

APPLIED MATHEMATICS HONOURS NUMERICAL ANALYSIS B

COURSE INFORMATION 2018

Runge-Kutta Methods

- Definition
- Construction / Derivation
- Error analysis, Error control
- Stability

Boundary Value Problems

- One- and two-dimensional
- Finite-difference method, Shooting method
- Error control

Parabolic PDEs

- Finite-difference method
- Error analysis
- Stability

Computational and theoretical work will be assigned *ad hoc* in the form of several assignments. Submission of work after deadline is not acceptable.

(Note that all of the above is subject to possible alteration.)