



Numerical Algorithms

Winter Semester 2015
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Exercise Sheet 11.

Due date: **Tuesday, 28.1.16.**

Programming Exercise 1. (Discontinuous Galerkin)

Complete the [code accompanying](#) this problem sheet to solve the linear advection equation

$$\begin{cases} u_t + au_x = 0, & t > 0, x \in [0, 10], \\ u(x, 0) = \sin(x), & t = 0. \end{cases} \quad (1)$$

with advection velocity $a = 2\pi$, and inflow boundary condition $g(t) = -\sin(t)$.

(8 points)