

My main life's work has been to write *The Art of Computer Programming*, a work-still-in-progress that attempts to organize and summarize what is known about the vast subject of computer methods and to give it firm mathematical and historical foundations. (The three volumes published so far have been translated into many languages and more than a million copies have been sold.) As a researcher in computer science, I am more or less the “father” of several subareas called the analysis of algorithms, $LR(k)$ and $LL(k)$ parsing, attribute grammars, empirical study of programming languages, and literate programming. My best-known research in mathematics is represented by the Knuth–Bendix algorithm for word problems, the Schensted–Knuth correspondence between matrices and tableaux, and an analysis of the big bang that occurs in the evolution of random graphs. As a university professor I introduced a variety of new courses into the curriculum, notably Concrete Mathematics, and I supervised the dissertations of 28 excellent students. And as a programmer, I wrote software systems called \TeX and METAFONT that are used for the majority of today's mathematical publications and now have more than a million users worldwide.