

DMITRY TANANKO, Ph.D.

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SUMMARY

An experienced Reliability (RAM) and Quality Manager with a proven record of Reliability Program and Product management is looking for a challenging position that requires establishing highly efficient reliability improvement processes and managing reliability of complex products. Poses strong technical and management qualifications with an impressive track record of more than 18 years of hands-on experience in Reliability, Maintainability, Quality, and Systems Engineering. Demonstrated ability to lead highly professional team to a successful execution of the Reliability Program. Accumulated diversified portfolio of successful assignments and publications in Academia, OEM, and Defense Contractors universe. The areas of expertise include: Reliability and Applied Statistics; Design for Reliability (DFR); Systems Engineering; DFSS and Lean Six Sigma, etc.

RECENT ACCOMPLISHMENTS

General Dynamics Land Systems

- Successfully planned and executed Design for Reliability (DFR) approach on Stryker NBCRV program that ended in successful demonstration of the reliability requirements with statistical confidence resulting in a substantial test time reduction.
- Managed Stryker MGS Reliability Growth Test at unprecedented Growth Rate (alpha~0.4) due to effective closed loop failure mode mitigation system and efficient FRACAS.
- As a member of G-41 Reliability Committee co-authored new Reliability Standard ANSI/GEIA-STD-0009 "Reliability Program Standard for Systems Design, Development and Manufacturing" that replaced previously cancelled MIL-STD-785B. Presently working on a complimentary Reliability Handbook.
- Co-Chair of SAE Ground Vehicle Reliability (GVR) Committee.

Ford Motor Company

- As a Core Member of the Firestone Tire Root Cause Team, spearheaded the successful resolution of the Firestone Tire Tread Separation problem (2001).

PROFESSIONAL EXPERIENCE

General Dynamics Land System, Sterling Heights, MI

Manager, Reliability and Robust Engineering Department

12/05 – present

- Lead Reliability and Robust Engineering Department including Environmental Test Laboratories and Manage Reliability for all GDLS programs (Abrams M1A2, Stryker FOV, EFV, JLTV, GCV, FCS, FOX, etc.) Deploy Six Sigma and Reliability/Robustness Initiatives. Establish reliability metrics and analyze reliability for developmental and fielded programs. Review and modify existing processes to comply with ISO and CMMI certification.
- Developed and implement Corporate Design for Reliability (DFR) approach and methodology that were successfully employed with various legacy and newly developed programs. Managed Environmental Test Lab, providing HALT/HASS and Qualification Testing of the subsystems and components. Employed CALCE methodology on several developmental programs. Support and consult International GD programs (Scout SV) for GD UK, GD ELS business units. Directed LSAR Reliability support (B-Tables) based on MIL-STD-1388 and 0007 standards.
- Co-Authoring new ANSI/GEIA-STD-0009 "Reliability Program Standard for Systems Design, Development and Manufacturing" and accompanied Handbook GEIA-HB-0009. Interfaced with AMSAA, ATEC and AEC communities while developing and supporting Reliability Growth and Qualification tests. Active member of G-41 Reliability Committee and Co-Chair of SAE Ground Vehicle Reliability Committee.

Ford Motor Company, Dearborn, MI

Senior Staff Specialist, Safety Data Analysis/Automotive Safety Office

(01/03–12/05)

- Analyzed US Crash Data; interacted with NHTSA, Automotive Alliance, and Advanced Safety research group assessing safety related engineering and design issues. Provided support to legal department with statistical inferences and recalls data analysis.

- Provided analytical and statistical support to TREAD initiative (NHTSA, US Congress). Developed statistical tools and data mining techniques for Automotive Safety Office. Developed and implemented parameterization technique for 5-parameter Weibull distribution function.

Reliability Implementation Engineer, Global Core Engineering/RVT (06/97–12/02)

- *Core Member of Firestone Tire Root Cause Investigation Team.* Provided advanced statistical analysis of field and lab test data. Developed unique tire test techniques using vibration and sound profiles, FFT, infrared cameras, temperature mapping, etc. for capturing tire tread separation event. Performed Thermal and Stress Analysis of the tire Finite Element Models.
- Developed and implemented various statistical methods for warranty data analysis. Root cause investigation, accelerated key-life and design verification testing. Provided technical leadership solving system design problem by using reliability and robustness tools (Six Sigma, APQP, FMEA, Key-Life Test, DOE, Parameter & Tolerance Designs, etc.), as well as working with the supplier on the component design issues (Powertrain, DPFE Sensors, Digital Calibration and Signal Processing, etc.)

Wayne State University, Detroit, MI

Graduate Research Assistant, Mechanical Engineering College (12/95–05/97)

- Conducted modeling and development of new type of spur gears with separation of rolling and sliding forces. Created suitable theory, analysis and research of the working model by using strain gages and FEA.

Polytechnic University, Kharkov, Ukraine

R&D Engineer (2/93-12/94)

- Investigated and developed suitable theory for S-shaped VAC of semiconductor thin films based on the transcendent energy balance equation for phonon dissipation in the crystal grid. Production and research of semiconductor thin films. Solved manufacturing and production problems for long lasting, durable and reliable materials using thermal treatment, annealing, vacuum deposition, etc.

EDUCATION

- **Ph.D. in Mechanical Engineering**, Wayne State University, Detroit, MI, 2001
- **MS in Theoretical Physics**, Polytechnic University, Kharkov, Ukraine, 1993
- **BS in Materials Science**, Polytechnic University, Kharkov, Ukraine, 1990

LIST OF SELECTED PUBLICATIONS

- D.E. Tananko, et al., **Reliability Growth of Mobile Gun System During Production Verification Test**, *The ITEA Journal of Test and Evaluation*, Volume 30, Issue 1, March 2009, Pages 149-158
- D.E. Tananko, et al., **Design For Reliability Methodology to Achieve Reliability Growth that Meets New Guidelines**, Applied Reliability Symposium proceedings, 2009
- ANSI/GEIA-STD-0009, **Reliability Program Standard for Systems Design, Development and Manufacturing**, INFORMATION TECHNOLOGY ASSOCIATION OF AMERICA, 2008
- D.E. Tananko and V.V. Krivtsov, **A Modified Gauss-Newton-Levenberg-Marquardt Method for Estimation of Weibull Mixtures**, *Ford Technical Journal*, 2003.
- E.I. Rivin, D.E. Tananko, **Kinematic and Force Analysis of a Gear System with Separation of Sliding and Rolling between Meshing Profiles**, *AGMA FTM 2001, Detroit, MI, USA*.
- V.V. Krivtsov, D.E. Tananko, and T.P. Davis, **Regression approach to tire reliability analysis**, *Reliability Engineering & System Safety*, Volume 78, Issue 3, December 2002, Pages 267-273
- D.E. Tananko, V.V. Krivtsov and D.C. Rohweder, **Do We Really Need a Spec on Tire Static Balance**, *SAE Technical Paper Series*, # 2003-01-0151.
- D.E. Tananko, **AFD Application on the Analyses of the Hitching/Ringing Problem**, *TRIZCON2000, THE ALTSHULLER INSTITUTE FOR TRIZ STUDIES, NH, USA*.
- I.N. Volovichev, Y.G. Gurevich, D.E. Tananko, **Effect of high-frequency electron gas heating on static volt-ampere characteristic with negative differential conductance**, *Journal of Communications Technology and Electronics v 41 n 16 Dec 1996 MAIK Nauka/Interperiodica Publ Birmingham AL USA p 1418-1421 ISSN: 1064-2269 CODEN: JTELEJ, 1996. The paper is abstracted in Ei Compendex.*