Gustav Robert Kirchoff (1824 – 1887)

From Wikipedia, the free encyclopedia:
Gustav Robert Kirchhoff was a German physicist who contributed to the fundamental understanding of electrical circuits, spectroscopy, and the emission of black-body radiation by heated objects. He coined the term "black body" radiation in 1862, and two sets of independent concepts in both circuit theory and thermal emission are named "Kirchhoff's laws" after him, as

well as a law of thermochemistry. The Bunsen–Kirchhoff Award for spectroscopy is named after him and his colleague, Robert Bunsen.
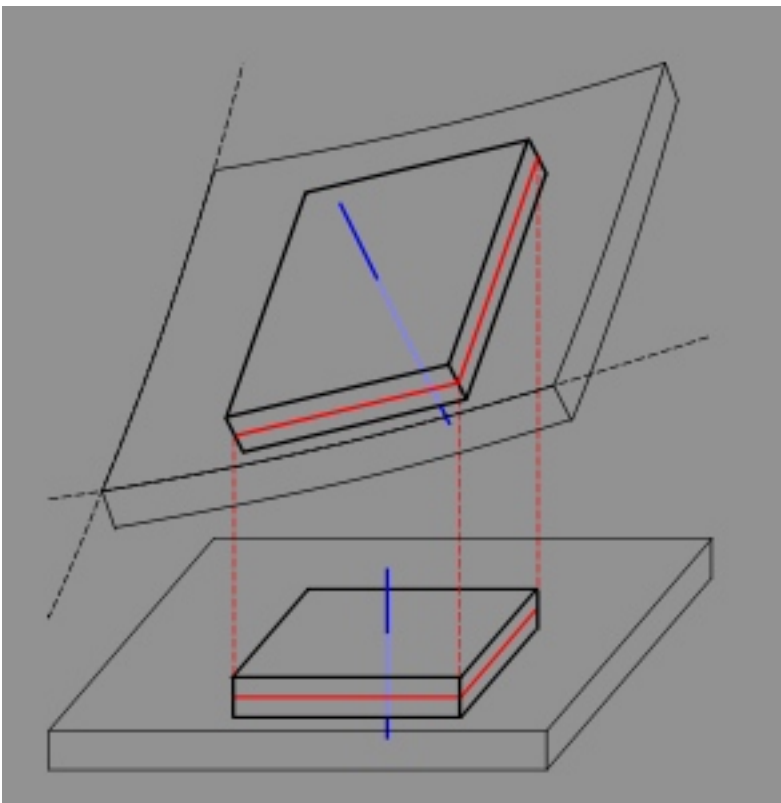
Kirchhoff–Love plate theory (from Wikipedia, the free encyclopedia)
Deformation of a thin plate highlighting the displacement, the mid-surface (red) and the normal to the mid-surface (blue)

The Kirchhoff–Love theory of plates is a two-dimensional mathematical model that is used to determine the stresses and deformations in thin plates subjected to forces and moments. This theory is an extension of Euler-Bernoulli beam theory and was developed in 1888 by Love using assumptions proposed by Kirchhoff. The theory assumes that a mid-surface plane can be used to represent a three-dimensional plate in two-dimensional form.

The following kinematic assumptions that are made in this theory:

  straight lines normal to the mid-surface remain straight after deformation
  straight lines normal to the mid-surface remain normal to the mid-surface after deformation
  changes in the thickness of the plate during a deformation are neglected.

Deformation of a thin plate highlighting the displacement, the mid-surface (red) and the normal to the mid-surface (blue)