TC10 Technical Committee on Graphics Recognition

Newsletter

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Please contribute relevant news to TC10 groups.

Please send any relevant event, notice or link to the newsletter editor : Motoi Iwata.

Message from the editor



Welcome to the November edition of the TC10 newsletter, which contains information on the LNCS-GREC post-proceedings, the report of the TC10/TC11 summer school at La Rochelle, and the next call for papers.

Please be aware that the deadline for proposing workshops, competitions and tutorials for ICDAR 2019 is approaching. The call for the TC10/TC11 summer school is also ready.

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

Motoi Iwata, IAPR-TC10 Newsletter Editor.

Summary of the 2nd IAPR TC10/TC11 Summer School in La Rochelle, France

The 2nd IAPR TC10/TC11 Summer School has been held in La Rochelle, France from July 2nd to 6th 2018.

The aim of this summer school was to give to new students in the field of DAR (Document Analysis and Recognition) an overview of all the traditional approaches to process and analyse documents but also to focus on new trends such as deep learning, the use of interactive devices, the fraud issues in documents, and so on.

Different talks have been done by international researchers coming from France, Switzerland, Spain, Japan and United States. In addition of traditional



oral talks, 3 practical sessions have been carried out in order to apply some techniques addressed during the talks. The interactive sessions (such as poster session and self-introduction session) have been a good environment for many exchanges between participants and senior researchers. Finally a visit of the L3i laboratory has also been organised with demonstrations

of the research activities in the field of DAR.

Two awards have been given. The poster award has been given to Florian Westphal (Blekinge Institute of Technology, Sweden) for his poster titled "Efficient Binarization using Heterogeneous Computing and Interactive Learning". The excellence award has been given to Tarin Clanuwat (Center for Open Data in the Humanities, Tokyo, Japan) for her outstanding participation.

This event gathered PhD students and junior researchers from 11 countries (France : 7, Vietnam : 4, Sweden : 2, Finland : 2, Germany : 2, Indonesia : 2, Pakistan : 1, Austria : 1, Tunisia : 1, Italy : 1, Japan : 1). Thanks to the support of the IAPR, 2 travel grants and 4 fee waivers have been assigned to participants will low resources. Moreover 17 master students (16 from China and 1 from Brazil) attend to this summer school in order to discover the field of document analysis.

Final edition of the LNCS-GREC post-proceedings

International Workshop on Graphics Recognition (GREC) LNCS Postproceedings

http://grec2017.loria.fr/

The GREC workshop was, as usual, a great opportunity to share new ideas and knowledge about graphics recognition. As in previous editions, after the GREC workshop, authors had the opportunity to submit an extended and revised paper for publication at Lecture Notes in Computer Science (LNCS), Springer.

The selected papers will be published as:

- Lecture Notes in Computer Science, volume 11009.

- **Title**: *Graphics Recognition. Current Trends and Challenges.*

12th International Workshop, GREC 2017, Kyoto, Japan, Revised Selected Papers.

Springer is finalizing the edition of the volume, so the 10 selected papers plus the discussion groups reports will be very soon available at:

https://www.springer.com/cn/book/9783030022839

Thanks again for all your contributions.

Alicia Fornés and Bart Lamiroy The GREC 2017 chairs

Call for the TC10/TC11 Summer School on Document Analysis (SSDA 2019)

Part of the mission of IAPR TC11 and TC10 is to promote high quality educational activities related to Reading Systems and Graphics Recognition. Responding to this need, TC10 and TC11 have established a series of summer schools. After the successful organization of summer schools in Jaipur, India, and La Rochelle, France, we are now are soliciting proposals for the organisation of the third "IAPR TC10/TC11 Summer School on Document Analysis" (SSDA) in 2019.

The "IAPR TC10/TC11 Summer School on Document Analysis" is intended to become the primary educational activity of IAPR TC11 (Reading Systems) and TC10 (Graphics Recognition). The School is meant to be a training activity where participants are exposed to the latest trends and techniques of Reading Systems and Graphics Recognition.

The aim of the School is to provide both an objective and clear overview and an in-depth analysis of the state-of-the-art research in selected topics of Reading Systems and Graphics Recognition. The School should aim to provide a stimulating opportunity for young researchers and Ph.D. students in the field.

Individuals and groups who are interested in Reading Systems and Graphics Recognition are invited to submit proposals for organizing and hosting the 2019 IAPR TC10 / TC11 Summer School. As the previous summer schools were organized in Asia and Europe, organizing teams from the Americas are encouraged to submit a bid in order to facilitate the envisioned rotational scheme of the IAPR TC10 / TC11 Summer School.

In order to fully plan their bid, it is expected that proposers familiarise themselves with the guidelines for organising the

School first. The Guidelines can be found at the TC11 Web site:

http://www.iapr-

tc11.org/mediawiki/index.php/Guidelines_for_Organising_and_Bidding_to_Host_the_TC10_/_TC11_Summer_School

The submission of a bid implies full agreement with the rules and procedures for organising the School. Especially, this means that organizers will apply for IAPR support and that the event will use the series title "IAPR TC10/TC11 Summer School on Document Analysis" with an optional sub-title denoting a special focus of the respective event.

Proposals should be sent to:

- Gernot A. Fink (TC11), gernot.fink[at]udo.edu
- Jean-Christophe Burie (TC10), jcburie[at]univ-lr.fr

The deadline for submitting written proposals is:

Friday, December 10, 2018

Please consider submitting a proposal for this increasingly important event for the TC10/TC11 community. If you have questions, please do not hesitate to contact the TC11 and TC10 SSDA representatives (emails above).

Call for ICDAR 2019 Workshops, Tutorials and Competitions

The **ICDAR2019** Organizing Committee invites proposals for Workshops, Tutorials and Competitions to be held in conjunction with ICDAR 2019.

http://icdar2019.org/

Call for competitions

Competitions information: http://icdar2019.org/program/competitions/

Important Dates

- Proposal Due: November 30, 2018
- Acceptance Notification: December 30, 2018
- Suggested deadline for Competition participants: April 30, 2019
- Initial Submission of Competition Reports Deadline: May 15, 2019
- Camera-Ready Papers Due: June 15, 2019

All proposals should be submitted by electronic mail to the Competition Chairs (Luiz Oliveira and Marcus Liwicki) via: marcus.liwicki@unifr.ch and lesoliveira@inf.ufpr.br

Call for workshops

Workshops information: http://icdar2019.org/program/workshops/

Important Dates

- Proposal Due: November 30, 2018
- Acceptance Notification: December 30, 2018
- Dates of Workshops: September 20, 21, 2019

All proposals should be submitted by electronic mail to the Workshop Chairs (Jean-Marc Ogier and Seiichi Uchida) via: icdar2019-workshop *** human.ait.kyushu-u.ac.jp (please replace *** with atmark).

Call for tutorials

Tutorials information: http://icdar2019.org/program/tutorials/

Important Dates

- Proposal due: November 30th, 2018.

- Feedback and/or suggestions: within two weeks of receiving the proposal.

- Final acceptance: December 30th, 2018.

All proposals should be submitted by electronic mail to the Tutorial Chairs, Daniel Lopresti (lopresti@cse.lehigh.edu) and Josep Lladós (Josep.Llados@uab.cat).

ICDAR 2019: call for papers for the conference and IJDAR track

The **15th International Conference on Document Analysis and Recognition** will be held in Sydney, Australia from September 20-25, 2019. ICDAR is the premier international gathering for researchers, scientist and practitioners in the document analysis community. http://icdar2019.org/

Important Dates

- Feb 15, 2019 Paper Submission Deadline
- May 15, 2019 Author Notification
- Jun 15, 2019 Camera-Ready Papers Due

ICDAR-IJDAR Journal Track

For the first time, ICDAR 2019 is opening a journal track that will offer the benefit of the rapid turnaround and dissemination times of a conference while providing the paper length, scientific rigor, and careful review process of an archival journal.

More info here:

https://static.springer.com/sgw/documents/1642033/application/pdf/ICDAR-IJDAR-CFP-v4+2+-+DPL.pdf

Important Dates

- Nov. 15, 2018: Initial submission deadline
- Jan. 15, 2019: Initial decisions (accept, minor/major revision, reject)
- Feb. 15, 2019: ICDAR regular paper submission deadline
- Apr. 15, 2019: Submission deadline of the revised version of IJDAR papers
- May 30, 2019: Final decisions (accept to journal track, or move to journal-only process)

Papers submitted to the journal track should follow the format of IJDAR submissions and all of the standard guidelines (https://www.springer.com/computer/image+processing/journal/10032).

This special issue is a joint initiative of the board of editors of IJDAR and the Program Chairs of ICDAR 2019.

- Andreas Dengel, Rafael Dueire Lins, Cheng-Lin Liu: Program Chairs of ICDAR 2019
- Koichi Kise, Daniel Lopresti, Simone Marinai: Editors-in-Chief of IJDAR

For any information about this initiative, please email one of the editors of this special issue or consult the FAQ that will be posted on the IJDAR website (https://www.springer.com/computer/image+processing/journal/10032).

Cheng-Lin Liu, ICDAR 2019 Program Co-Chair (liucl@nlpr.ia.ac.cn)

Post-doc position - L3i - La Rochelle France

Title : Content-based document signature for IoT security

The L3i laboratory has one open post-doc position in computer science, in the specific field of document image analysis and pattern recognition

Duration: 12 months
Position available from: January 1st, 2019
Salary: approximately 2100 € / month (net)
Place: L3i lab, University of La Rochelle, France
Specialty: Computer Science/ Image Processing/ Document Analysis/ Pattern Recognition
Contact: Mickaël Coustaty (mickael.coustaty [at] univ-lr.fr) and Petra Gomez-Krämer (petra.gomez [at] univ-lr.fr)

Position Description

The L3i is a research lab of the University of La Rochelle. La Rochelle is a city in the south west of France on the Atlantic coast and is one of the most attractive and dynamic cities in France. The L3i works since several years on fraud detection in

documents and document security and has become a worldwide reference in this domain.

The work done by the post-doc will take part in the context of the SPIRIT (European funding by the CHIST-ERA program) and SVP-IoT (funding of the Region Nouvelle Aquitaine) projects. As the adoption of digital technologies expands, it becomes vital to build trust and confidence in the integrity of such technology. The SPIRIT and SVP-IoT projects will investigate the proof of concept of employing novel secure and privacy-ensuring techniques in services set-up in the Internet of Things (IoT) environment, aiming to increase the trust of users in IoT-based systems. The proposed system will address distinct issues related to security and privacy, hence, overcoming the lack of user

confidence, which inhibits utilization of IoT technology.

The work of the L3i within those projects is to develop a technology based on creating a contentbased signature of user data/ documents, in order to ensure the integrity of sent data upon arrival. This technology has also been developed at the University of La Rochelle [1, 2, 3] but has not yet been employed in the IoT domain. The projects aim to build upon the highly significant results produced by the partners and to research the challenges of how these technologies can be adapted for IoT environment.

More specifically, the work done by the post-doc will consist in two main objectives: (1) extracting content from IoT device data by analyzing the input IoT device data in order to prepare the data for analysis and semantics extraction; (2) computing a unique content-based signature to allow authenticating an IoT data object independently of its physical representation. Hence, this work will consist of two parts: data/ document analysis and signature computation. In the first part, an IoT data object will be analyzed in order to obtain a robust description of the object, which is independent of the acquisition mode and source. The different components of the document and their spatial relationships (for images this would be printed text, tables, graphics, stamps, handwritten signature...) will be extracted. The aim is to obtain a stable decomposition and reliable content extraction, which conforms to the requirements of the subsequent security-assuring tasks.

The signature computation method, which is the second part, combines cryptographic hash algorithms and perceptual hash algorithms. The cryptographic signature is based on the robust description of the IoT data object. This allows authenticating any object even if it has been subjected to minor modifications as long as these modifications do not change any part of the semantic content.

Qualifications

Candidates must have a completed PhD and research experience in image processing and analysis or pattern recognition.

General Qualifications

• Good programming skills mastering at least one programming language like Java, Python, C/C++

- Good teamwork skills
- Good writing skills and proficiency in written and spoken English or French

Applications

Candidates should send a CV and a motivation letter to mickael.coustaty [at] univ-lr.fr and petra.gomez [at] univ-lr.fr.

References

S. Eskenazi, B. Bodin, P. Gomez-Krämer, and J.-M. Ogier. A perceptual image hashing algorithm for hybrid document security. In International Conference on Document Analysis and Recognition (ICDAR), pages 741-746, 2017.
 S. Eskenazi, P. Gomez-Krämer, and J.-M. Ogier. The Delaunay document layout descriptor. In ACM International Symposium on Document Engineering (DocEng), pages 167-175, 2015.

[3] S. Eskenazi, P. Gomez-Krämer, and J.-M. Ogier. When document security brings new challenges to document analysis. In International Workshop on Computational Forensics (IWCF), Lecture Notes in Computer Science (LNCS 8915), pages 104-116. Springer, 2015.

Call for papers

Event/Location/Web	Event Date	Deadline (paper submission)
IWRR 2018, Perth, Australia (at ACCV2018)	December 2, 2018	- passed -
International Workshop on Robust Reading		
http://www.cvc.uab.es/iwrr2018/		
MANPU 2019, Thessaloniki, Greece	January 8, 2019	- passed -
3rd Int. Workshop on coMics ANalysis, Processing and		
Understanding (at Int. Conf. on Multimedia Modeling)		
http://mmm2019.iti.gr/3rd-international-workshop-on-		
comics-analysis-processing-and-understanding-manpu-2019/		
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CVPR 2019, Long Beach, USA Computer Vision and Pattern Recognition http://cvpr2019.thecvf.com/	June 15-21, 2019	November 16, 2018
ICDAR 2019, Sydney, Australia Int. Conf. on Document Analysis and Recognition http://www.icdar2019.org/	September 22-25, 2019	Nov. 15, 2018 (IJDAR Track) Feb. 15, 2018 (paper)

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

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