Vorlesungen über die Theorie der Integralgleichungen. By I. G. Petrovskij. Würzburg, Physica-Verlag, 1953. 100 pp. 7.80 DM.

This is a clear and concise exposition in less than one hundred pages of the classical theory of integral equations. Unfortunately while the book undoubtedly fills a need for Russian speaking students—it was originally written in that language—a German edition seems to me redundant. There is little that cannot be found in the opening chapters of Courant-Hilbert.

The book contains a useful table of analogies between finite-dimensional space and Hilbert space (as a function space), and an appendix in which the author shows the advantage of Lebesgue integration in developing the theory of symmetric kernels. The Fredholm theory is done, not by the famous method of Fredholm determinants, but by E. Schmidt's method of approximation by degenerate kernels.

There is little in the way of illustrative material or exercises.

Harry Pollard