

ALONZO CHURCH: His Life, His Work and Some of His Miracles.

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Abstract

This paper is dedicated to Alonzo Church, who died in August 1995 after a long life devoted to logic. To Church we owe lambda calculus, the thesis bearing his name and the solution to the *Entscheidungsproblem*. His well-known book, *Introduction to Mathematical Logic*, vol. I, defined the subject matter of mathematical logic, the approach to be taken and the basic topics addressed. Church was also the creator of the *Journal of Symbolic Logic*, the best-known journal of the area, which he edited for several decades.

This paper is divided in three sections. The first is written in journalistic style: the story of the life of Alonzo Church is told, including some of the many anecdotes I have collected from different sources. The second part is devoted to his work, but is far from being exhaustive. The last part is more original; in it I attempt to show that Church's great discovery was lambda calculus and that his remaining contributions were mainly inspired afterthoughts in the sense that most of his contributions as well as some of his pupils derive from that initial achievement. Included are Kleene's Recursion Theory and the completeness proof of Henkin. I have added an appendix in which is presented the typed lambda calculus and a proof of the undecidability of first-order logic.