



Peter Laurinec

Curriculum Vitæ

Education

- 2014 – present **PhD. Study in Intelligent Information Systems**, *Faculty of Informatics and Information Technologies, Slovak University of Technology, Bratislava.*
- 2012 – 2014 **Mgr. in Probability and Mathematical Statistics**, *Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava.*
- 2009 – 2012 **Bc. in Insurance mathematics**, *Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava.*

Dissertation's thesis

- title *Intelligent Analysis and Mining Big Distributed Data (in Slovak)*
- supervisor Mária Lucká
- description My research deals with the cluster analysis and its development and adaptation to big data. I analyze methods that effectively handle large volumes of data and data streams. I see the application in the domain of energy and smart grids. The area is interesting to examine from the perspective of sustainable sources of energy, economy and environment.

Master's thesis

- title *Model-based cluster analysis (in Slovak)*
- supervisor Radoslav Harman
- description The diploma thesis deals with the model-based Gaussian clustering. I have derived and proposed six optimization criteria for the creation of clusters. Optimization problem was solved by using a generalization of the binary genetic algorithm. Cluster analysis can be used to increase the marketability of products, searching for brain tumors or image segmentation.

Bachelor's thesis

- title *Latin squares and theirs usage in design of experiments (in Slovak)*
- supervisor Alena Bachratá

Vodná Ul. 2927/27 – 945 01 Komárno – Slovakia
☎ +421 904 393 588 • ✉ laurinec.peter@gmail.com
📄 <https://petolau.github.io/>

description I created a model of analysis of variance, if we use Latin square for design of experiment. Analysis of variance with usage of Latin squares can be used for example in agriculture for better planning.

Experience

- 2016 – 2017 **Instructor of Artificial Intelligence**, *FIIT STU*, Bratislava.
2014 – 2016 **Instructor of Procedural Programming**, *FIIT STU*, Bratislava.
May 2015 – **Consultant - part-time job**, *Atos IT solutions*, Bratislava.
September 2015 Work on project which dealt with electrical energy consumption and smart grid.
2012 – 2015 **Tutor of mathematics and statistics**, Bratislava.
I have tutored university students in fields of mathematics and statistics.
summer of 2011 **Administrative work**, *ALL PROF Slovakia*, Bratislava.
2011 Scanning and controlling of personal documents.

Languages

Slovak **Native speaker**
Czech **Advanced**
Hungarian **Advanced**
English **Intermediate**

Computer skills

R, RStudio Advanced C Intermediate
L^AT_EX Advanced Linux Intermediate
MS Office Advanced

Other skills

Driving Type B
licence

Interests

Statistics Data analysis, data mining, machine learning, artificial intelligence, data science, clustering, big data
Blogging Blog about time series data mining in R (<https://petolau.github.io/>)
Sport Soccer, cycling, badminton, squash, running, ultra trail, yoga
Other Hiking, fishing, music, movies, traveling

Publications

- Prediction of load Grmanová, G., Laurinec, P., Rozinajová, V., Bou Ezzeddine, A., Lucká, M., Lacko, P., Vrablecová, P., Návrát, P.: *Incremental Ensemble Learning for Electricity Load Forecasting*. In Acta Polytechnica Hungarica. Vol. 13, No. 2 (2016), pp. 97-117. ISSN 1785-8860
- Grmanová, G., Rozinajová, V., Bou Ezzeddine, A., Lucká, M., Lacko, P., Lóderer, M., Vrablecová, P., Laurinec, P.: Application of biologically inspired methods to improve adaptive ensemble learning. In NaBIC 2015. Advances in nature and biologically inspired computing : proceedings of the 7th World congress on nature and biologically inspired computing (NaBIC 2015), in Pietermaritzburg, South Africa, held December 01 - 03, 2015. Springer, 2016, pp. 235-246. ISBN 978-3-319-27400-3.
- Bou Ezzeddine, A., Lóderer, M., Laurinec, P., Vrablecová, P., Rozinajová, V., Lucká, M., Lacko, P., Grmanová, G.: Using biologically inspired computing to effectively improve prediction models. In International Journal of Hybrid Intelligent Systems. Vol. 13, No. 2 (2016), pp. 99-112, IOS Press.
- Time series clustering Laurinec, P., Lucká, M.: *Comparison of Representations of Time Series for Clustering Smart Meter Data*. Lecture Notes in Engineering and Computer Science: Proceedings of The World Congress on Engineering and Computer Science 2016, WCECS 2016, 19-21 October, 2016, San Francisco, USA, pp. 458-463.
- Laurinec, P., Lóderer, M., Vrablecová, P., Lucká, M., Rozinajová, V., Bou Ezzeddine, A.: *Adaptive Time Series Forecasting of Energy Consumption Using Optimized Cluster Analysis*. Data Mining Workshops (ICDMW), 2016 IEEE 16th International Conference on, 2016, pp. 398-405.