Resume

Name	**Elliot** Nelson Ivan **Geikowsky** Ramírez
E-mail	elliot.geikowsky@ttu.edu
Address	2023 37th Street, Lubbock, TX 79412-1245
Phone	(806)500-5918
Nationality	Chilean
Marital status	Married

Education

2015-present — Graduate student in Mechanical Engineering PhD program.
Texas Tech University, Lubbock, TX

2012 — M. Sc. in Mechanical Engineering.
Universidad Técnica Federico Santa María, Valparaíso, Chile.
Thesis: "Information system model for the logistic management of a process-oriented SME".

2003 — B. S. in Mechanical Engineering.
Universidad Técnica Federico Santa María, Valparaíso, Chile
Thesis: "Information system model for the logistic management of a process-oriented SME".

Work Experience

2011-2015 — *Research Project Manager*
Universidad Técnica Federico Santa María,
Economic and operative management of research projects.

2009-2015 — *Research engineer /Co-founder*
Teccsen S.A.
Enterprise dedicated to the development of computer-aided design, computational modelling and finite element analysis. It is mainly aimed at the representation and solution of engineering problems of machinery and equipment related to the mining industry, heat exchange and power transmission. http://www.teccsen.com/

2007-2008 — *Project Manager*
Geprocom S. A.
Design and installation of plants on mining operations, exploration of new businesses for automation of production processes on mining, food process, and salmonid farming industries.

2000 — *Design Engineer*
Oxiquim S.A.
Design and installation of a chemical pilot plant for the production of resins and formaldehyde derivatives.

Teaching Experience

Texas Tech University, Lubbock, TX

2016-present — *Teaching Assistant:* Advanced Statistical Methods.

Universidad Técnica Federico Santa María, Valparaíso, Chile

2011-2015 — *Instructor:* Mechanics of Materials.

Computational Engineering Experience/Activities

2006-2009 *AES Gener – Electric power industry*
Stress and lifetime analysis of Pelton wheels used in hydroelectric power plants: Computational representation and stress analysis for three types of Pelton wheels. Stress and fatigue analysis through finite element computational methods. Studies of geometrical recovery of eroded surfaces through welding process. Measurement, experimental and predictive analysis of residual stress on turbine surfaces geometry-recovered by welding. Elaboration and optimization of welding protocols.

2005-2006 *Compañía Minera Candelaria – Cooper mining industry*
Bucket wheel excavator lifespan analysis: Complete computational representation and stress analysis for all structural components of a Mann Takraf rotating shovel. Structural stress analysis using finite element computational methods. Modal analysis and fatigue studies. Cracks growth predictive analysis.

2005 *Refinería de Petróleo de Con-con – Petroleum industry*
Thermal fatigue evaluation of heat exchange equipment. Computational modeling and stress analysis of single pass exchanger tubes. Numerical modeling and predictions associated creep fracture. Studies of equipment safety factor. Computational geometrical representation, thermal and mechanical stress analysis through ADINA.

2004-2005 *AES Gener – Electric power industry*
Stress analysis and redesign for vertical roller mill: Computational modelling and stress studies of milling main shaft. Stress concentration analysis and redesign of coupling joint system. Increasing of lifetime and availability cycle of the equipment.
Computational geometrical representation through Solid Edge. Stress analysis through Ansys Multiphysics using solid element.

2003-2004 *Armada de Chile - Defense*
Design, experimental testing, and construction of mechanical components in navy watercrafts: Design and construction of loadcell for mechanics test. Design, stress analysis, construction, and experimental testing of rescue system for Chilean Navy submarine. Implementation of DSRV and SRC rescue system in Scorpène-class and U-209 class submarines. Working and rescue procedure certificated by Naval Sea Systems Command, NAVSEA.
Computational geometrical representation through Solid Works. Stress analysis through ADINA, Ansys, and Ansys Multiphysics using solid and shell element.

2003 Compañía Minera Zaldivar – *Cooper mining industry*
Stress analysis using finite element computational methods to Conveyor belt bridge system: Modal and failure analysis for structures and mechanical components. Impact and fatigue analysis in transition zones. Computational geometrical representation through Solid Works. Stress and modal analysis through ADINA using shell and belt element.

Journal Publications

E. Geikowsky, S. Gorumlu, and B. Aksak, "The effect of flexible joint-like elements on the adhesive performance of nature inspired bent mushroom-like fibers.", **2018**, Beilstein J. Nanotechnol., *Manuscript accepted for publication.*

Oral Presentations

E. Geikowsky, S. Gorumlu, and B. Aksak, "Fabrication and characterization of curved mushroom-like fibers with graded elastic modulus", *41th Annual Meeting of The Adhesion Society*, Feb 25-Mar 1 2018, Catamaran Resort Hotel, San Diego, California

Computational Software Experience

Structural analysis by finite element methods:
ADINA, Abaqus, Ansys

Interdisciplinary design, modelling mechanisms and structures:
AutoCAD, Pro/Engineer, Solid Works, Solid Edge, Alibre

Programming and mathematical evaluation:
Matlab, MathCAD, Visual Studio.