

APPLIED MATHEMATICS HONOURS IV, 2009

Computational Projects in Applied Mathematics

Provisional Timetable for Projects

There will be five projects for this semester. The first project is compulsory. There will then be two groups of two projects: students should do one project from each of these groups. There will be three to four lectures on each project, and students will attend lectures for ALL five projects.

Weeks 1–2

Project 1 (compulsory) on *A Model for the Spread of Rabies* will be handed out in week one and will be lectured on in weeks one and two. The project must be handed in by Friday 3rd April.

Weeks 3–6

Lectures will concentrate on the second group of projects.

Project 2: *Spectral Methods for Nonlinear Wave Equations*

Project 3: *Neural Networks: A Learning Network*

In week 5, Project 1 should be handed in.

In week 6, students will have started work on ONE of the Projects 2 or 3. The project must be handed in by Wednesday 6th May.

Mid-Semester Break is from Friday April 10th to Sunday April 19th.

Weeks 7–9

Lectures will concentrate on the third group of projects.

Project 4: *Symplectic Integrators for Hamiltonian Systems*

Project 5: *The Expulsion of Magnetic Flux by Convective Eddies*

In week 9, one of projects 2 or 3 should be handed in.

Weeks 10–12

Lectures on projects 4 and 5 will be completed.

Students will have started work on ONE of the Projects 4 or 5. The project must be handed in by Wednesday 3rd June.

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