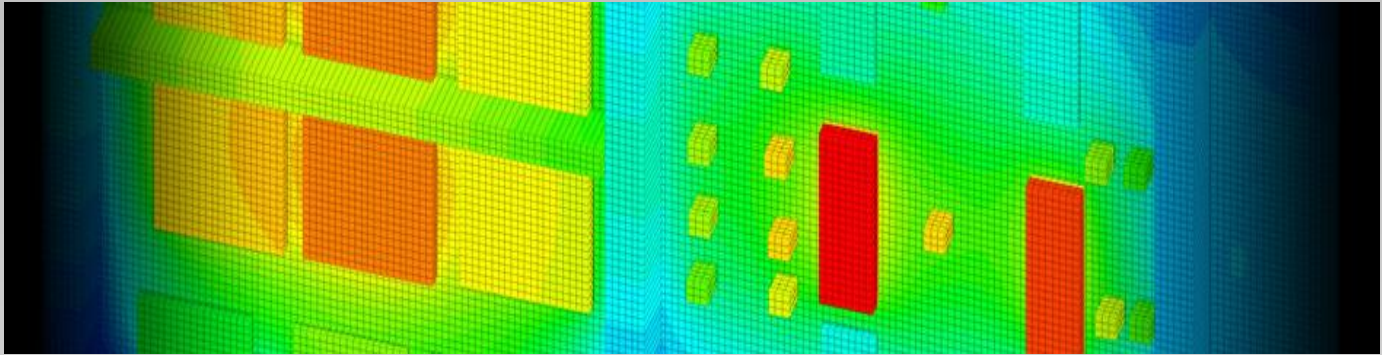


2011 HEAT TRANSFER FOR ELECTRONICS I



OBJECTIVES

- Understand basic theories
 - ✓ Heat transfer fundamentals
 - ✓ Natural and forced convection theory
 - ✓ Basic Finite Element Analysis (FEA)
- Apply to electronics packaging
 - ✓ Cooling requirement evaluations
 - ✓ Heat transfer study for all levels:
Rack → Chassis → PCB → Components
 - ✓ Environment effects including altitude
 - ✓ Fatigue life predictions
 - ✓ Practical guides to PCB, chassis and rack system design

WHO SHOULD ATTEND

- Mechanical engineers interested in learning basic thermal analysis and applications
- Electronic packaging engineers interested in hands-on training in heat transfer analysis in various thermal environments
- Mechanical engineers desiring a greater understanding and applications of FEA program



CONTENTS

The class is a 3-day seminar with a combination of classroom lecture and hands-on training to understand the following materials:

Shock and Vibration Analysis for Electronics

- Basic heat transfer theory including conduction, convection and radiation
- Practical guides to simplified thermal analysis
- Environmental effects evaluation
- Fan evaluation and selection
- Thermal cycling application to fatigue
- FEA application to heat transfer
- Practical applications for electronic packaging design – case studies

Application tools used:

- LuxCalc[®]
- LuxPCB[®]

SCHEDULE

A detailed course syllabus will be sent to you before the seminar.

LOCATION

The seminars will be presented at your facility or a mutually agreed upon location.

REGISTRATION AND TUITION

- How to register:
 - By Phone: 408.365.2937
 - By Email: info@luxea.com
- Seminar fee: \$2000 per student per course
- Minimum class size – 8 students. Seminar may be canceled or rescheduled up to 1 week prior to scheduled date if minimum class size is not met.
- Refunds – cancellations made at least 24 hours in advance will receive a full refund or credit towards a future course. Student substitutions are permitted at any time prior to start of class. No refunds for registered participants who fail to attend without prior cancellation notification.

TEACHING STAFF

The instructors at Luxea have numerous years of experience in engineering analysis in nuclear, aerospace, transportation, electronics, and defense industries.

- Head Instructor: Keith Yi has PhD in Mechanical Engineering 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.
- Instructor: Harold Durlofsky, PhD
- Instructor: Yujun Kim, PhD