

**XXVI International Conference on
Data Analytics and Management in Data Intensive Domains
DAMDID/RCDL 2024**

**HSE University, Nizhny Novgorod
Faculty of Informatics, Mathematics, and Computer Science
October 22-25, 2024**

<https://damdid2024.frccsc.ru/>

Paper submission: <https://easychair.org/my/conference?conf=damdid2024>

Call for Contributions

Aims and scope. Exponential growth of data practically in all human activity areas, consolidating role to be played by informatics and IT for the development of methods and facilities for data analysis and management in various data intensive domains (DID), study of experience in applying these methods and stimulating their advancement have motivated organization of this conference. Main objective of this conference is to promote the acceleration of research, improvement of their efficiency (quality and visibility of results, competitive ability) at the expense of the enhancement of methods and facilities for data analysis and management in DID. It is expected that the mutual complementarity of approaches in interdisciplinary DID will contribute to the creation of the corporate culture generalizing methods for data analysis and infrastructures development applicable in diverse DID.

Target audience. DAMDID conference is a multidisciplinary forum of researchers and practitioners from various domains of science and research promoting cooperation and exchange of ideas in the area of data analysis and management in DID (domain is data intensive if its development is induced by elaboration of data that not necessarily might be “Big”). For participation at the conference the specialists from such DID as X-informatics (where X = astro, bio, chemo, geo, medicine, neuro, physics, etc.), social science, economy, etc., as well

from the areas of statistics, informatics, data mining, machine learning, data science, new technologies and IT, business, etc. are invited.

We welcome papers on interdisciplinary research, but we encourage authors to focus not only on the problems of the domain, but also on the rationale for choosing computer science methods and to analyze the research results from a computer science perspective.

Host organizers

- HSE University, Nizhny Novgorod
- Lobachevsky State University of Nizhny Novgorod
- Federal Research Center “Computer Science and Control” of the Russian Academy of Sciences
- Moscow ACM SIGMOD Chapter

Venue. The XXVI International Conference “Data Analytics and Management in Data Intensive Domains” (DAMDID/RCDL 2024) will be held during 22-25 October 2024 in Nizhny Novgorod at the Faculty of Informatics, Mathematics, and Computer Science, HSE University, Nizhny Novgorod, Bolshaya Pecherskaya street, 25/12

Important dates

- Submission deadline for papers: June 17, 2024
- Submission deadline for tutorials: June 3, 2024
- Notification for the first round: July 19, 2024
- Final notification of acceptance: September 2, 2024
- Deadline for camera-ready versions of the accepted papers: September 16, 2024
- Conference: October 22-25, 2024

Conference language. Official languages of the conference are both English and Russian. A submission may be presented in any language. Authors may use both languages for their presentation during the conference, slides should be provided in English.

Conference topics. The open list of topics proposed for submission is organized in form of the tracks presented in the list given below.

Tracks for data analysis, problem solving, experiment organization

- Problem statement and solving: urgent problem or phenomena required study in a specific domain or in a generalized way, thorough insight based on the nature, characteristics of the phenomenon and data available, approaches for organization of problem solving and methods selection, problem classification in various domains, process of problem solving and tools applied.
- Organization of experiments: survey of approaches for the organization of experimental research, scientific theory justification, experiment simulation, research cycles, robotization, infrastructures for experiment organization, reproducing of results, workflow metadefinition and reuse, verification of results, comparison of new results with those obtained earlier.
- Hypotheses and models as constituents of research experiments: methods and facilities for hypotheses generation and testing, construction of computerized models, models as a mean for theory and hypothesis verification, cognitive modeling paradigm, experience of creation of predictive models in research.
- Advanced data intensive analysis methods and procedures: state of the art in methods of statistics, data mining, machine learning, multivariate analysis, evaluation of methods generality and specialization, orientation of methods on specific domains and kinds of data, classification of methods, systematization of experience of methods application for problem solving, cognitive analytics for data-driven decision making, information visualization and exploratory analysis, meta-analysis methods, Big Data analytics efficiency and scalability, new data analysis methods development.
- Conceptual modeling: formalization of semantics of the subject domains, conceptual specification of problems and evolution of ontologies in specific domains, experience of applying of various models and tools for ontology support, semantic annotation for concept formation, progress of ontological modeling, ontological models use for database schema specification, independence of conceptual specification of data, abstract specification of algorithms and workflows in the conceptual models, semantic interoperability of programs.
- Research support in data infrastructures, data intensive use cases: functions and architectures of facilities for research support (virtual

laboratories/observatories, data centers), cross-infrastructure interoperability and data sharing between interdisciplinary researches, data intensive use cases for research data infrastructures, experience of use case implementation.

Tracks for data management

- Methods, tools and infrastructures for data acquisition and storage: advanced projects, experience of data acquisition and storage in long-living projects, comparative analysis of the projects, project surveys, facilities and approaches for data collecting and storage, specificity of semantics, structure and characteristics of data (including streaming data), data representation, metadata organization, data quality, data provenance (including taking them from the literature), data cleansing, problems of Big Data storage.
- Data integration: methods and tools for entity resolution and fusion in the Big Data infrastructures, unification of various data models (such as NoSQL, graph-based, RDF-based, array-based models), canonical data models and their synthesis, schema and ontology matching and mapping, methods and tools for virtual data integration, application-driven subject mediators, semantic integration of data, data warehouses, ETL process support, multidimensional data models, data integration in hybrid infrastructures supporting structured, semi-structured and non-structured data, infrastructures of data integration systems, application of data integration facilities in specific domains.
- Information extraction from observational data: issues of extracting the most complete and up-to-date information from data in astronomy, spectroscopy, material science, medicine, etc.; application of data analysis methods to classify objects and search for anomalies
- Information extraction from texts: identification and extraction of structured information from the texts, declarative languages and methods for information extraction, linguistic methods, NLP, multilingual textual data, instruments for textual analysis.
- Research data infrastructures and their applications: various data infrastructures, based on data and compute-intensive platforms (such as clouds and grids, distributed clusters, supercomputers, parallel database machines, etc.), new models for data intensive programming in such infrastructures and Big data platforms, metadata and modeling in data

infrastructures, virtualization based technologies, evaluation of performance of data infrastructures, scalability issues.

- Semantic Web role in DID: languages, tools, and methodologies for representing and managing data, semantics and reasoning on the Web, semantic interoperability and cross identification of the Semantic Web resources, spatio-temporal Semantic Web data and ontologies, harvesting of Semantic Web data from diverse data collections, Web data quality and provenance, multidialect architectures for declarative conceptual specification and problem solving over heterogeneous collections of data, application of Semantic Web facilities for problem solving, linked open data.

Conference Proceedings. Conference post-proceedings consist of Conference Track proceedings (full papers and some high-quality short papers in English) to be submitted to Springer's **Communications in Computer and Information Science** (CCIS, <http://www.springer.com/series/7899>) and Journal Track proceedings (limited topics) to be submitted to **Lobachevskii Journal of Mathematics** (<https://www.springer.com/journal/12202>), to the **Pattern Recognition and Image Analysis** (<https://www.springer.com/journal/11493>), and to the **Automation and Remote Control** (<https://www.springer.com/journal/10513>) for the sake of better visibility of the conference publications by the international scientific community, as well as for indexing the papers in Scopus and Web of Science. Supplementary volume will be submitted to scientific journal **Systems and Means of Informatics** (http://www.ipiran.ru/english/journal_Systems/index.asp) for indexing the papers in RSCI.

Previous DAMDID proceedings in Springer's Communications in Computer and Information Science (CCIS, <http://www.springer.com/series/7899>) for 2016-2021 are available at <https://link.springer.com/conference/damdid>. Previous proceedings in CEUR for 2011-2021 are available at <https://ceur-ws.org/>. Proceedings of 2022 are published as special issues of the Lobachevskii Journal of Mathematics (<https://link.springer.com/journal/12202/volumes-and-issues/44-1>) and the Pattern Recognition and Image Analysis (<https://link.springer.com/journal/11493/volumes-and-issues/33-2>); supplementary proceedings are published as a special issue of the Proceedings of the Institute for Systems Analysis

https://isa.ru/proceedings/index.php?option=com_content&view=article&id=1226&Itemid=&lang=en

Categories of submissions and reviewing. The conference structure will include the plenary keynotes and tutorials presented by the leading researchers, regular sessions containing regular and short presentations of the research results obtained in various conference tracks. Co-located with the conference the satellite events are also planned including workshops (open and by invitation) and invited sessions. Paper submission rules and templates can be found at the website. Papers in any category should be submitted via EasyChair system.

Two-round single-blind peer-reviewing will be organized. During the first round each paper (demo) is reviewed by at least three PC members. As a result of the first round a paper (demo) can be accepted as a full paper (demo), rejected or recommended to be revised w.r.t. remarks in reviews. All papers recommended to be revised are subjects for the second round of reviewing. During the second round a paper (demo) is reviewed again. As a result of the second round a paper (demo) can be accepted as a full paper (demo), short paper (demo) or rejected.

Soon after the conference the papers are distributed among different volumes of proceedings. Top-rated full papers are included into the CCIS volume and journal volumes (Lobachevskii Journal of Mathematics, Pattern Recognition and Image Analysis, Automation and Remote Control). Other full and short papers (demos) are included in the RCSI journals volume.

General-chair

- Panos Pardalos, University of Florida, USA

Program Committee Co-chairs

- Eduard Babkin, HSE University, Nizhny Novgorod, Russia
- Nikolay Zolotykh, Lobachevsky State University of Nizhny Novgorod
- Sergey Stupnikov, FRC Computer Science and Control, RAS, Russia