Assessment

- ***To obtain a mark of 5.0***

1. Program the 2D diffusion equation with bilinear and with biquadratic elements.
2. Compute the order of accuracy of your code for both element types for the steady state diffusion equation (look at the online lecture notes).

- ***To obtain a mark greater than 5.0, do one (or more) of:***

1. Write a 2D elasticity code and demonstrate that it is working correctly with a suitable test problem.
2. Write a 2D stokes code (this will definitely earn a mark of 6.0).
3. Perform an order of accuracy test with the method of manufactured solutions for a *time dependent* 2D diffusion problem (using biquadratic elements).
4. Find a cool geological application for any of the codes you have developed and show how your numerical model gives new insight into this problem.

Assessment

- Prepare a short report (<10 pages) including a description of the model, the code implementation and any figures/graphs. All figures/graphs must have labelled axis, etc.
- The source code used to generate your results must be submitted with your report. It is a requirement that I can reproduce your results.
- **All reports and code must be submitted by August 31.** Please email your submission to dave.may@erdw.ethz.ch
- It is required that you visit D. May before the final submission date to discuss your code. This is to ensure that you wrote it yourself.
- You can ask as many questions and visit as often as you require (appointment via email please!) to get your code working. *This is encouraged and will not negatively influence your final mark.*