

# A Multiphysics Approach to the Design of Loudspeaker Drivers

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## Abstract

Loudspeaker drivers are energy transducers: their main goal is to efficiently convert electrical energy to acoustic energy (sound), through the movement of mechanical parts. As such, they are prime candidates for the application of multiphysics methods and tools.

The talk will outline the growing set of tools that COMSOL Multiphysics® software puts in the hands of the loudspeaker designer; how they can be put to practical use in everyday work; how they can be applied to different kind of electroacoustic devices and systems (cone loudspeakers, compression drivers, horns, waveguides, and so on); how the measured performance compares to the simulations and what can be done to improve the accuracy of the prediction.