

Hlawka, Edmund

The idea of “arbitrary” functions of Poincaré in the course of a century. (Die Idee der “willkürlichen” Funktionen von Poincaré im Laufe des Jahrhunderts.) (German)

[Zbl 1104.01305](#)

Beck, Hanno (ed.) et al., Nature, mathematics and history. Research on Alexander von Humboldt and on mathematical historiography. Halle/Saale: Deutsche Akademie der Naturforscher Leopoldina (ISBN 3-335-00510-4/pbk). Acta Hist. Leopold. 27, 189-200 (1997).

The author discusses Poincaré’s use in probability theory of the “method of arbitrary functions” in two known physical problems: (A) the distribution of the small planets and (B) the probability of hitting red or black in roulette [see *H. Poincaré*, *La science et l’hypothèse*, Flammarion, Paris (1902; [JFM 34.0080.12](#)) (Chapter 11, pp. 227 (A), 233–235 (B))]. A number of famous comments about problems (A) and (B) are mentioned, especially in connection with ergodic theory. Finally he gives some modern versions of uniform distribution results stated by Poincaré in more literary terms depending on the Erdős-Turán formula and the works of the author.

For the entire collection see [[Zbl 0988.00020](#)].

Reviewer: [Olaf Ninnemann \(Berlin\)](#)

MSC:

[01A60](#) History of mathematics in the 20th century

Cited in **1** Document