

We help designers and manufacturers

- ✓ Reduce design cycle time
- ✓ Minimize customer product returns
- ✓ Maximize product yields

Failure Analysis · Materials Analysis · Reliability Testing · Teardown Analysis

Announcing

MuAnalysis is pleased to announce Seste Dell'Aera has joined the MuAnalysis team as President and COO.

Seste brings over 35 years of experience in management, technical sales and marketing in the technology industry.

Dr. Martine Simard-Normandin will continue to provide the technical leadership for the company.

Instructional Videos

MuAnalysis has created informative videos that appeal to technical individuals interested in learning about a variety of topics in electronics materials failure analysis.

The videos present actual examples of components, boards and LEDs and discusses the techniques used to identify their failures.

You can view the videos here:

[Recognizing Solderability Failures](#)

[Recognizing Wirebond Failures](#)

[LED Services](#)

[Services for IP & Patent Lawyers](#)

[Detecting Counterfeit Electronic Parts - Part 1](#)

[Detecting Counterfeit Electronic Parts - Part 2](#)

Courses

MuAnalysis offers two courses that are available on demand to groups of 5 or more. These half day courses can be located at customer premises or at MuAnalysis facilities.

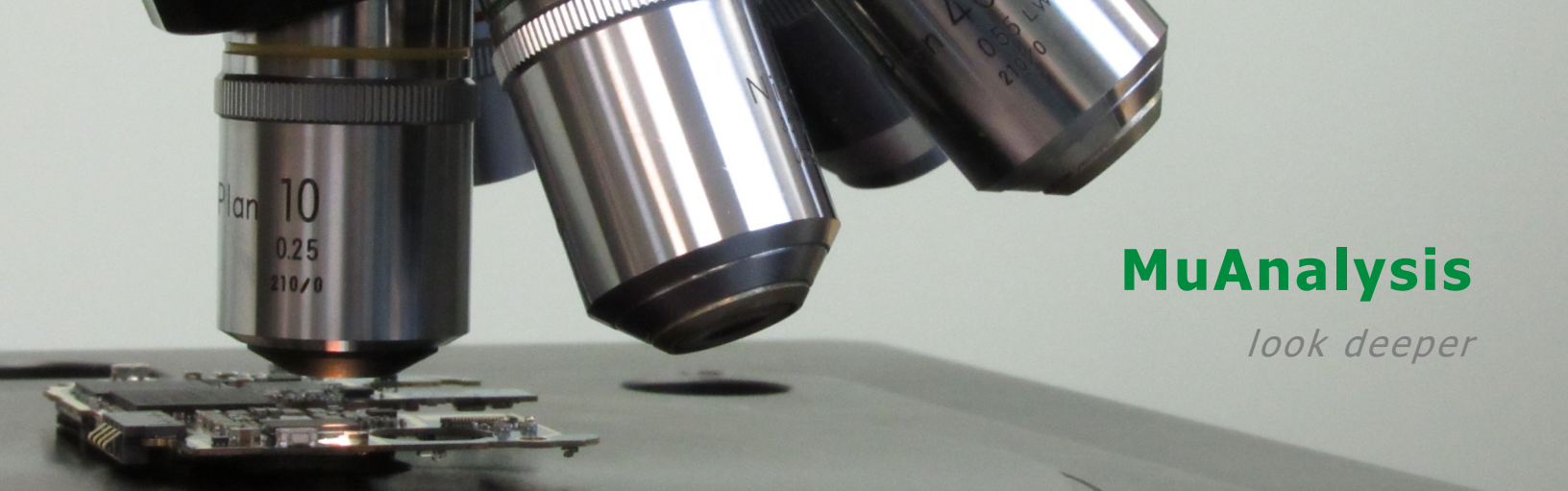
Failure Analysis of Electronic Devices

This workshop will benefit design engineers, component engineers, and quality engineers who may not be familiar with the physics behind FA tools available to them, internally or externally, to resolve their customer returns or supplier quality issues.

Shining a light on LED technology: construction, reliability, qualification, failure modes

This course will benefit design engineers, component engineers, quality engineers and patent lawyers who may not be familiar with the physics, internal structure and reliability issues of LEDs as components.

Did you know that MuAnalysis also performs analysis on materials?



MuAnalysis

look deeper

Scanning Electron Microscopy (SEM)

- Digital imaging
- Elemental chemical analysis by EDX
- Sub-micron thin film measurements

Counterfeit Detection and Materials Verification

- Authenticity verification of electronic components per AS5553 and IDEA1010
- Disjointment and RoHS screening
- Conflict minerals screening
- Construction analysis - package, structures and process definition
- Yield and process defect analysis
- Solder joint integrity analysis
- Assembly inspection per IPC-A-610
- Board construction per IPC-A-600
- DPA per MIL-STD-1580

Materials Analysis

- Raman micro-spectroscopy
- FTIR micro-spectroscopy
- Confocal Laser Scanning Microscopy (CLSM)
- UV fluorescence imaging
- Microcontamination analysis
- Vickers Micro-hardness

Failure Analysis of ICs, CCAs, LEDs, discrete passive and active components

- X-ray radiography
- Scanning acoustic microscopy
- Decapsulation and package opening
- Repackaging and reballing
- Precision cross sectioning, delayering, staining, and chemical techniques
- Plasma etching
- Automated latch-up and curve trace testing
- Precision mechanical electrical probing
- RF Micro-probing
- Liquid crystal fault isolation
- Emission microscopy (EMMI)
- Optical Beam Induced Current (OBIC) analysis
- Infra-red (IR) optical microscopy
- High-resolution optical microscopy

Reliability Testing per JEDEC JESD47, MIL-STD-883 or 750, Telcordia GR468

- Electrostatic Discharge (HBM, MM, SDM)
- Latch-up
- Temperature humidity bias (THB)
- Highly Accelerated Stress Test (HAST)
- Autoclave
- High/low temperature storage (HDS, LDS)
- Burn-in/Life test, static or dynamic
- Power Cycling
- Solderability
- Preconditioning
- Thermal cycling and thermal shock
- Wire bond pull, lid pull
- Die shear
- Peel and Pull tests

LED and Luminaire Analysis

- Reliability testing per IES LM-79 and IES LM-80
- Lumen measurements
- CRI, CCT
- Vendor identification

MuAnalysis Consulting Services

- Qualification program definition
- Vendor/supplier assessments
- Reliability/FA
- Data analysis
- Reliability monitoring
- Yield improvement
- Fab support
- ESD audits
- Customized seminars/educational programs
- Expert Witness services
- Teardown reports