Preface to R. Piotrowski's Readings in Language Engineering and Applied Linguistics (PRLEAL-2019)

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Abstract

The paper presents a critical survey and record of the III International Conference "PRLEAL- 2019" held in memory of R.G. Piotrowski, a Soviet and Russian scholar philologists, founder of Computer Linguistics in the USSR and Russia. It lays stress upon professor Piotrowski's historical and academic impact on Machine Translation development and Computer Linguistics researches in Russia and post-USSR countries and briefly describes his scientific interests and precept. It introduces the Conference main topics and describes the academic and research standing of the Conference participants. It also provides the reader with the Conference relevant links.

Keywords: *Language Engineering, Evidentiary-Based research methodology, "Speech Statistics" Group, Evidence-Based Philology, Language Engineering strategy*

1 Introduction

As Natural Language Processing in its theoretical and practical spheres is ever-widening domain attracting interest of specialists in many areas there is an increasing need to discuss its modern methods, results and prospects. Two years interval for such international discussion seems most favourable as it permits to show new methods tested experimentally and results received.

Traditionally "R. Piotrowski's Readings in Language Engineering and Applied Linguistics" conference being a place for such a discussion solves this task and permits its participants to present their results and ideas and is organized as Readings. Materials on previous Readings are available on the site of journal "The Scientific Opinion", №9, 2012 and on CEUR-WS platform: PRLEAL-2017, as well as on the R. Piotrowski's Readings site.

The III International conference "PRLEAL-2019" held on November 27th, 2019 in Herzen State Pedagogical University (Saint Petersburg, Russian Federation) was organized by its Philology Faculty (Educational Technologies in Philology Chair), Mathematical Faculty(Chair of Methodics of Education in Math and Informatics) and Scientific School "Applied Studies of Language and Speech, R.G. Piotrowski's School", together with Saint Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS) and Saint Petersburg State University (Philology Faculty, Mathematical Linguistics Chair).

We organize our Readings in memory of Raimund G. Piotrowski – our outstanding colleague and teacher, whose continued interests and extensive knowledge remain the source of ideas and research trends for modern specialists in language engineering and applied linguistics. He was the founder of Russian Engineering (Computer) Linguistics, a pioneer of machine translation (MT) in Russia, one of those who started statistical research in linguistics. His main lines of investigations were text statistics, machine translation and applied lexicography, semantic modelling and cognitive science. Nowadays statistical linguistics receives new impetus to work with vector space model, support vector machine method, at the same time natural language processing is now being enriched with corpus linguistic data and methods. Taken together these all enhance the potential of language engineering implementation in both philology and paralinguistics.

The present state and achievements in those applied linguistics directions that were largely started by R.G. Piotrowski and his school traditionally are the focus for R. Piotrowski's Readings. Forums like this are also meant to support tradition and consistency in Russian science and to educate and develop a new generation of researchers. Thus, during the Readings both experienced specialists and young participants (master- and post-graduate students) were exposed to the modern state of the problems in question. The conference topics concerned modern MT systems development, statistics in natural language processing and text studies, and new approaches in the field of evidentiary-based linguistics.

2 Topics of Interest

The conference topics concerned automatic dictionaries and terminology databases development and management, statistics and machine learning methods in natural language

processing and text studies, new approaches in the field of evidence-based philology, computer assisted language learning and language worker training.

3   The Committee members of PRLEAL-2019

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4   The Readings Informational Support

Conference events were covered by the R. Piotrowski's Readings site and official Herzen University site.

5   Conference Facts

The Readings participants were over 60 researchers – linguists, mathematicians, IT specialists and teaching professors from Minsk (Belarus), Tallin (Estonia), Riga (Latvia), Bratislava (Slovakia), Prague (Czech Republic), Lanzhou University of Technology (China) and Moscow, Saint-Petersburg, Grozny, Perm, Tomsk, Togliatti, Smolensk, Ulyanovsk, Vladivostok (Russian Federation).

The high research level was proved by the participants' academic level and their research standing: 51% had the status of Full Doctor or PHD in linguistics, applied mathematics, IT-technology, pedagogics, medicine and psychology. More than half of the participants (46%) were young scientists under 39 whose interests apportioned the conference topics.

The PRLEAL-2019 joined scientists from Belarus, Latvia, Austria, Estonia, Slovakia, the Czech Republic, China and Russia. In general, the representatives from 6 Universities from around the world and 13 Russian Federation, as well as 4 research science centers and 3 international companies have taken part in conference:

- **University of Vienna**, Vienna, Austria

- **Charles University**, Prague, Czech Republic

- **Tallinn University of Technology, School of Information Technology**, Tallinn, Estonia

- **Slovak Academy of Sciences, Ľ. Štúr Institute of Linguistics**, Bratislava, Slovakia

- **Lanzhou University of Technology**, Lanzhou, China

- **Minsk Linguistic State University**, Minsk, Belarus

- **Moscow State University**, Moscow, Russian Federation

- **St. Petersburg State University**, Saint-Petersburg, Russian Federation

- **Herzen Pedagogical State University of Russia**, Saint-Petersburg, Russian Federation

- **Smolensk State University**, Smolensk, Russian Federation

- **Bauman Moscow State Technical University**, Moscow, Russian Federation

- **ITMO University**, Saint Petersburg, Russian Federation

- **Tomsk State University of Control Systems and Radioelectronics**, Tomsk, Russian Federation

- **Perm National Research Polytechnical University (PNRPU)**, Perm, Russian Federation

- **Togliatti State University**, Togliatti, Russian Federation

- **Pavlov First Saint-Petersburg State Medical University**, Saint-Petersburg, Russian Federation

- **Higher School of Economics**, Moscow, Saint-Petersburg, Russian Federation

- **National Research University Higher School of Economics**, Saint-Petersburg, Russian Federation

- **St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS)**, Saint-Petersburg, Russian Federation

- **V. A. Trapeznikov Institute of Control**, Moscow, Russian Federation

- **Institute for Regional Economy Studies RAS**, Saint Petersburg, Russian Federation

- **Center for Prevention and Control of HIV and Infectious Diseases**, Saint-Petersburg, Russian Federation

- **Tilde Company**, Riga, Latvia

- **Linguistic and Information technologies, LLC**, Moscow, Russian Federation

- **Rostelecom**, Vladivostok, Russian Federation.

The Readings Program included Plenary session and 3 Sections:

• **Section 1:** Language Engineering, Quantitative and Machine Learning Methods for Text Analysis and Recognition

• **Section 2:** Language Engineering in Text Processing and Applied Lexicography

• **Section 3:** Language Engineering in Corpus Studies.

The participants presented over 25 reports on key issues which were followed by an interesting and constructive discussion.

The Readings managed to show the ever-lasting interest in different aspects of natural language processing methods and their practical realization, which were the main sphere of interest and studies of R.G. Piotrowski and are maintained today by his followers and young researchers.

The Conference Proceedings with CEUR-WS include 25 papers in English, 5 papers in Russian will be published in Herzen University scientific journal "Izvestia: Herzen University Journal of Humanities Sciences".

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