

Korteweg-de Vries equation

3. Mathematical Investigations Miniproject

This workshop could be used as a starting point for Mathematical Investigations projects. Possible topics are:

- Look for solutions of similar differential equations with solitons (with appropriate background reading). There could be several options of this type, e.g. for the sine Gordon equation or the nonlinear Schrödinger equation (just the Maths).
- Read up about the Mathematics of the Severn bore and present this as a talk, report, or similar as planned for the investigations.
- Programming to study solutions. This would be suitable for students (individual students or a subgroup) with particular interest in programming as their contribution to the group effort. For these students there should be short handout with an introduction into e.g. Matlab including packages/commands relevant to differential equations.