.html
Contact: ipratika@ee.duth.gr

7. **ICFHR2016 Handwritten Document Image Binarization Competition (H-DIBCO 2016)**
Organizers: Ioannis Pratikakis, Konstantinos Zagoris, Georgios Barlas, Basilis Gatos
URL: http://vc.ee.duth.gr/h-dibco2016/
Contact: ipratika@ee.duth.gr

8. **ICFHR2016 Competition on Local Attribute Detection for Improving Handwriting Recognition**
Organizers: Shawn Reid, Michael Murdock, Jack Reese, Blaine Hamilton
URL: http://collections.ancestry.com/ANDAR-AD-2016/Home
Contact: mmurdock@ancestry.com

9. **ICFHR2016 Competition on Handwritten Text Recognition on the READ Dataset**
Organizers: Joan Andreu Sánchez, Verónica Romero, Alejandro H. Toselli, Enrique Vidal
URL: http://transcriptorium.eu/~htrcontest/
Contact: jandreu@prhlt.upv.es

GREC 2015 LNCS Post-proceedings

Eleventh IAPR International Workshop on Graphics Recognition (GREC)
http://grec2015.loria.fr/
LNCS Postproceedings

The papers that have been accepted for publication in the LNCS Post-proceedings will be published as:
- Lecture Notes in Computer Science, volume 9657.
- Title: Graphics Recognition. Current Trends and Challenges.
     11th International Workshop, GREC 2015, Nancy, France, August 22-23, 2015, Revised Selected Papers.

The submission process to Springer for the forthcoming LNCS volume will be announced soon.

ACCEPTED PAPERS
- Improving Fuzzy Multilevel Graph Embedding with Topological Node Features - an application to Graphics Recognition
- Towards the Alignment of Handwritten Music Scores
- Circle Detection Performance Evaluation Revisited
- Text-independent speech balloon segmentation for comics and manga
- Camera-based document image retrieval system for heterogeneous-content complex linguistic maps
- Recognising Electronic Circuits to Enrich Web Documents for Electronic Simulation
- Migrating the Classical Pen-and-Paper based Conceptual Sketching of Architecture Plans Towards Computer Tools - Prototype Design and Evaluation
- Ontology-based Understanding of Architectural Drawings
- Statistical Performance Metrics for Use with Imprecise Ground-Truth
- The creation of digital, synthetic, ground-truth images from historic cosmic ray data recordings

IJDAR Alert

Volume 19, Issue 2
http://link.springer.com/journal/10032/19/2/page/1

- Bidirectional extraction and recognition of scene text with layout consistency
  R.Hinami, X.Liu, N.Chiba, S.Satoh

- TextCatcher: a method to detect curved and challenging text in natural scenes
  J.Fabrizio, M.Robert-Seidowsky, S.Dubuisson, S.Calarasanu, R.Boissel

- Converting heterogeneous statistical tables on the web to searchable databases
  D.W.Embley, M.S.Krishnamoorthy, G.Nagy, S.Seth

- Lexicon reduction of handwritten Arabic subwords based on the prominent shape regions
  H.Davoudi , M.Cheriet, E.Kabir

- Detecting figures and part labels in patents: competition-based development of graphics recognition algorithms
  C.Riedl , R.Zanibbi, M.A.Hearst, S.Zhu, M.Menietti, J.Crusan, I.Metelsky, K.R.Lakhani

- Advancing the state of the art for handwritten math recognition: the CROHME competitions, 2011–2014
  H.Mouchère , R.Zanibbi, U.Garain, C.Viard-Gaudin

Job offer: Postdoctoral position at University of La Rochelle

Call for Applications: Postdoctoral position at University of La Rochelle (France)

Topic : Robust biometrics (face authentication) under spoofing attacks on mobile platforms

Outline
The L3i lab of the University of La Rochelle (France) is looking for a talented young researcher to join a team working on mobile authentication using identity documents capture and video interaction. You will work closely with approx. 8 persons (professors, associate professors, software engineers, postdoctoral researchers and PhD students) in 2 labs and 2 companies to design, prototype, evaluate and disseminate a new solution for the robust distant authentication of individuals using identity document scans and a live video session.

Context
As part of the MOBIDEM project ("Mobile Identity for the Masses"), which aims at lowering the barrier for the acquisition of digital certificates for online signatures, the L3i is in charge of conceiving and developing an efficient and effective solution for the authentication of individuals during the creation of the digital identity. This projects involves two industrials and another academic lab, and will lead to new solutions to build online trust.
The MOBIDEM project is funded by the French government.

Working environment
The L3i lab ("Image Interaction Informatics") is the ICT research component of the University of La Rochelle, France. Located on the seaside in one of the most touristic cities in France, the L3i lab has grown a solid experience in collaborative research projects with many academics labs and industrial partners. The L3i lab has a huge team of researchers (postdocs, software engineers, professors), who have been working on R&D projects in the domain of document image analysis (DIA). The L3i lab has several state of the art document scanners and sophisticated equipment for conducting high quality research. Composed of a hundred staff members, we value scientific excellence, initiative, and cooperation.

Practical information
- Duration : 1 year (renewable for 1 extra year)
- Salary and benefits : starting at 2000€ per month after tax, regular French healthcare, 25+ days annual leave
- Starting date : before dec. 2016
- Position open until : sept. 2016

Expected qualifications and skills
- PhD in Computer Science, Mathematics, or other relevant field with a sound publication record
- Experience in biometrics, ideally in face recognition / authentication
- Proficiency in C/C++/Matlab/OpenCV and/or Scientific Python
- Strong mathematical knowledge
- Experience in collaborative academic / industrial projects is a plus

- Experience in machine learning and computer vision in general
- Very good communication skills in English, both spoken and written
- Speaking French is a plus, willingness to learn is expected otherwise
- Experience in video processing is a plus
- Experience with one or more deep learning framework would be greatly appreciated
- Willingness to prototype with mobile devices
- Highly motivated and enthusiast
- Autonomous and problem-solver
- Team-player

For more information about the position, please contact :
muriel.visani@univ-lr.fr and joseph.chazalon@univ-lr.fr

To apply, please
1 - Review the current state of the position at http://l3i.univ-larochelle.fr/recrutementMOBIDEM
2 - Send an application to muriel.visani(at)univ-lr.fr and joseph.chazalon(at)univ-lr.fr with :
- Your contact information (name, email, address with country)
- A resume with relevant experience (1 or 2 pages)
- A cover letter presenting key skills and motivations
- 2 references (letters if possible, names and contacts at least)
- [optional, if available] reviews of the PhD thesis by recognized scholars
- [optional but well received] short summary of research project

Job offer: Marie-Curie Fellowship at the Computer Vision Center

Call for Applications: Marie-Curie Fellowship at the Computer Vision Center (Barcelona, Spain)

The Computer Vision Centre opens six Marie Curie fellowships on different areas of Computer Vision, with the objective to incorporate researchers with a strong international and intersectoral component.

The P-SPHERE project is coordinated by the Universitat Autonoma de Barcelona with the participation the Computer Vision Centre. It aims to foster excellence in the training, mobility and professional improvement of researchers. The fellowship is co-financed by the P-SPHERE project, a Marie Sklodowska-Curie COFUND action financed through the H2020 framework.

Information on the Marie-Curie Fellowships:
http://www.uab.cat/web/research/p-sphere/introduction-1345688666835.html

Candidate's Profile
- Applicants must hold a PhD in computer science or a related field.
- They must not have resided or carried out their main work/studies activity in Spain for more than twelve months in the three years immediately prior to the call deadline.
- The applicants are expected to have experience in pattern recognition and machine learning techniques, and be able to demonstrate strong analytical and programming skills.
- The applicants should be fluent in oral and written communication in English. They should work well in a team, while demonstrating initiative and independence.

The call will open on September 2016
The two fellowships advertised here are linked to the Document Analysis Group (DAG):
1. Robust Reading
2. Historical Document Image Analysis

****** POSITION 1 ******
Marie Curie Fellowship on Robust reading

The fellowship is linked to the robust reading and machine learning research groups. The successful applicant is expected to align his research to the research line on holistic interpretation of urban scene imagery.

The goal of this research line is to automatically learn models (i.e. meanings) to which experiences (i.e. images and video from wearable devices or from social media streams) can be associated. The selected candidate is expected to align his research to the research line on holistic interpretation of urban scene imagery, investigating techniques for automatic interpretation of indoor and outdoor urban scenes. Of particular interest is the interplay between visual and textual content in a scene image, and to what extent such modalities can work synergistically towards urban scene imagery interpretation.

To achieve this goal, contextual information should be modelled over distinct context spaces that include textual cues, visual cues and interpretation of user behaviour. The Fellow could work, for example, on a single inference model in which these separate elements serve as mutual context to each other.

Research contact
- Dimosthenis Karatzas dimos@cvc.uab.es

****** POSITION 2 ******
Marie Curie Fellowship on Historical Document Image Analysis

Digital humanities are an emerging topic. The automatic extraction of information from scanned documents stored in archives and libraries of any modality (printed or handwritten text, graphics) is a challenge. The use of context is very important in improving the recognition, especially when it is handwritten. The structure of objects, language models both for textual and graphical contents is a kind of syntactic context. There is also another context, the semantic context provided by users which encompasses new modalities of user interaction (sketching interface, collaborative annotation platforms).

The aim of the project is summarized with the following objectives.
- To develop models for indexing and cross-linking visual terms in large scale document collections.
- Context aware recognition: to include syntactic and semantic context in recognition and retrieval architectures.
- To construct an advanced collaborative and tangible interface architecture and validate with end users.

He/she will work in current projects in collaboration with archives on the interpretation of historical manuscripts (not exclusively) such as demographic documents, hand written musical scores, maps, etc.

Research contact
- Alicia Fornes afornes@cvc.uab.es
- Josep Lladós josep@cvc.uab.es

Job offer: PhD Studentship at the Computer Vision Center

Open PhD Studentship at the Computer Vision Center (Barcelona, Spain)

The Computer Vision Center at the Universitat Autònoma de Barcelona (UAB) seeks a qualified candidate for a PhD student position (FPI-MINECO contract) in the field of historical document image analysis.
Candidates must prove that they hold university-awarded Master's degree or equivalent at the time of signing the contract.
Candidates cannot already hold a PhD degree.

The duration of the position is 4 years (48 months).

DATES
- The call will open soon.
- (probable) Start date: October 2016.

More information at: http://www.cvc.uab.es/?p=2640

Research contact
- Josep Lladós < josep@cvc.uab.es >
- Alicia Fornes < afornes@cvc.uab.es >

IWRR 2016: Call for papers

2nd International Workshop on Robust Reading
(in conjunction with ECCV 2016)
October 8,9, or 16 (TBC), 2016, Amsterdam, The Netherlands
www.cvc.uab.es/IWRR2016

IWRR 2016 is the succession of the 1st IWRR workshop that was held in Singapore as a satellite workshop of ACCV 2014. IWRR aims at bringing together computer vision researchers and practitioners with an interest in reading systems that operate on images acquired in unconstrained conditions, such as scene images and video sequences, born-digital images, wearable camera and lifelog feeds, social media images, etc. The particular focus of the workshop is on the automatic extraction and interpretation of textual content in images, and applications that use textual information obtained automatically by such methods.

The workshop aims to offer a forum for researchers to share experiences and latest results in the area, and to discuss current trends and the evolution of the Robust Reading Competition (RRC) which has attracted to date over 1,500 researchers and more than four thousand submissions. Reporting recent results on standard datasets such as the ICDAR RRC 2015 dataset on incidental scene text or the Coco-Text dataset is particularly encouraged.

All submitted papers will be reviewed by at least three members of the programme committee. Paper acceptance will be based on originality, novelty, technical soundness, and clarity of presentation. Proceedings for all ECCV 2016 workshops will be published with Springer.

Fresh paper submissions as well as re-submissions of improved versions of rejected ECCV / ACM Multimedia papers (submitted along with the original reviews) are welcome. The topics of interest include among others:
- Scene text localisation, segmentation, and recognition
- Reading scene and/or overlaid text in video sequences
- Word spotting
- End-to-end reading systems
- Text localisation and recognition in born-digital images
- Restoration of camera captured paper documents
- Quality estimation and degradation modelling of camera-captured text
- Performance evaluation and metrics
- Robust reading applications
- Graphical content interpretation in complex settings

Important Dates
- Submission deadline: **June 20, 2016**
- Deadline for resubmitted ECCV / ACM Multimedia papers: **July 7, 2016**
- Author Notification : **July 11, 2016**
- Camera Ready: July 24, 2016

MedPRAI 2016: Call for papers

1st Mediterranean Conference on Pattern Recognition and Artificial Intelligence
November 22 - 23, 2016, Tebessa, Algeria
http://medprai2016.sciencesconf.org

It is with great pleasure that we invite you to the 1st Mediterranean Conference on Pattern Recognition and Artificial Intelligence. The conference is organized by the Department of Mathematics and Computer Science, Larbi Tebessi University and will be held in Tebessa, Algeria on November 22-23, 2016. The conference aims to provide an interdisciplinary forum for discussions on recent advancements in different areas of pattern recognition and artificial intelligence.

Topics of interest scope all related subareas including but not limited to the following.

Track 1: Pattern Recognition
 - Handwriting analysis and recognition
 - Biometrics applications
 - Pattern recognition & applications
 - Image, speech, signal and video processing
 - Machine learning and data mining
 - Computer vision
 - Robotics and perception
 - Virtual reality & medical applications

Track 2: Artificial Intelligence
 - Natural language processing
 - Automated reasoning and inference
 - Knowledge representation and reasoning
 - Constraint processing
 - Heuristic search
 - Intelligent interfaces
 - Multi-agent Systems
 - Deep learning

All submitted papers will be reviewed by at least 2 members of the international program committee; additional reviewers will be consulted if needed. Paper acceptance will be based on originality, significance, technical soundness, and clarity of presentation.

It is planned to publish the proceedings with Springer in their Communications in Computer and Information Science (CCIS) series (final approval pending).

Important Dates
- Paper Submission: **May 27, 2016.**
- Author Notification: **August 26, 2016.**
- Camera-ready Paper/Registration: **September 9, 2016.**
- Conference Dates: **November 22-23, 2016.**

Endorsed by
The International Association or Pattern Recognition (IAPR).

Organizers
Larbi Tebessi University, Tebessa, Algeria.
Bahria University, Islamabd, Pakistan.
Laboratory of Mathematics, Informatics and Systems, Tebessa, Algeria.

Call for papers

Event/Location/Web	Event Date	Deadline (paper submission)
DATECH 2016,Poznan, Poland Digital Access to Textual Cultural Heritage http://ddays.digitisation.eu/datech-2016/	6-7 October 2016	-passed-
ICFHR 2016, Shenzhen, China Int. Conf. on Frontiers in Handwriting Recognition http://www.nlpr.ia.ac.cn/icfhr2016/	October 23-26, 2016	-passed-
ICPR 2016, Cancun, Mexico Int. Conf on Pattern Recognition http://www.icpr2016.org/site/	December 4-8, 2016	-passed-
MEDPRAI 2016, Tebessa, Algeria 1st Mediterranean Conf. on Pattern Recognition and Artificial Intelligence	November 22-23, 2016	June 13, 2016

http://medprai2016.sciencesconf.org/		
S+SSPR 2016 (ICPR Workshop), Mérida, Mexico Int. Workshops on Structural and Syntactic Pattern Recognition and Statistical Techniques in Pattern Recognition http://www.s-sspr.org/	Nov. 30 - Dec. 2, 2016	June 14, 2016
ICVGIP 2016, Guwahati, India Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP) http://www.iitg.ernet.in/icvgip2016/	December 18-22, 2016	July 8, 2016 (abstracts) July 15, 2016 (full paper)
IWRR 2016, Amsterdam, The Netherlands Int. Workshop on Robust Reading (in conjunction with ECCV) http://www.cvc.uab.es/iwrr2016/?c=home	October 8,9 or 16, 2016	June 20, 2016
ICPRAM, Porto, Portugal Int. Conf. on Pattern Recognition Applications and Methods http://www.icpram.org/	February 18-22, 2016	October 4, 2016
IBPRIA, Faro, Portugal Iberian Conf. on Pattern Recognition and Image Analysis http://www.ibpria.org/2017/	June 21-23, 2017	November 26, 2016

Call for datasets

We would like to remind you that the TC10 and TC11 Web sites always welcome contributions of new datasets or other resources related to the community. We would like to encourage all the TC10 and TC11 members to submit such material to the TC10 and TC11 for archiving. The availability of datasets, ground truth and performance evaluation tools online is not only good practice, but also a requirement for a field to progress.

We would like make a special request to the organizers of recent and future competitions. Independently of whether you have the competition datasets and evaluation tools available through other Web sites, please consider archiving them with TC10 / TC11 as well. Web sites often go off-line and useful resources are frequently lost forever.

Please check the TC10 site on information about how to submit datasets for archiving.
http://iapr-tc10.univ-lr.fr/index.php/datasets-and-software

Marcus Liwicki and Syed Saqib Bukhari
TC-11 and TC-10 Dataset Curators