

FENG LING

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5505 Avenue F, Austin, TX 78751

EDUCATION

B.S. Pure Mathematics and B.S. Aerospace Engineering (Astronautics) The University of Texas at Austin	Expected Graduation: Dec 2015 Cumulative GPA: 3.736/4.0 (178 GPA hr)
Graduate Coursework: (* = Audited) Stochastic Detection and Estimation; GPS Signal Processing; Finite Elements Methods; Complex Analysis; Real Analysis; Algebraic Topology; Differential Topology; Abstract Algebra; K-Theory; 4-Manifold Topology*; Homotopy Type Theory*; D-modules*; Ergodic Theory and Dynamics*; Rational Homotopy Theory* Senior Design Team Project Investigated challenges and possible solutions for CubeSat orbital (LEO) re-entry problem In charge of simulation of the re-entry and parameter design for thermal subsystem	
Computational Science and Engr Certificate Program , Institute of Computational Engineering and Sciences Halliburton Business Foundations Summer Institute , McCombs School of Business	Summer 2012

WORK AND RESEARCH

Undergraduate Research Assistant , Center for Space Research at UT Austin	08/13-present
Parametric study on dynamical effects of accelerometer-CG misalignment models Analyzing the GRACE accelerometer data anomalies from thruster firing and star camera measurement deviations Assisted graduate students on spacecraft and mission thermal environment modeling project Studied the geographical significance of GRACE on-board SNR and post-fit residue of the Earth gravity model	
Individual Research , Institute of Computational Engineering and Sciences at UT Austin	08/14-05/15
Investigated applications of discrete exterior calculus for exact conservation FEM	
Team Member , Research Initiatives with NASA-JSC (TRICK Modeling and Simulation)	09/10-05/11
Generated Mars rover landing graphical simulation, results presented at JSC Developed interfacing codes based on NASA software packages (TRICK, AGEA, and EDGE)	

HONORS AND ACHIEVEMENTS

Meritorious Winner Team Lead , COMAP Mathematical Contest In Modeling (Problem B)	2015
Member , Aerospace Honor Society Sigma-Gamma-Tau UT Austin Chapter	2011
Team Leader , Student Engineering Council Alternative Energy Challenge 3rd place	Fall 2010
Finalist , Intel International Science and Engineering Fair	May 2010

EXTRACURRICULAR

Participant , Directed Reading Program	01/2014-present
Gave expository peer presentations each semester on the subjects of Persistent Homology, Čech Cohomology, Du-val singularity, and Blow-ups Befriended a handful of wonderful graduate students	
Active Member , Longhorn Rocket Association	08/11-05/14
Designed and implemented software ground station and sensor fusion for a high power (L2) rocket payload Designed and machined model rockets from primitive components	
Participant , Coursera, Udacity, and other MOOC experiences	08/11-present
Exposed to the state of art techniques in areas of Cryptography, Software Testing, Machine Learning, Database Management, Artificial Intelligence, etc.	
Member , IEEE Robotics and Automation Society	09/10-12/10
Participated in Robot-a-thon autonomous robot building competition	
Volunteering Experiences: Introduce a Girl to Engineering Day, UT Radionavigation Lab, Habitat for Humanity, Explore UT Tour Guide, Bellaire City Library, Methodist Hospital, Music Units Societies Everywhere, Bellaire Art Club	

SKILLS

Proficient in UNIX/Linux (BASH), MATLAB, C, Fortran, \LaTeX , MS Office Suite, GIMP, Solidworks;
Capable in C++, OpenMP, MPI, Python(ipython), R, Java, Labview, Multisim, OpenSCAD, Infolytica MagNet;
Fluent in Mandarin Chinese and English

EMPLOYMENT STATUS

International Student (F-1) visa, eligible for 12-month Optional Practical Training plus 17-month extension for E-verified employers