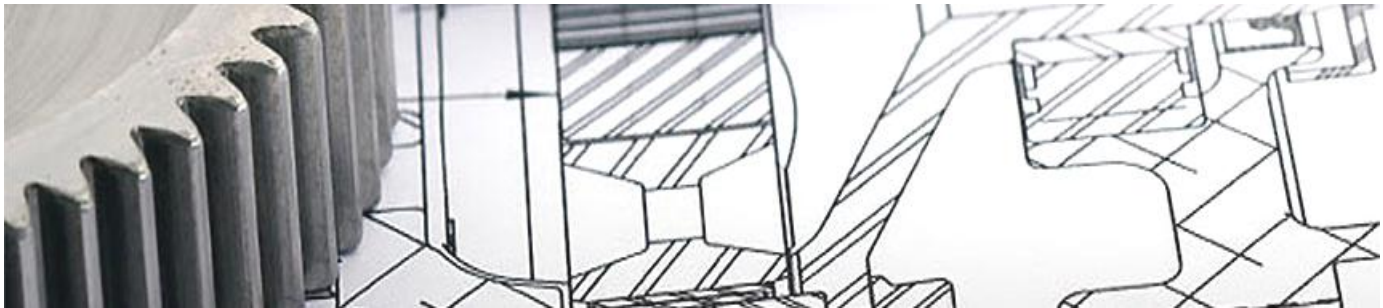


# ENGINEERING CONSULTING SERVICES



*Founded in 2003, Luxea (Lux Engineering Analysis Inc.) is an engineering consulting and software development company located in San Jose, California specializing in stress, vibration, and thermal analysis applied to fields in nuclear, aerospace, electronics, transportation, and defense. LUXEA supports the self-developed Libra finite element program, a comprehensive FEA package applicable to linear and non-linear, stress and thermal analyses.*

## ▶ ENGINEERING SERVICES

Luxea provides comprehensive and unparalleled services in technical analysis and product design. Whether it's a specific system design, component analysis, or an overall project consulting that you wish from us, you will get full access to our know-hows and expertise from over hundreds of years of combined experiences in engineering across various industries through our consultants. We pride in ourselves in providing **fully customized, state-of-the-art FEA analysis** to any problems with our own industry-proven LibraFEA program.

We provide :

- Staff Augmentation
- Special Expertise Transfer
- Process Development & Management
- And more ...

Our mission is to make you, our clients and customers, more productive and competitive by providing the highest customized professional consulting services available on the market today.

## ▶ LUXEA ADVANTAGE

### Competitor Service

Limited access to FEA tools (3<sup>rd</sup> party tool)

- Limited knowledge of FEA tool algorithms
- Inefficiency from limited applicability



### Luxea Service

Unlimited access to FEA tools (self-developed)

- Intimate knowledge of FEA tool algorithms
- Completely customizable to specific problems
- Unparalleled efficiency



## ▶ AREAS OF EXPERTISE

### **Structural and Thermal Analysis**

LUXEA personnel have extensive experience in stress, vibration, structural dynamics, and thermal analyses. LUXEA personnel are expert in FEA application program such as Libra, ANSYS, and NASTRAN, and in CFD programs such as FLO-THERM.

### **FEA and Engineering Software Tool Development**

LUXEA is the principal developer of both the Libra finite element analysis program, and the LUXPCB electronic board, thermal analysis program. LUXEA has developed pre- and post-processing programs for FEA model development and data evaluation.

### **Nuclear Transport Casks**

LUXEA personnel have extensive experience in the design, analysis, and licensing of casks for transport of nuclear materials. In addition, LUXEA provides analytical support for safety analyses of fuel shipments.

### **ASME Code Application**

LUXEA personnel are expert in the application of ASME and NRC nuclear codes to the stress and dynamic analyses of nuclear piping systems, and nuclear facility structures and facilities. LUXEA engineers have been involved in ASME nuclear code committees.

### **Feedback Control Simulation Programs**

LUXEA personnel have developed simulation control programs for automotive steering systems, process control, and water hammer effects in nuclear piping systems.

## ▶ PAST PROJECTS

The experts at Luxea have extensive experiences in various industrial fields including:

### **Nuclear**

#### *Nuclear Fuel Transport Package*

- Cask design, analysis, and testing
- Materials testing and characterization
- ASME, NRC, GE code certification

#### *Nuclear Piping System*

- Earthquake loads analysis
- Water hammering analysis
- Piping system dynamic analysis

### **Aerospace/Defense**

#### *Aircraft Radome Antennas*

- Aerodynamic and structural study
- Fiber composite material evaluation

### **Electronics**

#### *Aircraft communication equipment*

- Equipment rack systems analysis
- PC components analysis
- Thermal & structural analysis

### **Transportation**

#### *Palletized shock isolation system*

- ISO container drop simulation
- Transit case evaluation
- Shock & vibration analysis

#### *Power steering*

- Chassis vibration analysis
- Control system feedback analysis



*“Luxea means light, and we provide the light to the most difficult engineering problems out there.”*

### ▶ PRINCIPALS OF THE FIRM

**Keith Yi**, CEO and founder of the firm, has PhD in Material Science from Stanford University and a BS in Mechanical Engineering from University of California at Berkley. He has over 25 years experience in thermal and stress analysis. He has worked extensively on thermal and stress analyses associated with licensing of nuclear structures and defense projects.

**Harold Durlowsky**, principle developer of the Libra Finite Element Program, has PhD in Aeronautics and Astronautics Engineering from Stanford University, MS in Engineering Mechanics from San Jose State University, and a BS in Civil Engineering from Drexel University. He has over 30 years experience in thermal and stress analysis. He has worked extensively on thermal and stress analyses associated with licensing of nuclear structures and is the consultant to the ASME committee on dynamic analysis for nuclear piping.

### ▶ TEAMS OF THE FIRM

- Nuclear Advisory
- Consulting & Training
- Product Development
- Business Development

### ▶ CONTACT US

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