Vladimir Gantovnik

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Work Authorization

- US Citizen

Qualifications

- Highly motivated aerospace engineer with research experience and successful record of developing new ideas and products.
- Solid educational credentials including a Ph.D. in Mechanics, M.S. in Materials Science, and M.S. in Aerospace Engineering.
- Broad engineering background associated with structural design, analysis, and optimization.

Education

2000–2005 — **Ph.D., Engineering Science & Mechanics**, *Virginia Polytechnic Institute and State University (Virginia Tech)*, Blacksburg, VA
Dissertation: An improved genetic algorithm for optimization of composite structures. Committee: Prof. Zafer Gürdal (Advisor), Prof. Layne Watson, Prof. Liviu Librescu, Prof. Eric Johnson, Prof. Mahendra Singh

1998–1999 — **M.S., Materials Science & Engineering**, *Iowa State University*, Ames, IA
Thesis: Micro-structural relationships of heavily deformed Au-Ag and Au-Pt composites. Advisor: Prof. Alan M. Russell

1992–1998 — **M.S., Aerospace Engineering, *summa cum laude***, *Siberian State Aerospace University*, Krasnoyarsk, Russia
Thesis: Bending of a sandwich composite toroidal shell stiffened by rings under external pressure. Advisor: Prof. Alexander V. Lopatin

2014–2015 — **Graduate Certificate, Management Science and Engineering**, *Stanford University*, Stanford, CA
UTC Employee Scholar Program

Experience

09/2021–current — **Principal Stress Engineer**, *Raytheon Technologies, Collins Aerospace*, Chula Vista, CA
Boeing Programs: 787, 737. tcl/tk, python

04/2020–08/2021 — **Staff Stress Engineer**, *Raytheon Technologies, Collins Aerospace*, Chula Vista, CA
Boeing Programs: 787, 737. tcl/tk, python

03/2017–04/2020	**Staff Stress Engineer**, *UTC Aerospace Systems*, Chula Vista, CA GTF CSeries and Embraer E2 Programs: Structural analysis and sizing support of components of nacelle thrust reverser. Patran/Nastran, VBA, Perl, Python, iSight, Nastran SOL200, HyperMesh, OptiStruct. Subject Matter Expert (SME) in Structural Optimization.
08/2017–08/2018	**Adjunct Professor**, *Southwestern College*, Chula Vista, CA Engineering.
10/2011–02/2017	**Stress Engineer**, *UTC Aerospace Systems/Goodrich Aerostructures*, Chula Vista, CA GTF CSeries/MRJ and Airbus A350XWB Programs: Structural analysis and sizing support of components of nacelle thrust reverser. Patran/Nastran, VBA, Perl, iSight, Nastran SOL200, HyperMesh, OptiStruct.
02/2011–06/2011	**Structural Engineer**, *LightSail Energy*, Oakland, CA Venture capital-funded start-up company. Company is in a stealth mode, and everything related to LightSail Energy is top-secret classified. Project: Design of composite ultra-high-pressure vessels for compressed-air energy storage (CAES) system. Matlab, Ansys, Abaqus.
06/2007–10/2010	**Postdoctoral Associate**, *University of North Carolina at Charlotte, Department of Bioinformatics and Genomics*, Charlotte, NC Project: Modeling of competitive DNA hybridization and kinetics for the purpose of predicting binding outcomes on DNA microarray. Perl, Mathematica, R, VisualOMP. Funded by NIH.
09/2005–06/2007	**Research Associate**, *Clemson University, Department of Mechanical Engineering*, Clemson, SC Project: Multivariate optimization, packing and configurational vehicle design for the Family of Medium Tactical Vehicles (FMTV). Pro/E, Fortran, Mathematica. Funded by U.S. Army TACOM.
09/2004–08/2005	**Graduate Research Assistant**, *Virginia Tech, Center for High Performance Manufacturing*, Blacksburg, VA Project: 3D Printing of Precious Metal Composites. SolidWorks modeling. Funded by Ex-One/Extrude Hone Cortporation and Hoover & Strong.
05/2000–08/2004	**Graduate Research Assistant**, *Virginia Tech, Department of Engineering Science & Mechanics*, Blacksburg, VA Project: Optimization of composite structures by an improved genetic algorithm. Ansys, Fortran. Funded by Air Force Office of Scientific Research (AFOSR).
02/1998–05/2000	**Graduate Research Assistant**, *Ames National Laboratory, Metallurgy and Ceramics Division*, Ames, IA Project: Deformation processed Au-Ag and Au-Pt composites.
08/1997–02/1998	**Graduate Research Assistant**, *Siberian Aerospace Academy, Department of Computer Modeling*, Krasnoyarsk, Russia Project: Analysis and design of toroidal composite shell. Nastran, Fortran, AutoCAD
08/1995–08/1997	**Intern Mechanical Engineer**, *The Krasnoyarsk Machine-Building Plant, Research Composite Laboratory*, Krasnoyarsk, Russia Project: Development of plasma spraying and gas dynamic cold spraying for surface coating of metals.

Skills

Programming	tcl/tk, Python (GUI with tkinter, PyQt5), R, Perl, VBA, C++, C#, Java, Fortran, Mathematica, Matlab, Maple, MySQL, Power BI/DAX, awk, sed, bash

FEA	Altair HyperWorks, MSC Patran/Nastran, Ansys, Femap, Abaqus, Comsol Multiphysics, HyperSizer, VR&D Genesis
CAE	Catia, SolidWorks, PTC Creo, AutoCAD
Structural Optimization	HEEDs, Simulia iSight, Nastran SOL200, Altair OptiStruct, Altair HyperStudy, modeFrontier, Tosca, VR&D VisualDOC

Awards

2007–2009	**Richard Priory Postdoctoral Fellowship**, *Duke Energy*, Charlotte, NC
2000–2005	**Graduate Research Fellowship**, *ESM, Virginia Tech*, Blacksburg, VA
2000	**Ames Laboratory Inventor Incentive Award**, *AmesLab*, Ames, IA
2000	**The International Precious Metals Institute (IPMI), Outstanding Work Award in Precious Metal Research** , *Iowa State University*, Ames, IA
1998-1999	**L.W. Huncke Foundation Scholarship**, *Iowa State University*, Ames, IA
1996	**Russian Presidential Scholarship for Talented Young Researchers**, *Siberian Aerospace Academy*, Krasnoyarsk, Russia
1995–1996	**The Gagarin's Award for Academic Excellence**, *Siberian Aerospace Academy*, Krasnoyarsk, Russia
1995	**The National Competition in the Strength of Materials, 1st place**, *Siberian Aerospace Academy*, Krasnoyarsk, Russia
1994	**SAA Competition in the Strength of Materials, 2nd place**, *Siberian Aerospace Academy*, Krasnoyarsk, Russia

Memberships

- AIAA since 2000
- ASME since 2005

Reviewer

- Composites Science and Technology
- International Journal for Structural and Multidisciplinary Optimization
- Aerospace Science and Technology
- AIAA Structures, Structural Dynamics, and Materials (SDM) Conference
- ASME International Design Engineering Technical (IDETC) Conference
- Journal of Materials Engineering and Performance
- Transactions on Mathematical Software