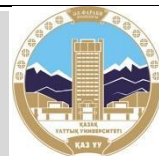




14th Asian Conference on Intelligent Information and Database Systems

6-9 June 2022, Almaty, Kazakhstan



CDUD 2022

Special Session on Concept Discovery in Unstructured Data

at the 14th Asian Conference on Intelligent Information and Database Systems (ACIIDS 2022)

Almaty, Kazakhstan, June 6-9, 2022

Conference website: <http://www.aciids.pwr.edu.pl/>

Special Session Organizers

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Objectives and topics

Concept discovery is a subdomain of Knowledge Discovery (KDD) and AI that uses human-centered techniques such as Formal Concept Analysis (FCA), Topic Modeling, Visual Text Representations, Conceptual Graphs etc. for gaining insight into the underlying conceptual structure of the data. Traditional machine learning techniques are mainly focusing on structured data whereas most data available resides in unstructured, often textual, form. Compared to traditional data mining techniques, human-centered instruments actively engage the domain expert in the discovery process.

This special session welcomes papers describing innovative research on data discovery techniques. Moreover, this workshop intends to provide a forum for researchers and developers of data mining instruments, working on issues associated with analyzing unstructured data. First, we are interested in methods for transforming unstructured into semi-structured information. Unstructured information such as texts or images can be tagged, keywords can be extracted from texts by means of Natural Language Processing methods, etc. For example, recently so-called Learning Representations such as Text Vectors or Visual Words have gained much attention in the domain of unstructured data. Second, in this workshop we also particularly welcome research on using human-centered instruments such as FCA to analyze unstructured and semi-structured data. Applications in which we are interested include but are not limited to Text Mining and Web Mining including forums, blogs, social sharing systems like Twitter and Facebook, mining sociological interviews, etc. We are also interested in innovative instruments for dealing with interpretability, fairness, transparency, knowledge incompleteness and asymmetry. CDUD 2022 is the fourth edition of the three preceding workshops: CDUD 2016 (Moscow, Russia, 2016; website: <https://cla2016.hse.ru/cdud/>; Proceedings: <http://ceur-ws.org/Vol-1625/>), CDUD 2012 (Leuven, Belgium, 2012; Proceedings: <http://ceur-ws.org/Vol-871/>), and CDUD 2011 (Moscow, Russia, 2011; Proceedings: <http://ceur-ws.org/Vol-757/>).

The scope of the CDUD 2022 includes (but not limited) the following topics:

- Applications of FCA for discovery purposes
- Association Rules and Frequent Closed Itemsets
- Biclustering and Multimodal clustering

- Conceptual Clustering
- Dealing with knowledge incompleteness and asymmetry
- Deep Learning for Text Representations
- Discovery techniques for conceptual models
- Explainable, fair and transparent AI
- Efficient indexing and structuring algorithms
- Formal Concept Analysis and Rough Sets
- Graph Mining and Learning
- Pattern Mining for Intelligent Transport
- Knowledge discovery and representation
- Natural Language Processing
- Ontology Learning from text
- Probabilistic concept discovery
- Patterns in Big Data and No-SQL databases
- Recommender Systems
- Text Mining and Text Kernels
- Topic Modeling
- Visual Analytics

Important dates

Submission of papers: **January 15, 2022 (EXTENDED - HARD)**

Notification of acceptance: **March 1, 2022**

Camera-ready papers: **March 15, 2022**

Registration & payment: **March 15, 2022**

Conference dates: **June 6-9, 2022**

Program Committee (to be invited)

Secretary: Aliya Nugumanova, S. Amanzholov East Kazakhstan State University, Kazakhstan

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Artem Revenko, Semantic Web Company, Vienna, Austria

Alexander Panchenko, Skolkovo University of Technology, Russia and Technische Universität Darmstadt, Germany

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Dominik Slezak, University of Warsaw, Poland

Rustam Tagiew, German Center for Railway Traffic Research, Dresden, Germany

Jesus Medina Moreno, University of Cádiz, Spain

Rinat Zhukhenov, National Information Technologies JSC, Nur-Sultan, Kazakhstan

Submission

All contributions should be original and not published elsewhere or intended to be published during the review period. Authors are invited to submit their papers electronically in pdf format, through EasyChair. All the special sessions are centralized as tracks in

the same conference management system as the regular papers. Therefore, to submit a paper please activate the following link and select the track: *CDUD 2022: **Special Session on Concept Discovery in Unstructured Data.***

<https://easychair.org/conferences/?conf=aciids2022>

Authors are invited to submit original previously unpublished research papers written in English, of up to 13 pages, strictly following the LNCS/LNAI format guidelines. Authors can download the Latex (recommended) or Word templates available at [Springer's web site](#). Submissions not following the format guidelines will be rejected without review. To ensure high quality, all papers will be thoroughly reviewed by the CDUD 2022 Program Committee. All accepted papers must be presented by one of the authors who must register for the conference and pay the fee. The conference proceedings will be published by Springer in the prestigious series LNCS/LNAI (indexed by ISI CPCI-S, included in ISI Web of Science, EI, ACM Digital Library, dblp, Google Scholar, Scopus, etc.).