

EDUCATION

- 2004 **Master of Science, Engineering**
Wright State University, Dayton, Ohio
- 1999 **Bachelor of Science, Mechanical Engineering**
Grove City College, Grove City, Pennsylvania

EXPERIENCE

- December 2015
to Present **Engineering Design & Testing Corp.**
Birmingham, Alabama
Consulting Engineer
Root cause analysis of incidents involving machinery, mechanical systems, and plumbing systems in residential, commercial, and industrial applications. Failure analysis, mechanical design analysis, process evaluation, and troubleshooting services. Engineering analysis of the origin and cause of fires and explosions. Failure analysis of fire suppression systems.
- July 2013
to December 2015 **Dayton Children's Hospital**
Dayton, Ohio
Facilities Engineering Manager
Physical plant operations, maintenance, landscape, and engineering for main hospital and network of satellite facilities. Provide energy demand analysis, procurement, and usage optimization. Ensure facility code compliance for national healthcare regulatory agencies and all other authorities having jurisdiction. Provide design and construction guidance for major construction projects.
- November 2011
to July 2013 **United Technologies Aerospace Systems**
Troy, Ohio
Engineering Manager
Manage thermal analysis, dynamic analysis, offshore engineering resources, and computer-aided design for aircraft wheels and braking systems for Boeing, Airbus, Cessna, and Sukhoi. Provide requirements definition and implementation for high performance computing environment. Provide engineering expertise for product lifecycle management software and process development.
- June 1999
to November 2011 **Goodrich Corporation**
Troy, Ohio
Senior Structures Engineer
Provide analytical and experimental stress, fatigue, and damage analysis of aircraft wheels and brakes for new product development for Boeing and in-service field support for Cessna. Provide internal technical support for finite element analysis software. Develop software tools for automation of repetitive manual finite element related operations. Develop new analysis methods focused on cycle time reductions and solution accuracy improvements.

Design Engineer

Research and develop ideas for new products. Design wheel and brake systems for commercial aircraft. Provide material selection, component sizing, solid model and drawing generation, geometric dimensioning and tolerancing, prototype manufacturing, full scale testing, and documentation. Work with clients such as Boeing and Airbus to align design features with needs and requirements. Develop automated software tools for design optimization.

Project Engineer

Manage projects from conception through to completion. Manage project budget and costs. Responsible for the completion of all documentation. Produce test plans and reports. Work with clients such as Boeing and Airbus to ensure design and manufacture of products to agreed budgets and time frames.

Engineering Trainee

Conduct testing programs for new products. Analyze test data and write reports to document performance. Perform basic stress and deflection calculations. Produce manufacturing drawings for test fixtures.

November 1997
to May 1999

**General Electric – Transportation Systems
Grove City, Pennsylvania***Engineering Intern*

Design custom tooling for locomotive engine refurbishment processes. Produce manufacturing drawings for tooling and conduct tests to verify proper function of finished products.

REGISTRATIONS and CERTIFICATIONS

Registered Professional Engineer in Alabama (35749)

Registered Professional Engineer in Arkansas (17194)

Registered Professional Engineer in Florida (81049)

Registered Professional Engineer in Georgia (PE040769)

Registered Professional Engineer in Louisiana (41055)

Registered Professional Engineer in Mississippi (27434)

Registered Professional Engineer in Ohio (70317)

Registered Professional Engineer in Tennessee (119182)

Registered Professional Engineer in Texas (124093)

Certified Fire and Explosion Investigator (CFEI 21099-12077)

Certified Vehicle Fire Investigator (CVFI 21099-12077v)

National Council of Examiners for Engineering and Surveying (Record 66378)

PROFESSIONAL ORGANIZATIONS

American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)

American Society of Mechanical Engineers (ASME)

National Association of Fire Investigators (NAFI)

National Fire Protection Association (NFPA)

PUBLICATIONS

Himes, T.M., *“Building Systems and Healthy Living”*, The Stress Point, Volume 29, Number 3, Engineering Design and Testing Corp., South Carolina, September 2016.

PRESENTATIONS

“Non-parametric Structural Optimization Using NX Nastran and TOSCA.Structure”, PLM World Conference, May 2011

“Household Failures, Issues and Defects”, National Association of Subrogation Professionals – Alabama Chapter Meeting, October 2016

“Smarter Ways to Use Excel for Engineering”, Engineering Design & Testing Corp., February 2017

PATENTS

Himes, Anderson, Brundrett, Corio, Howard, *“Electric brake for aircraft,”* U.S. Patent 7,717,240

Himes, Kipp, Campbell, *“Repair method for electric aircraft brake,”* U.S. Patent 8,296,916

CONTINUING EDUCATION

- 2021 *Florida Laws and Rules for Professional Engineers*, EZ-PDH.com
- 2020 *COVID-19 Opens Our Eyes: Indoor Air Hydration is the Game Changer to Staying Healthy*, American Society of Heating Refrigerating and Air-Conditioning Engineers
- Fire Suppression ITM*, Engineering Continuing Education PDH
- Fossil Power Plant Pollution Control Systems*, Engineering Design & Testing Corp.
- Rules of Professional Conduct*, Engineering Design & Testing Corp.
- Investigating Internal Combustion Engine Failures*, Engineering Design & Testing Corp.
- Analysis of Cross-Linked Polyethylene*, Engineering Design & Testing Corp.
- Back to Basics: Fire Science with a Spark*, Engineering Design & Testing Corp.
- Welding Processes, Techniques, Standards, Inspections, and Failure Modes*, Engineering Design & Testing Corp.
- 2019 *Introduction to HVAC Loads*, Price Training Programs
- A Brief Review of Polymers: Characterization and Failure Analysis*, Engineering Design & Testing Corp.
- Building Your Practice – Means & Methods for Success*, Engineering Design & Testing Corp.
- Construction Engineering: A Focus on the Use of Cranes in Construction Operations*, Engineering Design & Testing Corp.
- Electrical Connection Failures*, Engineering Design & Testing Corp.
- Interdisciplinary Investigations*, Engineering Design & Testing Corp.
- Subchapter M: A Brief Overview of EDT as a Third-Party Organization*, Engineering Design & Testing Corp.

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- Quantitative Measurement of LP and Natural Gas Systems*, Engineering Design & Testing Corp.
- 2018 *Basic Fatigue Analysis*, Engineering Design & Testing Corp.
Developing as a Consultant, Engineering Design & Testing Corp.
Metallurgy for the Non-Metallurgist and Its Use in Root Cause/Damage Assessments, Engineering Design & Testing Corp.
Methods of Equipment Protection, Engineering Design & Testing Corp.
Industrial Plant Process Controls, Engineering Design & Testing Corp.
- 2017 *Vehicle Fire, Arson & Explosion Investigation Science & Technology Seminar*, National Association of Fire Investigators, Lexington, Kentucky
Instructions and Warnings: What is the Difference and Does It Matter?, Engineering Design & Testing Corp.
Engineering Analysis of Failure: Determination of Cause in a Legal Environment, Engineering Design & Testing Corp.
- 2016 *Bolting Specialist Qualification Part 1*, American Society of Mechanical Engineers
Investigation of Gas and Electric Appliance Fires, Fire Findings, Benton Harbor, Michigan
International Fire, Arson, & Explosion Investigation Training Program, National Association of Fire Investigators, Seattle, Washington
Principles of Failure Analysis, ASM International
- 2015 *OSHA Permit-Required Confined Space Entry*, eTraining Inc.
- 2014 *Boiler and Hydronic Water Treatment*, Solid Blend Technologies
Electrical Safe Work Practices, Lewellyn Technology
- 2013 *Structural Optimization in FE Analysis*, NAFEMS
- 2012 *Advanced Dynamic FE Analysis*, NAFEMS
Practical Introduction to CFD, NAFEMS
- 2011 *Fatigue & Fracture Mechanics in FE Analysis*, NAFEMS
- 2010 *Mechanical Nonlinearities*, ANSYS