

## Finite element methods for stationary convection-diffusion problems

## Martin Stynes<sup>1</sup>

The nature of solutions of steady-state convection-diffusion problems (where convection dominates) will be described. Standard numerical methods have difficulty in providing accurate solutions to such problems. Finite element methods that are specially designed for convection-diffusion will be described. The use of special meshes in the solution of these problems will also be considered.

<sup>&</sup>lt;sup>1</sup> National University of Ireland, Cork, Ireland., m.stynes@ucc.ie