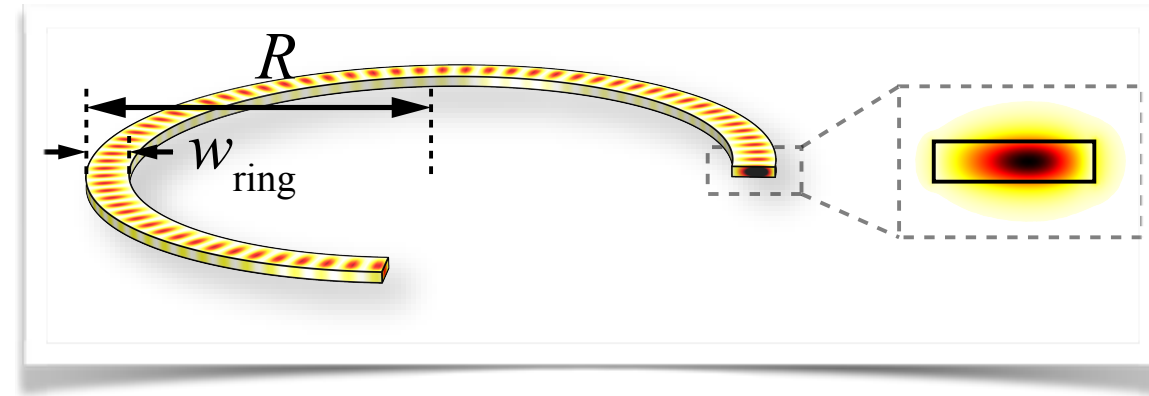# Finite element with COMSOL

1. Finite Element basics with Comsol:
   - Weak form
   - Implementation of simple scalar field (temperature) example.

2. Solving eigenmodes of waveguides and axisymmetric cavities.
   - Optical and mechanical waveguides
     - ▷ Fields
     - ▷ Dispersion relations (compare)
     - ▷ Coupling
   - Axisymmetric optical and mechanical cavities
     - ▷ Fields
     - ▷ Dispersion relations
     - ▷ Coupling

3. Periodic structures
   - Band diagrams
   - Density of states