Università della Svizzera italiana

Facoltà di scienze informatiche

Software Atelier: Differential Equations **Academic Year 2016/2017**

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Assignment 2 - Reading assignment

Due date: Monday 10 October 2016

Name:
Discussed with:

1. Reading

On icorsi, you will find the first chapter from the FEniCS book; The first 5 pages contain a nice presentation of the weak formulation. After reading the first 5 pages rewrite the weak formulation for the following PDE:

$$-\Delta u + u = f \text{ in } \Omega \tag{1}$$

subjected to Dirichlet boundary conditions

$$u = u_0 \text{ on } \partial\Omega_D \tag{2}$$

and the Neumann boundary condition

$$\nabla u \cdot n = g \text{ on } \partial\Omega_N. \tag{3}$$

Write down the solution in LaTeXformat, compile with xelatex. The example format can be found on icorsi.

2. FEniCS

Try to install FEniCS on your machine, and try hands-on with the first example from the book.