

Vasiliy V. Krivtsov

3358 Honeysuckle Drive, Ann Arbor, MI 48103
734-239-3359 (cell) :: vasiliy.krivtsov@gmail.com

SUMMARY:

Corporate specialist & consultant in **Reliability Engineering, Risk Analysis** and **Applied Statistics**. Author of a book, more than 40 papers, 9 patented inventions and 3 trade secrets in these fields. Associate Editor of the Reliability Engineering and System Safety journal.

EDUCATION:

- **Ph.D.**, Reliability Engineering /Applied Statistics, 2000, University of Maryland, USA
- **Ph.D.**, Electrical Engineering, 1991, Kharkov Polytechnic Institute, Ukraine
- **B.S./M.S.**, Electrical Engineering (honors), 1986, Kharkov Institute of Mech & Electrification, Ukraine

AREAS OF EXPERTISE:

Reliability, Risk Analysis & Applied Statistics

Reliability/Survival data analysis (incl. warranty data analysis), Reliability models with covariates (proportional hazard, accelerated life, survival regression), Repairable system & recurrence data analysis (RP, HPP, NHPP, GRP), SPC (process capability, control charts), Multiple regression analysis and ANOVA, Design of Experiments, System reliability analysis (Fault & Event trees), Probabilistic risk assessment, Bayesian analysis.

Electrical/Power Engineering

Analytical and experimental investigations of the reed, solid-state and quasi-electronic relays. Optimization of dynamic modes of the series solid state switching devices. Special expertise and inventive solutions (nine patents) in reed interface relays for control/protection systems of high voltage equipment.

Teaching/Lecturing/Training

Formerly an associate professor of electrical engineering, Krivtsov has exceptional communication and teaching skills. Currently, he is co-responsible for Ford Motor Company's corporate training in reliability engineering worldwide. Additionally, he is a member of the Gnedenko International Group on Reliability, conducting seminars/workshops to various government and private organizations.

Computer Languages & Applications

Practical programming experience in Pascal, C/C++ and VBA. Extensive experience with a variety of Windows and UNIX applications, including specialized packages such as SAS Enterprise Guide, Statistica, Mathematica, Minitab, CrystallBall, Weibull++, ITEM, RELEX.

EMPLOYMENT HISTORY:

FORD MOTOR COMPANY, Dearborn, MI, 1996 - present. **Ford Staff Technical Specialist in Reliability & Statistical Analysis**, Office of Technical Fellow in Quality Engineering (2002-present), Senior Technical Specialist (1999-2002), Reliability Technical Specialist (1997-1999), Reliability Implementation Engineer (1996-1997). Responsibilities: **corporate reliability training** (incl. Ford of North America, Mexico, Brazil, Australia); **statistical engineering (incl. six sigma)** support of product development; **field data analysis** and **emerging concerns** identification; **statistical warranty cost forecasting**; probabilistic **risk assessment** (e.g., as a Ford technical liaison to the US DOT **National Highway Safety Administration**).

UNIVERSITY OF MARYLAND, College Park, MD, 1993-1995. College Park, MD, 1993-1995. **Graduate Research Scientist** on the Reactor Safety Assessment System (RSAS) - a joint project between UMD, U.S. **Nuclear Regulatory Commission** (NRC) and the **Idaho National Engineering Laboratory**. Responsibilities included: software modules **reliability assurance** (data flow and robustness), knowledge base and inference engine enhancement, RSAS deployment at the NRC's Operation Center. Other UMD responsibilities included teaching support of **mathematical techniques in reliability engineering**, design and development of reliability analysis software tools.

Vasiliy V. Krivtsov

3358 Honeysuckle Drive, Ann Arbor, MI 48103
734-239-3359 (cell) :: vasiliy.krivtsov@gmail.com

KHARKOV INSTITUTE OF MECHANIZATION AND ELECTRIFICATION, Kharkov, Ukraine, 1991-1993. Kharkov, Ukraine, 1991-1993. **Associate Professor of Electrical Engineering** (1993), Assistant Professor of Electrical Engineering (1991-1992). Responsibilities included teaching courses in low voltage **electrical apparatus** and **relay protection, engineering statistics, theory of reliability and maintainability**; supervising graduate projects, co-chairing the Electrical Engineering Department Scientists' Council.

INVENTOR, Inc., Kharkov, Ukraine, 1991-1993. **Reliability Consultant**. Investigated reed relay output parameter stability using **variability propagation** techniques. Conducted extensive research in **system reliability analysis**, specializing in optimization methods for the **shared load and redundant systems** for the power and electronic engineering applications.

RECENT PROFESSIONAL ACTIVITIES:

2009: **Invited Speaker**, Mathematical Methods in Reliability, MMR-2009
1999-2008: **Associate Editor**, International Journal on Reliability Engineering & System Safety
2000-2008: **Session Chair** and/or **Speaker**, International Symposium on Reliability (RAMS)
2005, 2008: **Invited Speaker**, American Statistical Association (ASA), Detroit, Ann Arbor Chapters
2005: **Section Organizer**, International Symposium on Stochastic Models in Reliability, SMRSSL-2005
2004, 2007: **Invited Speaker**, American Society of Quality (ASQ), Ohio Chapter
2003: **Key Note Address**, Modern Technologies, Quality & Restructuring, TMCR-2003

SELECTED PUBLICATIONS:

Books/Monographs

- V.V. Krivtsov (2000), *A Monte Carlo approach to modeling and estimation of the generalized renewal process in repairable system reliability analysis*, ISBN/ISSN: 0-5997-2587-7.
- M. Modarres, M. P. Kaminsky, V.V. Krivtsov (1999), *Reliability Engineering and Risk Analysis*, Marcel Dekker, New York, ISBN: 0-8247-2000-8. (2nd edition scheduled for publication in 2009.)
- V.V. Krivtsov (1991), *Parameter Correction Methods of Magnetically Controlled High-Voltage Interface Devices* (in Russian), Kharkov Polytechnic Institute, Kharkov, Ukraine.

Book Contributions

- V.V. Krivtsov and V.I. Gurevich (2003), Reliability Optimization for the Series Configuration of Electronic Components - in *Protection Devices and Systems for High-Voltage Applications*, Marcel Dekker, New York, ISBN: 0-8247-4056-4.
- M. P. Kaminsky and V.V. Krivtsov (1998), A Monte Carlo Approach to Repairable System Reliability Analysis - in *Probabilistic Safety Assessment and Management*, New York, Springer, ISBN: 3-540-76262-0.

Refereed Journals

- V.V. Krivtsov, I.M. Kolmanovsky, and T.P. Davis (2008), A Constrained Quadratic Spline as a Model for Cumulative Hazard Function, *Int. J. Reliability and Safety*, Vol. 2, No. 3, pp. 170-178.
- M. P. Kaminskiy and V.V. Krivtsov (2007), An Integral Measure of Aging/Rejuvenation for Repairable and Non-repairable Systems, Cornell University Archive - Statistical methodology, arXiv:0711.3218v1 [stat.ME].
- V.V. Krivtsov (2007), Recent Advances in Theory & Applications of Stochastic Point Processes in Reliability Engineering, Editorial Review, *Reliability Engineering & System Safety*, Vol. 92, # 5, pp. 549-551.
- V.V. Krivtsov (2007), Practical Extensions to NHPP Application in Repairable System Reliability Analysis, *Reliability Engineering & System Safety*, Vol. 92, # 5, pp. 560-562.
- M. P. Kaminsky and V.V. Krivtsov (2006), Bayesian Probability Papers, *Reliability: Theory & Applications*, ISSN 1932-2321, No 1(2), pp. 57-62.

Vasiliy V. Krivtsov

3358 Honeysuckle Drive, Ann Arbor, MI 48103
734-239-3359 (cell) :: vasiliy.krivtsov@gmail.com

- M. P. Kaminsky and V.V. Krivtsov (2005), A Simple Procedure for Bayesian Estimation of Weibull Distribution, *IEEE Transactions on Reliability*, Vol. 54, pp. 612-616.
- M.I. Awad, M.A. Dejack, and V.V. Krivtsov (2004), Evaluation of Fatigue Life Regression Models - *SAE Technical Paper Series*, # 2004-01-0625.
- D.E. Tananko, V.V. Krivtsov and D.C. Rohweder (2003), Do We Really Need a Spec on Tire Static Balance? - *SAE Technical Paper Series*, # 2003-01-0151.
- V.V. Krivtsov, D.E. Tananko and T.P. Davis (2002), A Regression Approach to Tire Reliability Analysis, *Reliability Engineering & System Safety*, vol. 78, # 3, pp. 267-273.
- V.V. Krivtsov and J. W. Case (1999), Peculiarities of Censored Data Analysis in Automotive Industry Applications - *SAE Technical Paper Series*, # 1999-01-3220.
- M. P. Kaminsky and V.V. Krivtsov (1997), A Monte Carlo Approach to Warranty Repair Predictions - *SAE Technical Paper Series*, # 972582.

Conference Proceedings

- V.V. Krivtsov and M. Frankstein (2006), Automotive Component Reliability: Should it be measured in Time or Mileage? - in Proc. Annual Reliability and Maintainability Symposium, Newport Beach, CA, January 2006, pp. 86-70.
- V.V. Krivtsov (2005), Application Extensions of Nonhomogeneous Poisson Process, Invited Speech - in Proc. International Symposium on Stochastic Models in Reliability, Beer Sheva, Israel, February 2005, pp. 217-220.
- V.V. Krivtsov and M. Frankstein (2004), Nonparametric Estimation of Marginal Failure Distributions from Dually Censored Automotive Data - in Proc. Annual Reliability and Maintainability Symposium, Los Angeles, CA, January 2004, pp. 86-89.
- V.V. Krivtsov and J.W. Wasiloff (2000), Classical Vs. Bayesian Reliability Growth in Theory and Practice - in Proc. ASQ 54th Quality Congress, Indianapolis, IN, May 2000, pp. 311-316.
- M. P. Kaminsky and V.V. Krivtsov (2000), G-Renewal Process as a Model for Statistical Warranty Claim Prediction - in Proc. Annual Reliability and Maintainability Symposium, Los Angeles, CA, January 2000, pp. 276-280.
- V.V. Krivtsov (1998), A Monte Carlo Simulation of Stochastic Point Processes for Automotive Industry Applications - Proc., Institute of Mathematical Statistics, Vol. 27, # 2, p. 98.
- V.V. Krivtsov, et. al (1996) A Reactor Safety Assessment System: Summary of Methods and Experiences - in Proc. International Conference on Probabilistic Safety Assessment and Management ESRA, Crete, Greece, June 1996, pp. 30-36.

Patented Inventions

- V.I. Gurevich and V.V. Krivtsov (1991), An HV Solid-State Switching Device - USSR Patent # 1728945.
- V.V. Krivtsov and V.I. Gurevich (1990), An HV Reed Interface Switching Device - USSR Patent # 1739396.
- V.V. Krivtsov and V.I. Gurevich (1990), A Method of a Non-bounce Commutation - USSR Patent # 1772834.
- V.V. Krivtsov and V.I. Gurevich (1989), A Synchronized Reed-Interface Relay - USSR Patent # 1665423.

For a complete list of publications & patents, please follow: <http://www.krivtsov.net/publicat.htm>

PERSONAL: Married, U.S. Citizen