

4. Mesh generation using

a priori - and / or a posteriori

↓
before the FE calculation

↓
after the FE calculation

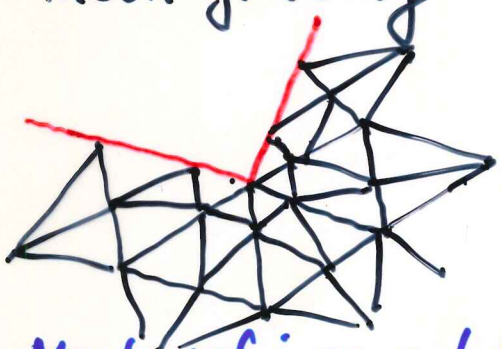
analysis of the input data
(\exists of obtuse corners in $\Gamma = \partial\Omega$, Γ_I , coefficient jumps in the PDE etc.)

analysis of the FE solution u_h :
a posteriori error estimates (see Section 2.6)



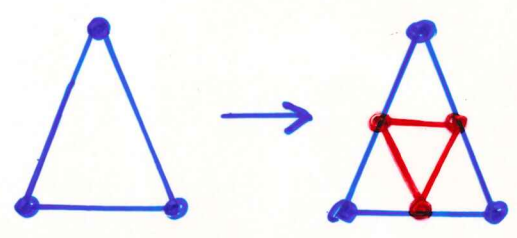
mesh grading

mesh refinement, i.e. mark the elements where the error is large, and refine these elements



Mesh refinement techniques for triangles:

red refinement



green refinement (triangle bisection)

