

# Martin Tolliver

hello@martinengineer.com | Austin, TX

Packaging Engineer with 11 years of experience in every aspect of packaging - concept, design, simulation, prototyping, testing, and production. 5 years in aerospace systems engineering, delivering mission-critical hardware for zero-gravity, high-vibration, and extreme thermal environments

## Education and Training

Bachelor of Science, Mechanical Engineering | Massachusetts Institute of Technology  
Systems Engineering Certificate | California Institute of Technology  
FAA Private Pilot Certificate - Demonstrated proficiency in complex system operations, real-time risk assessment, and adherence to rigorous safety protocols in a dynamic environment

## Skills

Expert proficiency in Finite Element Analysis (ANSYS, LS-DYNA, SolidWorks Simulation) and CAD systems (AutoCAD, SolidWorks, SpaceClaim, Graphite, ArtiosCAD), rapid prototyping, mill, lathe, CNC machining

## Professional Experience

**Sealed Air / Austin Foam Plastics | Pflugerville, TX | 2014 - present**

### Product Development Creative Design Manager | 2019 - present

- Reduced packaging material intensity by 18% across a 60-SKU server portfolio while maintaining drop-test integrity, eliminating 54 tons of annual material waste and cutting logistics costs by an estimated \$1.1M
- Responsible for design, analysis, prototyping, testing, and production launch of all server packaging products
- Established remote simulation protocols that reduced physical prototype iterations by 40%, enabling faster project cycles and more efficient travel for on-site validation
- Root cause analysis for any test failures or field issues
- Document control, engineering changes, customer factory integration

### Mechanical Engineer | 2014 - 2019

- Designed and validated more than 100 packaging solutions for various servers weighing 25-450 lb. Experience with a wide range of other products as well - large flat-panel monitors, laptops, desktops, avionics sensors, and even kitchen sinks (really)
- Simulated packaging designs for more than 50 products including portables, desktops, servers, flat panel monitors, and printers using explicit dynamics
- Compared simulation results with real-world test results to refine simulation methods and accuracy
- Developed material models for molded paper pulp and polyethylene foam with high correlation to drop-test results
- Design and fabrication of surrogate units for representative packaging testing
- Design and fabrication of fixtures and tooling for manual and automated manufacturing processes

**Jackson and Tull | Albuquerque, NM | 2006 - 2007**

### Aerospace Engineer

- Risk Reduction - Alternative Infrared Satellite System (RR-AIRSS) - radically improved space-based missile detection capability, launched 2011

**Air Force Research Lab Space Vehicles Directorate | Kirtland AFB, NM | 2003 - 2006**

### Developmental Engineer, Air Force Officer

- Demonstration and Science Experiments (DSX) Cygnus satellite - first on-orbit tests of Radiation Belt Remediation (RBR), launched 2019

## Publications

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[1] Guarnieri, J., Tolliver, M., etc. "The MDA MicroSatellite Target System (MTS) for DoD Radar Calibration", IEEE Aerospace, 2007

- Developed and fielded a precision radar calibration system, demonstrating expertise in high-stakes testing, data correlation, and meeting stringent DoD performance standard

[2] Spanjers, G., Tolliver, M., etc. "Overview of the AFRL's Demonstration and Science Experiments (DSX) Program", AIAA Space, 2006

- Led systems integration for a \$50M+ R&D satellite, managing cross-functional technical risk and ensuring hardware readiness for a 10-year on-orbit mission