Berlekamp, Elwyn R.
Algebraic coding theory. Revised ed. (English) ⟦Zbl 1320.94001⟧
Hackensack, NJ: World Scientific (ISBN 978-981-4635-89-9/hbk; 978-981-4635-91-2/ebook). xxiv, 474 p. (2015).

This is a (very slightly) revised edition of Berlekamp's famous book, "Algebraic Coding Theory", originally published in 1968 [Zbl 0988.94521] (see the review of the Russian translation in [Zbl 0256.94006], and with a second edition in 1984 [Zbl 1320.94002] (published by Aegean Park Press). Being one of the first textbooks in this area, it is even today a real gem.

The revision mainly seems to refer to the author's wonderful historical overview of the developments of this area and annotations of personal activities during the period from 1948 (C. Shannon) to 2002 (M. Sudan receiving the Nevanlinna prize), and an addition of 6 references which were not mentioned in the 2nd ed.

However, the effort in publishing this edition seems to have been kept to a minimum. The two bibliographies from the first and second edition are still kept separate, and also Albert Mullin's recommendation made in his review mentioned above, to include locations of reviews to Zentralblatt MATH and Referativny Zhurnal Matematika, has not been carried out. With the technologies of today, such an update could have been easily done and enhanced the value of this fine book.

Summing up, practicing engineers, lecturers and scholars will find this book of great value.

Reviewer: Olaf Ninnemann (Berlin)

MSC:

94-01	Introductory exposition (textbooks, tutorial papers, etc.) pertaining to information and communication theory
94Bxx	Theory of error-correcting codes and error-detecting codes
11Y16	Number-theoretic algorithms; complexity
11T06	Polynomials over finite fields
01A75	Collected or selected works; reprintings or translations of classics

Cited in **1** Review
Cited in **16** Documents

Full Text: DOI