## **Preface**

The CLEF 2019 conference is the twentieth edition of the popular CLEF campaign and workshop series that has run since 2000 contributing to the systematic evaluation of multilingual and multimodal information access systems, primarily through experimentation on shared tasks. In 2010 CLEF was launched in a new format, as a conference with research presentations, panels, poster and demo sessions and laboratory evaluation workshops. These are proposed and operated by groups of organizers volunteering their time and effort to define, promote, administrate and run an evaluation activity. To celebrate the 20th anniversary of CLEF we prepared a book focusing on the lessons learnt in 20 years of CLEF and its impact over time.

CLEF  $2019^2$  was organized and hosted by the University of Lugano, Switzerland from 9 to 12 September 2019.

Nine evaluation laboratories were selected and run during CLEF 2019. To identify the best proposals, besides the well-established criteria from the editions of previous years of CLEF such as topical relevance, novelty, potential impact on future world affairs, likely number of participants, and the quality of the organizing consortium, this year we further stressed the connection to real-life usage scenarios and we tried to avoid as much as possible overlaps among labs in order to promote synergies and integration.

This year, for the first time, we set up a mentorship program to support the preparation of lab proposals for newcomers to CLEF. The CLEF newcomers mentoring program offered help, guidance, and feedback on the writing of draft lab proposals by assigning a mentor to proponents, who helped them in preparing and maturing the lab proposal for submission. If the lab proposal fell into the scope of an already existing CLEF lab, the mentor helped proponents to get in touch with those lab organizers and team up forces.

Building on previous experience, the Labs at CLEF 2019 demonstrate the maturity of the CLEF evaluation environment by creating new tasks, new and larger data sets, new ways of evaluation or more languages. Details of the individual Labs are described by the Lab organizers in these proceedings. Below is a short summary of them.

CLEF/NTCIR/TREC Reproducibility – CENTRE@CLEF<sup>3</sup> aims to run a joint CLEF/NTCIR/TREC task on challenging participants: 1) to reproduce best results of best/most interesting systems in previous editions of CLEF/NTCIR/TREC by using standard open source IR systems; 2) to con-

<sup>&</sup>lt;sup>1</sup> Ferro, N., Peters, C. (eds.): Information Retrieval Evaluation in a Changing World – Lessons Learned from 20 Years of CLEF, The Information Retrieval Series, vol. 41. Springer International Publishing, Germany (2019).

<sup>&</sup>lt;sup>2</sup> http://clef2019.clef-initiative.eu/

<sup>3</sup> http://www.centre-eval.org/clef2019/

tribute back to the community the additional components and resources developed to reproduce the results in order to improve existing open source systems.

Identification and Verification of Political Claims – CheckThat!<sup>4</sup> aims to foster the development of technology capable of both spotting and verifying check-worthy claims in political debates in English and Arabic.

**CLEF eHealth**<sup>5</sup> aims to support the development of techniques to aid laypeople, clinicians and policy-makers in easily retrieving and making sense of medical content to support their decision making. The goals of the lab are to develop processing methods and resources in a multilingual setting to enrich difficult-to-understand eHealth texts, and provide valuable documentation.

Early Risk Prediction on the Internet –  $eRisk^6$  explores challenges of evaluation methodology, effectiveness metrics and other processes related to early risk detection. Early detection technologies can be employed in several areas, particularly those related to health and safety. For instance, early alerts can be sent when a predator starts interacting with a child for sexual purposes, or when a potential offender starts publishing antisocial threats on a blog, forum or social network. The main goal is to pioneer a new interdisciplinary research area that would be potentially applicable to a wide variety of situations and to many different personal profiles.

Multimedia Retrieval – ImageCLEF<sup>7</sup> provides an evaluation forum for visual media analysis, indexing, classification/learning, and retrieval in medical, nature, security and lifelogging applications. A focus of the task has always been on multimodal data, so the combination of image data with data from other sources.

Biodiversity Identification and Prediction – LifeCLEF<sup>8</sup> aims at boosting research on the identification and prediction of living organisms in order to solve the taxonomic gap and improve our knowledge of biodiversity. Through its biodiversity informatics related challenges, LifeCLEF is intended to push the boundaries of the state-of-the-art in several research directions at the frontier of multimedia information retrieval, machine learning and knowledge engineering.

**Digital Text Forensics and Stylometry** - **PAN**<sup>9</sup> is a networking initiative for the digital text forensics, where researchers and practitioners study technologies that analyze texts with regard to originality, authorship, and trustworthiness. PAN provides evaluation resources consisting of large-scale corpora, performance measures, and web services that allow for meaningful evaluations.

<sup>4</sup> https://sites.google.com/view/clef2019-checkthat/

<sup>5</sup> http://clef-ehealth.org/

<sup>6</sup> http://erisk.irlab.org/

<sup>&</sup>lt;sup>7</sup> https://www.imageclef.org/2019

<sup>8</sup> http://www.lifeclef.org/

<sup>9</sup> http://pan.webis.de/

The main goal is to provide for sustainable and reproducible evaluations, to get a clear view of the capabilities of state-of-the-art-algorithms.

Personalised Information Retrieval – PIR-CLEF<sup>10</sup> provides a framework for the evaluation of Personalised Information Retrieval (PIR). Current approaches to the evaluation of PIR are user-centric, mostly based on user studies, i.e., they rely on experiments that involve real users in a supervised environment. PIR-CLEF aims to develop and demonstrate a methodology for the evaluation of personalised search that enables repeatable experiments. The main aim is to enable research groups working on PIR to both experiment with and provide feedback on the proposed PIR evaluation methodology.

Extracting Protests from News – ProtestNews<sup>11</sup> aimed to test and improve state-of-the-art generalizable machine learning and natural language processing methods for text classification and information extraction on English news from multiple countries such as India and China for creating comparative databases of contentious political events (riots, social movements), i.e. the repertoire of contention that can enable large scale comparative social and political science studies.

CLEF has always been backed by European projects that complement the incredible amount of volunteering work performed by Lab Organizers and the CLEF community with the resources needed for its necessary central coordination, in a similar manner to the other major international evaluation initiatives such as TREC, NTCIR, FIRE and MediaEval. Since 2014, the organisation of CLEF no longer has direct support from European projects and are working to transform itself into a self-sustainable activity. This is being made possible thanks to the establishment of the CLEF Association<sup>12</sup>, a non-profit legal entity in late 2013, which, through the support of its members, ensures the resources needed to smoothly run and coordinate CLEF.

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<sup>10</sup> http://www.ir.disco.unimib.it/pir-clef2019/

<sup>11</sup> https://emw.ku.edu.tr/clef-protestnews-2019/

<sup>12</sup> http://www.clef-initiative.eu/association

Maarten de Rijke, University of Amsterdam, The Netherlands.

Last but not least, without the important and tireless effort of the enthusiastic and creative proposal authors, the organizers of the selected labs and workshops, the colleagues and friends involved in running them, and the participants who contribute their time to making the labs and workshops a success, the CLEF labs would not be possible.

Thank you all very much!

July, 2019

Linda Cappellato Nicola Ferro David E. Losada Henning Müller

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