**Krantz, Steven G.**
**The proof is in the pudding. The changing nature of mathematical proof.**
New York, NY: Springer (ISBN 978-0-387-48908-7/hbk; 978-0-387-48744-1/ebook). xvi, 264 p. (2011).

The somewhat cryptic title of the book is a modification of the bonmot "The proof of the pudding is in the eating" which in turn is an analogue to Cervantes' citation "Al freir de los huevos lo verá" from *Don Quijote* (1615). Both citations mean, loosely speaking, that you can say that something is a success only when you have tried it. "Successful" is a mathematician if he has found an interesting result (or counterexample), and "trying" it means being able to give a proof which is accepted by a sufficiently large part of the community. The primary concern of this book is to describe the essence, nature, and methodology of mathematical proof, with a strong emphasis on the change of these concepts in time. In fact, the book covers the full history and evolution of the proof concept. The notion of rigorous thinking has evolved over time and changed more than once, and the author documents that development. He gives examples both of decisive developments in the technique of proof and also of magnificent blunders that taught us about how to think rigorously. In contrast to the "sloppy" style some centuries ago, in our times strict rules for generating and recording proofs have been established (which, however, are not always observed). At the same time, many new external factors have now an influence over the way mathematics is practiced; for example, the computer plays an important role in many (not only application-oriented) mathematical investigations. Enumerating the headings of the 13 chapters gives a rough idea of its contents. 1. What is a proof and why? 2. The ancients. 3. The middle ages and an emphasis on calculation. 4. The dawn of the modern age. 5. Hilbert and the twentieth century. 6. The tantalizing four-color theorem. 7. Computer-generated proofs. 8. The computer as an aid to teaching and a substitute for proof. 9. Aspects of modern mathematical life. 10. Beyond computers: the sociology of mathematical proof. 11. A legacy of elusive proofs. 12. John Horgan and "the death of proof?" 13. Closing thoughts. This enumeration illustrates the large variety of topics treated by the author in this wonderful book. It is written in a very clear and suggestive manner that makes the reading pleasant and rewarding; just consider Chapter 5 (on distinguished mathematicians of the last century) or Chapter 11 (on some famous open problems) which are really worth reading. The reviewer's only criticism concerns the author's typical restricted American view of the "rest of the world": for example, what he writes in Section 5.2 about European mathematics is simply not true. Moreover, the "he/she – his/her" style used by many authors, especially in the US, who mix up, for the alleged sake of political correctness, grammatical and biological gender, is annoying and ridiculous. However, these minor flaws did not spoil the reviewer's pleasure in reading the whole book. As the author himself writes in the Preface, the purpose of the book is to collect the ideas connected with all aspects of proof, [ ... ] and to acquaint the reader with the culture of mathematics: who mathematicians are, what they care about, how they think, and what they do. Any reader will notice that the author has reached this goal in very convincing way, and the outcome is a brilliant work which should be found in every math library and department office.          *Jürgen Appell (Würzburg)*