

**Exercise 7 - Numerical methods for fluid-structure interaction
(Summer term 2015)**

Exercise 7.1 (Practical exercise)

We study the FSI code that is based on C++ deal.II (<https://www.dealii.org/>) and freely available via ANS (<http://media.archnumsoft.org/10305/>).

Questions:

- Where is the inflow Dirichlet velocity defined?
 - Where do we input the geometry?
 - What are the material parameters?
 - What is the chosen time-stepping scheme and how can we change it?
 - What kind of MMPDE is implemented?
 - What is the finite element choice for v, p, u ?
 - What are the boundary conditions?
 - How are the linear equation systems solved?
 - Is the symmetric or non-symmetric fluid Cauchy stress tensor used? (Hint: Is there a term implemented on the outflow boundary?)
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Discussion / Meeting on Jul 13, 2015