

Preface to R. Piotrowski's Readings in Language Engineering and Applied Linguistics (R. Piotrowski's Readings LE & AL'2017)

Andrey Ronzhin²
ronzhin@iias.spb.su

Sergey Bogdanov¹
rector@herzen.spb.ru

Vladimir Laptev³
prorector@herzen.spb.ru

Larisa Beliaeva¹
lauranbel@gmail.com

Xenia Piotrowska¹
krp62@mail.ru

Olga Kamshilova¹
onkamshilova@gmail.com

¹Herzen State Pedagogical University of Russia, Saint Petersburg

²The Saint Petersburg Institute for Informatics and Automation
of the Russian Academy of Sciences, Saint Petersburg

³Russian Academy of Education, Moscow

Russian Federation

Abstract

The article presents a critical survey and record of the conference “R. Piotrowski's Readings LE & AL'2017” held in memory of R.G. Piotrowski, a Soviet and Russian scholar philologists, founder of Computer Linguistics in 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, its full Program 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

The II International conference “R. Piotrowski’s Readings LE & AL’2017” (Readings) held on November 27th, 2017 in Herzen State Pedagogical University (Saint Petersburg, Russian Federation) was organized by its Philology Department, Educational Technologies in Philology Chair, Theoretical and Applied Computer Studies in Philology Center, Scientific School “Applied Studies of Language and Speech, R.G. Piotrowski’s School”, Empress Maria Feodorovna Library, Herzen University Museum, together with Saint Petersburg State University, Russian Academy of Education and St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS).

The Readings were organized in memory of our outstanding colleague and teacher, the founder of Russian Language Engineering (Computer Linguistics), a pioneer of Machine Translation (MT) in Russia Raimund G. Piotrowski. It was thanks to R.G. Piotrowski’s research and writings that not only automatic dictionary building technologies and practical MT systems were developed and applied, but an Evidence-Based research methodology in humanitarian studies and a Language Engineering strategies in research and didactic spheres were formulated and exercised as well.

Raimund G. Piotrowski was a Soviet and Russian scholar philologist, whose sphere of interest were such fields as Romance philology, Quantitative Linguistics and Natural Language Processing. He was the initiator of such schools of Evidence-Based philology as Language Engineering and Linguistic Synergetics (in Russia), originator of Linguistic Automata Theory. Under his supervision the first experimental systems of linguistic technologies (Natural Text Processing systems and practical multilanguage systems of Machine Translation) were created in the Soviet Union [Piotrowski 2007; Piotrowski et al. 1994].

He was a Full member of many academic institutions, both in Russia and abroad; thus, among others, he was Honorary Professor of the UNESCO, Honorary Professor of Herzen State University of Russia, a fist from the East Corresponding Member of the Polish Academy of Sciences, Actual Member of the Cybernetic Academy Odobleja, Member of the International Society for Computer Linguistics and, of course, of the International Quantitative Linguistics Association.

Raimund G. Piotrowski was the author of more than 300 studies, among which were the following scientific and text books:

- “Article Formation in Romance Languages” [Piotrowski 2008],
- “Language Engineering and Language Theory” [Piotrowski 1979],
- “Text, Computer, Mensch” [Piotrowski 1984],
- “Mathematical Linguistics” [Piotrowski 1985],
- “Linguistic Automaton” [Piotrowski 1999],
- “Linguistic Synergetics. Reference Positions First Results, Perspectives” [Piotrowski 2006].

He was scientific editor of the international encyclopedia “Quaintitative Linguistik. Ein internationales Handbuch” [Köhler et al. 2005].

The law of language changes was named as Piotrowski’s law [Best 2008].

134 PhD and 14 Full Doctor theses were defended under his scientific supervision [R. Piotrowski's Bibliography 2004].

R.G. Piotrowski was the creator and chief of "Speech Statistics" International Group [Kelich 2008] and Language Engineering Laboratory in the Leningrad State Pedagogical Institute named after A.I. Herzen. Within 1948-1954 and 1966-1974 he was dean of foreign languages department in this Institute and chair of French, Spanish, and then Romance Philology Chair.

In the Herzen State Pedagogical University R.G. Piotrowski was the chair of Applied Linguistics Unit with two laboratories: Language Engineering Laboratory and Machine Translation Laboratory, he organized an Interuniversity Centre of Theoretical and Applied Computer Researches in Philology and was its permanent director.

The Readings were aimed both at commemorating the 95-th birthday of the outstanding scientist, our teacher and colleague, and at discussing the present state and achievements in those applied linguistics directions that were largely started by R.G. Piotrowski and his school. Forums like this are also meant to support tradition and consistency in Russian science and to educate and develop a new generation.

2 Topics of Interest

The conference topics concerned

- modern MT systems development, their use and evaluation,
- automatic dictionaries and terminology databases development and management,
- statistics 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 R. Piotrowski's readings LE & AI'2017

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4 Conference Facts

The Readings participants were over 70 researchers – linguists, philologists, mathematicians, IT-specialists and teaching professors from Minsk (Belarus), Paris (France), Zurich (Switzerland), Tbilisi (Georgia), Riga(Latvia), Tallinn(Estonia) and Moscow, St. Petersburg, Tomsk, Irkutsk, Togliatti, Simferopol, Ufa (Russian Federation). The high research level was proved by the participants’ academic level and their research standing: 62% had the status of Full Doctor or PhD in linguistics, pedagogics, mathematics, technology, medicine and biology (Fig. 1).

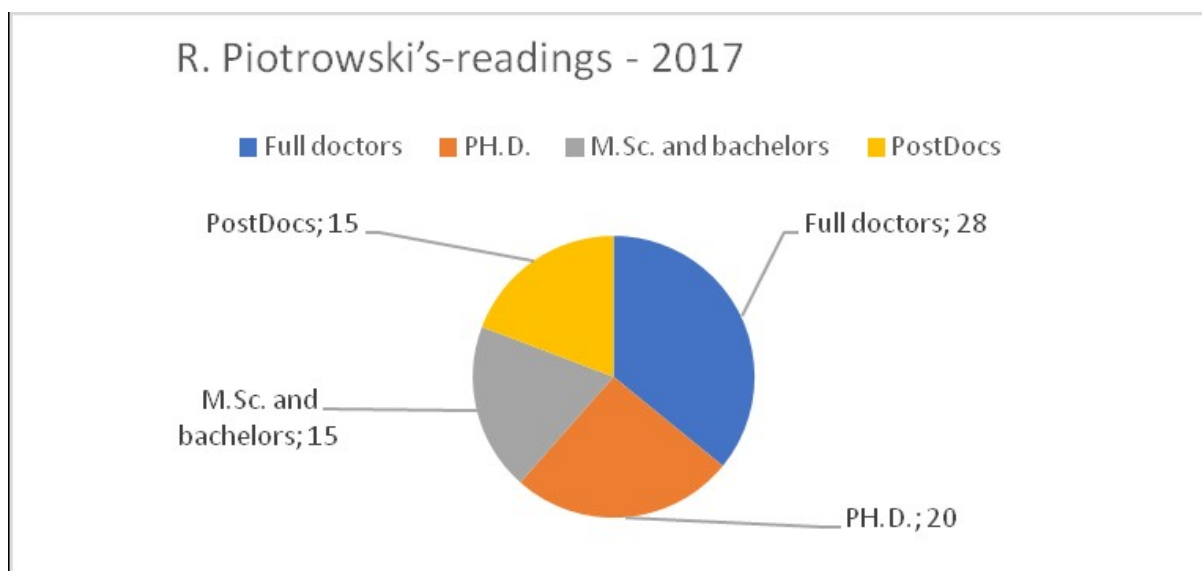


Figure 1: Participants’ academic levels

More than half of the participants (52%) were young scientists under 39 whose interests apportioned the conference topics.

5 The Readings Informational Support

Alongside with the [Readings](#) site and official [Herzen University](#) site the conference events were covered by Herzen University Senate’s newspaper “[Pedagogicheskie Vesty](#)” and also by “[Gazeta Petersburska](#)” (St. Petersburg Gazette of SPb Polish Society “Polonia”, Monthly).

The Center of Theoretical and Applied Computer Studies in Philology and Empress Maria Feodorovna Library designed and presented an exhibition “[In Search of Evidence-Based Philology ...](#)”, dedicated to scientific and public impact of R.G. Piotrowski’s life, the history and development of research areas started by him: Engineering Linguistics, Linguistic Synergetics, Psychiatric Linguistics. It’s report available on and [Empress Maria Feodorovna Library](#) site.

6 Overview and Program of Accepted Papers

The Readings Program included Plenary session and Round table “**Experimental Evidence-Based Paradigm and Synergetic Linguistics within the Framework of Modern Theoretical and Applied Linguistic Methods and Technologies**” and panel talks “**Modern Methods of Language and Text Analysis**”. The participants presented 24 reports. Video records of the Plenary Session and Round Table discussion are available on [Readings](#) site.

PROGRAM

27th November 2017, 48, Emb. Moiki, Building 5, St.Petersburg, Big Conference Hall

9.00 – 9.30 – Registration

PLENARY SESSION

9.30 – Organizing Committee Welcome Speech

9.45 – 10.10 Larisa Beliaeva, Full Doctor, Herzen State Pedagogical University of Russia, Saint Petersburg, Russia. **Language Engineering in the Framework of Modern “Information 4.0”**

10.10 – 10.35 Svetlana Sokolova, PhD, PROMT Company, Saint Petersburg, Russia. **MT Functions and MT Users in XXI Century**

10.35 – 11.00 Andrej Ronzhin, Full Doctor, St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, Saint Petersburg, Russia. **The Past and Future of Herzen University and SPIIRAS Interdisciplinary Research in Man-Machine Interaction**

11.00 – 11.25 Galina Kostyshkina, Full Doctor, Baikal State University, Irkutsk, Russia. **Conceptual Systematics in Linguistic Investigations**

11.30 – 11. 45. BREAK

11.45 – 12.10 Vladimir Pashkovsky, Full Doctor, II Mechnikov North-Western State Medical University, Saint Petersburg, Russia. **Delusion as a Semiotic Object**

12.10 – 12.35 Stella Tseitlin. Full Doctor, Herzen State Pedagogical University of Russia, Saint Petersburg, Russia. **Ontolinguistics in the Mirror of Synergetics**

12.35 – 13.00 Tatiana Chernigovskaya, Full Doctor, Saint Petersburg State University, Saint Petersburg, Russia. **Language and Brain: XXI century**

14.00 – 13.25 Elena Chingareva-Slavine, Full Doctor, Institut d’Etudes Slaves, Paris, France. **Antimyths and Reflexed Reality of Leningrad Engineering Linguistics School (in memory of R.G. Piotrowski)**

13.30 – 14.30. **Visiting R.G. Piotrowski’s Memorial Exhibition at Empress Maria Feodorovna Library.**

LUNCH

**14.30 – 17.30 (Big Conference Hall) ROUND TABLE
Evidence-Based Paradigm and Synergetic Linguistics in Modern Theoretical**

and Applied Linguistic Approaches and Technologies

Larisa Beliaeva, Alexandr Zubov, Yuriy Gorbunov – moderators

14.30 – 14.45 Alexandr Zubov, Full Doctor, Minsk State Linguistic University, Minsk, Belarus. **R.G. Piotrowski – the Founder of Computer Linguistics in Belarus**

14.45 – 15.00 Sergey Chebanov, Full Doctor, Saint Petersburg State University, Saint Petersburg, Russia. **What is an Empirical Evidence-Based Paradigm in Modern Linguistics?**

15.00 – 15.15 Mikhail Marusenko, Full Doctor, Saint Petersburg State University, Saint Petersburg, Russia. **Raymond Piotrowski and Evidence-Based Linguistics**

15.15 – 15.30 Yuriy Gorbunov, Full Doctor, Togliatti State University, Togliatti, Russia. **French Linguistics Metalanguage in the Light of R.G. Piotrowski's Theory of Linguistic Synergetics**

15.30 – 15.45 Ravil Garipov, Full Doctor, M. Akmulla State Pedagogical University, Ufa, Bashkortostan. **A Corpus Dictionary as a Formal Semantics Presentation**

15.45 – 16.00 BREAK

16.00 – 16.15 Natela Archvadze, PhD, Ivane Javakhishvili, Tbilisi State University, Tbilisi, Georgia; Merab Pkhovelishvili, PhD, Niko Muskhelishvili, Institute of Computational Mathematics, Tbilisi, Georgia; Lia Shetsiruli, PhD, Batumi Shota Rustaveli State University, Batumi, Georgia. **Morphological Analysis of Words in Clusters**

16.15 – 16.30 Sergey Kulikov, PhD, OOO «2TOLK» Company, head of department, Moscow, Russia. **A Four-Component Model of Linguistic Sign as a Theoretical Base for Lexicographing Monoreferential Evaluative Words**

16.30 – 16.45 Svetlana Dikareva, PhD, Alexandr Dikarev, student, V.I. Vernadsky Crimean Federal University, Simferopol, Crimean Republic. **Modelling Educational Scenarios in R.G. Piotrowski's School Tradition**

16.45 – 17.00 Ivan Larchenkov, Globus Software House Ltd., Saint Petersburg, Russia; Ludmila Larchenkova, Full Doctor, Herzen State Pedagogical University of Russia, Saint Petersburg, Russia. **TechnoLinguistica – Program Complex Support for Teaching English Vocabulary**

14.30 – 17.45 (Room 25) PANEL TALKS

Modern Methods of Language and Text Analysis

Xenia Piotrowska, Voldemar Nymm, Natalia Zaitseva – moderators

14.30 – 14.45 Olga Kamshilova, PhD, Herzen State Pedagogical University of Russia, Saint Petersburg, Russia. **Corpus-driven Research of Adjectives in Learner Language Acquisition**

14.45 – 15.00 Irina Kipyatkova, PhD, St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, State University of Aerospace Instrumentation (SUAI); Alexey Karpov, Full Doctor, St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, ITMO University, Saint Petersburg, Russia. **Language Modeling for Continuous Russian Speech Recognition Systems**

15.00 – 15.15 Ivan Shilin, MSc (PhD student); Liubov Kovriguina, PhD; Dmitry

Mouromtsev, PhD; Gerhard Wohlgenannt, Dr.hab (Full Doctor); Roman Ivanitskiy, MSc, ITMO University, Saint Petersburg, Russia. **A Method for Dataset Creation for Dialogue State Classification in Voice Control Systems for the Internet of Things**

15.15 – 15.30 Aleksandr Romanov, PhD; Maria Vasilieva, student; Anna Kurtukova, student, Roman Meshcheryakov, Full Doctor, Tomsk State University of Control Systems and Radioelectronics (TUSUR University), Tomsk, Russia. **Sentiment Analysis of Text Using Machine Learning Techniques**

15.30 – 15.45 Aleksey Romanov, MSc (PhD student); Dmitry Volchek, MSc (PhD student), ITMO University, Saint Petersburg, Russia; Artem Chirkin, MSc, ETH Zurich, Zurich, Switzerland; Dmitry Mouromtsev, PhD; Arina Sender, MSc, ITMO University, Saint Petersburg, Russia. **Implementing a Natural Language Processing Approach for an Online Exercise in Urban Design**

15.45 – 16.00 Voldemar Nymm, PhD; Xenia Piotrowska, Full Doctor, Herzen State Pedagogical University of Russia, Saint Petersburg, Russia. **Using Stochastic Learning Theory and Corpus Tools in CALL**

16.00-16.15 Anna Kupriianova, MSc; Ivan Shilin, MSc (PhD student); Gerhard Wohlgenannt, Dr.hab (Full Doctor); Liubov Kovriguina, PhD, ITMO University, Saint Petersburg, Russia. **The Implementation of the Mention-Ranking Approach to Coreference Resolution in Russian**

16.15 – 16.30 Vladimir Makarov, Full Doctor, Minsk State Linguistic University, Minsk, Belarus. **On Classification Consequences Caused by Areal Analysis of Romance Languages Lexico-Semantic Relations**

16.30 – 16.45 Lev Baburin, PhD, Saint-Petersburg State Institute of Technology (Technical University), Saint Petersburg, Russia. **Lingua-Statistic Analysis of the Usage of Past Simple Tense in French and Italian**

16.45 – 17.00 Natalia Zaitseva, Full Doctor, Anastasia Ivkina, PhD, Herzen State Pedagogical University of Russia, Saint Petersburg, Russia. **Experimental Systematization of Spanish Flamenco Terminology**

17.00 – 17.15 Nikita Mamajev, MSc student, ITMO University, Saint-Petersburg, Russia; Mikhail Marusenko, Full Doctor, Saint Petersburg State University, Saint Petersburg, Russia; Xenia Piotrowska, Full Doctor, Herzen State Pedagogical University of Russia, Saint Petersburg, Russia. **Burrows's Delta in Authorship Attribution of Russian Literary Texts**

17.30 – 17.45 Alina Putintseva, MSc; Liubov Kovriguina, PhD; Ivan Shilin, MSc(PhD student), ITMO University, Saint Petersburg, Russia. **Automatic Classification of Elliptical Constructions in Russian Spontaneous Speech**

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