

**Hilbert, David; Klein, Felix
Frei, Günther (ed.)**

**Der Briefwechsel David Hilbert – Felix Klein (1886–1918). Mit Anmerkungen hrsg. von
Günther Frei.** (German) Zbl 0566.01006

Arbeiten aus der Niedersächsischen Staats- und Universitätsbibliothek Göttingen, Bd. 19. Göttingen:
Vandenhoeck & Ruprecht. xi, 153 S. DM 28.00 (1985).

This volume contains mathematical correspondence between David Hilbert and Felix Klein written between 1886 and 1918. This collection of 129 letters, extensively annotated by the editor, gives the reader a first hand look at a most important part of mathematics as seen by two of the greatest mathematicians of the time. These letters trace both mathematical developments of this period and the many mathematicians responsible for these developments.

The collection begins with letters written while Hilbert was studying in Paris and progresses through the years giving a detailed picture of Hilbert's mathematics as it developed (Hilbert's work on invariant theory being a primary example). The first letters (1-96) give a very detailed mathematical picture of the times (between 1886 and 1894) while the later letters written after Hilbert's move to Göttingen, are less frequent and include more non-mathematical details. The last few letters contain a discussion on the mathematical foundations of General Relativity.

Clearly, such a collection offers the reader a marvelous look at significant mathematics as it was created and seen by its creators. The annotator states that the printed text is fundamentally faithful to the original letters with only very minimal changes made to correct obvious written mistakes. The annotation, extensive in many places, provides both mathematical and personal (that is information about mathematicians referred to in the text) details which add to a better understanding of the letters. In addition, the annotator has provided a great service by appending two extensive indexes, a name register and mathematical subject index. The first register, containing the names of almost 200 well known mathematicians, enables the reader to find the letters referring to these mathematicians and their works. Similarly, the second register, containing over 200 mathematical topics, enables the reader to find the letters discussing these topics.

All in all this is a valuable and extremely interesting volume for the mathematical historian to have and a pleasure for any mathematician to be able to sample the superb mathematics found in this correspondence.

Reviewer: B. Mann

MSC:

- [01A55](#) History of mathematics in the 19th century
- [01A60](#) History of mathematics in the 20th century
- [01A75](#) Collected or selected works; reprintings or translations of classics
- [01-02](#) Research exposition (monographs, survey articles) pertaining to history and biography

Cited in 1 Review

Keywords:

[correspondence](#); [invariant theory](#); [general relativity](#)

Biographic references:

[Hilbert, David; Klein, Felix](#)