Numerical Derivative vs Integration Error Error in integral approximation of  $f(x) = \sin(x)$ Error in derivative approximation of  $f(x) = \sin(x)$ 0.1 0.1 0.0 0.0 0.0 0.2 1.2 0.4 0.6 0.8 1.0 1.4 0.0  $\Delta x$