special subsets of the complex plane, and to bounds on circles which contain all roots. The authors emphasize that the old methods of Bernoulli, Graeffe, Laguerre, and Lehmer-Schur are not only of historical interest. Weierstrass' iteration for the computation of all roots, which has been rediscovered several times, is treated with care. Bounds on the complexity conclude the text.

The most original part of the book is the contribution on solids, and even if the book were restricted to that alone, it would be worth having it.

DIETRICH BRAESS
INSTITUT FÜR MATHEMATIK
RUHR-UNIVERSITÄT BOCHUM
44780 BOCHUM, GERMANY

2[65-06, 65Nxx]—*Boundary value problems for partial differential equations and applications*, J.-L. Lions and C. Baiocchi (Editors), Research Notes in Applied Mathematics, vol. 23, Masson, Paris, 1993, xii+460 pp., 24 cm, softcover, F 390

This volume contains 44 papers with a total of 71 authors. The papers were all solicited as a tribute to Enrico Magenes on the occasion of his 70th birthday. Given the reputations of the contributing authors and the great esteem in which the honoree is held among workers in Numerical PDEs, it is no surprise that the papers are of high quality. It is likely that quite a number of these papers will be of interest to many readers of *Mathematics of Computation.*

J.H.B.

3[49-02, 70-08, 70Q05]—*Control and estimation in distributed parameter systems*, H. T. Banks (Editor), Frontiers in Applied Mathematics, vol. 11, Society for Industrial and Applied Mathematics, Philadelphia, PA, 1992, xii + 227 pp., 25 cm, softcover, $56.50

This book is volume 11 in the Frontiers in Applied Mathematics series published by SIAM. It consists of five, primarily review, contributions, each between 40 and 54 pages in length and each with extensive bibliographies.

The contributors and their topics, in order, are

1. J.-L. Lions on "Pointwise control for distributed systems",

2. M. C. Delfour and M. P. Polis on "Issues related to stabilization of large flexible structures",

3. J. S. Gibson and A. Adamian on "A comparison of three approximation schemes for optimal control of a large flexible structure",

4. D. L. Russell on "Mathematical models for the elastic beam with frequency proportional damping", and

5. R. F. Curtain on "A synthesis of time and frequency domain methods for the control of infinite-dimensional systems: a system theoretic approach".

For the most part these articles are independent and treat the formulation of, and analytical questions about, specific classes of control problems. Only the third chapter emphasizes computational questions and methodology. The last four chapters each use various beam equations and models as examples for their analysis. The book provides a good snapshot of the state of the art of these topics at the