



## **SUZANNE F. UCHNEAT, P.E. SENIOR CONSULTANT**

[sfuchneat@engsys.com](mailto:sfuchneat@engsys.com)

Suzanne Uchneat is a Senior Consultant with over a decade of experience in documentation, investigation, and analysis of complex failures. She is a professionally licensed mechanical engineer who specializes in the study of mechanical behavior of materials in relation to structure, properties, and performance. Her technical expertise includes fatigue and fracture, corrosion, environmental degradation of materials, laboratory testing, fractography, materials characterization, inspections, and data analysis.

During her career at ESi, Ms. Uchneat has served in project management and technical roles in complex, multidisciplinary failure investigations involving components and systems across a wide variety of industries. She has managed investigations involving aerospace, automotive, marine, rail, power distribution, medical, plumbing, construction, and recreational products industries as well as intellectual property matters.

### **Areas of Specialization**

- Applied Mechanics
- Design Analysis
- Engineering Failure Analysis
- Fatigue and Fracture Mechanics
- Mechanical and Materials Design
- Mechanical Engineering
- Mechanical Testing
- Mechanics of Materials
- Metallurgical Failure Analysis
- Metals
- Recreational Products
- Sports and Exercise Equipment

### **Education**

- M.S., Mechanical Engineering, Georgia Institute of Technology
- B.S., Biological Sciences, Clemson University

### **Licensed Professional Engineer (P.E.)**

Georgia (043375)

*September 2022*

## Positions Held

### Engineering Systems Inc., Norcross, Georgia

Senior Consultant, 2021 - Present  
Senior Staff Consultant, 2018 - 2020  
Staff Consultant, 2017 - 2018  
Associate Consultant, 2015 - 2017  
Technologist, 2011 - 2015

### Alcoa Inc., Goose Creek, South Carolina

Environmental Engineer Co-Op, 2008

## Continued Education

Southwest Research Institute NASGRO Course

Structural Failure Identification in Aircraft Accident Investigation  
Embry-Riddle Aeronautical University

Aircraft Accident Investigation and Management  
Embry-Riddle Aeronautical University

## Publications & Presentations

“Ergonomic Safety Analysis of Tilting a Grinding Machine”, W. Wong, **S. Uchneat**, D. Brickman, E. Knox, J. Eganhouse, *XXXIVth Annual International Occupational Ergonomics and Safety Conference Virtual Conference*, September 2022.

“An Overview of Aircraft Accident Investigation and Component Failures,” E.E. Wright, **S.F. Uchneat**, *ASM Handbook, Volume 11A: Analysis and Prevention of Component and Equipment Failures*, August 2021

“Fracture Appearance and Mechanisms of Deformation and Fracture”, M.E. Stevenson, P.D. Umberger, & **S.F. Uchneat**, *ASM International Handbook*, Volume 11, 2021 edition.

“Failure Analysis of a Fractured Saw Blade Carbide Tip,” **S.F. Uchneat**, P.D. Umberger, M.E. Stevenson & J.L. McDougall, *Journal of Failure Analysis and Prevention*, Manuscript ID JFAP-19-06-2230.R1, December 2019

“Case Study: Analysis of Corrosion Patterns to Evaluate the Pre-Accident Configuration of an ATV Tie Rod End Connection,” **S. Uchneat**, M. Stevenson, J. McDougall, *ASM Journal of Failure Analysis and Prevention*, Vol. 16, Issue 4, August 2016