McGill Computational Science and Engineering Seminar

Wednesday October 6th at 14:30 in Burnside Hall room 1120

Adaptive Quadrature - Revisited

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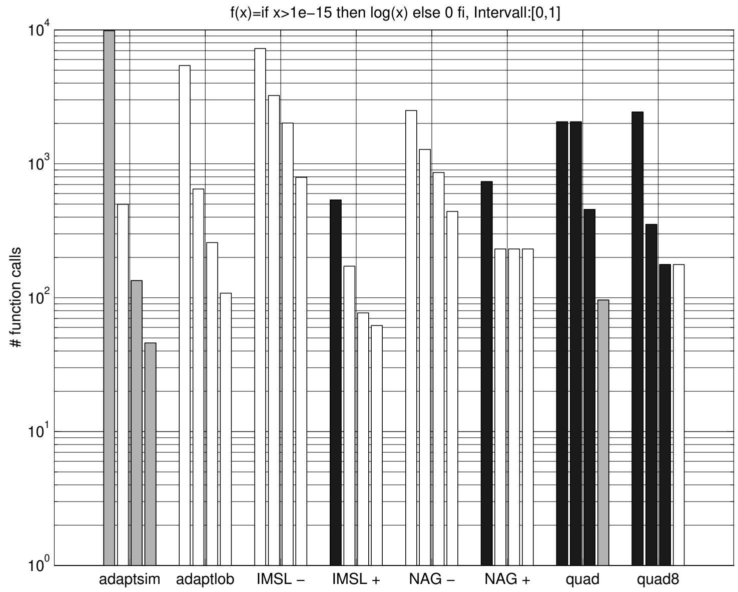
First the basic principles of adaptive quadrature are reviewed. Adaptive quadrature programs being recursive by nature, the choice of a good termination criterion is given particular attention. Two Matlab quadrature programs are presented. The first is an implementation of the well-known adaptive recursive Simpson's rule; the second is new and is based on a four-point Gauss-Lobatto formula and two successive Kronrod extensions. Comparative test results are described and attention is drawn to serious deficiencies in the adaptive routines **quad** and **quad8** provided by Matlab.



Coffee and Desserts are served after the seminar at 15:30 in the lounge, Burnside Hall 1024