

# Mechanical Stress Analysis

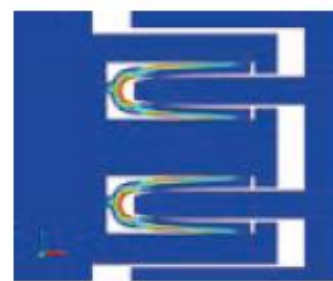
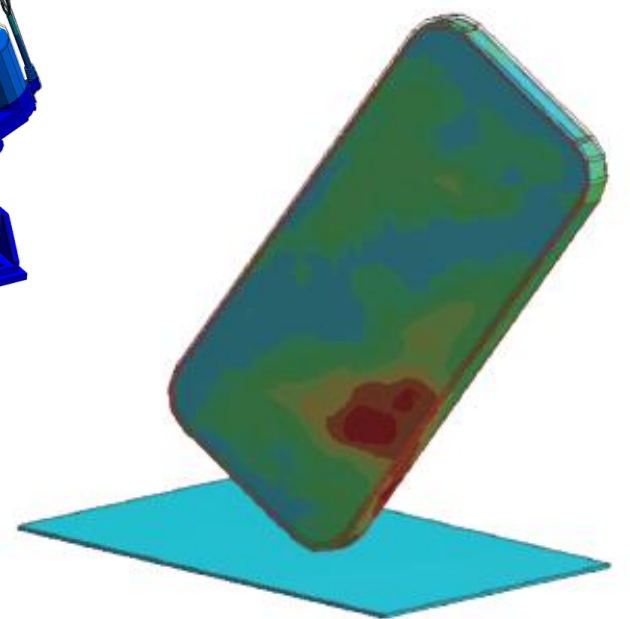
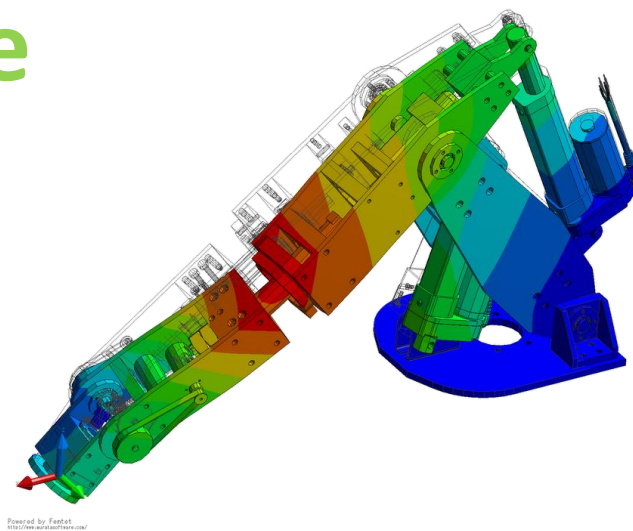
3D/2D Finite Element Method Analysis Software

## Drive Your Ideas to Reality

Mechanical stress solver simulates, just to name a few, the deformation and stress distribution due to pressure, the load, the acceleration, the centrifugal force, the thermal load, the vibration, the nonlinear materials like rubber, high polymer, and plastic.

## Capabilities at a Glance

- Vibration
- Collision
- Peeling
- Friction
- Large deformation
- Buckling
- Isotropic/anisotropic elasticity
- Hyperelasticity
- Elasto-plasticity
- Creep
- Viscoelasticity
- Rayleigh damping coefficient
- Initial stresses
- Transient analysis



[Try Femtet free of charge for 60 days](#)

# Mechanical Stress Analysis

## 3D/2D Finite Element Analysis Software

### Optimization Is What Counts

How you optimize your design is important, especially in the early stages of your engineering activity. It will reduce the incurring time and cost of, product development and making/re-working prototype samples. The mechanical stress solver provides you with the best possible solution to your design by calculating the items like strength-to-weight ratio, eigenvalues, and stiffness.



Life Assessment for Solder Ball



Deformation of Rubber

## Benefits

### Comprehensive Functionalities

All in one package from modeling to meshing, simulation, and to results display.

### Intuitive Operations

Rich in graphical user interface.  
Automatic meshing suitable for each analysis condition.

### Efficient Engineering

Capable of batch processing and parametric analysis that are essential for optimizing your design. VBA macro function is available.

### Database Management

A wide range of data can be stored and shared among a group of users; materials, body attributes, and analysis conditions

### CAD Translator

Supports various kinds of CAD formats to import and export, and lets you use the data on hand straight away.

### Multiphysics

In addition to the mechanical stress analysis, Femtet has solvers for the thermal conductivity, the electric field, and the magnetic field. A coupled analysis of these solvers is possible.