

# CIRCLE 2020 - The First Joint Conference of the Information Retrieval Communities in Europe

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## ABSTRACT

The Joint Conference of the Information Retrieval Communities in Europe (CIRCLE 2020) is the first joint conference of the French, Italian, and Spanish information retrieval communities. Although these communities had conceived the CIRCLE conference as a meeting and networking venue, because of the COVID-19 pandemic, they had to make the conference as fully virtual event. Nonetheless, the three days of conference gathered interesting studies and research work on a wide range of topics on information retrieval, such as topic and document modelling, query and ranking refinement, information retrieval in e-government, social media, recommender systems, information retrieval evaluation, indexation and annotation, user profiling and interaction, frameworks and systems, and semantic extraction.

## CCS CONCEPTS

• **Information systems** → **Information retrieval**.

## KEYWORDS

Information retrieval, information extraction, indexation, semantic annotation, query refinement, learning to rank, information retrieval evaluation, user modelling, recommender systems.

## 1 INTRODUCTION

The Joint Conference of the Information Retrieval Communities in Europe (CIRCLE 2020, <https://www.irit.fr/CIRCLE>) is the first joint conference of the French, Italian, and Spanish information retrieval communities.

CIRCLE 2020 arose from a twofold wish to gather three national Information Retrieval (IR) conferences and to offer young researchers the opportunity to meet and discuss with senior researchers. CIRCLE is supported by the ARIA French conference (CORIA, CONférence en Recherche d'Information et Applications), the Spanish Conference on Information Retrieval (CERI, Congreso Español de Recuperación de Información), the Italian Information Retrieval Workshop, and the Swiss IR community.

The main objective of CIRCLE 2020 is to propose a unique place for stimulating and disseminating research in IR, where senior/industrial and early stage researchers (including MSc and PhD

students) can network and discuss their research results in a friendly environment.

The presentations and discussions of the conference were done virtually. If the COVID-19 emergency had not happened, CIRCLE 2020 would have taken place on July 6-9, 2020 at Samatan, Gers, in the South of France (50 minutes from Toulouse).

## 2 CONFERENCE TOPICS

CIRCLE 2020 offered an opportunity to present and discuss both theoretical and empirical research. Relevant topics included, but were not restricted to:

- **Search and ranking.** Research on core IR algorithmic topics, including IR at scale, covering topics such as:
  - Queries and query analysis;
  - Web search, including link analysis, sponsored search, search advertising, adversarial search and spam, and vertical search;
  - Retrieval models and ranking, including diversity and aggregated search;
  - Efficiency and scalability;
  - Theoretical models and foundations of information retrieval and access.
- **Content analysis, recommendation and classification.** Research focusing on recommender systems, rich content representations and content analysis, covering topics such as:
  - Filtering and recommender systems;
  - Document representation;
  - Content analysis and information extraction, including summarisation, text representation, readability, sentiment analysis, and opinion mining;
  - Cross- and multilingual search;
  - Clustering, classification, and topic models;
  - IR and natural language processing.
- **Domain-specific applications.** Research focusing on domain-specific IR challenges, covering topics such as:
  - Social search;
  - Search in structured data including email search and entity search;

- Multimedia search;
- IR for Education;
- Legal document search;
- Health, including genomics and bioinformatics;
- IR and digital libraries;
- IR and databases;
- Other domains such as enterprise, news search, app search, archival search.
- **Artificial intelligence, semantics and dialog.** Research bridging AI and IR, especially toward deep semantics and dialog with intelligent agents, covering topics such as:
  - Question answering;
  - Conversational systems and retrieval, including spoken language interfaces, dialog management systems, and intelligent chat systems;
  - Semantics and knowledge graphs;
  - Deep learning for IR, embeddings, and agents.
- **Human factors and interfaces.** Research into user-centered aspects of IR, including user interfaces, behaviour modelling, privacy, and interactive systems, covering topics such as:
  - Mining and modelling search activity, including user and task models, click models, log analysis, behavioural analysis, and attention modelling;
  - Interactive and personalised search;
  - Collaborative search, social tagging and crowdsourcing;
  - Information privacy and security.
- **Evaluation.** Research that focuses on the measurement and evaluation of IR systems, covering topics such as:
  - User-centred evaluation methods, including measures of user experience and performance, user engagement and search task design;
  - Test collections and evaluation metrics, including the development of new test collections;
  - Eye-tracking and physiological approaches, such as fMRI
  - Evaluation of novel information access tasks and systems such as multi-turn information access;
  - Statistical methods and reproducibility issues in information retrieval evaluation.
- **Future directions.** Research with theoretical or empirical contributions on new technical or social aspects of IR, especially in more speculative directions or with emerging technologies, covering topics such as:
  - Novel approaches to IR;
  - Ethics, economics, and politics;
  - Applications of search to social good;
  - IR with new devices, including wearable computing, neuroinformatics, sensors,
  - Internet-of-Things, vehicles.

### 3 SUBMISSIONS

For the CIRCLE common track, submissions were requested to be in English, the official language of the conference. Submission were peer reviewed by at least three members of conference program committee in a double blind process.

Authors were invited to submit one of the following types of contributions:

- Long original papers (from 6 to 8 pages + 1 page for references)
- Short original papers (from 3 to 4 pages + 1 page for references)
- Extended abstracts containing descriptions of ongoing projects or presenting already published results (up to 2 pages)

While long papers were supposed to describe mature and original research results, short papers were conceived as exciting new work that is not yet mature enough for a long paper, such as for example “doctoral papers”. Extended abstracts could include a system demonstration, a project presentation, or an already published piece of work (e.g. in a top level IR journal or conference). Applications of information retrieval to novel areas were especially welcome.

The Easychair system (<https://easychair.org>) was used for the paper submission and review processes.

The accepted papers ranged from theoretical work and experimental research to system and project descriptions. Each accepted paper was included in the conference proceedings and were orally presented. The proceedings are online published by CEUR Workshop Proceedings at <http://ceur-ws.org/Vol-2621/>.

There were also some CERI submissions with oral presentations of papers written in either Spanish or English. Special interest was devoted to papers on applications with municipal, regional or national impact in Spain, collaborations from Spanish institutions and companies, or using corpora in Spanish. Short original papers or extended abstracts were allowed. As in previous editions of CERI, defended thesis from June 2018 to May 2020 could qualify for the SERI Award to the best Spanish PhD dissertation in IR. Details are given by the Spanish IR association, <http://seri.org.es>.

### 4 SCIENTIFIC COMMITTEE

Iván Cantador, Max Chevalier and Massimo Melucci are very grateful to the program committee members who evaluated the submissions. The PC chairs could not have prepared such a interesting scientific programme without the thoughtful and careful comments from all the 68 PC members and 6 additional reviewers.

- **Aris Anagnostopoulos**, Sapienza University of Roma, Italy
- **Juan Antonio Martínez Comeche**, Universidad Complutense de Madrid, Spain
- **Ismail Badache**, Laboratoire d’Informatique et Systèmes, INSPE Aix-Marseille University, France
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- **Luca Becchetti**, Sapienza University of Roma, Italy
- **Alejandro Bellogín**, Universidad Autónoma de Madrid, Spain
- **Patrice Bellot**, Aix-Marseille Université – CNRS (LSIS), France
- **Rafael Berlanga**, Universitat Jaume I, Spain
- **Catherine Berrut**, LIG, Université Joseph Fourier Grenoble I, France
- **Paolo Boldi**, University of Milano, Italy
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- **Sylvain Lamprier**, LIP6 – UPMC, France
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- **Salvatore Orlando**, Università Ca' Foscari Venezia, Italy
- **Javier Parapar**, University of A Coruña, Spain
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Additional reviewers were **Jibril Frej**, **Andrea Iovine**, **Kevin Roitero**, **Marco Polignano**, **Lucia Siciliani**, and **Sebastiano Vigna**.

## 5 MENTORING

Students co-authoring accepted papers were offered the possibility to meet face-to-face with senior researchers in specific mentoring parallel sessions. Seven students took benefit from that opportunity. The PC chairs and organisers would like to thank **Alejandro Bellogín**, **Catherine Berrut**, **Fidel Casheda**, **Fabio Crestani**, **Gerges Quenot**, and **Julien Velcin** for voluntarily mentoring those students.

## 6 PUBLICATIONS

In total, 8 long papers (78% acceptance rate), 18 short papers (83% acceptance rate), and 12 extended abstracts (79% acceptance rate) were accepted for publication and presentation, leading to 38 oral communications. These papers were grouped into thematic sessions as follows (see <https://www.irit.fr/CIRCLE/program/>):

- Frameworks and systems
- Indexation and annotation
- Information Retrieval evaluation
- Information Retrieval in e-government
- Query and ranking refinement
- Recommender systems
- Semantic extraction
- Social media
- Topic and document modelling
- User profiling and interaction

## 7 LOCAL ORGANISATION

Unfortunately, the conference could not be hosted in the planned holiday resort, but has to be virtual. The IR communities had conceived the CIRCLE conference as a meeting and networking venue. The COVID-19 pandemic at the time of the conference did not make it possible.

Presentations were 15 minutes long, plus 5 minutes for questions, whatever the type of paper. Prerecorded presentations were not used, but rather live presentations and discussions using the Cisco Webex system. Each half day, a slot was devoted for trying connections. A virtual connection the day before the conference (on the 6th of July) was also organised for those who wanted to test the above system.

Each paper needed to go with a registration with a 50€ fee to be included in the proceedings. In case of papers with several authors,

just a single fee for the paper was required. Other authors and non-authors participants had to freely register.

During the conference, specific rooms were open for coffee break or discussions.

## 8 SPONSORS AND STUDENT GRANTS

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Students authoring papers were offered the possibility to have a discussion in a virtual face-to-face meeting of about 30 minutes. These meetings were scheduled on the last day of the conference.

**Last words from the conference PC Chairs.** CIRCLE 2020 could not have been organised in the turbulent context that we have experienced without a reactive and efficient organisation committee. We give our special thanks to:

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