



Errata to “The Errors in Calculating the Pseudospectral Differentiation Matrices for Čebyšev-Gauss-Lobatto Points”

Computers Math. Applic., Vol. 37, No. 1, pp. 41–48, 1999

R. BALTENSPERGER AND J.-P. BERRUT
 Institut de Mathématiques, Université de Fribourg
 CH-1700 Fribourg/Pérolles, Switzerland
 <richard.baltensperger><jean-paul.berrut>@unifr.ch

(Received and accepted February 1999)

Unfortunately, two formulas were misprinted in the above article. On page 45, it should read: “This yields the first derivative matrix as

$$D_{jk}^{(1)} = \begin{cases} \frac{\delta_k (-1)^{j+k}}{\delta_j x_j - x_k}, & \text{if } j \neq k, \\ - \sum_{i=0, i \neq j}^n \frac{\delta_i (-1)^{i+j}}{\delta_j x_j - x_i}, & \text{if } j = k, \end{cases} \quad (14)$$

and the second derivative matrix as

$$D_{jk}^{(2)} = \begin{cases} 2D_{jk}^{(1)} \left(D_{jj}^{(1)} - \frac{1}{x_j - x_k} \right), & \text{if } j \neq k, \\ 2 \left(D_{jj}^{(1)} \right)^2 + 2 \sum_{i=0, i \neq j}^n D_{ji}^{(1)} \frac{1}{x_j - x_i}, & \text{if } j = k. \end{cases} \quad (15)$$

Moreover, the last four citations [13–16] were inadvertently omitted.

REFERENCES

13. H.E. Salzer, Lagrangian interpolation at the Chebyshev points $x_{n,\nu} = \cos(\nu\pi/n)$, $\nu = 0(1)n$; some unnoted advantages, *The Computer J.* **15**, 156–159 (1972).
14. P. Henrici, *Essentials of Numerical Analysis*, Wiley, New York, (1982).
15. C. Schneider and W. Werner, Some new aspects of rational interpolation, *Math. Comp.* **47**, 285–299 (1986).
16. W.S. Don and A. Solomonoff, Accuracy and speed in computing the Chebyshev collocation derivative, *SIAM J. Sci. Comput.* **16**, 1253–1268 (1995).