

Scientific Computing
Homework 3
Assigned: Sept. 20; Due: Oct. 4

Written Homework:

Use Taylor series to derive the leading term in the error from integrating one panel using the Trapezoid rule:

$$\int_{x_k}^{x_{k+1}} f(x) dx = \frac{h}{2} [f(x_k) + f(x_{k+1})] + \frac{h^3}{12} f''(x_m)$$

Programming Assignment:

Do problem 12 at the end of chapter two in the Lecture Notes. Please hand in a copy of your code and analysis, as well as mailing it to the TA at bringley@cims. Make sure you follow the guidelines in the Software section.