Vladimir Gantovnik

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in gantovnik

Work Authorization

- U.S. Citizen

Qualifications

- Results-driven aerospace engineer with a proven track record in research, innovation, and the successful development of new concepts and products.
- Strong academic foundation with a Ph.D. in Mechanics, and dual M.S. degrees in Materials Science and Aerospace Engineering.
- Diverse engineering expertise encompassing structural design, stress analysis, and structural optimization across multiple aerospace programs.

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**, *Siberian State Aerospace University*, Krasnoyarsk, Russia, Honors: *summa cum laude*
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**, *RTX Corporation, Collins Aerospace*, Chula Vista, CA
Airbus: A350. Boeing: B787, B737. hypermesh, nastran, tcl/tk, python

04/2020– 08/2021 **Staff Stress Engineer**, *Raytheon Technologies, Collins Aerospace*, Chula Vista, CA
Boeing: B787, B737. 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.

08/2017– **Adjunct Professor**, *Southwestern College*, Chula Vista, CA
08/2018 Engineering.

10/2011– **Stress Engineer**, *UTC Aerospace Systems/Goodrich Aerostructures*, Chula Vista, CA
02/2017 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– **Structural Engineer**, *LightSail Energy*, Oakland, CA
06/2011 Venture capital-funded start-up company. Company was in a stealth mode. Project: Design of composite ultra-high-pressure vessels for compressed-air energy storage (CAES) system. Matlab, Ansys, Abaqus.

06/2007– **Postdoctoral Associate**, *University of North Carolina at Charlotte, Department of*
10/2010 *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– **Research Associate**, *Clemson University, Department of Mechanical Engineering*,
06/2007 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– **Graduate Research Assistant**, *Virginia Tech, Center for High Performance Manufac-*
08/2005 *turing*, Blacksburg, VA
Project: 3D Printing of Precious Metal Composites. SolidWorks modeling. Funded by Ex-One/Extrude Hone Cortporation and Hoover & Strong.

05/2000– **Graduate Research Assistant**, *Virginia Tech, Department of Engineering Science &*
08/2004 *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– **Graduate Research Assistant**, *Ames National Laboratory, Metallurgy and Ceramics*
05/2000 *Division*, Ames, IA
Project: Deformation processed Au-Ag and Au-Pt composites.

08/1997– **Graduate Research Assistant**, *Siberian Aerospace Academy, Department of Computer*
02/1998 *Modeling*, Krasnoyarsk, Russia
Project: Analysis and design of toroidal composite shell. Nastran, Fortran, AutoCAD

08/1995– **Intern Mechanical Engineer**, *The Krasnoyarsk Machine-Building Plant, Research*
08/1997 *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
Structural Optimization	Siemens HEEDs, Simulia iSight, Nastran SOL200, Altair OptiStruct, Altair HyperStudy, modeFrontier, Tosca, VR&D VisualDOC

CAE Catia, SolidWorks, PTC Creo, AutoCAD

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 Award for Academic Excellence**, *Siberian Aerospace Academy*, Krasnoyarsk, Russia

1995 **The National Competition in the Strength of Materials, 1st place**, *Krasnoyarsk Civil Engineering Institute*, Krasnoyarsk, Russia

1994 **SAA Competition in the Strength of Materials, 2nd place**, *Siberian Aerospace Academy*, Krasnoyarsk, Russia

Memberships

o AIAA since 2000   o ASME since 2005

Reviewer

o Composites Science and Technology

o International Journal for Structural and Multidisciplinary Optimization

o Aerospace Science and Technology

o AIAA Structures, Structural Dynamics, and Materials (SDM) Conference

o ASME International Design Engineering Technical (IDETC) Conference

o Journal of Materials Engineering and Performance

o Transactions on Mathematical Software