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## [IAPR-TC10] Newsletter 144 – December 2020

Posted on 29/12/2020 (https://iapr-tc10.univ-lr.fr/?p=1166) by Christophe Rigaud (https://iapr-tc10.univ-lr.fr/?author=5)



Welcome to the December edition of the TC10 newsletter.

In this issue, you will find an important message from TC10 chair and fresh information about ICDAR 2021 conference, tutorials and competitions. Also, call for proposals to organize the IAPR TC10/TC11 Summer School on Document Analysis and DAS 2022.

Please take care and keep safe from COVID-19 and I wish you a happy new year!

Christophe Rigaud IAPR-TC10 Communications Officer



### Message from TC10 chair:

Dear all,

First of all, let me wish you Merry Christmas and a Happy New Year. Let's hope 2021 will be much better. Indeed, this "pandemic 2020" has been very difficult at many levels, taking care of our beloved ones and adapting ourselves to new ways of doing research, teaching, meeting friends, relatives...

On the positive side, we can be proud since we have shown a great adaptability degree, and many 100% c conferences/workshops, including DAS and ICFHR, have been really successful and participative.

Privacy - Terms

As you may remember, at the "2<sup>nd</sup> Future of Document Analysis and Recognition Workshop" (at ICDAR 2019) many of us discussed the future of our community. During 2020, we set a Task Force to continue the discussions towards the definition of a strategic plan for the document analysis and recognition community. We involved the TC10/TC11 chairs/vice-chairs and some of the previous/future organizers of our events (conferences, workshops, summer schools). The update of this activity was presented at DAS and ICFHR. You can find the session that was recorded at DAS here:

https://www.youtube.com/watch?v=\_46pgNwj0IQ&feature=youtu.be (https://www.youtube.com/watch?v=\_46pgNwj0IQ&feature=youtu.be)

Our plan is to keep working in this direction during 2021, and of course, receive feedback from all the community. Please, stay tuned!

All the best and take care, Alicia Fornés (TC10 chair)

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**Call for contributions:** feel free to contribute to TC10 newsletters, by sending any relevant news, event, notice, open position, dataset or link to us on iapr.tc10[at]gmail.com

# 1) Upcoming deadlines and events

## 2021

- Deadlines:
  - January 11, tutorial proposal ICDAR 2021 (https://icdar2021.org/calls/call-for-tutorials/) (extended)
  - January 31, proposal submission SSDA 2021
  - February 8, paper submission deadline for ICDAR 2021 (https://icdar2021.org/)
- Events:
  - o January 10-15, conference ICPR 2020 (https://www.icpr2020.it/), Milan, Italy (online)
  - January 21-22, workshop S+SSPR 2020 (https://www.dais.unive.it/sspr2020/), Padua, Italy (online)
  - o February 4-6, conference ICPRAM 2021 (http://www.icpram.org/) (online)
  - o September 5-10, conference ICDAR 2021 (https://icdar2021.org/), Lausanne, Switzerland

## 2022 and later

• Events:

o December 2022, conference ICFHR 2022 (http://www.icfhr2022.org), Hyderabad, India

# 2) IJDAR article alert

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https://link.springer.com/journal/10032/volumes-and-issues/23-4 (https://link.springer.com/journal/10032/volumes-and-issues/23-4) (https://link.springer.com/journal/10032/volumes-and-issues/23-4)

• (https://link.springer.com/article/10.1007/s10032-020-00356-y) (https://link.springer.com/article/10.1007/s10032-020-00356-y) Single shot multi-oriented text detection based on local and non-local features (https://link.springer.com/article/10.1007/s10032-020-00356-y)

Xiao Qian Li, Jie Liu, Shu Wu Zhang, Gui Xuan Zhang & Yang Zheng

• Automatic room information retrieval and classification from floor plan using linear regression model (https://link.springer.com/article/10.1007/s10032-020-00357-x)

Hiren K. Mewada, Amit V. Patel, Jitendra Chaudhari, Keyur Mahant & Alpesh Vala

• (https://link.springer.com/article/10.1007/s10032-020-00358-w)DetectGAN: GAN-based text detector for camera-captured document images (https://link.springer.com/article/10.1007/s10032-020-00358-w)

Jinyuan Zhao, Yanna Wang, Baihua Xiao, Cunzhao Shi, Fuxi Jia & Chunheng Wang

• (https://link.springer.com/article/10.1007/s10032-020-00359-9)Optical character recognition with neural networks and post-correction with finite state methods (https://link.springer.com/article/10.1007/s10032-020-00359-9) (open access)

Senka Drobac & Krister Lindén

# 3) Invitation to TC10/11 meeting at ICPR

You are all invited to attend the next TC10/11 meeting that will take place **online** on **Wednesday**, **January 20**, **12:00 – 13:00 CET**. The meeting is open to all TC10 members receiving this newsletter.

The link for connecting to the online meeting will be shared in January.

Note that it is habitual to host a joint TC10/11 meeting during the ICPR. Since ICPR will take place as a virtual conference this year, we have decided to decouple the TC10/11 meeting from the conference and hold it separately the week after ICPR as a virtual meeting. This way the TC10/11 meeting will not be bound to the timing of ICPR coffee breaks, while it will be open to everyone.

# 4) Open call for expressions of interest for organizing future TC10 or TC11 events

Due to the current pandemic situation, and understanding the difficulties in putting together a complete bid under the current circumstances, the TC10 and TC11 teams have opted not to open specific calls for organizing any future events planned for after 2023.

Nevertheless, we would like to probe the community, and invite our colleagues to start thinking about whether they would like to potentially organize a future TC10 or TC11 event (e.g. conference, workshop, summer school).

We will be gathering expressions of interest for a few months. These are not meant to be full proposals, but rather an informal message to the TC10/TC11 chair, indicating a possible interest to organize one of the future

events.

If you think you can take on the organization of such a future event, **please send us a quick message**, indicating if possible where, when and which event you would be interested in organizing.

**Dr Dimosthenis Karatzas**, TC11 Chair (dimos[at]cvc.uab.es) **Dr Alicia Fornes**, TC10 Chair (afornes[at]cvc.uab.es)

# 5) ICDAR 2021 2<sup>nd</sup> call for paper

The 16th International Conference on Document Analysis and Recognition September 5-10, 2021 – Lausanne, Switzerland

Web page: https://icdar2021.org (https://icdar2021.org)

Call for Papers (PDF): <u>ICDAR2021-2nd-CfP.pdf</u> (https://icdar2021.org/wp-content/uploads/icdar-2021-2nd-

cfp.pdf)

Contact: info@icdar2021.org (mailto:info@icdar2021.org)

ICDAR is the premier international event for scientists and practitioners involved with document analysis and recognition, a field of growing importance in the current age of digital transition. In 2021, the 16th edition of this flagship conference will be held in Switzerland for the first time.

The organizers are committed to holding a safe and secure ICDAR 2021 in the face of the worldwide COVID-19 health crisis. In the event it becomes necessary, ICDAR 2021 will be held with options for remote participation. All accepted papers will be presented at the conference and published in the ICDAR 2021 proceedings, whether or not the conference takes place physically, virtually, or in a hybrid format.

List of accepted workshops: <a href="https://icdar2021.org/workshops/">https://icdar2021.org/workshops/</a> (https://icdar2021.org/workshops/)

List of accepted competitions: <a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a>/org/competitions/<a href="https://icdar2021.org/competitions/">https://icdar2021.org/competitions/</a></a>

Call for papers:

### **Important Dates**

- 08 Feb 2021: Paper submission deadline
- 26 Apr 2021: Notification of acceptance
- 17 May 2021: Camera-ready version submission deadline
- 05-07 Sep 2021: Workshops, tutorials, and doctoral consortium
- 08-10 Sep 2021: Main conference dates

News: recent past ICDAR proceedings have been published using IEEE Computer Society Press. Building on successful collaborations between IAPR and Springer, the ICDAR advisory board has decided to publish the ICDAR 2021 proceedings under the Springer Lecture Notes in Computer Science (LNCS) series.

More details at: https://icdar2021.org/calls/call-for-papers/ (https://icdar2021.org/calls/call-for-papers/)

Andreas Fischer, Rolf Ingold, and Marcus Liwicki ICDAR 2021 General Chairs (info@icdar2021.org (mailto:info@icdar2021.org))

# 6) ICDAR 2021 call for tutorials (deadline

# extended)

The ICDAR 2021 Organizing Committee invites proposals for tutorials that will be held on September 5-7, before the main conference begins.

Detailed information at:

https://icdar2021.org/calls/call-for-tutorials/ (https://icdar2021.org/calls/call-for-tutorials/)

Important dates:

- Jan 11, 2020: (extended) Proposal Due
- Jan 31, 2020: (extended) Acceptance Notification
- Sep 5-7, 2021: Dates of Tutorials

All proposals should be submitted by electronic mail to the Tutorial Chairs:

**Veronique Eglin** (veronique.eglin[at]insa-lyon.fr) **Alicia Fornés** (afornes[at]cvc.uab.es)

# 7) ICDAR 2021 competition on Document Visual Question Answering

\*\*\* NEW DATASETS ARE NOW AVAILABLE \*\*\*

Dear Colleagues,

We are pleased to **invite you to participate** in the ICDAR 2021 Long-Term Competition on Document Visual Question Answering (DocVQA) that is organized in conjunction with the **16**<sup>th</sup> **International Conference on Document Analysis and Recognition (ICDAR)**, 5-10 September 2021, Lausanne (Switzerland).

Website: <a href="https://rrc.cvc.uab.es/?ch=17">https://rrc.cvc.uab.es/?ch=17</a> (https://rrc.cvc.uab.es/?ch=17)

### Overview

Contemporary Document Analysis and Recognition (DAR) research tends to focus on generic information extraction tasks (character recognition, table extraction, word spotting), largely disconnected from the final purpose the extracted information is used for. The DocVQA challenge seeks to inspire a "purpose-driven" point of view in Document Analysis and Recognition research, where the document content is extracted and used to respond to high-level tasks defined in natural language by the human consumers of this information. In this sense DocVQA constitutes a new problem space, where high-level semantic tasks dynamically drive information extraction algorithms to conditionally interpret document images.

DocVQA is modeled as a Visual Question Answering (VQA) problem where the task is to answer a natural language question asked on a single document image or a collection of digitized documents. This goes over and above passing a document image through OCR, and involves understanding all types of information conveyed by a document.

The DocVQA challenge is a continuous, evolving effort, linked to various scientific events. The ICDAR 2021 competition is the second edition of the challenge, while a first edition was organized in the context of CVPR 2020 Workshop on Text and Documents in the Deep Learning Era.

#### Tasks

The challenge is structured around three tasks, out of which Task 2 and Task 3 constitute the core of the ICDAR 2021 edition:

**Task 1**: **Single Document VQA**. VQA over a generic set of ~40k questions over ~10k documents. Introduced for CVPR 2020, and continuously open for submissions.

**Task 2: Document Collection VQA.** VQA over a collection of ~14k forms. Locating the evidence is as important as finding the correct answer. Introduced for CVPR 2020 and revamped for ICDAR 2021.

**Task 3: Infographics VQA**. VQA over challenging documents with complex layout. New task introduced for ICDAR 2021 on a new dataset of ~5k documents

## Registration

The competition is hosted at the Robust Reading Competition portal. Please register to the portal in order to gain access to downloads and submit results.

https://rrc.cvc.uab.es/?com=contestant (https://rrc.cvc.uab.es/?com=contestant)

## **Important Dates**

10 November 2020: Release of training data subset for new Task 3 on "Infographics VQA"

10 December 2020: Release of full dataset for new Task 3 on "Infographics VQA"

31 March 2021: Deadline for Competition submissions

5 - 10 September 2021: Results presentation at ICDAR

## **Organizers**

Minesh Mathew (IIIT Hyderabad, India) Rubèn P. Tito (Computer Vision Center, Spain) C. V. Jawahar (IIIT Hyderabad, India) Dimosthenis Karatzas (Computer Vision Center, Spain)

# 8) ICDAR 2021 competition on Historical Map Segmentation

Dear colleagues,

We would like to encourage you to participate in the ICDAR 2021 Competition on Historical Map Segmentation, to be organized in conjunction with the 16th International Conference on Document Analysis and Recognition (ICDAR), 5-10 September 2021, Lausanne (Switzerland).

This competition is organized by the LASTIG team of **IGN** (the French National Mapping Agency), the R&D Lab. of **EPITA** (French engineering school in computer science), and the Center of Historical Studies of **EHESS** (French graduate schools of social sciences).

Why should you consider this competition?

- 1. All **datasets** are released with an **open license** as soon as they are available (training and validation sets already available).
- 2. Evaluation tools are released early with an open source license.
- 3. Winners of each task will be invited to co-author the report paper.
- 4. We propose **unsolved research problems** at the frontiers of computer sciences, social sciences and history, with an important potential impact in the geographic information systems (GIS) community.

Downloads, mailing list, updates, evaluations tools available here: <a href="https://icdar21-mapseg.github.io/">https://icdar21-mapseg.github.io/</a> <a href="https://icdar21-mapseg.github.io/">(https://icdar21-mapseg.github.io/)</a>

Twitter account: @ICDAR21\_MapSeg (https://twitter.com/ICDAR21\_MapSeg)

Contact address: icdar21-mapseg-contact(at)googlegroups.com (icdar21-mapseg-contact@googlegroups.com)

### Tasks:

- Task 1: detecting a set of closed shapes (building blocks) in the map image.
- Task 2: segmenting the map content from the rest of the sheet.
- Task 3: locating the intersection points of graticule lines (historical georeferencing lines).

## Schedule:

- Now: training and validation sets available Training phase is started
- March 31: Registration deadline for competition participants
- April 5 to April 16: Test phase
- April 23: Notification of results, Method description deadline
- July 1: Full dataset release, Full results disclosure.

Best regards,

## The organizers

Edwin Carlinet (LRDE/EPITA), Joseph Chazalon (LRDE/EPITA), Yizi Chen (LASTIG/IGN & LRDE/EPITA), Bertrand Duménieu (CRH/EHESS), Thierry Géraud (LRDE/EPITA), Clément Mallet (LASTIG/IGN), Julien Perret (LASTIG/IGN & CRH/EHESS)

# 9) SSDA 2021 call for proposals: IAPR TC10/TC11 Summer School on Document Analysis

#### **Important Dates**

January 31, 2021 Proposal Submission Deadline

### Submit Proposals via email to:

- Michael Blumenstein (TC11 Representative), Michael.Blumenstein@uts.edu.au (mailto:Michael.Blumenstein@uts.edu.au)
- KC Santosh (TC10 Representative), Santosh.KC@usd.edu (mailto:Santosh.KC@usd.edu)

Part of the mission of International Association for Pattern Recognition (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, La Rochelle, France, and Islamabad, Pakistan, we are now soliciting proposals for the organization of the fourth "IAPR TC10/TC11 Summer School on Document Analysis" (SSDA) in 2021.

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 PhD 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 2021 IAPR TC10 / TC11 Summer School. As the previous summer schools were organized in Asia, Europe, and most recently in the Sub-continent, 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 familiarize themselves with the guidelines for organizing 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 (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 organizing 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.

#### COVID-19 related notice:

We are offering an option to prospective organizers to prioritize a face-to-face event, but due to the unprecedented COVID-19 situation globally, we are also looking to solicit innovative on-line/virtual options as an alternative. Although a challenge, the current pandemic situation offers some new opportunities to engage and organize the Summer School differently – prospective organizers are encouraged to consider this point as part of their bid preparations.

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: Michael Blumenstein (TC11 Representative) and KC Santosh (TC10 Representative).

#### **Previous events:**

As a reference, the 2019 Summer School on Document Analysis was held in Islamabad, Pakistan with the theme Deep Learning Applications for Document Analysis (URL: <a href="http://pprs.org.pk/events/ssda2019.html">http://pprs.org.pk/events/ssda2019.html</a>) (http://pprs.org.pk/events/ssda2019.html))

# 10) DAS 2022 call for bids

Following the successful organization of the 14th IAPR International Workshop on Document Analysis Systems, hosted virtually from Wuhan (China) last July, we are now soliciting proposals for organizing and hosting DAS 2022.

The DAS workshop has become one of the signature events for TC11. DAS 2022 will build on the tradition established by past DAS workshops held in Kaiserslautern, Germany (1994), Malvern, PA (1996), Nagano, Japan (1998), Rio de Janeiro, Brazil (2000), Princeton, NJ (2002), Florence, Italy (2004), Nelson, New Zealand (2006),

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Nara, Japan (2008), Boston, MA (2010), and Gold Coast, Australia (2012), Tours-Loire Valley, France (2014), Santorini, Greece (2016), Vienna, Austria (2018), and Wuhan, China (2020).

**Individuals and groups** who are interested in Document Analysis Systems **are invited to submit proposals for organizing and hosting DAS 2022**. The event should preferably take place in late summer/fall but is not limited to this period.

The submission deadline is March 31<sup>st</sup>, 2021.

Proposals should be submitted to the TC11 chair (Dimosthenis Karatzas) and vice-chair (Gernot Fink).

If you have a potential interest in preparing a proposal, please let us know in advance. Such an expression of interest is not a commitment to make a formal proposal nor an official bid, but it would help us monitor the bid preparation activity and will give us a chance to help with the preparation of the bids.

Similarly, if you need further information concerning DAS, please feel free to contact us.

The final selection among competing proposals will be made short after the deadline by the DAS Steering Committee, which is composed of all those who have themselves organized or contributed substantially to past DAS workshops.

Dr Dimosthenis Karatzas, TC11 Chair (dimos\@cvc.uab.es)
Dr Gernot Fink, TC11 Vice-Chair (gernot.fink\@cs.tu-dortmund.de)

# 11) Job offers (2 new)

## PhD Position, Document and Pattern Recognition Lab (CS@RIT)

Department of Computer Science, Rochester Institute of Technology, USA

Start Date: Fall 2021

We are looking for a qualified candidate to fill a grant-funded PhD position in the <u>Document and Pattern</u> <u>Recognition Lab (https://www.cs.rit.edu/~dprl/index.html)</u> at RIT starting in Fall 2021. This position will be part of the recently created Molecule Maker Lab Institute ( <u>MMLI (https://moleculemaker.org/about)</u>) funded by the US government.

MMLI is led by a number of <u>world-renown computer scientists and chemists (https://moleculemaker.org/people)</u> seeking to accelerate chemical discovery (e.g., in service of creating improved materials for solar cells), along with related educational and outreach efforts intended to democratize the chemical discovery process. The project is centered at the University of Illinois Urbana-Champaign, with participation from researchers at Penn State and RIT.

The focus of this PhD is the recognition/extraction, indexing, and search of chemical diagrams, multi-modal search (text + diagrams), and creating chemical knowledge graphs extracted from the chemical literature and other sources. The aim with this work is to advance the state-of-the-art for diagrammatic recognition and search, as the associated development of new AI-based techniques for chemical discovery. In this PhD role, the student will have be expected to collaborate effectively in an interdisciplinary team comprised of computer scientists, chemists, and engineers.

Questions about this position should be sent to the dprl lab director, Richard Zanibbi (<a href="mailto:rxzvcs@rit.edu">rxzvcs@rit.edu</a>). Please share this with others that may be interested.

# Post-doc position in Computer Vision and Machine Learning for Document image fraud detection

L3i laboratory at La Rochelle, France

Start date: February 1st, 2021 (may be modified according to the sanitary situation)

Duration: 12 months Income: 2100 € / month

The work carried out by the candidate will be a part of the LabCom IDEAS. IDEAS is co-funded by the French National Research Agency (ANR) and the Nouvelle-Aquitaine Region, and brings together the Yooz company and the L3i laboratory. The objective is to imagine, invent, design, develop, optimize and train the best algorithms for processing automatically business documents. The goal is to offer services, based on artificial intelligence, that are capable of automatically analyzing and understanding various types of business documents.

The work of the postdoc fellow will fall within the area "Document fraud detection". The aim is to develop new methods for fraud detection in document images (image forensics) without prior knowledge. The candidate, who holds a PhD. in the fields of computer science, computer engineering, signal processing, or applied mathematics, must have a significant research experience in the domain of image or signal processing and analysis.

Candidates for this position should send a **CV** and **a cover letter** (names and reference details would be appreciated) to:

- petra.gomez [at] univ-lr.fr
- mickael.coustaty [at] univ-lr.fr
- nicolas.sidere [at] univ-lr.fr
- Vincent.PoulaindAndecy [at] getyooz.com
- Saddok.Kebairi [at] getyooz.com

 $More\ details\ available\ at: \underline{https://ao.univ-lr.fr/index.php/s/Kj2LATK2yxFFPkX\ (\underline{https://ao.univ-lr.fr/index.php/s/Kj2LATK2yxFFPkX)}$ 

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