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COMPUTATIONAL LINGUISTICS AND INTELLIGENT SYSTEMS

Proceedings of the 4th International Conference, COLINS 2020. Volume I: Main Conference

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This volume represents the proceedings of the Workshop Conference, with Posters and Demonstrations track, of the 4th International Conference on Computational Linguistics and Intelligent Systems, held in Lviv, Ukraine, in April 2020. It comprises 83 contributed papers that were carefully peer-reviewed and selected from 165 submissions. The volume opens with the abstracts of the keynote talks. The rest of the collection is organized in two parts. Parts II contain the contributions to the Workshop COLINS Conference tracks, structured in two topical sections: (I) Computational Linguistics; (II) Intelligent Systems.

Preface

It is our pleasure to present you the proceedings of the Workshop Conference of COLINS 2020, the fourth edition of the International Conference on Computational Linguistics and Intelligent Systems, held in Lviv (Ukraine) on April 23-24, 2020.

The main purpose of the CoLInS conference is a discussion of the recent research results in all areas of Natural Language Processing and Intelligent Systems Development.

The conference is soliciting literature review, survey and research papers comments including, whilst not limited to, the following areas of interest:
– mathematical models of language;
– machine learning;
– discourse analysis;
– segmentation, tagging, and parsing;
– speech recognition;
– sentiment analysis and opinion mining;
– text categorization and topic modeling;
– text mining;
– information retrieval;
– artificial intelligence;
– information extraction;
– statistical language analysis;
– text summarization;
– data mining and data analysis;
– computer lexicography;
– social network analysis;
– question answering systems;
– web and social media;
– NLP applications;
– machine translation;
– intelligent text processing systems;
– memory systems and computer-aided translation tools;
– computer-aided language learning;
– corpus linguistics.

The language of COLINS Conference is English.

The conference took the form of oral presentation by invited keynote speakers plus presentations of peer-reviewed individual papers. There was also an exhibition area for poster and demo sessions. A Student section of the conference for students and PhD students run in parallel to the main conference.

This year Organizing Committee received 165 submissions, out of which 83 were accepted for presentation as a regular papers. The papers are submitted to the following tracks: discourse analysis (3 paper), data mining and data analysis (12 paper), web and social media (9 papers), segmentation, tagging, and parsing (2 papers), text categorization and topic modeling (7 paper), statistical language analysis (12 papers), text mining (7 paper), information retrieval (9 papers), artificial intelligence (29 papers), Natural Language Processing (32 papers), NLP applications (18 paper), corpus linguistics (9 papers), sentiment analysis and opinion mining (3 paper), computational lexicography (2 papers), automatic ontology building (5 paper), morphological analysis (3 paper), content analysis (5 papers), intelligent text processing systems (9 papers), intelligent computer systems building (21 papers) and problem of classification (4 papers). The papers directly deal with such languages: Ukrainian, Polish, Russian, Spanich, Island, English and Germany.

These papers and extended abstracts were published in this Volume I of COLINS 2020 proceedings.

The conference would not have been possible without the support of many people. First of all, we would like to thank all the authors who submitted papers to COLINS 2020 and thus demonstrated their interest in the research problems within our scope. We are very grateful to the members of our Program Committee for providing timely and thorough reviews and, also, for being cooperative in doing additional review work. We would like to thank the Organizing Committee of the conference whose devotion and efficiency made this instance of COLINS a very interesting and effective scientific forum.

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