What’s happening in CLEF and What's the Covid-19 @ MLIA Initiative

Nicola Ferro
@frrncl

University of Padua, Italy
What's happening in CLEF and What's the Covid-19 @ MLIA Initiative
NTCIR-15, 11 December 2020, Tokyo, Japan

Nicola Ferro
@frrncl

Information Access in any language or modality
Analytics for Information Retrieval
Evaluation Initiatives
Evaluation Methodologies, metrics, statistics
Technology Transfer
Interactive Information Retrieval Evaluation
Specific Application Domains
New Data Collection
Work on data from rare languages

CLEF 2021: Conference

Full/Short Papers: 3 May 2021
Answer Retrieval for Questions on Math (ARQMath)
BioASQ: Large-scale biomedical semantic indexing and question answering
CheckThat! Lab on Detecting Check-Worthy Claims, and Fake News
Cheminformatics Elsevier Melbourne University lab (ChEMU)
CLEF eHealth
Early Risk prediction on the Internet
ImageCLEF Multimedia Retrieval Challenge in CLEF
LifeCLEF: Multimedia Life Species Identification
Living Labs for Academic Search (LiLAS)
PAN Lab on Digital Text Forensics and Stylometry
SimpleText: (Re)Telling right scientific stories to non-specialists via text simplification
Touché: Argument Retrieval
CLEF 2021 Organization

General Chairs

- **Bogdan Ionescu**, University “Politehnica” of Bucharest, Romania
- **K. Selcuk Candan**, Arizona State University, USA

Program Chairs

- **Henning Müller**, University of Applied Sciences Western Switzerland, Switzerland
- **Lorraine Goeuriot**, Université Grenoble Alpes, France
- **Birger Larsen**, Aalborg University Copenhagen, Denmark

Lab Chairs

- **Alexis Joly**, INRIA Sophia-Antipolis, France
- **Maria Maistro**, University of Copenhagen, Denmark
- **Florina Piroi**, Vienna University of Technology, Austria

Lab Mentorship Chair

- **Lorraine Goeuriot**, Université Grenoble Alpes, France

Proceedings Chairs

- **Guglielmo Faggioli**, University of Padua, Italy
- **Nicola Ferro**, University of Padua, Italy
What's happening in CLEF and What's the Covid-19 @ MLIA Initiative
NTCIR-15, 11 December 2020, Tokyo, Japan

Nicola Ferro
@frrncl

Participation: Attendees

100% Voluntary Effort Based

Mainly voluntary effort + project funding
What’s happening in CLEF and What’s the Covid-19 @ MLIA Initiative
NTCIR-15, 11 December 2020, Tokyo, Japan

Nicola Ferro
@frrncl

7 best of CLEF 2019 labs
7 full papers
2 short papers

Submitted
Accepted

Conference


0 10 20 30 40 50 60 70
Working Notes

Working Notes Papers

- Papers from 2000 to 2020, with a significant increase in 2013, peaking at 216 in 2020.

What's happening in CLEF and What's the Covid-19 @ MLIA Initiative

NTCIR-15, 11 December 2020, Tokyo, Japan

Nicola Ferro
@frrncl
Publication “Universe”

Google Scholar Metrics for “Cross-Language Evaluation Forum”

Google Scholar for “CLEF evaluation”

60,700 hits
Publication “Universe” (2020)

<table>
<thead>
<tr>
<th>Category</th>
<th>Title</th>
<th>h5-index</th>
<th>h5-median</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Engineering &amp; Computer Science</td>
<td>IEEE Transactions on Knowledge and Data Engineering</td>
<td>81</td>
<td>117</td>
</tr>
<tr>
<td>2. Engineering &amp; Computer Science</td>
<td>International World Wide Web Conferences (WWW)</td>
<td>80</td>
<td>113</td>
</tr>
<tr>
<td>3. Databases &amp; Information Systems</td>
<td>International Conference on Very Large Databases</td>
<td>70</td>
<td>102</td>
</tr>
<tr>
<td>4. Databases &amp; Information Systems</td>
<td>ACM SIGMOD International Conference on Management of Data</td>
<td>66</td>
<td>96</td>
</tr>
<tr>
<td>5. Databases &amp; Information Systems</td>
<td>ACM SIGIR Conference on Research and Development in Information Retrieval</td>
<td>57</td>
<td>97</td>
</tr>
<tr>
<td>6. Databases &amp; Information Systems</td>
<td>International Conference on Data Engineering</td>
<td>56</td>
<td>79</td>
</tr>
<tr>
<td>7. Databases &amp; Information Systems</td>
<td>ACM International Conference on Web Search and Data Mining</td>
<td>54</td>
<td>95</td>
</tr>
<tr>
<td>8. Databases &amp; Information Systems</td>
<td>ACM International Conference on Information and Knowledge Management</td>
<td>54</td>
<td>88</td>
</tr>
<tr>
<td>9. Databases &amp; Information Systems</td>
<td>International Conference on Web and Social Media (ICWSM)</td>
<td>48</td>
<td>71</td>
</tr>
<tr>
<td>10. Recommendation Systems</td>
<td>ACM Conference on Recommender Systems</td>
<td>46</td>
<td>73</td>
</tr>
<tr>
<td>11. Computer Science</td>
<td>Information Processing &amp; Management</td>
<td>46</td>
<td>71</td>
</tr>
<tr>
<td>12. Computer Science</td>
<td>Knowledge and Information Systems</td>
<td>43</td>
<td>60</td>
</tr>
<tr>
<td>13. Computer Science</td>
<td>Information Systems</td>
<td>41</td>
<td>71</td>
</tr>
<tr>
<td>14. Computer Science</td>
<td>IEEE International Conference on Big Data</td>
<td>41</td>
<td>52</td>
</tr>
<tr>
<td>15. Computer Science</td>
<td>Workshop of Cross-Language Evaluation Forum</td>
<td>40</td>
<td>54</td>
</tr>
<tr>
<td>16. Computer Science</td>
<td>ACM Transactions on Intelligent Systems and Technology (TIST)</td>
<td>39</td>
<td>65</td>
</tr>
<tr>
<td>17. Computer Science</td>
<td>IEEE Transactions on Big Data</td>
<td>38</td>
<td>58</td>
</tr>
<tr>
<td>19. Computer Science</td>
<td>Semantic Web</td>
<td>26</td>
<td>56</td>
</tr>
<tr>
<td>20. Computer Science</td>
<td>Journal of Big Data</td>
<td>34</td>
<td>84</td>
</tr>
</tbody>
</table>
Steering Committee

- **Steering Committee Chair**
  - Nicola Ferro, University of Padua, Italy

- **Deputy Steering Committee Chair for the Conference**
  - Paolo Rosso, Universitat Politècnica de València, Spain

- **Deputy Steering Committee Chair for the Labs**
  - Martin Braschler, Zurich University of Applied Sciences, Switzerland

- **Members**
  - Khalid Choukri, Evaluations and Language resources Distribution Agency (ELDA), France
  - Paul Clough, University of Sheffield, United Kingdom
  - Fabio Crestani, Università della Svizzera italiana, Switzerland
  - Carsten Eickhoff, Brown University, USA
  - Norbert Fuhr, University of Duisburg-Essen, Germany
  - Lorraine Goeuriot, Université Grenoble Alpes, France
  - Julio Gonzalo, National Distance Education University (UNED), Spain
  - Donna Harman, National Institute for Standards and Technology (NIST), USA
  - Evangelos Kanoulas, University of Amsterdam, The Netherlands
  - Birger Larsen, University of Aalborg, Denmark
  - David E. Losada, Universidade de Santiago de Compostela, Spain
  - Mihai Lupu, Vienna University of Technology, Austria
  - Josiane Mothe, IRIT, Université de Toulouse, France
  - Henning Müller, University of Applied Sciences Western Switzerland (HES-SO), Switzerland
  - Jian-Yun Nie, Université de Montréal, Canada
  - Eric SanJuan, University of Avignon, France
  - Giuseppe Santucci, Sapienza University of Rome, Italy
  - Jacques Savoy, University of Neuchâtel, Switzerland
  - Laure Soulier, Pierre and Marie Curie University (Paris 6), France
  - Theodora Tsikrika, Information Technologies Institute (ITI), Centre for Research and Technology Hellas (CERTH), Greece
  - Christa Womser-Hacker, University of Hildesheim, Germany

- **Past Members**
  - Djoerd Hiemstra, Radboud University, The Netherlands
  - Jaana Kekäläinen, University of Tampere, Finland
  - Séamus Lawless, Trinity College Dublin, Ireland
  - Carol Peters, ISTI, National Council of Research (CNR), Italy - CLEF SC Chair 2000-2009
  - Emanuele Pianta, Centre for the Evaluation of Language and Communication Technologies (CELCT), Italy
  - Maarten de Rijke, University of Amsterdam, The Netherlands
  - Alan Smeaton, Dublin City University, Ireland
Aims and Scope

In the current Covid-19 crisis, as in many other emergency situations, the general public, as well as many other stakeholders, need to aggregate and summarize different sources of information into a single coherent synopsis or narrative, complementing different pieces of information, resolving possible inconsistencies, and preventing misinformation. This should happen across multiple languages, sources, and levels of linguistic knowledge that varies depending on social, cultural or educational factors.

Covid-19 MLIA Eval organizes a community evaluation effort aimed at accelerating the creation of resources and tools for improved MultiLingual Information Access (MLIA) in the current emergency situation with a reference to a general public use case:

Sofia has heard that a drug has been experimented in different countries and she would like to have a consolidated and trustworthy view of the main findings, whether the drug is effective or not, and whether there are any adverse effects.

Distillation for the general public also implies a level of specialist-non-specialist communication, when the aggregated sources contain both disseminative and specialised sources. Therefore, the general public would need to understand medical expertise by using their correspondent in the “popular” language or by using an appropriately calibrated language for the communication to be effective.

http://eval.covid19-mlia.eu/
Information Extraction

Categories

- **drug names, treatments, general intervention**: this category concerns both commercial and generic names of drugs, as well as general intervention in the health domain; elements from this category usually come from advices from a professional (medical doctor, pharmacist) or from self-medication.

- **signs, symptoms, diseases**: this category deals with medical problems and merges together all signs, symptoms, and diseases (shortness of breath, extreme fatigue, fever, skin infection, weight loss).

- **findings, efficacy of treatments**: this category is more complex since it concerns all elements related to positive or negative effects of treatments, including non-expected stuff.

- **tests**: this category concerns all tests performed to diagnose medical problems such as blood sample, physical exam, serological test.

- **behaviors, everyday life actions**: this category concerns all actions performed by each of us such as to wash one’s hands, to cough into his elbow, to self-confine, use of face masks, physical distancing.

- **legal dispositions, regulations**: this category concerns all actions decided by local or national authorities (Government, Ministry, etc.), such as to download the employer certificate, list of authorized move, prolonged border closure, closure of educational institutions.

Languages

- English, French, German, Greek, Italian, Spanish, Swedish

---

The goal of the Information Extraction task is to identify medical information in texts. We define six major types of entities to be identified. Those categories are mainly related to the Covid-19 issue. The main objective is to mine texts in order to access relevant information concerning the Covid-19, and more specifically information that may help the health professional to find outcomes.

During the first round of this task, participants will have access only to unannotated data (namely, the data collected from the two other tasks) in a plain text format. The evaluation will consist in a rover of system outputs. We encourage the participants to try experimental methods and to submit several system outputs in order to exchange different views during the discussion at the virtual meeting.

http://eval.covid19-mlia.eu/task1/
High Precision: participants are required to build systems that will help the general public to retrieve the most relevant documents on the Web concerning COVID-19 efficiently. The main focus of this subtask is on the top ranked documents.

High recall: the focus is more on the problem of finding as many relevant documents as possible with the least effort. Given a limited amount of resources, such as a time limit and expert availability in time of crisis, there will be a limit on the maximum number of documents that can be retrieved in order to build a set of relevant documents that should be delivered to the general public.

Both subtasks are open to monolingual and bilingual submissions.

Languages
- English, French, German, Greek, Italian, Spanish, Swedish, and Ukrainian

Topics
- English, French, German, Greek, Italian, Spanish, Swedish, and Ukrainian plus Chinese and Japanese
Machine Translation

http://eval.covid19-mlia.eu/task3/

- **Constrained**: participants must submit at least a system trained only with the provided data (constrained) for each of the language pairs they would like to participate.
  - Nasic linguistic tools such as taggers, parsers, or morphological analyzers or multilingual systems are allowed in the constrained condition.
- **Unconstrained**: participants can use additional training data (not provided by the organisers) or existing translation systems specifying a flag that the system uses additional data.

**Languages**
- English-German
- English-French
- English-Spanish
- English-Italian
- English-Modern Greek
- English-Swedish
We plan for **three rounds**, tentatively one-month long each, organized as follows:

- **training (2 weeks)**: data will be released and you will develop your own systems;
- **testing (2 weeks)**: you will submit your system runs, ground-truth will be created, and your runs will be scored;
- **meeting (1 day)**: an interactive (remote) meeting will be organized where you will shortly present the highlights and downlights to accelerate knowledge transfer and take up for the next round.

**Rolling technical report**: participants and organizers will keep and update a rolling technical report the techniques applied and insights gained during participation, round after round.

Participants are provided with a dedicated git **repository** where to push and share the outcomes of your participation in the different rounds, i.e. runs, code, (language) resources, and a technical report.

### Repositories

<table>
<thead>
<tr>
<th>Repository</th>
<th>Description</th>
<th>Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>organizers-task3</td>
<td>Organizers repository of the &quot;Machine Translation&quot; task of Covid-19 MLIA @ Eval effort. It contains d...</td>
<td>7 hours ago</td>
</tr>
<tr>
<td>etranslation</td>
<td>Repository of participant eTranslation in the Covid-19 MLIA @ Eval effort.</td>
<td>3 days ago</td>
</tr>
<tr>
<td>promt</td>
<td>Repository of participant PROMT LLC in the Covid-19 MLIA @ Eval effort.</td>
<td>3 days ago</td>
</tr>
<tr>
<td>tilde</td>
<td>Repository of participant Tilde in the Covid-19 MLIA @ Eval effort.</td>
<td>4 days ago</td>
</tr>
<tr>
<td>cur/mt</td>
<td>Repository of participant Charles University - MT Team in the Covid-19 MLIA @ Eval effort.</td>
<td>4 days ago</td>
</tr>
<tr>
<td>lms</td>
<td>Repository of participant University of Padua in the Covid-19 MLIA @ Eval effort.</td>
<td>4 days ago</td>
</tr>
<tr>
<td>limsi</td>
<td>Repository of participant TUP, CNRS-LIMSI, in the Covid-19 MLIA @ Eval effort.</td>
<td>4 days ago</td>
</tr>
<tr>
<td>gnu</td>
<td>Repository of participant Ganpat University - U. V. Patel College of Engineering, in the Covid-19 MLIA @ Eval effort.</td>
<td>4 days ago</td>
</tr>
<tr>
<td>tarjana-ai</td>
<td>Repository of participant Tarjana FZ LLC in the Covid-19 MLIA @ Eval effort.</td>
<td>5 days ago</td>
</tr>
<tr>
<td>lc</td>
<td>Repository of participant LC-Lab in the Covid-19 MLIA @ Eval effort.</td>
<td>5 days ago</td>
</tr>
<tr>
<td>cernm</td>
<td>Repository of participant Charles University - MTIR team in the Covid-19 MLIA @ Eval effort.</td>
<td>5 days ago</td>
</tr>
<tr>
<td>gaterip</td>
<td>Repository of participant University of Sheffield in the Covid-19 MLIA @ Eval effort.</td>
<td>5 days ago</td>
</tr>
</tbody>
</table>

---

[https://bitbucket.org/covid19-mlia/](https://bitbucket.org/covid19-mlia/)
Where We are?

- **50 teams from 26 countries registered**
  - to date, participating in multiple tasks
  - 35 for the Information Extraction task
  - 25 for the Multilingual Semantic Search task
  - 25 for the Machine Translation task

- **We are in the middle of round 1**
  - participants just submitted their runs
    - 2 December 2020
  - relevance assessments just started
    - due by mid December 2020
  - preliminary participants reports
    - due by 23 December 2020
  - virtual meeting
    - in the week 11-15 January 2021

- **14 teams from 10 countries actually submitted runs**
  - 4 for the Information Extraction task
    - English 4; German 1; Greek 1; Italian 1; Spanish 1
  - 4 for the Multilingual Semantic Search task
    - English 3; French 2; German 2; Greek 1; Italian 1; Spanish 3; Swedish 1; Ukrainian 1
    - {German, French, Spanish, Swedish} → English 1
    - English → German 1
    - English → Spanish 1
    - English → French 1
  - 8 for the Machine Translation task
    - English → German 5
    - English → French 8
    - English → Spanish 6
    - English → Italian 4
    - English → Greek 2
    - English → Swedish 5
What’s Next?

- Preparing for analysing participant runs
- Preparing for the virtual meeting
- Preparing for next round, roughly February-March 2021
  - new corpora
  - new topics
  - new languages
  - better training data available
  - cross-fertilisation between tasks
A Joint Effort

Coordinators

Overall

Khalid Choukri, Evaluations and Language resources Distribution Agency (ELDA), France
choukri@elda.org

Nicola Ferro, University of Padua, Italy
ferro@dei.unipd.it

Data Acquisition and Engineering

Miltos Deligiannis, ILSP/Athena RC, Greece
mdel@athenarc.gr

Vassilis Papavassiliou, ILSP/Athena RC, Greece
vppapa@athenarc.gr

Stelios Piperidis, ILSP/Athena RC, Greece
spip@athenarc.gr

Prokopis Prokopidis, ILSP/Athena RC, Greece
prokopis@athenarc.gr

Information Extraction

Thierry Declerck, DFKI, Germany
declerck@dfki.de

Cyril Grouin, LIMSI, France
cyril.grouin@limsi.fr

Pierre Zweigenbaum, LIMSI, France
pz@limsi.fr

Multilingual Semantic Search

Giorgio Maria Di Nunzio, University of Padua, Italy
dinunzio@dei.unipd.it

Maria Eskevich, CLARIN ERIC
maria@clarin.eu

Machine Translation

Francisco Casacuberta, Universitat Politècnica de València, Spain
fcr@phl.t.upv.es

Miguel Domingo, Universitat Politècnica de València, Spain
midobal@phl.t.upv.es

Mercedes García-Martínez, Pangeanic, Spain
m.garcia@pangeanic.com

Manuel Herranz, Pangeanic, Spain
m.herranz@pangeanic.es

Topic translation
Relevance Assessment
JOIN US

http://eval.covid19-mlia.eu/registration/