Аналитика и управление данными в областях с интенсивным использованием данных

XIX Международная конференция
DAMDID / RCDL'2017
10-13 октября 2017 года, Москва, МГУ

Программа конференции

Data Analytics and Management In Data Intensive Domains

XIX International Conference
DAMDID / RCDL'2017
October 10-13, 2017, Moscow, Moscow State University

Conference Program

Monday, October 9			
Time	***Auditorium A***	***Auditorium B***	***Auditorium C***
9:00-15:00	***Registration***		
10:30-11:00	***Welcome coffee***		
11:00-14:00	**Preconference Plenary Session:** **Next generation sequencing (NGS) in genomics: techniques and applications** **Keynote Talk 1** **Stefano Ceri (Italy) Data-Driven Genomic Computing: Making Sense of the Signals from the Genome** **Invited Talk** **Zoltan Szallasi (USA) Development of genomic based diagnostics in various application domains** ***(coffee break in between)***		
14:00-15:00	***Lunch***		

Tuesday, October 10			
Time	***Auditorium A***	***Auditorium B***	***Auditorium C***
9:00-19:00	***Registration***		
10:30-11:00	***Welcome coffee***		
11:00-14:00	**Tutorial** **Zoltan Szallasi (USA) Genomics in the service of cancer immunotherapy** ***(coffee break in the middle)***		
14:00-15:00	***Lunch***		
15:00-16:30	**PhD Workshop Session W1.** **Data analysis**		
16:30-16:45	***Coffee break***		
16:45-18:15	**PhD Workshop Session W2.** **Data integration, database schema development**		
19:00-21:00	***Welcome Party***		

Wednesday, October 11			
Time	***Auditorium A***	***Auditorium B***	***Auditorium C***
10:00-10:30	**Opening of the Conference**		
10:30-11:30	**Keynote Talk 2 Giuseppe Longo (Italy) The astronomical data deluge: problems and solutions**		
12:00-12:30	***Coffee break***		
12:30-14:00	**Session C1. Data analysis projects in astronomy**	**Session C2. Semantic Web techniques in DID**	
14:00-15:00	***Lunch***		
15:00-16:30	**Session C3. Special-purpose DID infrastructures 1**	**Session C4. Distributed computing**	
16:30-16:45	***Coffee break***		
16:45-18:15	**Session C5. Special-purpose DID infrastructures 2**	**Session C6. System efficiency evaluation**	
17:15-18:45	***Coordinating Committee meeting***		
19:00-22:00			

Thursday, October 12			
Time	***Auditorium A***	***Auditorium B***	***Auditorium C***
10:00-11:00	**Keynote Talk 3 Katrin Amunts (Germany) The EU's Human Brain Project (HBP) Flagship – Accelerating brain science discovery and collaboration**		
11:00-11:30	***Coffee break***		
11:30-13:00	**Session C7. Data analysis projects in neuroscience**	**Session C8. Specific data analysis techniques**	**Session C9. Ontological models and applications 1**
13:00-14:00	**Session C10. Heterogeneous database integration**	**Session C11. Text analysis in humanities 1**	**Poster and Demo Session**
14:00-15:00	***Lunch***		
15:00-16:30	**Session C12. Data analysis projects in various DID**	**Session C13. Text analysis in humanities 2**	**Session C14. Ontological models and applications 2**
16:30-17:00	***Coffee break***		
17:00-18:30	**Session C15. Organization of experiments in data intensive research**	**Session C16. Digital library projects**	
19:00-21:00	***Cultural event: Concert of the Academic Choir of MEPhI ?***		

Friday, October 13			
Time	***Auditorium A***	***Auditorium B***	***Auditorium C***
9:30-11:00	**Session C17. Knowledge representation and discovery**		
11:00-11:30	***Coffee break***		
11:30-13:00	**Session C18. Approaches for problem solving in DID**	**Session C19. Application of machine learning**	
13:00-13:30	***Closing of the Conference***		
14:00-15:00	***Lunch***		

Structure of the DAMDID/RCDL 2017 Conference Sessions

C1 Data analysis projects in astronomy

23 S.V. Vereshchagin, E.S. Postnikova (INASAN) Accumulation of new knowledge on internal structure of open star clusters on the basis of data intensive research (Накопление новых знаний о внутреннем устройстве рассеянных звездных скоплений на основе интенсивного использования данных)[1]

54 Pavel Minaev, Alexey Pozanenko (Space Research Institute, RAS) Short gamma-ray transients in SPI/INTEGRAL: search, classification and interpretation

78 Nikolay Skvortsov, Leonid Kalinichenko (FRC CSC RAS), Alexey Karchevsky (MSU), Dana Kovaleva, Oleg Malkov (INASAN) Development of the ILB catalogue for identification of binary stars (Разработка каталога идентификации двойных звёзд ILB)

C2 Semantic Web techniques in DID

32 Victor Telnov (National Research Nuclear University MEPhI). Semantic Educational Web Portal

80 Alexander Kirillovich (Volga Region Federal University, Kazan). Problem of Transitivity of Wikipedia's Category System (Проблема транзитивности в системе категорий Википедии)

43 E.A. Sidorova, I.S. Kononenko, Yu.A. Zagorulko (A. P. Ershov Institute of Informatics Systems, NSU, Novosibirsk) An Approach to Filtering Prohibited Content on the Web (Подход к фильтрации запрещенного контента в веб-пространстве)

C3 Special-purpose DID infrastructures 1

17 Vasily Bunakov (Science and Technology Facilities Council, Harwell, UK), Alexia de Casanove, Pascal Dugénie (CINES, Montpellier, France), Rene van Horik (DANS, The Hague, Netherlands), Simon Lambert (Science and Technology Facilities Council, Harwell, UK), Javier Quinteros (GFZ German Research Centre for Geoscience, Potsdam, Germany), Linda Reijnhoudt (DANS, The Hague, Netherlands). Data curation policies for EUDAT collaborative data infrastructure

52 Vasily Bunakov (Science and Technology Facilities Council, Harwell, UK) Data policy as activity network

[1] Titles of papers in Russian in brackets are added for the papers written in Russian

1 Denis M. Ponizovkin (IT-Aces, Pereslavl-Zalessky) The Model of Recommender Systems Based on Fuzzy Logic as the Extension of the Collaborative Filtering Model (Модель рекомендательной системы на нечетких множествах как эффективное расширение коллаборативной модели)

C4 Distributed computing

47 A. Maysuradze, V. Kozlov (MSU) Modeling Message Passing Delays in a Computer Cluster to Monitor its Network (Моделирование задержек передачи информации в вычислительном кластере для мониторинга коммуникационной среды)
53 A.P. Afanasiev, V.V. Voloshinov, A.V. Sokolov (Institute for Information Transmission Problems RAS) Inverse Problems in the Modeling on the Basis of Regularization and Distributed Computing in the Everest Environment (Обратные задачи моделирования на основе регуляризации и распределенных вычислений в среде Everest)
71 Oleg Sukhoroslov, Aleksander Afanasiev (Institute of information transmission problems of RAS) Development of Data-Intensive Services with Everest

C5 Special-purpose DID infrastructures 2

36 Timofey Rechkalov, Mikhail Zymbler (South Ural State University) An Approach to Data Mining Inside PostgreSQL Based on Parallel Implementation of UDFs
49 Victor Belenkov, Sergey Borokhov, Vladimir Budzko, Peter Keyer, Vadim Korolev (FRC CSC RAS) The Issues of Information Security Provision for Information Systems in Data Intensive Domains (Вопросы обеспечения информационной безопасности информационных систем, реализующих интенсивное использование данных)

C6 System efficiency evaluation

6 Evgenii D. Viazilov, Nick N. Mikhailov, Denis A. Melnikov (All-Russian Research Institute for Hydrometeorological Information World Data Centre, Obninsk) Methodology for Evaluating the Functioning of Distributed ESIMO Data Providers (Методика определения интегрального показателя для оценки функционирования центров ЕСИМО)
21 O.O. Komarevtseva (Srednerusskiy Institute of Management-branch of Russian Academy of National Economy and Public Administration, Orel) Simulation of Data for Determining the Readiness of Municipalities to Implement Smart City Technologies (Имитационное моделирование данных для определения готовности муниципальных образований к внедрению технологий Smart City)
39 Tatiana Dyukina (St. Petersburg State University) The modified correlation coefficient (Модифицированный коэффициент корреляции)
48 Dmitry Devyatkin, Roman Suvorov, Ilya Tikhomirov (FRC CSC RAS), Yulia Otmakhova (NSU) Towards Framework for Discovery of Export Growth Points

C7 Data analysis projects in neuroscience

77 Dmitriy Kovalev (FRC CSC RAS), Sergey Priimenko (MSU), Natalya Ponomareva (Research Center of Neurology) Search for gender difference in functional connectivity of fMRI resting state

88 Darya Endeeva (MSU) Organizing a Virtual Experiment for the Analysis of Effective Connectivity of Human Task Functional Magnetic Resonance Imaging (Исследование методов организации виртуального эксперимента для задачи поиска эффективной связности функциональной магнитно-резонансной томографии действий человека)

C8 Specific data analysis techniques

28 Mikhail Tikhomirov, Boris Dobrov (MSU) Using News Corpora for Temporal Summary Formation (Формирование исторической справки по корпусу новостей с учетом структуры динамики развития новостного сюжета)

27s A.V. Myshev, A.V. Dynin (National Research Nuclear University MEPhI (IATE), Obninsk) Fractal Methods in Information Technologies for Processing, Analyzing and Classifying Large Flows of Astronomical Data (Фрактальные методы в информационных технологиях обработки, анализа и классификации больших потоков астрономических данных)

55s Maria Karyaeva, Valery Sokolov (Yaroslavl State University) On the Problem of Multi-word Term Extraction from a Domain-specific Document Collection

57s A. Maysuradze, E. Echkina (MSU) Analysis and Visualization of International Scientific Cooperation Based on the Scientific Publication Index (Анализ и визуализация международного научного сотрудничества на основе научных публикаций)

26 Sergej Znamenskii (A.K. Ailamazyan Program Systems Institute of Russian academy of Science, Pereslavl-Zalessky), Vladislav Dyachenko (P.G. Demidov Yaroslavl State University) Alternative Model of the Strings Similarity (Альтернативная модель сходства символьных строк)

C9 Ontological models and applications 1

20 Efstratios Kontopoulos, Panagiotis Mitzias, Marina Riga, Ioannis Kompatsiaris (Information Technologies Institute, Thessaloniki, Greece) A Domain-Agnostic Tool for Scalable Ontology Population and Enrichment from Diverse Linked Data Sources

24 Dmitriy Malakhov (MSU), Vladimir Serebryakov (MSU, FRC CSC RAS) The Semantic Search Model Based on the Thesaurus (Модель семантического поиска на базе тезауруса)

35s Igor Fiodorov (Plekhanov Russian University of Economics) Development of BWW ontology for a workflow conceptual modeling

C10 Heterogeneous database integration

70 Sergey Stupnikov (FRC CSC RAS) Specification and Implementation of Multimodel Data Integration Rules (Спецификация и реализация разномодельных правил интеграции данных)

10 Manuk Manukyan (Yerevan State University) On an Approach to Data Integration: Concept, Formal Foundations and Data Model

C11 Text analysis in humanities 1

11s Yu.V. Leonova, A.M. Fedotov, O.A. Fedotova (Institute of Computation Technologies of SB RAS, NSU, State Scientific and Technical Library of SB RAS, Novosibirsk) Approach to Classification of Thesis Abstracts by Subjects (О подходе к классификации авторефератов диссертаций по темам)

13s D.S. Zuev, A.A. Marchenko, A.F. Khasiannov (Volga Region Federal University, Kazan) Text Mining Tools for Legal Documents (Применение инструментов интеллектуального анализа текстов в юриспруденции)
31s Denis Zubarev (PFUR), Ilya Sochenkov, Ilya Tikhomirov, Oleg Grigoriev (FRC CSC RAS) Funding of Scientific Projects: Similarity and Plagiarism Detection

C12 Data analysis projects in various DID

4 A.O. Erkimbaev, V.Yu. Zitserman, G.A. Kobzev, A.V. Kosinov (Joint Institute for High Temperatures of RAS) Standardization of storage and retrieval of semi-structured thermophysical data in JSON-documents associated with the ontology
30s V.A. Dudarev, N.N. Kiselyova (A.A. Baikov Institute of Metallurgy and Materials Science RAS, National Research University Higher School of Economics) High-level Formalization of Problem Domain for Inorganic Materials Science Information Resources Consolidation (Высокоуровневая формализация предметной области для консолидации информационных ресурсов в области неорганического материаловедения)
50 Svetla Boytcheva, Galia Angelova (Institute of Information and Communication Technologies of Bulgarian Academy of Sciences), Zhivko Angelov (Adiss Lab Ltd.), Dimitar Tcharaktchiev (Medical University Sofia, University Specialised Hospital for Active Treatment of Endocrinology, Sofia, Bulgaria) Integrating Data Analysis Tools for Better Treatment of Diabetic Patients
60s M.D. Filin, T.Y. Gratsianova (MSU) Information Retrieval System Based on Topic Models (Система информационного поиска на основе тематических моделей)

C13 Text analysis in humanities 2

18 K. Boyarsky (ITMO University), E. Kanevsky (EMI RAS, St Petersburg). Effect of Semantic Parsing Depth on the Identification of Paraphrases in Russian Texts (О влиянии семантики на точность определения парафраз в русскоязычных текстах)
22 Valerie Mozharova, Natalia Loukachevitch (MSU). Recognizing Names in Islam-Related Russian Twitter
45 V.B. Barakhnin, O.Yu. Kozhemyakina, I.S. Pastushkov (Institute of Computational Technologies of SB RAS, NSU, Novosibirsk) Comparative Analysis of Methods of Automated Classification of Poetic Texts Based on Lexical Signs (Сравнительный анализ методов автоматической классификации поэтических текстов на основе лексических признаков)

C14 Ontological models and applications 2

38 Yu. A. Zagorulko, O.I. Borovikova, G.B. Zagorulko (A.P. Ershov Institute of Informatics Systems, NSU) Application of Ontology Design Patterns in the Development of the Ontologies of Scientific Subject Domains (Применение паттернов онтологического проектирования при разработке онтологий научных предметных областей)
42 Andrey Bart (Tomsk State University), Alexander Fazliev, Evgeny Gordov, Igor Okladnikov, Alexey Privezentsev, Alexander Titov (Institute of Atmospheric Optics SB RAS) Ontological description of meteorological and climate data collections

C15 Organization of experiments in data intensive research

68 Yannic Kropp, Bernhard Thalheim (University of Kiel) Data Mining Design and Systematic Modelling

75 Evgeny Tarasov (MSU), Dmitry Kovalev (FRC CSC RAS) Estimation of Scientific Hypotheses Quality in Virtual Experiments in Data Intensive Domains (Оценка качества научных гипотез в виртуальных экспериментах в областях с интенсивным использованием данных)

76 Dmitry Kovalev, Leonid Kalinichenko, Sergey Stupnikov (FRC CSC RAS) Organization of Virtual Experiments in Data-Intensive Domains

C16 Digital library projects

29 M.R. Kogalovsky (Market Economy Institute of RAS), S.I. Parinov (The Central Economical and Mathematical Institute of RAS) Semantic Annotation of Information Resources by Taxonomies in Scientific Digital Library (Семантическое аннотирование информационных ресурсов в научной электронной библиотеке средствами таксономий)

37 V.N. Zakharov, Yu.V. Nikitin, Alexandr A. Khoroshilov, Alexey A. Khoroshilov (FRC CSC RAS) Principles of Creating a Multilingual Electronic Library for a Large Information Center (Принципы создания многоязычной электронной библиотеки для крупного информационного центра)

72 Alexander Elizarov, Evgeny Lipachev, Denis Zuev (Volga Region Federal University, Kazan) Digital Mathematical Libraries: Overview of Implementations and Content Management Services

69 Alexander Elizarov, Evgeny Lipachev (Volga Region Federal University, Kazan) Lobachevskii DML: Towards a Semantic Digital Mathematical Library of Kazan University

C17 Knowledge representation and discovery

25 V.V. Golenkov, N.A. Guliakina, I.T. Davydenko, D.V. Shunkevich (Belarusian State University of Informatics and Radioelectronics) Semantic Model of Knowledge Bases Representation and Processing (Семантическая модель представления и обработки баз знаний)

66 Valeriy Chernenkiy, Yuriy Gapanyuk, Georgiy Revunkov, Yuriy Kaganov, Yuriy Fedorenko, Svetlana Minakova (Bauman Moscow State Technical University) Using metagraph approach for complex domains description

14s Yas Alsultanny (Arabian Gulf University) Big Data Mining and Visualization for Knowledge Discovery

C18 Approaches for problem solving in DID

19 M.G. Matveev, E.A. Sirota, M.E. Semenov, A.V. Kopytin (Voronezh State University) Verification of the Convective Diffusion Process Based on the Analysis of Multidimensional Time Series (Верификация процесса конвективной диффузии на основе анализа многомерных временных рядов)

59 M.M. Postnikov, B.V. Dobrov (MSU, Faculty of Computational Mathematics and Cybernetics) News Stories Representation Using Event Photos (Представление новостных сюжетов с помощью событийных фотографий)

65 Ark Andreev, Dmitry Berezkin, Ilya Kozlov (Bauman Moscow State Technical University) Method for Forecasting of Situations Development Based on Event Detection in Text Stream

(Метод прогнозирования развития ситуаций на основе обнаружения событий в потоке текстовых документов)

C19 Application of machine learning

7s Nadezhda Kiselyova, Andrey Stolyarenko, Victor Dudarev (IMET RAS) Machine Learning Methods Application to Search for Regularities in Chemical Data
9 Giuseppe Angora (University of Naples Federico II), Massimo Brescia (INAF Astronomical Observatory of Capodimonte), Giuseppe Riccio (INAF Astronomical Observatory of Capodimonte), Stefano Cavuoti, Maurizio Paolillo (University of Naples Federico II), Thomas Puzia (Institute of Astrophysics, Pontificia Universidad Católica de Chile) Astrophysical Data Analytics based on Neural Gas Models, using the Classification of Globular Clusters as Playground
61 A.G. Dyakonov (MSU), A.M. Golovina (Bauman Moscow State Technical University) Anomaly Detection in Mechanisms Using Machine Learning (Выявление аномалий в работе механизмов методами машинного обучения)
3 Alexander Ermakov, Pavel Polyakov (RCO Llc, Moscow) Statistical Model for Recognition of Senses in Foreign Language Texts Trained by Examples from Parallel Texts (Статистическая модель для распознавания смыслов в текстах иностранного языка с обучением на примерах из параллельных текстов)

Structure of the PhD WS Sessions

W1 Data Analysis

81 Manvel Avetisian (MSU) Volumetric Medical Image Segmentation with Deep Convolutional Neural Networks
82 Mark Andreev (MSU) A New Approach to Determining the Attitude of Authors of Short Texts to the Topics Discussed in the Texts on the Example of Estimating the Inflations Expectations (Новый подход к определению отношения авторов коротких текстов к обсуждаемым темам на примере оценки инфляционных ожиданий)
34 Vsevolod Vikulin (MSU) Automatic Feature Extraction for Signals Classification
(Автоматическое выделение признаков в задаче классификации сигналов)

W2 Data integration, database schema development

85 Mikhail Islentyev (MSU) An Approach for Implementation of Methods for Entity Resolution in the Hadoop/MapReduce Distributed Computing Environment (Подход к реализации методов разрешения сущностей в среде распределенных вычислений Hadoop/ MapReduce)
86 Ivan Ubaleht (Omsk State Technical University) Design of Relational Database Schemes Based on the Elementary Relationships of Attributes: Algorithm of Computation Closure of a Set of Attributes for One Type of Relationship (Построение схем реляционных баз данных с помощью элементарных связей атрибутов: алгоритм вычисления замыкания атрибутов для одного типа связи)

Structure of the Poster and Demo Session

Posters

15 Vyacheslav Krut'ko, N. S. Potemkina, O. A. Mamikonova, A. M. Markova (FRC CSC RAS) Individual optimization of nutrition on the basis of big data analysis in human-computer dialogue

58 Sofia-Nikole Zharikova (RUDN), Ilya Sochenkov (FRC CSC RAS) Text Categorization Methods Using Topical Importance Characteristic

Demo

40 Anna Guseva, Vasiliy Kireev, Pyotr Bochkaryov, Igor Kuznetsov, Matvey Koptelov, S. A. Philippov (MEPhI) Tasks of the management of informational-semantic field of the organization on the basis of the streaming micro-segmentation of the Internet audience (Задачи управления информационно-семантическим полем организации на основе потоковой микросегментации интернет-аудитории)

62 Ju.O. Kuznetsova (Pirogov Russian National Research Medical University), L.R. Borisova (Financial University under the Government of the Russian Federation), A.V. Kuznetsova (Emanuel Institute of Biochemical Physics of Russian Academy of Sciences, «Azforus», Ltd, Moscow), O.V. Senko (Federal Research Center Computer Science and Control of the Russian Academy of Sciences, «Azforus», Ltd, Moscow) Transparent Interface for Prediction in Machine Learning (Прозрачный интерфейс для прогноза в машинном обучении)