CURRICULUM VITAE

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Education

Data Mining and Statistical Analysis in Business
SGH Warsaw School of Economics

Ph.D. Student in Physics 2007-2013
University of Silesia in Katowice,
Division of Field Theory and Elementary Particle Physics
Defended on 17th September 2013
Title: *Accelerator Neutrino Oscillations and Their Non-Standard* Interactions
Advisor: prof. zw. dr hab. Marek Zrałek

Master's Degree in Econophysics 2005-2007
University of Silesia in Katowice,
Division of Field Theory and Elementary Particle Physics
Defended on 27th June 2007
English Title: *Some Geometrical and Topological Methods in Classical and Quantum Field Theory*
Advisor: dr hab. Jerzy Król

Bachelor's Degree in Econophysics 2002-2005
University of Silesia in Katowice,
Division of Field Theory and Elementary Particle Physics
Defended on 27th June 2005
English Title: *Time Series analysis with ARMA and ARIMA processes*
Advisor: dr hab. Jacek Syska

Music School in Rybnik I and II degree 1994-2004

Grants

Foundation for Polish Science, TEAM June 2019 - Dec 2019
Title: *Random matrix models: from biomolecules to topological recursions*
Project Coordinator: dr hab. Piotr Sułkowski

NCN Opus 5 *University of Silesia in Katowice* **March 2014 – March 2018**
Title: *Attempts to explain the quark and leptons masses and mixing*
Project Coordinator: prof. zw. dr hab. Marek Zrałek.
Scope of activities: *Computer programs in Mathematica for computing mass and mixing parameters with different group symmetry. Statistical tests and verification of parameters.*

Foundation for Polish Science, SKILLS/Inter Nov 2013 - June 2014
Title: *On topology, interacting RNA, and quantum physics*
Project Coordinator: dr hab. Piotr Sułkowski
Scope of activities: *Computer programs in C++, Python for statistical analysis RNA, DNA and protein. Computing topological characteristics from RNA and protein structures.*

MNiSW *University of Silesia in Katowice* **Jan 2011 - Dec 2012**
Title: *Neutrino properties beyond the Standard Model, study of possibilities for experimental verification*
Project Coordinator: prof. zw. dr hab. Marek Zrałek.
Scope of activities: *Computer programs in Mathematica for computing neutrinos cross section in future experiments. Statistical verification for new physics interactions.*

Postdocs

Foundation for Polish Science, SKILLS/Inter
Title: *On topology, interacting RNA, and quantum physics*
Project Coordinator: prof. dr hab. Piotr Sułkowski

Conferences, Workshops and Schools (with Contribution)

UniverseNet 22-26.09.2008
The second network school and meeting Oxford, UK
Contribution: *Neutrino propagation in the case of general interaction.* (Poster)

Coherence and Correlations in Nanosystems 05-10.09.2008
XXXII International Conference of Theoretical Physics Ustroń, Poland
Contribution: *Fisher and structural information of the system. Phenomenological considerations.* (Poster)
The method of the likelihood and the Fisher information in the construction of physical models. (Pub.)

Matter To The Deepest: 11-16.09.2011
XXXV International Conference of Theoretical Physics Ustroń, Poland
Contr: *Majorana neutrino mass matrix with CP symmetry breaking.* (Pub.)

Matter To The Deepest: 09.2013
XXXVII International Conference of Theoretical Physics Ustroń, Poland **Contribution:** *Attempts at Explaining Neutrino Masses and Mixings Using Finite Horizontal Symmetry Groups.* (Pub.)

Matter To The Deepest: 13-18.09.2015
XXXIX International Conference of Theoretical Physics Ustroń, Poland **Contribution:** *The Flavor Problem and the Family Symmetry Beyond the Standard Model.* (Pub.)

Interdisciplinary conference TYGIEL: 18-19.03.2017 Lublin, Poland
Contribution: Discrete symmetry flavor group in SM and New Physics. (Sem.)
Topological classification of RNA and Protein structure. (Sem.)

Category Theory in Physics, Mathematics and Philosophy: 16-17.11.2017
Warsaw, Poland
Contribution: *Chord Diagrams Category and its Limit. (Sem.)*

XXVIII International Conference on neutrino physics and astrophysics: 04-09.06.2018 Heidelberg, Germany
Contribution: *Lepton Masses and Mixing in Two-Higgs-Doublet Model. (Poster)*

33rd Summer Conference in Topology and its Applications 17-20.07.2018
Western Kentucky University Bowling Green, USA
Contribution: *Chord Diagrams Category in biology (Seminar).*

Neutrino Oscillation Workshop 09-16.09.2018 Rosa Marina, Italy **Contribution:** *Lepton masses and mixing in Two-Higgs doublet model. (Seminar).*

DISCRETE 2018 26-30.11.2018 Vienna, Austria
Contribution: *Lepton masses and mixing in Two-Higgs doublet model. (Seminar).*

SKN Business Analytics and SAS Institute – 28.11.2019 Modelowanie dla biznesu Warsaw, Poland
Contribution: *Feature Selection Methods for scoring models. (Seminar).*

1st Open International Didactic Seminar on Business Intelligence and Data Science. Case studies, Data Driven Strategies. – 16.04.2021 Warsaw, Poland
Contribution: Real time analytics for students (Seminar)

Modern Methods and Practices in Credit Risk 18.05.2021 Warsaw, Poland
Contribution: ML models for credit scoring (Seminar)

Data Science Summit ML edition. – 18.06.2021 Warsaw, Poland
Contribution: Feature selection methods and AI for credit scoring (Seminar)

22nd International Conference on Quantitative Methods in economics. – 23.06.2021 Warsaw, Poland
Contribution: AI for credit scoring modeling (Seminar)

Certificates and training

- IBM - Python for Data Science (2021)
- Kaggle - Intro to AI Ethics (2021)
- Kaggle - Intro to Deep Learning (2021)
- Udemy - Complete Natural Language Processing (NLP) with Python (2020)
- SAS Visual Analytics 2 (2020)
- Sages - The Big Data processing with Apache Spark (2020)
- Udemy - How to become a Data Scientist Azure Machine Learning (2020)
- Vertica Essentials 9.x (2020)
- SAS Viya: Python integration (2020)
- SAS Visual Analytics 1 (SAS Viya) (2020)
- DataWorkshop – Practical Machine Learning (2019)
- Processing in SAS – Macro language (2017)
- SAGES - Introduction to Machine Learning with Python (2017)
- Processing in SAS – Basics (2017)
- Design and creating OLAP cubes" (2016)
- SAS, SGH - Business analysis with SAS Visual Analytics" (2016)
- ESSAM-ICM - BigData Analysis with Apache Spark" (2016)
- SAGES – Introduction to Big Data & Apache Hadoop (2014)

Work Experience

SGH Warsaw School of Economics, Poland 02.2015
Assistant Professor (from 04.2019): *Real Time Analytics in Apache Spark and ESP SAS, Quantum Machine Learning, Fraud detection methods, Feature selection methods for scoring models, Statistics and Programming in SAS.*
Lecturer: *Methodology of Data Warehouse in SAS, Basics and Advanced statistics in SAS, Real time data analysis.*

Cardinal Stefan Wyszyński University in Warsaw, Poland 10.2013 – 04.2019 Vice-Dean for the infrastructure: *Cooperation with business env.*
Assistant Professor: *Statistic laboratory, ETL methodology, Seminary, Medical and pharma statistics, Data Warehouse methodology,*
Lecturer: *Financial Engineering, Introduction to Financial Markets, Mathematica Laboratory, Computers Laboratory, Data Warehouse.*

Algomine AI Warsaw, Poland 12.2019 – 04.2021
Position: *Data Science Engineer*
Scope of activities: *Mixing insurance and banking data for ML models, Product allocation for garment industry, Trainings Python, SAS for companies. Models check and automatisation on production env. In SAS.*

AMA Institute Warsaw, Poland 10.2017 – 05.2019
Position: *Data Analysis Expert*
Scope of activities: *Free (and commercial) python library Advanced Scorecard Builder for automatic scorecard models building, portal with data analysis for uniform audit file at companies.*

Oracle Maxymiser Warsaw, Poland 11.2015 – 01.2016
Position: *Junior Front End Developer*
Scope of activities: *Programming with HTML5, CSS, PHP, JavaScript for A/B tests.*

GoWork Warsaw, Poland 07.2013 – 01.2015
Position: *Lecturer*
Scope of activities: *Web applications development, Programming with HTML5, CSS, MySQL, PHP, JavaScript, JQuery, Smarty, Wordpress, CodeIgniter*

BioStat Rybnik, Poland 11. 2011-02.2012 Position: *statistical analyst*
Scope of activities: *Statistical reports from medicine data. Data preparation and presentation.*

Wasko S.A. Gliwice, Poland 07. 2011-10.2011
Position: *software tester for SI WCPR system - emergency services*
Scope of activities: *Work with: JIRA, TESTLINK, SharePoint for acceptance, functional, and regression tests.*

Computer skills

Programming Languages: Python, Bash, PHP, JavaScript, C++
Markup Languages: Markdown, LaTeX, HTML5, CSS3
Operating Systems: Microsoft, OS X, Linux
Github: https://github.com/sebkaz