

EDBT/ICDT-WS 2022

The Workshops of the EDBT/ICDT 2022 Joint Conference

March 29, 2022

Message from the Workshop Chairs:

It is our great pleasure to present on behalf of the entire conference organizing committee and the workshop organizers, the proceedings of the Workshops co-located with the 25th International Conference on Extending Database Technology (EDBT) and the 25th International Conference on Database Theory (ICDT), held on March 29, 2022 (originally planned to take place in Edinburg, UK, but eventually held online due to the COVID-19 pandemic).

The EDBT and ICDT series of conferences are prestigious forums for exchanging novel results that extend the foundations and applications of data management technologies. This year, five exciting workshops continue the tradition of focusing on emerging topics in data management, complementing the areas covered by the main technical program (these proceedings include the first four workshops, while the last one runs its own proceedings):

- [Data Platform Design, Management, and Optimization](#) (DATAPLAT)
- [Data Analytics solutions for Real-Life APplications](#) (DARLI-AP)
- [Big Data Visual Exploration and Analytics](#) (BigVis)
- [Knowledge Graphs for Economics and Finance](#) (EcoFinKG)
- [Design, Optimization, Languages and Analytical Processing of Big Data](#) (DOLAP)

We thank the workshop organizers, PC members and external reviewers for their effort in organizing these workshops, and the authors for continuing to submit their high-quality work to the EDBT/ICDT workshops, making these venues successful and intellectually stimulating.

Sincerely,

Maya Ramanath, IIT Delhi (India)

Themis Palpanas, Université Paris Cité (France)

Data Platform Design, Management, and Optimization (DATAPLAT)

Since big data has imposed a paradigm change in the way data is stored, managed, and queried, information systems have evolved into complex data platforms or data ecosystems supporting data-intensive storage, computation, and analysis of data with heterogeneous structures. Yet, a smart and comprehensive support for data scientists and architects to govern the data through the whole life-cycle is still lacking. The first edition of the DataPlat Workshop brings together researchers and practitioners to discuss innovative solutions and architectures that address the related challenges, ranging from metadata management to data profiling and governance, from provenance control to orchestration of data transformation pipelines, from data fusion to autoML.

Nine papers were submitted to DataPlat and reviewed by a Program Committee including 12 international experts in the related fields. Each paper received between two to four reviews. Six papers were accepted for presentation at the workshop, of which two regular papers and four short papers. One of the regular papers came from the industrial world. The DataPlat program also included a keynote given by Alberto Abelló (UPC, Spain) related to Big DataBase Management Systems.

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Data Analytics solutions for Real-Life Applications (DARLI-AP)

Information and communication technologies have made massive heterogeneous data available in various real-world application domains. Individuals play a crucial role in generating data, driving user- and context-aware analysis processes, and demanding easily accessible and understandable knowledge at the end of these processes. Several challenges in data science deal with data creation, storage, search, sharing, modeling, analysis, and visualization of data, information, and knowledge. DARLI-AP provides an opportunity for academics and practitioners from different research areas to share their experiences in designing and developing cutting-edge analytics solutions for real-world applications.

The international program committee of DARLI-AP consisted of 14 experts working in data science and related areas. For the 2022 edition, 21 submitted papers were evaluated by at least two experts from the program committee, with an acceptance rate of 55%. The program included a general talk entitled "From data pipelines to data products: The way to go", delivered by a leading scientist, Dr Khalid Belhajjame, Univ. Paris-Dauphine, France. The DARLI-AP 2022 program included 12 research and experience papers with live presentations and question-and-answer sessions interacting with 25-30 attendees. We supported diversity and inclusion, promoting inclusive language in papers and presentations. We awarded female researchers and members of underrepresented communities with free registrations: (1) Ambreen Hussain, Univ. Birmingham City; (2) Raymond Ondzigue Mbenga, Univ. Tours Blois, France and DEBIM, Univ. of Health Sciences Libreville, Gabon.

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Big Data Visual Exploration and Analytics (BigVis)

Information Visualization is nowadays one of the cornerstones of Data Science, turning the abundance of Big Data being produced through modern systems into actionable knowledge. The BigVis workshop focuses on a broad spectrum of data exploration, visualization and analytics issues, from traditional ones, such as efficient data storage, querying & indexing for enabling visual analytics, to new ways for visual presentation of massive data, efficient interaction and personalization techniques that can fit to different user needs.

BigVis 2022 attracted international participation from academia and industry. Ten research papers were submitted, of which six papers were selected for publication. The BigVis 2022 program also included two keynotes given by Danyel Fisher, Honeycomb.io ("Co-Designing the Data Structure and the User Experience") and Steffen Frey, University of Groningen ("Visual Mapping, Comparison and Exploration of Large Multifield Data"). We owe our sincere gratitude to the 45 members of the Technical Program Committee who contributed to a high-quality final program, working within a very tight schedule.

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Knowledge Graphs for Economics and Finance (EcoFinKG)

Knowledge Graphs are a recent and promising incarnation of database methodologies and technology, which is attracting increasing use within domains characterized by the presence of many interconnected entities, interacting via complex dynamics. Among the broad variety of fields where KGs are finding use and adoption, their impact on the economic and financial sector will undoubtedly be a long-lasting one due to a close fit between technology and business. EcoFinKG wants to reduce the distance between the database and economics/finance communities, sustaining new research-backed economic and financial applications that consciously use and demystify state-of-the-art data technology.

EcoFinKG attracted international participation from academia and industry, both in terms of contributions and audience. Other than the classical paper presentations, we hosted a keynote presentation by Prof. Renzo Angles on "Harnessing the Knowledge: Languages and Models underlying Knowledge Graphs", and a discussion panel on "Knowledge Graphs and Industrial Applications" with six knowledge representation experts and C-level professionals with a background in knowledge graphs in real-world projects. During the whole workshop, the audience has been regular at about 30-35 people with a peak of 40 during the entirety of the keynote. At EcoFinKG, 14 research papers were submitted and after receiving at least 2 reviews and a final decision by general chairs, 11 regular and 2 short papers were accepted. We received the sponsorship of University of Oxford, The Alan Turing Institute and The Royal Society.

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