

# Charles E. Lund

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## Professional Experience

- 37 years experience in Aerospace Engineering.
- 36 years experience in Computer Programming.
- 9 years experience in World Wide Web Authoring.

## Key Accomplishments

- Editor and co-author of the Parker NWL Stress Manual
- Patents:
  - 4,717,035; "End Closure for Composite Pressure Vessels;" January 5, 1988.
  - 4,773,282; "Piston Rod Assembly Including an Injection Bonded Piston Head and Fabrication Method;" September 27, 1988.
- Articles:
  - "Maximum Stress Between Nearly Intersecting Pressurized Holes;" Developments in Theoretical and Applied Mechanics, Volume XV; Georgia Tech; 1990.
  - "The Supermesh: Run-Time Meshing from Coarse CAD Models Using MSGMESH;" 1991 MSC/NASTRAN World Users' Conference, March 11-15, 1991.
  - "Parametric Studies of the Stresses Between Nearly Intersecting Pressurized Holes in an Infinite Solid;" AIAA/ASME/IEEE Mini-Symposium; Oakland University; May 11, 1991.
- Author of computer program for statistical analysis of Space Shuttle Thermal Protection System tiles

## Technical Expertise

### Specialty

Finite Element Analysis  
Thermal analysis  
Vibration analysis  
Dynamic Simulation

### Web Authoring

HTML  
Perl

### Operating Systems

Unix/Linux  
Windows

### Graphics

PaintShop Pro

### PC Applications

MS Word  
MS Access

### Programming

FORTRAN  
C++

## **Summarized Job History**

### **Parker Abex NWL Aerospace**

Structural Methods Specialist (1977-2000, 2002-present)  
Structural, thermal, and dynamic analysis of  
aircraft and missile flight controls and pumps

### **Lockheed Missiles and Space Co**

Structures Engineer (1970-77)  
Structural analysis of space vehicles

## **Education**

### **B.S.E.**

University of Michigan (1968);  
Aerospace Engineering;  
Minor equivalent: Psychology

### **M.S.E.**

University of Michigan (1970);  
Aerospace Engineering

### **Post-grad.**

Stanford University (1971-77);  
Aeronautical and  
Astronautical Engineering

## **Affiliations**

Senior Member, American Institute of Aeronautics and Astronautics  
Lecturer and research advisor, Western Michigan University College of Engineering  
Director of the Otsego Jazz Ensemble (17-piece band)

### **Lund & Lund**

Owner (1995-present)  
Desktop Publishing and  
World Wide Web Authoring

### **McDonnell-Douglas Astronautics Co**

Associate Engineer (1968-69)  
Structural and loads analysis of missiles