Preface

This volume contains supplementary proceedings of the third conference on Analysis of Images, Social Networks, and Texts (AIST'2014). The first two conferences in 2012 and 2013 attracted a significant number of students, researchers, academics and engineers working on data analysis of images, texts and social networks.

The broad scope of AIST makes it an event where researchers from different domains, such as image and text processing, exploiting various data analysis techniques, can meet and exchange ideas. We strongly believe that this may lead to cross-fertilisation of ideas between researchers relying on modern data analysis machinery. Therefore, AIST brings together all kinds of applications of data mining and machine learning techniques. The conference allows specialists from different fields meet each other, present their work and discuss both theoretical and practical aspects of their data analysis problems. Another important aim of the conference is to stimulate scientists and people from the industry to benefit from the knowledge exchange and identify possible grounds for fruitful collaboration.

Following an already established tradition, the conference was held in Yekaterinburg, capital of Urals region in Russia on 10-12 April 2014. The key topics of AIST are analysis of images and videos; natural language processing and computational linguistics; social network analysis; machine learning and data mining; recommender systems and collaborative technologies; semantic web, ontologies and their applications; analysis of socio-economical data.

The Programme Committee and reviewers of the conference featured well-known experts in data mining, natural language processing, image processing and related areas from Russia and all over the world.

We have received 74 high quality submissions mostly from Russia and also from France, Germany, India, Poland, Spain, Ukraine and USA, among which only 21 papers have been accepted as regular oral papers (11 long and 10 short) in Communications in Computer and Information Science series (Springer), volume 436. Thus, the acceptance rate of this volume is roughly 28%. In order to stimulate young practitioners and researchers we have also included 3 short industry papers in the main volume and 33 submissions as posters in this supplementary proceedings. Each submission has been reviewed by at least 3 reviewers, who are experts in their field, in order to supply detailed and helpful comments.

The conference also featured several invited talks and tutorials, as well as an industry session describing current trends and challenges.

Invited talks:

- Boris Mirkin (Higher School of Economics, Moscow), Data Clustering: Some Topics of Current Interest
- Jaume Baixeries (Universitat Politècnica de Catalunya, Barcelona), Characterization of Database Dependencies with FCA and Pattern Structures
- Dmitriy Kolesov (NextGIS, Moscow), GIS as an Environment for Integration and Analysis of Spatial Data
- Natalia Konstantinova (University of Wolverhampton, UK), Relation Extraction – Let's Find More Knowledge Automatically

Tutorials:

- Jaume Baixeries (Universitat Politècnica de Catalunya, Barcelona), Introduction to Formal Concept Analysis and Attribute Dependencies (in 2 parts)
- Konstantin Voronstov (CCAS of RAS and Yandex, Moscow), Tutorial on Probabilistic Topic Modeling: Additive Regularization for Stochastic Matrix Factorization
- Natalia Konstantinova (University of Wolverhampton, UK), Introduction to Dialogue Systems, Personal Assistants are Becoming a Reality
- Natalia Konstantinova (University of Wolverhampton, UK), Academic Writing – Getting Published in International Journals and Conferences

The industry speakers covered rich variety of topics:

- Iosif Itkin (Exactpro Systems), Network Models for Exchange Trade Analysis
- Leonid I. Levkovitch-Maslyuk (EMC), Big Data for business
- Alexander Semenov (http://jarens.ru/), Recent Advances in Social Network Analysis
- Irina Radchenko (http://iRadche.ru), Current Trends in Open Data and Data Journalism
- Oleg Lavrov (KM Alliance Russia), Knowledge Management as a Link between Business & IT
- Yury Kupriyanov (WikiVote!), IT Trends and Challenges in Knowledge Management

We would like to mention the best conference paper, according to the PC decision, written by V.B. Surya Prasath and Radhakrishnan Delhibabu and entitled "Automatic Contrast Parameter Estimation in Anisotropic Diffusion for Image Restoration".

We would like to thank the authors for submitting their papers and the members of the Programme Committee for their efforts to provide exhaustive reviews. We would also like to express special gratitude to all the invited speakers and industry representatives. We deeply thank all the partners and sponsors, and owe our gratitude to the Scientific Fund of Higher School of Economics for providing five AIST's participants with travel grants. Our special thanks goes to Springer editors who helped us starting from the first conference call until the final version of the proceedings. Last but not least, we are grateful to all organisers, especially to Eugeniya Vlasova and Dmitry Ustalov, whose endless energy saved us in the most critical stages of the conference preparation.

In Russian AIST is even more than abbreviation, namely it means a stork. So we believe this young and rapidly growing conference still be bringing inspiration for data scientists.

May, 2014

Dmitry I. Ignatov
Mikhail Yu. Khachay
Alexander Panchenko
Natalia Konstantinova
Rostislav Yavorsky
Dmitry Ustalov

Organisation

The conference was organized by joint team from the National Research University Higher School of Economics (HSE), Russia and Krasovsky Institute of Mathematics and Mechanics of UB RAS, Russia. It was supported by the Russian Foundation for Basic Research grant no. 14-07-06803.

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