

ADVANCES IN MATHEMATICS 59, 95 (1986)

Book Reviews

C. I. BYRNES AND C. F. MARTIN, *Geometrical Methods for the Theory of Linear Systems*, Reidel, 1980, 217 pp.

A. FEINTUCH AND R. SACKS, *Systems Theory: A Hilbert Space Approach*, Academic Press, 1982, 310 pp.

Hilbert space theory seemed exhausted just a few years ago (how pathological can a bounded operator be?) but has found two new lives: one by remarriage with circuit theory and one by a love affair with systems theory, as in one of the present books, both of which can be safely put in the hands of our friends in engineering (those who know how to read and write, of course) without fear of bringing a beautiful friendship to an end.

H. MICHEL (Ed.), *Ergodic Theory and Related Topics*, Akademie-Verlag, 1982, 232 pp.

A happy *mélange* of the probabilistic and dynamical sides of the subject. The papers are more readable than might be expected of a collection. Why is it that mathematicians in Eastern Europe usually write more clearly than those in the West?

E. HUSSERL, *Phantasie, Bewusstsein, Erinnerung*, Nijhoff, 1980, 723 pp.

The late Edmund Husserl, a student of Weierstrass turned philosopher whom Gödel thought to be the greatest philosopher since Leibniz, is still publishing, fifty years after his death, at the rate of one volume per year. His philosophy is for many of us a paradise from which no one can expel us.

S. GAL, *Search Games*, Academic Press, 1980, 216 pp.

It took a long time for information theory à la Shannon to be viewed as search theory, and even longer to get the theory of games mixed up in it. At last we can read about it in this amusing short book.

S. MORGAN, *The Mathematical Theory of Knots and Braids: An Introduction*, North-Holland, 1983, 295 pp.

H. R. MARGOLIS, *Spectra and the Steenrod Algebra*, North-Holland, 1983, 484 pp.

For a long time, books on algebra topology were of one of two kinds. Either they ended with the Klein bottle, or else they were written in the style of a personal letter to Norman Steenrod. It is a hopeful sign that topics that are at the very center of mathematics, like stable homotopy theory, are at last beginning to get written up, and we hope this book will be the auspicious beginning of a long series. As for knots, who does not love the non-commutative differential calculus that is associated with them?

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