

H. A. Lauwerier, **Asymptotic analysis**, Mathematical Centre Tracts No. 54, Amsterdam, 1974, 145 pages, price Dfl. 16,—.

This tract is a rewritten version of the first edition which appeared in 1966. It deals with the asymptotic behaviour of functions which are explicitly given by integrals. In his preface, the author announces a future second volume dealing with the asymptotic behaviour of functions which are implicitly defined by a differential equation, and in which also an exposition of perturbation techniques will be given.

The book treats the well-known methods of asymptotic analysis for integrals, such as integration by parts, the method of Laplace, the saddle point method and the method of stationary phase.

Applications are given among others to the gamma, Bessel, Airy, Hermite and confluent hypergeometric functions. Furthermore, applications to Kelvin's ship wave pattern and the theory of probability are presented. Most of the material of the book can also be found in other textbooks on asymptotic analysis.

The presentation is clear and the book may well serve as a self-contained textbook for students in mathematics and engineering.

H. W. Hoogstraten

Errata

V. K. Varatharajulu: *Elastodynamic analysis of crack emanating from the vertex of a wedge*, Journal of Engineering Mathematics, 8 (1974) 281–290.

Equation (6.12) should read:

$$\frac{\partial \zeta}{\partial z} = -\frac{1}{2\kappa} \left(\frac{1}{l}\right)^{1/\kappa} z^{1/\kappa-1} \left/ \left[1 - \left(\frac{z}{l}\right)^{1/\kappa} \right]^{\frac{1}{2}} \right.$$

Equation (6.15) should read:

$$\tau_{\phi z} = \frac{\mu W_0 t}{\kappa \pi l R} \operatorname{Re} \left\{ \frac{i \operatorname{Re} e^{i\phi} \left[1 + \frac{R}{l} e^{i\phi} \right]^{1/\kappa-1}}{\left[\left(1 + \frac{R}{l} e^{i\phi} \right)^{1/\kappa} \right]^{\frac{1}{2}} \left[1 - \left(1 + \frac{R}{l} e^{i\phi} \right)^{1/\kappa} \right]^{\frac{1}{2}}} \right\}$$

Equation (3.7) should read

$$\pi/2 < \theta < \kappa\pi, \dots$$