Lecture Summary, Monday, May 4, 2020

Shashank

- We started the class by revisiting some of the time stepping concepts.
  - Ed's closing remark: Crank-Nicolsan is very accurate for smaller time steps, implicit scheme is more accurate with larder time-steps
- We then discussed non-dimensionalising the advection-diffusion equation.
- We discussed the derivation of the Peclet Number from a non-dimensionalised advection diffusion equation.
- We discussed what is the physical significance of Peclet number's magnitude, eg: P >>1, diffusion time is greater than advection time, ie, diffusion is less effective than advection component of quantity (heat) transfer.
- We discussed how the flow changes along the boundary, and how diffusion starts dominating along the edges.