December 2020

CURRICULUM VITAE

Jacek Leśkow
Professor of Data Science
Poland

1. Personal data

born: November 1, 1959, Wrocław, Poland.
married, two children.

2. Professional Experience

Long term appointments (selected)

2018-2020 **Director**, NASK National Research Institute for Cybersecurity, Poland.

from 2012 **Technical University of Cracow**, Professor.

1997-2012 **WSB-NLU**, Polish-American Graduate School of Business, Head of Econometrics Department and Vice Rector for Research.

from 1989 **University of California,USA**, Director of Consulting Lab at the Department of Statistics.

1983-86 **Polish Academy of Sciences**, Research Assistant,Institute of Mathematics.

Visiting appointments

- **UFES, Victoria**, Brasil, **UFRN, Natal**, Brasil, 2015.
- **IMECC, UNICAMP, Campinas**, Brasil, 2014, 2015.
- **Department of Statistics, University of California, Davis, USA**, years: 2005, 2006,2007, 2008, 2009, 2010, 2012, 2014, 2016,2018.
- **Department of Mathematics, University of California, San Diego, USA**, years: 2007, 2013.
- **Departement de Statistique, Paris X, Nanterre**, 2016.
- **Department of Biostatistics, Indiana University, USA**: 2012.
- **LASPI -Laboratoire d'Analyse des Signaux et Processus Industriels,Roanne, France**: 2011, 2012.
- **Département d'economie et gestion, École Normale Superiéure de Cachan , Paris**, France, 2010
- **Laboratoire de statistique, IRMAR, Université Rennes 2, France**, years: 2006, 2010.
- **Center for Stochastic Processes, University of North Carolina at Chapel Hill, USA**, years: 1988,1989,1990, 1991, 1992, 1997.
- **CIMAT** - Centro de Investigaciones en Matematicas, **Guanajuato, Mexico**, years: 1996 - 2013 (Catedra Patrimonial contract in 2000-2002)
- **Department of Statistics, University of California, Riverside, USA**, years: 1998, 1999.
- **Institute of Systems Research, University of Maryland, College Park, USA**, year: 1996.
- **Division of Applied Mathematics, Brown University,USA** year: 1989.
- **University of Lund, Sweden**, year: 1994.

4. Language skills

English, Spanish, Polish - fluent
Russian, French - advanced
Portuguese - intermediate

5. Papers published
2020

64 *'Using the ICAPM to estimate the cost of capital: developed market and Polish market stock portfolios*, with Urbański, S. and Zarzecki, D.; in: *Education Excellence and Innovation Management: A 2025 Vision to Sustain Economic Development during Global Challenges*, pp. 12858 - 12870.

63 *'Subsampling for Heavy Tailed, Nonstationary and Weakly Dependent Time series'*, with: E. Gajecka, in *Cyclostationarity: Theory and Methods IV*, Springer Verlag.

62 *'Using the ICPM to Estimate the Capital Cost of Stock Portofolios: Empirical Evidence on the Warsaw Stock Exchange'*, with: S. Urbański, *Statistics in Transition*, vol. 21, No. 1, pp. 73 - 94.

2019

61 *'An Application of Functional Data Analysis to Local Damage Detection'*, with: M. Skupień, *Statistics in Transition*, vol.20, no1, pp 131 - 153.

2018

60 *'Time Average Estimation in the Fraction-of-Time Probabilisty Framework '*, with: D. Dehay and A. Napolitano, *Signal Processing*, 153, pp. 275-290.

2017

59 *'Person Recognition based on Touch Screen Gestures using Computational Intelligence Methods '*, with: K. Rzecki, P. Pławiak, M. Niedźwiecki, T. Sośnicki and M. Ciesielski. *Information Sciences*, vol. 415-416, pp. 70-84.

58 *'Transformed GARMA model: properties and simulations'*, with B.S de Andrade and M. C. Andrade, in *Communications in Statistics - Simulation and Computation*, vol. 46, no 9.

57 *'Transformed GARMA model with the inverse Gaussian distribution'*, with Andrade, B.S and Andrade, M.G.; in: *Cyclostationarity: Theory and Methods III*, Springer Verlag.

2016

56 *'Change-point Problem in the Fraction-of-Time Approach'*, with B. Stawiarski, in *Cyclostationarity: Theory and Methods III*, Springer Verlag.

55 *'Resampling techniques for cyclostationary time series. Long memory, weak dependence and heavy tails perspective'*, with E. Gajecka, in *Proceedings of the 60th World Statistics Congress of the International Statistical Institute*, ISI Statistical Institute, The Netherlands.

2015

54 *'Moving block quantile residual bootstrap in GARMA models: An application for the time series of dengue case count'*, with Andrade, B. and Andrade, M., in: *61th Annual Brazilian Region Meeting of the International Biometrics Society*, Salvador, Bahia, Brazil.

53 *'Multifactor-efficiency of the Fama-French Portfolios Formed on the Warsaw Stock Exchange: Bootstrap Method Application'*, with S. Urbański, in *Ekonomista* , Vol 2015/4.

52 *'Missing data analysis in cyclostationary models'*, with C. Drake and O. Knapik, in *Technical Transactions, Fundamental Sciences*, Vol. 2-NP/2014, Cracow Technical University.

51 *'Block bootstrap for the autocovariance coefficients of periodically correlated time series*, with A. Dudek and S. Maiz, in *Topics in Nonparametric Statistics*, Proceedings of the First Conference of the International Society for Nonparametric Statistics; Akritas, S.N.; Lahiri, S. and Politis, D. Editors.

2014

50 *'A new ICAPM approach to multifactor stock pricing using bootstrap*, Folia Oeconomica Cracoviensia, Vol. LV. With Urbanski, S.

49 *' Censored linear regression models for irregularly observed longitudinal data using multivariate t-distribution'*, with Garay, A., Castro, L.M. and Lachos, V.H. Statistical Methods in Medical Research, doi: 10.1177/0962280214551191. Impact factor: 2.957.

48 *' A generalized block bootstrap for seasonal time series*, with. Dudek, A., Paparoditis, S. and Politis, D., Journal of Time Series Analysis, vol **35**, pp. 89 - 114 . Impact Factor: 0.787.

47 *' Subsampling for continuous-time almost periodically correlated processes'*, with Dehay, D. and Dudek, A. Journal of Statistical Planning and Inference, vol **150**, pp. 142 - 158. Impact Factor: 0.784

46 *'EM-based inference for cyclostationary time series with missing observations*, with Drake, C. and Knapik, O. in: Chaari. F. , Leskow, J., Napolitano, A. and Sanchez-Ramirez, A. (editors), *Cyclostationarity: Theory and Methods*, Springer Verlag 2014.

2013

45 *'Missing data analysis in cyclostationary models'*, with Drake, C. and Knapik, O., Technical Journal of Politechnika Krakowska, Krakow, 2013.

44 *' Deterministic/cyclostationary signal separation using bootstrap'*, with Maiz, S., El Badaoui, M., Bonnardot, F. and Dudek, A., 11th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing, University of Caen, France, July 2013.

43 *'Central Limit Theorem in the Functional Approach'*, with A. Napolitano and D. Dehay, IEEE Transactions on Signal Processing, Vol **61**, No. 16, pp. 4025 - 4037. . Impact factor: 2.83.

42 *'Finding a frequency signature for a cyclostationary signal with applications to wheel bearing diagnostics*, with W. Cioch and O. Knapik, Mechanical Systems and Signal Processing, **38**, pp.55-64. Impact factor: 1.91.

2012

41 *'Cyclostationarity and resampling for vibroacoustic signals'*, Acta Physica Polonica A, vol. 121, pp. 160 - 163.

40 *'Resampling methods for time series level crossings'*, with M. Molenda, Communications in Statistics, Theory and Methods, vol **42**, no. 23.

2011

39 *'Modeling stock market indexes with copula functions*, eFinanse, Vol 7, No 2.

38 *'Linear filtration methods for statistical analysis of periodically correlated random processes - Part II: Harmonic Series Representation'*, with I. Yavorskij, I. Isayev, I. Kravets, E. Gajecka, Signal Processing, Vol.**91**, Issue 11, pp.2506-2519.

37 *'Linear filtration methods for statistical analysis of periodically correlated random processes - Part I: coherent and component method and their generalization'*, with I. Yavorskij, I. Isayev, I. Kravets, E. Gajecka, Signal Processing, Vol. **92**, pp. 1559-1566.

2010

36 *'Bootstrap algorithm in periodic multiplicative intensity model*, with A. Dudek, Communication in Statistics, Theory and Methods, vol. 40, no. 8, pp 1468-1489.

2009

35 *'On bootstrapping periodic random arrays with increasing period'*, with R. Synowiecki, Metrika, Vol. 71, No.3, pp. 253-279.

2008

34 *'Subsampling in estimation of autocovariance for PC time series'*, with L. Lenart and R. Synowiecki, Journal of Time Series Analysis, Vol.**29** , No. 6, pp. 995-1018.

33 *"Simultaneous confidence bands for the integrated hazard function'*, with A. Dudek and M. Goćwin, Computational Statistics, Vol. **23**, No. 1, pp. 41-62.

2007

32 *' Bootstrap and subsampling in financial risk management and demography*, jointly with Ł. Lenart and A. Suseł, monograph 'Tryptyk Sądecki' (in Polish).

31 *'Non-relatively measurable functions for secure communications signal design'*, with A. Napolitano, Signal Processing **87**, pp. 2765-2780.

2006

30 *'Non-relatively measurable spread-sequences for secure transmission of direct-sequence spread-spectrum signals'*, in: Proceedings of XIV European Signal Processing Conference (EUSIPCO 2006), Florence, Italy, 2006.

29 *' Foundations of the functional approach for signal analysis'*, with A. Napolitano, Signal Processing, Vol **86**, pp. 3796-3825.

28 *'Applications of bootstrap and subsampling in financial risk assesment'*, with L. Lenart, Akademichnyj Oglyad, pp. 89-92, Ukraine.

2004

27 *'Fraction-of-time approach in predicting Value-at Risk'*, with A. Napolitano, in: Lecture Notes in Mathematical Economics, editors: Leśkow, Puchet and Punzo, pp. 183 - 200. Springer Verlag 2004.

26 *'Bootstrap resampling tests for quantized time series'*, with C. Wronka in: Daniel Baier and Klaus-Dieter Wernecke (eds.): Innovations in Classification, Data Science, and Information Systems. Proc. 27th Annual GfKl Conference, University of Cottbus, March 12 - 14, 2003. Springer-Verlag, Heidelberg-Berlin, 2004, pp. 267-274.

2003

25 *' Inference for quantized spatial data using bootstrap'*, with A. Matziol, Proceedings of IMPAN conference on probabilistic methods in atmospheric sciences, Bedlewo, December 2002.

2002

24 *'Quantile prediction for time series in the fraction-of-time probability context'*, with A. Napolitano, European Signal Processing Journal, **82**, pp. 1727 - 1741.

2001

23 *'Calculation of Value-at-Risk using the genetic algorithm'*, Rynek Terminowy 2001, vol **2**, pp. 130-136, (in Polish), with S. Iwanski.

22 *' The impact of stationarity assesment on studies of volatility and Value-at-Risk*, Mathematical and Computer Modelling, Vol. **34**, No. 9-11, pp. 1213 - 1222.

1999

21 Main editor of the proceedings of the conference *'Financial markets and regional development*, Nowy Sacz, Poland.

20 *'Quantitative analysis of risk'*, Proceedings volume of the conference *'Financial markets and regional development*, Nowy Sacz, Poland.

1997

19 *'Inference for nonstationary processes'*, proceedings from the XI Forum of Statistics, Culiacan, Mexico.

1996

18 *'Functional Limit Theory for a Covariance Estimator'*, Journal of Applied Probability, Vol **33**, pp 1077 - 1092.

1995

17 *'Analysis of time series stationarity with applications*, Proceedings of the First Conference on Applied Statistics, Rieder University, New Jersey, May 1995.

16 *'Testing stationarity for stock market data'*, with D. Dehay, Economics Letters, Vol. **50**, No. 2, pp. 205-212.

1994

15 *'Laws of large numbers for periodically and almost periodically correlated processes'*, with H.L. Hurd, S.Cambanis and C. Houdre, Stochastic Processes and Their Applications, Vol. **53**, pp 37 - 54.

14 *'Asymptotic normality of the spectral density estimators for almost periodically correlated stochastic processes'*, Stochastic Processes and Their Applications, Vol. **52**, pp 351 - 360.

1993

13 *'Sieve-based maximum likelihood estimator for almost periodic stochastic processes models'*, Probability and Mathematical Statistics, Vol **14**, No 1, 1993, pp 11-24.

12 *'Asymptotic normality of the spectral density estimators for periodically correlated stochastic processes*, in: New Progress in Probability and Statistics, eds: M.L. Puri and J.P. Vilaplana, pp 285-291, International Science Publishers.

1992

11 *'Strongly consistent and asymptotically normal estimation of the covariance for almost periodically correlated stochastic processes'*, with H.L. Hurd, Statistics and Decisions, Vol. **10**, 201-225.

10 *'Morphometric Diversification of Red Deer Antlers from Selected Regions of Poland - Symmetry, Mean Values'*, with W. Goryńska, Folia Forestalia Polonica, Vol. **34**, pp 39 -48, Series A - Forestry.

9 *'Ergodic behaviour and estimation for periodically correlated processes'*, with A. Weron, Statistics and Probability Letters, Vol. **15**, pp 299-304.

8 *'Estimation of the Fourier coefficient functions and their spectral densities for ϕ - mixing almost periodically correlated processes'*, with H.L. Hurd, Statistics and Probability Letters, Vol.**14**, pp 299 - 306.

1990

7 *'An Analysis of Selected Features of the European Red Deer Antlers'*, with W. Goryńska and S. Kaczoruk, Folia Forestalia Polonica, Vol.**32**, pp 5 -18, Series A - Forestry.

1989

6 *'Maximum likelihood estimator of a drift function for a diffusion process'*, with R. Różański, Statistics and Decisions, 1989, Vol. **7**, 243-262.

5 *'A note on kernel regularization of a histogram estimator in the multiplicative intensity model'*, Statistics and Probability Letters, Vol **7**, pp. 395-400.

4 *'Histogram maximum likelihood estimator in the multiplicative intensity model'*, with R. Różański, Stochastic Processes and Applications, Vol **31**, pp. 151-189.

1988

3 *'Histogram maximum likelihood estimator of a periodic function in the multiplicative intensity model'*, Statistics and Decisions, Vol. **6**, pp. 79-88.

1987

2 *'Estimation of a periodic function in the multiplicative intensity model'*, Probability and Mathematical Statistics, Vol. **8**, pp. 103-110.

1984

1 *'On different versions of the law of iterated logarithm for R^∞ and l_p valued Wiener processes'*, Lecture Notes in Mathematics, No. 1080, pp. 152-161, 1984, Springer Verlag.

6. Books

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- *Cyclostationarity: Theory and Methods IV*, Springer Verlag 2020, together with Chaari, F., Zimroz, R. and Wyłomańska, A.
- *Cyclostationarity: Theory and Methods III*, Springer Verlag 2017, together with Chaari, F., Napolitano, A., Zimroz, R. and Wyłomańska, A.
- *Cyclostationarity: Theory and Methods II*, Springer Verlag 2015, together with Chaari, F., Napolitano, A., Zimroz, R. Wyłomańska, A. and Dudek, A.
- *Cyclostationarity: Theory and Methods*, Springer Verlag 2014, together with Chaari, F., Napolitano, A. and Sanchez-Ramirez, A.
- *'Forecasting and Simulations'* (in Polish), (multimedia - with CD-ROM), printed by WSB-NLU, Nowy Sacz, Poland.
- *'New Tools in Economic Dynamics'*,Lecture Notes on Mathematical Economy, Springer Verlag 2005.

7. Funded research projects

2014 *'Modern Computational Methods in Stochastic Modelling'*, summer 2014, grant no 2014/11831-3 FAPESP, Sao Paolo State Research Foundation, Brasil.
2014 - 2017 *' Relative measures and their applications in signal modelling'*, Principal Investigator, funded by National Center for Science (NCN), Poland, grant number 2013/10/M/ST1/00096.
2008 - 2011 *'Improving the Security of Communication Systems*, Principal Investigator, together with D. Dehay, I.Isayev and A. Napolitano, funded by NATO Science for Peace and Security Programme.
2001 - 2004
NATO research grant for *'Fraction-of-time probability in signal analysis'* with A. Napolitano, University of Napoli, Italy.
1996 - 1997
'Frequency analysis for periodically and almost periodically correlated processes', with D. Dehay, NATO Collaborative Research Grants.
1994 - 1995
'Stochastic models of poverty dynamics', research funded jointly by American Statistical Association and National Science Foundation in the form of a fellowship.
1993 - 1994
'Frequency analysis for periodically and almost periodically correlated processes', with D. Dehay, NATO Collaborative Research Grants.
1994- 1995
'Numerical studies of nonstationary processes', research funded by Committee on Research, UCSB.

8. Other research awards

2007	Recipient of *Best Paper Award* from European Association for Signal Processing
1999/2002	Recipient of *Catedra Patrimonial* award from CIMAT/CONACYT, Mexico.
1995	UCSB Committee on Research Award for research on numerical studies of nonstationary processes.
1993	Visiting Fellowship of the Australian National University
1989,90,91,92	ONR contracts for research on nonparametric periodic signals estimation.

9. Teaching Experience

- *undergraduate classes:*
  taught in Spanish: Metodos de Analisis Matematico (CIMAT),

taught in English: lower division: Introduction to statistics,upper division :mathematical statistics, computational statistics, statistics and computers (taught at Univ. California, USA)
Operations Managements, Quantitative Techniques, Econometrics, Forecasting (taught at WSB-NLU, Nowy Sacz, Poland).
taught in Russian: Financial Econometrics (Kiev Mohyla Business School, Kiev, Ukraine)
taught in Polish: mathematical statistics, algebra and introductory statistics, econometrics

- *graduate classes:*
  taught in Spanish: tutorial in nonstationary processes, Metodos Estadisticos III (bootstrap), Temas selectos en Series de tiempo.
  taught in English: Econometrics (WSB-NLU, Nowy Sacz, Poland), PSTAT 230 - statistical consulting, PSTAT 233 - statistical methods and computer statistical packages, PSTAT 208 - stochastic processes and operations research, biostatistics. (taught at Univ. California, Santa Barbara).
  taught in Polish: Forecasting and Simulations (WSB-NLU, Nowy Sacz, Poland), Project Management, Management of Information Systems, Risk Management.
  taught in Russian: Financial Risk Management (MBA class), Kiev Mohyla Business School, Kiev, Ukraine.
  taught in French: Analyse statistique des signaux, Institute Universitaire Technologique, Roanne, France.

10. Master and PhD level research supervision

- **within University of California, Santa Barbara**
  Co-Director of 2 PhD theses in Department of Statistics
  Co-Director of 3 PhD theses in Computer Science Department and Geography Department
- **within CIMAT**
  Co-Director of PhD theses *'Optimal Sampling Designs and the Horvitz-Thompson Predictor in Random Fields Sampling'* by J.E. Rodriguez, defended in 2003.
- **in Poland** Supervisor of 13 MSc level theses and 4 PhD level theses.
  Defended in 2008: Rafał Synowiecki, *'Resampling methods in time domain for nonstationary periodic and almost periodic time series* (in Polish),
  Defended in 2009: Anna Dudek , *Resampling methods for point processes* (in Polish).
  Defended in 2015: Elżbieta Gajecka-Mirek, *'Estimation of the parameters for non-stationary time series with long memory and heavy tails using weak dependence condition.*

10.Presentations and lectures- last 5 years, selected

2014, October	University UFRJ, Rio de Janeiro, Brasil.
2015, March	University UFES, Victoria, Brasil.
2015, March	University UFRN, Natal, Brasil.
2016, April	Congress of Nonparametric Statistics, Avignon, France.
2017, June	European Meeting of Statisticians, Helsinki, Finland.
2017, August	ESTE- International School on Time Series, Sao Carlos, Brasil.
2017, September	ITISE International Conference, Granada, Spain.
2018, July	Second National Congress of Statistics, Warsaw, Poland.

11. International research conferences organized

2019 Twelfth workshop *'Cyclostationarity: Theory and Methods*, Poland.

2018 Eleventh workshop *'Cyclostationarity: Theory and Methods*, Poland.

2017 Tenth workshop *'Cyclostationarity: Theory and Methods*, Poland.

2016 Ninth workshop *'Cyclostationarity: Theory and Methods*, Poland.

2015 Eighth workshop *'Cyclostationarity: Theory and Methods*, Poland.

2014 Seventh workshop *'Cyclostationarity: Theory and Methods*, Poland.

2013 Sixth workshop *'Cyclostationary systems and their applications*, Poland, sponsored by Technical University of Cracow, Poland.

2012 Fifth workshop *'Improving the security of communication systems'*, Poland, sponsored by NATO Peace for Security Programme

2011 Fourth workshop *'Improving the security of communication systems'*, Poland, sponsored by NATO Peace for Security Programme

2010 Third workshop *'Improving the security of communication systems'*, Poland, sponsored by NATO Peace for Security Programme

2009 Second workshop *'Improving the security of communication systems'*, Poland, sponsored by NATO Peace for Security Programme.

2008 First workshop *'Improving the security of communication systems'*, Poland, sponsored by NATO Peace for Security Programme.

2003 Fourth Latin American - European Workshop *New Tools of Qualitative Analysis of Economic Dynamics'*, Poland

2002 Third Latin American - European Workshop *New Tools of Qualitative Analysis of Economic Dynamics'*, October, CIMAT, Guanajuato, Mexico.

1998 *'Financial markets and regional development*, Nowy Sacz, Poland.

12. Refereeing services

Annals of Statistics
Acta Physica
Computational Statistics and Data Analysis
Digital Signal Processing
Electronic Journal of Statistics
Annals of the Institute of Mathematical Statistics
IEEE Transactions on Information Theory
Journal of Time Series Analysis
Journal of Nonparametric Inference
Advances in Applied Probability
Probability and Mathematical Statistics
Probability and Statistics Letters
Statistics and Decisions
Stochastic Processes and Applications
Journal of Computational and Graphical Statistics
US Army Research Office
Proceedings of American Mathematical Society
Journal of Multivariate Analysis
Journal of Applied Probability
Bernoulli
Revista Momento Economico