

Program

15th IAPR

International Workshop on
Document Analysis Systems

22 — 25 May 2022



DAS 2022 - La Rochelle



Foreword

We are very happy to welcome you to DAS 2022, the 15th IAPR International Workshop on Document Analysis Systems, held in La Rochelle, France, for the first time. Organizing an international workshop of such significant size after the COVID pandemic, aiming to welcome most of the participants on-site, is a challenge we are very happy to have taken on. Defining best-practice in organizing large hybrid events remains an on-going effort for the scientific community and we hope to have ensured a pleasant experience both for on- and off-site participants.

At the time of writing, over 70% of the registrations are for on-site participation. We are looking forward to hosting our friends and colleagues of the DAS community 4 years after we could last meet face-to-face. We are especially pleased to provide this opportunity to young researchers, some of whom will attend their first ever in-person scientific event. We supported their participation with considerably reduced registration fees for students and a financial assistance program.

We hope you will enjoy our city of La Rochelle. Located on the Atlantic coast of France, La Rochelle has recently been ranked among the most livable cities in France, in particular for students. The city has a rich historical fabric, with its old harbor and towers as its most well-known landmarks.

We will treat you the best way possible with a welcome cocktail in a splendid 18th century cloister (*Cloître des Dames Blanches*), part of the city hall, and a gala dinner in the old harbor, preceded by a sea tour to the picturesque *Fort Boyard* (as seen on TV in 70 countries).

The workshop will be hosted on-campus by La Rochelle Université, using state-of-the-art broadcasting equipment. The campus and all its workshop venues are located within walking distance of the conference hotels, the historic center and the *Minimes* beach.

Finally, we want to thank the numerous and deeply committed volunteers of the local organization team. Without them, and the support of this year's workshop sponsors, this 15th IAPR International Workshop on Document Analysis Systems would not be possible. Last but not least, we want to thank you, the participants, our friends and colleagues, for giving us the pleasure of your attendance, whether online or offline.

Welcome to La Rochelle!

May 2022

Jean-Marc OGIER,
Jean-Christophe BURIE
Mickaël COUSTATY
Antoine DOUCET

Preface

Welcome to the 15th IAPR International Workshop on Document Analysis Systems (DAS 2022). DAS 2022 was held in La Rochelle, France, during May 22–25, 2022, and brought together many researchers from Europe and abroad.

With the new remote access facilities, the workshop was not confined to a specific location. In a sense, this was truly a worldwide edition of DAS, taking place around the world in a coordinated fashion, employing a schedule we designed to support participation across a wide range of time zones. Of course, this came with some challenges, but also with interesting opportunities that caused us to rethink the way of fostering social and scientific interaction in this new medium. It also allowed us to organize an environmentally friendly event, extend the reach of the workshop, and facilitate participation from literally anywhere in the world for those with an interest in our field and an Internet connection. We truly hope we managed to make the most out of a difficult situation.

DAS 2022 continued the long tradition of bringing together researchers, academics, and practitioners in the research field of document analysis systems. In doing so, we built upon the previous workshops held over the years in Kaiserslautern, Germany (1994); Malvern, PA, USA (1996); Nagano, Japan (1998); Rio de Janeiro, Brazil (2000); Princeton, NJ, USA (2002); Florence, Italy (2004); Nelson, New Zealand (2006); Nara, Japan (2008); Boston, MA, USA (2010); Gold Coast, Australia (2012); Tours, France (2014); Santorini, Greece (2016); Wien, Austria (2018); and Wuhan, China (2020).

As with previous editions, DAS 2022 was a rigorously peer-reviewed and 100% participation single-track workshop focusing on issues and approaches in document analysis and recognition. The workshop comprised presentations by invited speakers, oral and poster sessions, and a pre-workshop tutorial, as well as distinctive DAS discussion groups.

This year we received 94 submissions in total, 78 of which were in the regular paper track and 16 in the short paper track. All regular paper submissions underwent a rigorous single-blind review process where the vast majority of papers received three reviews. The reviewers were selected from the 80 members of the Program Committee, judging the originality of work, the relevance to document analysis systems, the quality of the research or analysis, and the overall presentation. Of the 78 regular submissions received, 52 were accepted for presentation at the workshop (67%). Of these, 31 papers were designated for oral presentation (40%) and 21 for poster presentation (27%). All short paper submissions were reviewed by all three program co-chairs. Of the 16 short papers received, all 16 were accepted for poster presentation at the workshop (100%). The accepted regular papers are published in this proceedings volume in the Springer Lecture Notes in Computer Science series. Short papers appear in PDF form on the DAS conference website.

The final program included six oral sessions, two poster sessions, and the discussion group sessions. There were also two awards announced at the conclusion of the workshop: the IAPR Best Student Paper Award and the IAPR Nakano Best Paper Award. We offer our deepest thanks to all who contributed their time and effort to make DAS 2022 a first-rate event for the community.

In addition to the contributed papers, the program also includes two invited keynote presentations by distinguished members of the research community: Andreas Dengel from the German Research Center for Artificial Intelligence (DFKI, Germany) and Adam Jatowt from the University of Innsbruck (Austria).

We furthermore would like to express our sincere thanks to the tutorial organizer, Himanshu Sharad Bhatt from American Express AI Labs, for sharing his valuable scientific and technological insights. Special thanks are also due to our sponsors IAPR, the L3i Laboratory, AriadNext, Esker, IMDS, GoodNotes, Yooz, MyScript, ITESOFT, TEKLI, VIALINK, and the Région Nouvelle Aquitaine and Communauté d'Agglomération de La Rochelle, whose support, especially during challenging times, was integral to the success of DAS 2022.

The workshop program represented the efforts of many people. We want to express our gratitude, especially to the members of the Program Committee for their hard work in reviewing submissions. The publicity chairs, Richard Zanibi (USA) and Joseph Chazalon (France), helped us in many ways, for which we are grateful. We also thank the discussion group chairs, Michael Blumenstein (Australia) and Umapada Pal (India), for organizing the discussion groups, and the tutorial chairs, Rafael Dueire Lins (Brazil) and Alicia Fornes (Spain), for organizing the tutorial. A special thank you goes to the publication chair, Cheng-Lin Liu (China), who was responsible for the proceedings at hand. We are also grateful to the local organizing committee who made great efforts in arranging the program, maintaining the web page, and setting up the meeting platform with support for remote attendance. The workshop would not have happened without the great support from the hosting organization, La Rochelle University.

Finally, the workshop would have not been possible without the excellent papers contributed by authors. We thank all the authors for their contributions and their participation in DAS 2022! We hope that this program will further stimulate research and provide practitioners with better techniques, algorithms, and tools. We feel honored and privileged to share the best recent developments in the field of document analysis systems with you in these proceedings.

April 2022

Seiichi Uchida
Elisa Barney Smith
Véronique Eglin

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Zuheng Ming

REVIEWERS

We would like to thank all the reviewers for their valuable help in the evaluation process, with a special thanks to those who accepted additional reviews in a very short time.

(The list is sorted by last name and bold font indicates a special thanks.)

Alireza Alaei

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Ernest Valveny

Ekta Vats

Christian Viard-Gaudin
Mauricio Villegas
Nicole Vincent

Berrin Yanikoglu

Anna Zhu

Prof. Adam Jatowt

Automatic Question Answering & Generation in News Archives

The fields of automatic question answering, reading comprehension, and question generation have recently been rapidly advancing. Open-domain question answering, in particular, assumes automatically answering arbitrary user questions from a large document collection. The existing approaches are however designed to work on synchronic document collections such as Wikipedia, Web data, or short-term news corpora. We propose automatic question answering over temporal news collections which can contain millions of news articles that were published over several decades. Temporal aspects of both news articles and user questions form an additional challenge for this kind of question-answering task. We will first discuss a re-ranking approach for news articles which works by utilizing temporal information embedded in questions and in the underlying news archive, thus combining methods from Temporal Information Retrieval and Natural Language Processing. Next, we will discuss a dedicated solution for answering « When » type questions which require finding occurrence dates of events based on an underlying news archive. Finally, we will introduce ArchivalQA – a large-scale question answering dataset which has been automatically created from a two-decades-long news article collection, and which contains over 500k question-answer pairs. The dataset has been processed to remove temporally ambiguous questions and is designed for training question answering systems operating over long-term news archives.



Short bio

Adam Jatowt is a Professor at the Department of Computer Science and Digital Science Center at the University of Innsbruck. He is also a visiting researcher at the National Institute of Advanced Industrial Science & Technology in Tokyo. Before moving to Austria, Adam worked at Kyoto University as an Assistant and later as an Associate Professor. He received his Ph.D. in Information Science and Technology from the University of Tokyo, Japan in 2005. His research interests include knowledge extraction, information retrieval, natural language processing, digital libraries, and digital history. Adam has served as a General Co-chair of TPD2019, ICADL2020, a PC Co-chair of IPRES2011, SocInfo2013, ICADL2014, JCDL2017, ICADL2019 conferences as well as a tutorial Co-chair of SIGIR2017. He was also a co-organizer of 3 NTCIR evaluation tasks and a co-organizer of over 20 international workshops. He is an editorial board member of IP&M, JASIST, IJDL, JIIS, and IEEE JoSC journals. Adam has received the Vannevar Bush Best Paper Award at JCDL2021, the best short paper award at ECIR2018, and the best demo award at ECIR2019.

Monday 23rd May 2022, 8:30—9:30 AM

Location "Pôle Communication Multimédia Réseaux"

Prof. Andreas Dengel

"The kiss of the Prince": Bringing Document Content to Life

We are using text and graphic editors or other technical means, such as cameras, recorders, as well as messaging channels, all of which allow us to produce a document, i.e. a resource for furnishing information evidence or proving the information authenticity. As a result we obtain a preservation of an idea, an announcement, an incident, a solution, an accuse, etc. that may become a subject of study and interpretation. This could be a printed photograph or a sheet of paper with printed text, graphics, or writings, all of which in their specific and individual combination bear the original or legal form of something. For almost 30 years, the IAPR series on Document Analysis Systems provided detailed and valuable insights into how to "bring to life" content from static documents using approaches from pattern recognition, signal processing, artificial intelligence and other disciplines. So far, it has been a successful series of workshops that generated a lot of new impetus for technologies that were now part of the offerings of companies or the basis for the success of startups. This talk will exemplarily address some of these technologies embedded in a historical DAS outline but also will highlight directions of the future.



Short bio

Prof. Andreas Dengel is the Executive Director of the German Research Center for Artificial Intelligence (DFKI) in Kaiserslautern. He is also leading the research department Smart Data & Knowledge Services and the DFKI Deep Learning Competence Center. Andreas studied computer science at the Technical University of Kaiserslautern with economics as a minor until 1986. He finished his PhD in computer science at the University of Stuttgart in 1989. After working for IBM, Siemens and a guest researcher stay at Xerox PARC in Palo Alto, he was appointed to a professorship for the chair of Artificial Intelligence at the Technical University of Kaiserslautern in 1993. Since 2009, he holds a professorship (kyakuin) at the Department of Computer Science and Intelligent Systems at Osaka Prefecture University where he is acting as a lecturer and examiner. As of September 2020, Andreas has been appointed State KI-Botschafter. In 2021, he further became a member of the executive board of the International Neurodegenerative Disorders Research Center (INDRC) as well as a member of the Biotech Advisory Board of the State Rhineland-Palatinate. In 2019, for his research in the field of document analysis, Andreas was selected by a jury commissioned by the German Federal Ministry of Education and Research (BMBF) as one of the most influential scientists in 50 years of AI history in Germany. In the same year he also received the Outstanding Achievement Award of the Int'l Conference on Document Analysis and Recognition (ICDAR) in Sydney, Australia. In 2021, Dengel was awarded in the name of His Majesty Emperor Naruhito by the oldest Japanese decoration, the "Order of the Rising Sun Gold Rays with Neck Ribbon". His research focuses on machine learning, pattern recognition, quantified learning, data mining, semantic technologies and (of course) document analysis.

Wednesday 25th May 2022, 8:30—9:15 AM

Location "Pôle Communication Multimédia Réseaux"

	Sunday 22 May 2022	Monday 23 May 2022		Tuesday 24 May 2022		Wednesday 25 May 2022	
8h :30 – 9h :15		Opening ceremony & Keynote 1 [Automatic Question Answering & Generation in News Archives by Professor Adam Jatowt]	Véronique Eglin	Oral session 4 [Handwriting Text Recognition] [Full-Paper number 74, 9, 28, 87]	Nathalie Girard, Faisal Shafait	Keynote 2 «The kiss of the prince» Bringing Document Content to Life by Prof Andreas Dengel	Elisa Barney Smith
9h :15 – 9h :30						Oral session 6 [Open-source software and Benchmarking] [Full-Paper number 16, 19, 23, 60, 20]	
9h :30 – 10h :00		Coffee break					
10h :00 – 10h :30		Oral session 1 [Document Analysis Systems and applications] [Full-Paper number 66, 72, 6, 2, 48]	Marc Schamnac, Alexander Mattick	Coffee break			
10h :30 – 10h :55				Oral session 5 [Applications in handwriting] [Full-Paper number 92, 64, 76, 12, 27, 36]	Yann Soullard, Vincent Christlein		
10h :55 – 11h :30		Coffee break					
11h :30 – 11h :40				Oral session 2 [Information extraction and applications] [Full-Paper number 58, 63, 90, 71]	Cipran Dinu, Josep Lladós		
11h :40 – 12h :30		Lunch break					
12h :30 – 13h :00	Lunch break						
13h :00 – 14h :00	Lunch break						
14h :00 – 14h :30	Tutorial [Unlocking the Potential of Unstructured Data in Finance Through Document Intelligence by Himanshu Sharad Bhatt]	Oral session 3 [Historical document analysis] [Full-Paper number 54, 37, 33, 56, 26] + [CSAWA] [Paper number 14, 46]	Hussain Mohammad, Isabelle Marthot-Santaniello	Discussion group 1	Muriel Visani, Mickael Blumenstein, Umapada Pal	Plenary restitution of discussion groups	Muriel Visani, Mickael Blumenstein, Umapada Pal
14h :30 – 14h :45						Award ceremony & Closing	
14h :45 – 15h :00							
15h :00 – 15h :30	Coffee break						
15h :30 – 16h :00							
16h :00 – 16h :15							
16h :15 – 16h :30	Continuation of tutorial [Unlocking the Potential of Unstructured Data in Finance Through Document Intelligence by Himanshu Sharad Bhatt]	Coffee break		Poster session 1 [Full-Paper number 73, 21, 59, 80, 89, 5, 18, 45, 79, 41 will present on-site and all other full-papers will present on Gather.Town] Short papers [Short-Paper number 31, 43, 88, 94, 106, 107, 111 will present on-site and all other short-papers will present on Gather.Town] In parallel with coffee break			
16h :30 – 17h :00							
17h :00 – 17h :30			Industrial track	Vincent Poulain d’Andecy, Robin Mélinand			
17h :30 – 17h :45							
17h :45 – 18h :00	Welcome reception						
18h :00 – 21h :00							
21h :00 – 23h :00							

Room 000 « PASCAL »

Cloître des Dames Blanches

Main hall Technoforum

Rooms TICE-8 and TICE-9 « Pôle Communication Multimédia Réseaux »

Amphitheater « Pôle Communication Multimédia Réseaux »

Room SC1 « Pôle Communication Multimédia Réseaux »

Keynote 1 : Adam Jatowt

8h30 — 09h30	Automatic Question Answering & Generation in News Archives
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Oral Session 1: *Document Analysis Systems and Applications*

10h00 — 10h20	No. 66 — Font Shape-to-Impression Translation Masaya Ueda, Akisato Kimura and Seiichi Uchida
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10h20 — 10h40	No. 72 — TrueType Transformer: Character and Font Style Recognition in Outline Format Yusuke Nagata, Jinki Otao, Daichi Haraguchi and Seiichi Uchida
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10h40 — 11h00	No. 6 — Unified Line and Paragraph Detection by Graph Convolutional Networks Shuang Liu, Renshen Wang, Michalis Raptis and Yasuhisa Fujii
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11h00 — 11h20	No. 2 — The Winner Takes It All: choosing the “best” binarization algorithm for photographed documents Rafael Lins, Rodrigo B. Bernardino, Ricardo Barboza and Raimundo Oliveira
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11h20 — 11h40	No. 48 — A Multilingual Approach to Scene Text Visual Question Answering Josep Brugués i Pujolràs, Lluís Gomez and Dimosthenis Karatzas
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Oral Session 2: *Information extraction and applications*

11h40 — 12h00	No. 58 — Sequence-to-Sequence Models for Extracting Information from Registration and Legal Documents Ramon Pires, Fabio Souza, Guilherme Rosa, Roberto Lotufo and Rodrigo Nogueira,
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12h00 — 12h20	No. 63 — Contrastive Graph Learning with Graph Convolutional Networks G Nagendar and Ramachandhula Sitaram
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12h20 — 12h40	No. 90 — Improving Information Extraction on Business Documents with Specific Pre Training Tasks Thibault Douzon, Christophe Garcia, Stefan Duffner and Jérémy Espinas
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12h40 — 13h00	No. 71 — How Confident Was Your Reviewer? Estimating Reviewer Confidence From Peer Review Texts Prabhat Kumar Bharti, Tirthankar Ghosal, Mayank Agrawal and Asif Ekbal
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Oral Session 3: *Historical document analysis + CSAWA*

14h30 — 14h45	No. 54 — <i>Recognition and information extraction in historical handwritten tables: toward understanding early 20th century Paris census</i> Thomas Constum, Nicolas Kempf, Thierry Paquet, Pierrick Tranouez, Clément Chatelain, Sandra Bree and François Merveille
14h45 — 15h00	No. 37 — <i>Importance of Textlines in Historical Document Classification</i> Martin Kišš, Jan Kohút, Karel Beneš and Michal Hradiš
15h00 — 15h15	No. 33 — <i>Historical Map Toponym Extraction for Efficient Information Retrieval</i> Ladislav Lenc, Jiří Martínek, Martin Prantl, Josef Baloun and Pavel Král
15h15 — 15h30	No. 56 — <i>Information Extraction from Handwritten Tables in Historical Documents</i> José Andrés, Jose Ramón Prieto, Emilio Granell, Verónica Romero, Joan Andreu Sánchez and Enrique Vidal
15h30 — 15h45	No. 26 — <i>Named Entity Linking on Handwritten Document Images</i> Oliver Tüselmann and Gernot Fink
15h45 — 16h00	No. 14 — <i>Pattern Analysis Software Tools (PAST) for Written Artefacts</i> Hussein Mohammed, Agnieszka Helman-Wazny, Claudia Colini, Wiebke Beyer and Sebastian Bosch
16h00 — 16h15	No. 46 — <i>TEI-based Interactive Critical Editions</i> Simon Schiff, Sylvia Melzer, Eva Wilden and Ralf Möller

Oral Session 4: *Handwriting Text Recognition*

08h30 — 08h50	No. 74 — <i>Best Practices for a Handwritten Text Recognition system</i> George Retsinas, Giorgos Sfikas, Basilis Gatos and Christophoros Nikou
08h50 — 09h10	No. 9 — <i>Rescoring Sequence-to-Sequence Models for Text Line Recognition with CTC-Prefixes</i> Christoph Wick, Jochen Zöllner and Tobias Grüning
09h10 — 09h30	No. 28 — <i>A Light Transformer-Based Architecture for Handwritten Text Recognition</i> Killian Barrere, Yann Soullard, Aurélie Lemaitre and Bertrand Coüasnon
09h30 — 09h50 (10h00 ?)	No. 87 — <i>Effective Crowdsourcing in the EDT Project with Probabilistic Indexes</i> Joan Andreu Sanchez, Enrique Vidal and Vicente Bosch

Oral Session 5: *Applications in Handwriting*

10h30 — 10h50	No. 92 — <i>Paired Image to Image Translation for Strikethrough Removal from Handwritten Words</i> Raphaela Heil, Ekta Vats and Anders Hast
10h50 — 11h10	No. 64 — <i>Revealing Reliable Signatures by Learning Top-Rank Pairs</i> Xiaotong Ji, Yan Zheng, Daiki Suehiro and Seiichi Uchida
11h10 — 11h30	No. 76 — <i>On-The-Fly Deformations for Keyword Spotting</i> George Retsinas, Giorgos Sfikas, Basilis Gatos and Christophoros Nikou
11h30 — 11h50	No. 12 — <i>Writer Identification and Writer Retrieval using Vision Transformer for Forensic Documents</i> Michael Koepf, Florian Kleber and Robert Sablatnig
11h50 — 12h10	No. 27 — <i>Approximate Search for Keywords in Handwritten Text Images</i> José Andrés, Alejandro H. Toselli and Enrique Vidal
12h10 — 12h30	No. 36 — <i>Keyword Spotting with Quaternionic ResNet: Application to Spotting in Greek Manuscripts</i> Giorgos Sfikas, George Retsinas, Angelos P. Giotis, Basilis Gatos and Christophoros Nikou

Discussion groups

14h00 — 15h30

Poster Session 1

15h30 — 17h00

Keynote 2 : Andreas Dengel

8h30 — 09h15 The kiss of the Prince »: Bringing Document Content

Oral Session 6: *Open-source software and Benchmarking*

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| 09h15 — 09h35 | No. 16 — <i>A Comprehensive Comparison of Open-Source Libraries for Handwritten Text Recognition in Norwegian</i>
Martin Maarand, Yngvil Beyer, Andre Kåsen, Knut Fosseide and Christopher Kermorvant |
| 09h35 — 09h55 | No. 19 — <i>Open Source Handwritten Text Recognition on Medieval Manuscripts using Mixed Models and Document-Specific Finetuning</i>
Christian Reul, Stefan Tomasek, Florian Langhanki and Uwe Springmann |
| 09h55 — 10h15 | No. 23 — <i>A Comprehensive Study of Open-source Libraries for Named Entity Recognition on Handwritten Historical Documents</i>
Claire Bizon Monroc, Blanche Miret, Marie-Laurence Bonhomme and Christopher Kermorvant |
| 10h15 — 10h35 | No. 60 — <i>A Benchmark of NER Approaches in Historical Documents</i>
Nathalie Abadie, Edwin Carlinet, Joseph Chazalon and Bertrand Duménieu |
| 10h35 — 10h55 | No. 20 — <i>NCERT5K-IITRPR: A Benchmark Dataset for Non-Textual Component Detection in School Books</i>
Hadia Showkat Kawoosa, Mandhatya Singh, Manoj Manikrao Joshi and Puneet Goyal |

Poster Session 2

11h30 — 12h30

Plenary restitution of group discussions

14h00 — 14h45

Poster Session 1 (Technoforum)

Posters	No. 73 — Hai Thi Tuyet Nguyen, Adam Jatowt, Mickael Coustaty and Antoine Doucet, <i>“ReadOCR: A Novel Dataset and Readability Assessment of OCRd Texts”</i>
	No. 21 — Ahmad Droby, Daria Vasyutinsky Shapira, Irina Rabaev, Berat Kurar and Jihad El-Sana, <i>“Hard and Soft Labeling for Hebrew Paleography: A Case Study”</i>
	No. 59 — Dmitrijs Kass and Ekta Vats, <i>“AttentionHTR: Handwritten Text Recognition Based on Attention Encoder-Decoder Networks”</i>
	No. 80 — Borak Madi, Reem Alaasam, Ahmad Droby and Jihad El-Sana, <i>“HST-GAN: Historical Style Transfer GAN for Generating Historical Text Images”</i>
	No. 89 — Sofiane Medjram and Véronique Eglin, <i>“Challenging children handwriting recognition study exploiting synthetic, mixed and real data”</i>
	No. 5 — Gonzalo Santamaría, Cesar Dominguez, Jónathan Heras, Eloy Mata and Vico Pascual, <i>“Combining image processing techniques, OCR, and OMR for the digitization of musical books”</i>
	No. 18 — David Villanova-Aparisi, Carlos-D. Martínez-Hinarejos, Verónica Romero and Moisés Pastor-Gadea, <i>“Evaluation of Named Entity Recognition in handwritten documents”</i>
	No. 45 — Adrià Molina Rodríguez, Josep Lladós Canet, Oriol Ramos Terrades and Lluís Gómez Bigorda, <i>“A Generic Date Estimation System for Historical Document Images based on Ordinal Classification”</i>
	No. 79 — Martin Mayr, Alex Felker, Andreas Maier and Vincent Christlein, <i>“Combining Visual and Linguistic Models for a Robust Recipient Line Recognition in Historical Documents”</i>
	No. 41 — Konstantina Nikolaidou, Richa Upadhyay, Mathias Seuret and Marcus Liwicki, <i>“Investigating the Effect of using Synthetic and Semi-synthetic Images for Historical Document Classification”</i>
Short papers	No. 31 — Basilis Gatos, Giorgos Sfikas, Panagiotis Kaddas and George Retsinas, <i>“CULDILE: Cultural Dimensions of Deep Learning, A Document Analysis System for Historical Documents”</i>
	No. 43 — Jonathan DeGange, Swapnil Gupta, Zhuoyu Han, Krzysztof Wilkosz and Adam Karwan, <i>“Document Intelligence Metrics for Visually Rich Document Evaluation”</i>
	No. 88 — Daniel Lopresti, <i>“The Human Element in Document Analysis Systems”</i>
	No. 94 — Mark-Christoph Müller, <i>“Robust Extraction of Marked-Up Text Sections from Scientific Document Printouts”</i>
	No. 106 — Alexander Groleau, Kok Wei Chee and Stefan Larson, <i>“Augraphy: Data Augmentation for Document Images”</i>
	No. 107 — Alexander Groleau, Stefan Larson and Kok Wei Chee, <i>“ShabbyPages, a Robust Corpus for Training Document Image Models”</i>
	No. 111 — Tarun Kumar and Himanshu Sharad Bhatt, <i>“Evaluating Table Structure Recognition: A New Perspective”</i>

Poster Session 2 (Technoforum)

Posters	No. 15 — Wassim Swaileh, Michel Jordan and Dimitrios Kotzinos, <i>“3D Modelling Approach for Ancient Floor Plans’ Quick Browsing”</i>
	No. 22 — Solène Tarride, Aurélie Lemaitre, Bertrand Coüasnon and Sophie Tardivel, <i>“A comparative study of information extraction strategies using an attention-based neural network”</i>
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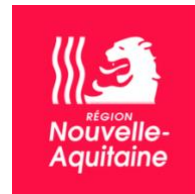
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