This error was acknowledged in July 2001, and corrected in later editions of the book.

Errata for "Numerical Recipes"

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Abstract

This records a small error I've found in the interesting book "Numerical Recipes in Fortran 77: The Art of Scientific Computing".

1 First section

Subject: Error in text of Numerical Recipes 2cd Edition book
Date: Sun, 15 Jul 2001 20:07:06 -0400
From: Greg Hammett <Hammett@pppl.gov>
To: bugs@nr.com

Greetings Numerical Recipes Cooks,

I enjoy reading parts of your cookbook from time to time.

I noticed a small error in Eqs. 4.5.20 and 4.5.21, on p.147 of the Numerical Recipes in Fortran 77 (2cd Edition, 1997 Printing corresponding to Software Vs. 2.08), and online at

http://www.ulib.org/webRoot/Books/Numerical_Recipes/bookfpdf/f4-5.pdf

The same error is in the C version of your book. The error is only in the explanation of the algorithm in the text, and not in the Fortran program (I didn't check the C program).

The problem is that in Eq. 4.5.20, the subscript j is used inconsistently on the left hand and right hand side of the equation. Eq. 4.5.20 should be changed from (using LaTeX notation)

$$w_j = \frac{2}{(\tilde{H}_j)^2}$$

to

$$w_j = \frac{2}{[\tilde{H}'_N(x_j)]^2}$$

which would then make it similar in form to Eq. 4.5.16, as it should be. (The confusion arrose becase the subscript j is used in Eq. 4.5.19 to indicate the order of

a Hermite polynomial, while in Eq. 4.5.20 the j'th weight is found by evaluating the N'th order Hermite polynomial at the location of the j'th abcissa.)

To be consistent, this then requires changing Eq. 4.5.21 to read:

$$\tilde{H}'_N = \sqrt{2N}\tilde{H}'_{N-1}$$

Cheers,
Greg Hammett
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Acknowledgements

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