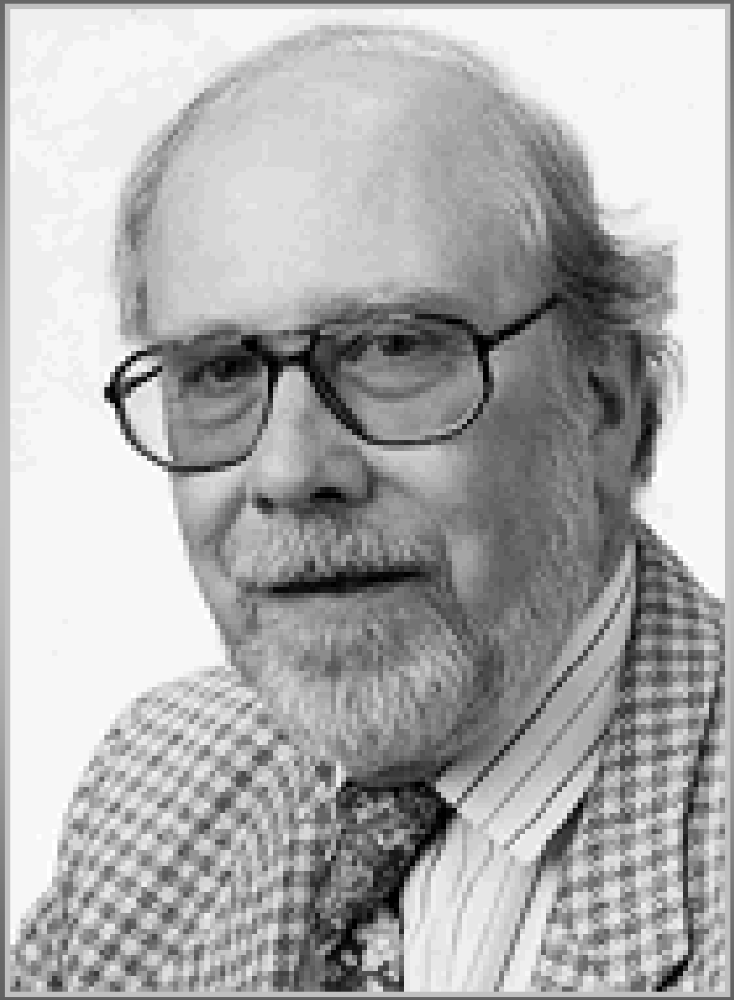
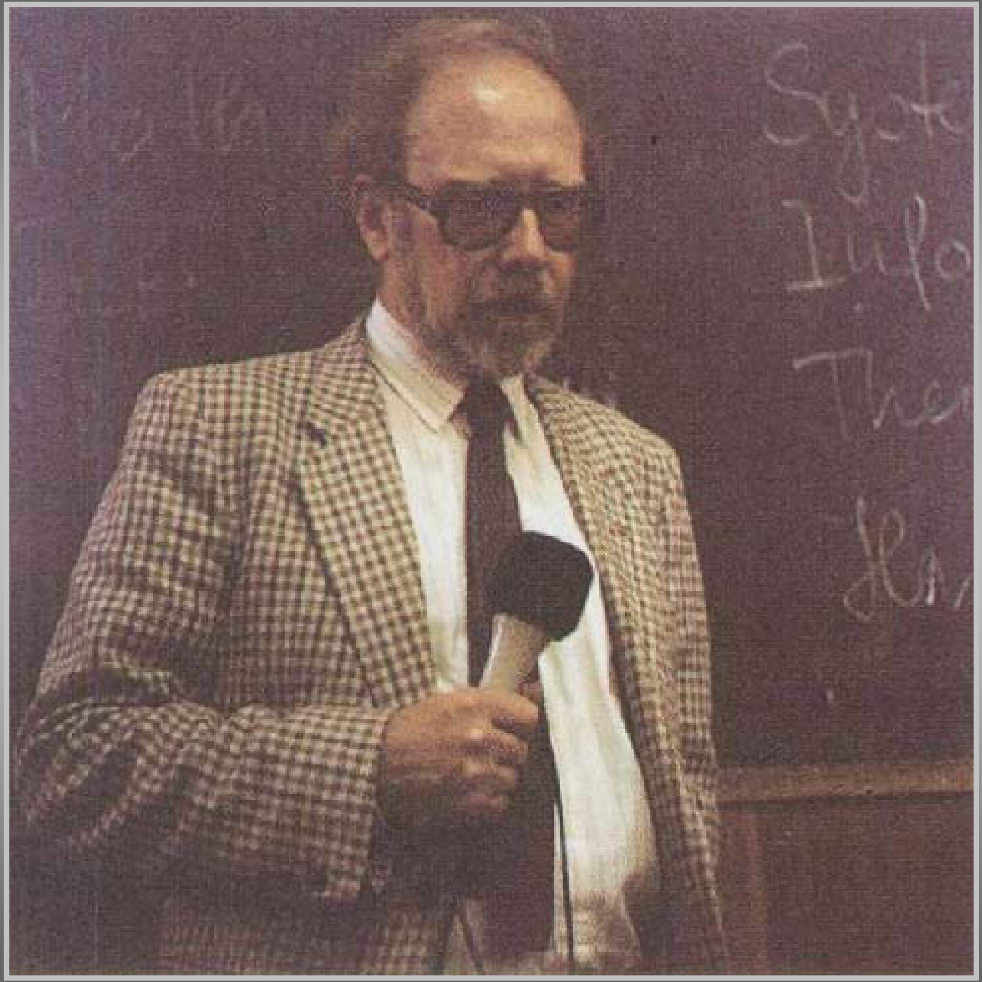
Конференция JMLC’2003. Клагенфурт (Австрия). Проф. Никлаус Вирт (ETH Zurich)

Никлаус Вирт в годы создания Паскаля. 1969 г.



Проф. Вирт в ETH Zurich. Конец 1990-х годов

Персональный компьютер Lilith. Любимое детище Никлауса Вирта (1979-1980)



Начало 1990-х годов. Москва. Вирт выступает в Институте общей физики АН СССР

Конференция ACM HOPL-II. Кембридж (США). Апрель 1993. Никлаус Вирт (справа)

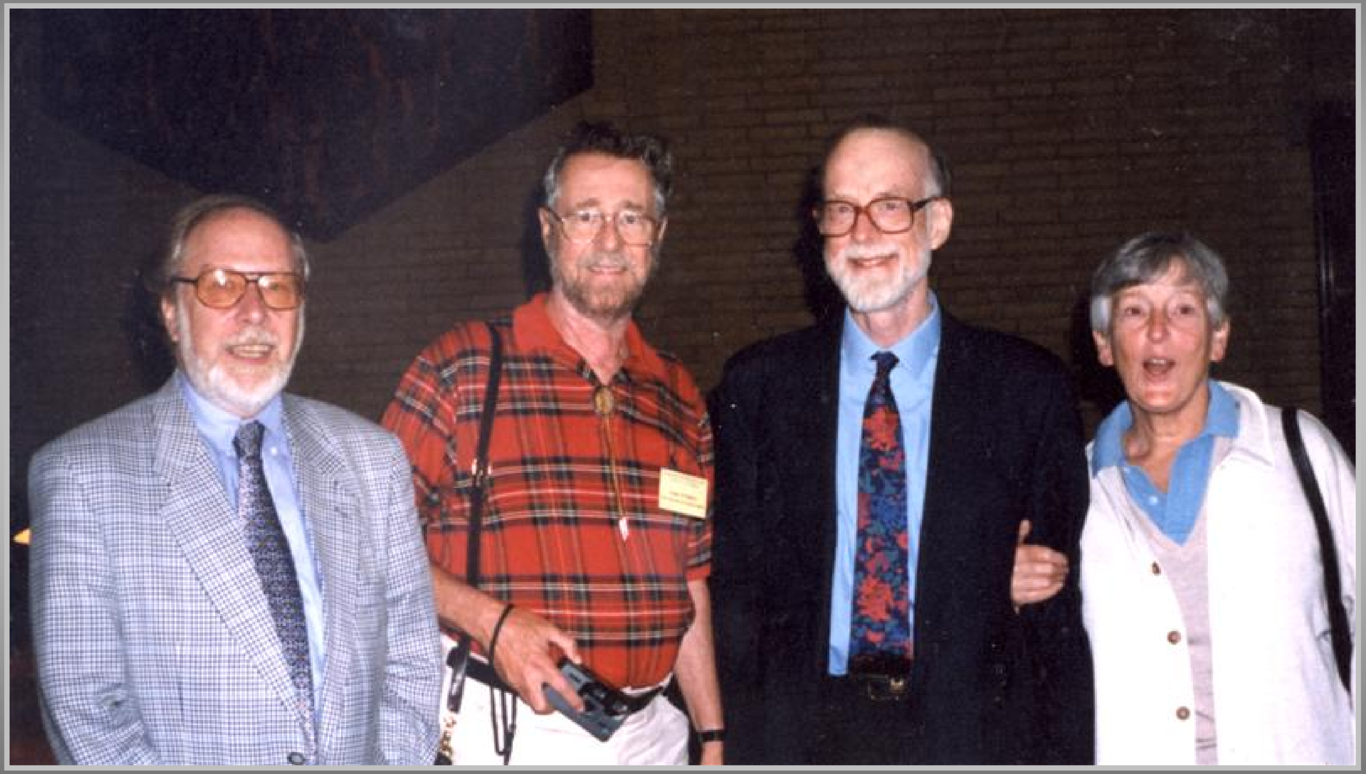
Никлаус Вирт

Конференция ITiCSE'2002. Аархус (Дания). Никлаус Вирт и Кристен Нигаард

Новосибирск. 27 июня 1996 г. При вручении Н. Вирту мантии почетного профессора НГУ

Новосибирск. 27 июня 1996 г. В центре – Никлаус Вирт, справа – И. В. Поттосин, слева – А. Недоря

Три патриарха программирования: Энтони Хоар, Эдсгер Дейкстра и Никлаус Вирт



Вирт, Дейкстра и Хоар

Конференция JMLC'2003. Энтони Хоар

28 September 1971

Dear Niklaus,

I enclose a draft of an axiomatic definition of PASCAL. I don't know whether it is publishable, or if published, whether anybody will read it. Please let me know what you think.

I have written to Don Knuth, who is quite encouraging about my proposed visit to Stanford in 1973.

Our bootstrap operation on PASCAL seems to have been quite successful, and I am encouraging Welsh and Quinn to write a note about it for SOFTWARE.

We now have to make a decision when to bring our compiler up to date with the final Zurich version. I don't know whether your colleagues at Zurich are yet thinking in terms of a "final" version; could you please encourage them to do so.

I am hoping to use PASCAL (perhaps in an extended version) as a tool for writing an Operating System modelled on Dijkstra's one, and following a suggestion by Brinch Hansen.

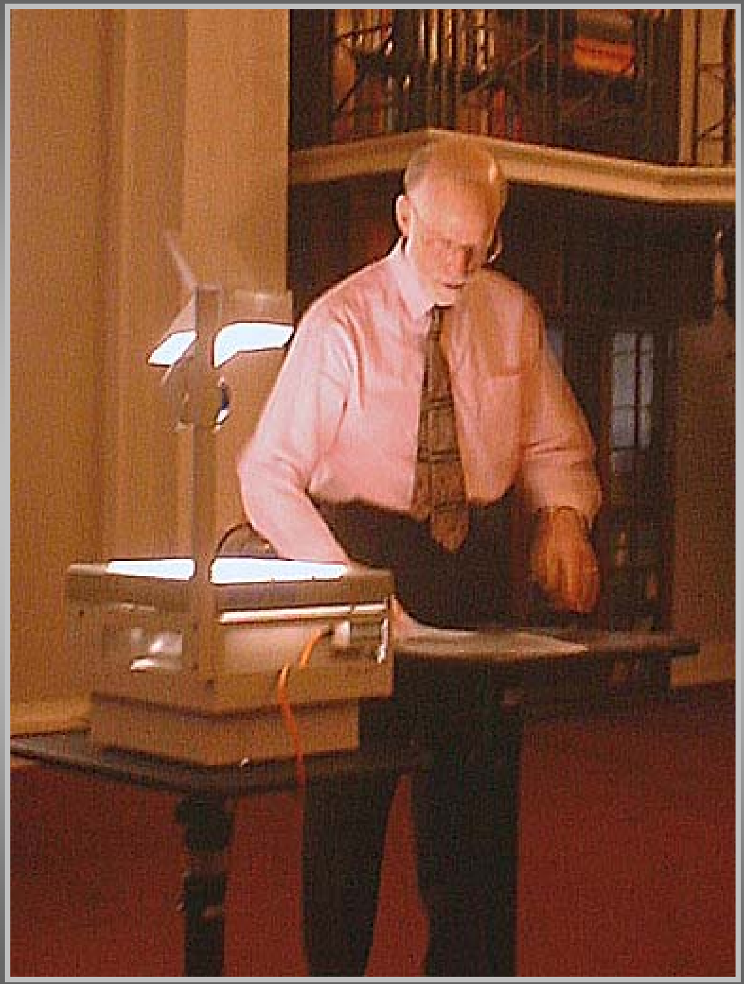
Best wishes.

Yours sincerely,

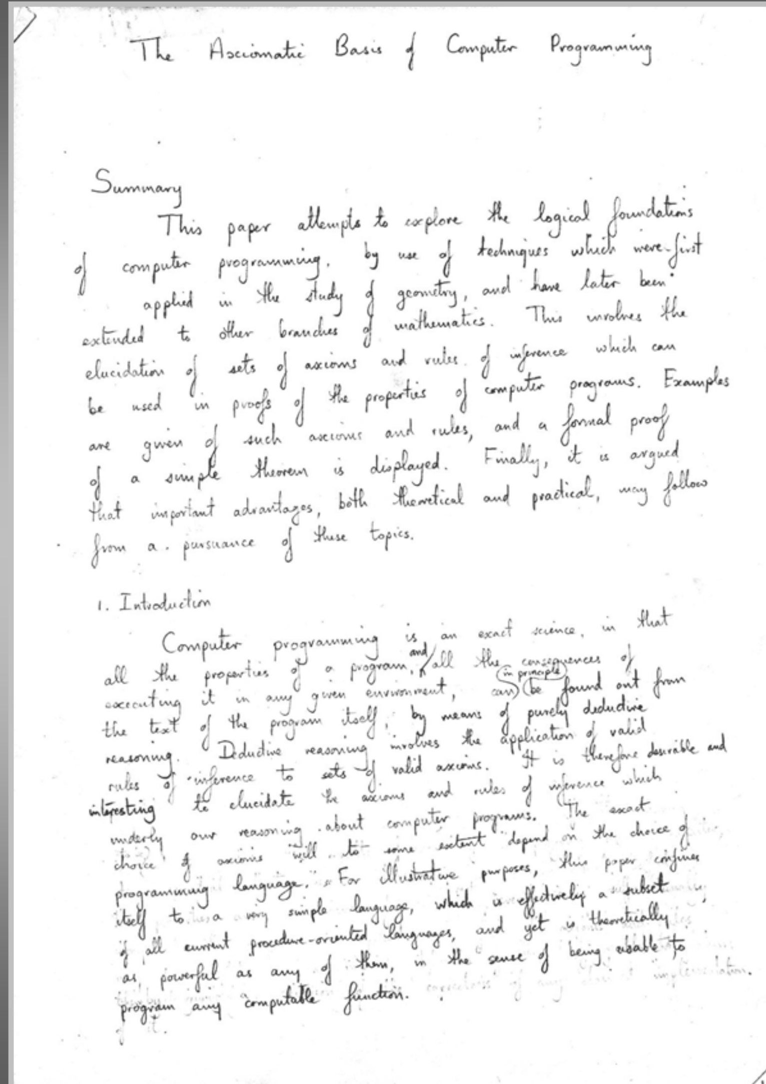
(C. A. R. Hoare)

Professor N. Wirth,
Stanford University,
Stanford,
California,
U. S. A.

Письмо Хоара, адресованное Вирту. 28 сентября 1971 г.



Музей науки. Лондон. Июнь 2001. Энтони Хоар



The Axiomatic Basis of Computer Programming

Summary

This paper attempts to explore the logical foundations of computer programming by use of techniques which were first applied in the study of geometry, and have later been extended to other branches of mathematics. This involves the elucidation of sets of axioms and rules of inference which can be used in proofs of the properties of computer programs. Examples are given of such axioms and rules, and a formal proof of a simple theorem is displayed. Finally, it is argued that important advantages, both theoretical and practical, may follow from a pursuance of these topics.

1. Introduction

Computer programming is an exact science, in that all the properties of a program and all the consequences of executing it in any given environment can in principle be found out from the text of the program itself by means of purely deductive reasoning. Deductive reasoning involves the application of valid rules of inference to sets of valid axioms. It is therefore desirable and interesting to elucidate the axioms and rules of inference which underly our reasoning about computer programs. The exact choice of axioms will to some extent depend on the choice of programming language. For illustrative purposes, this paper confines itself to a very simple language, which is effectively a subset of all current procedure-oriented languages, and yet is theoretically as powerful as any of them, in the sense of being able to program any computable function.

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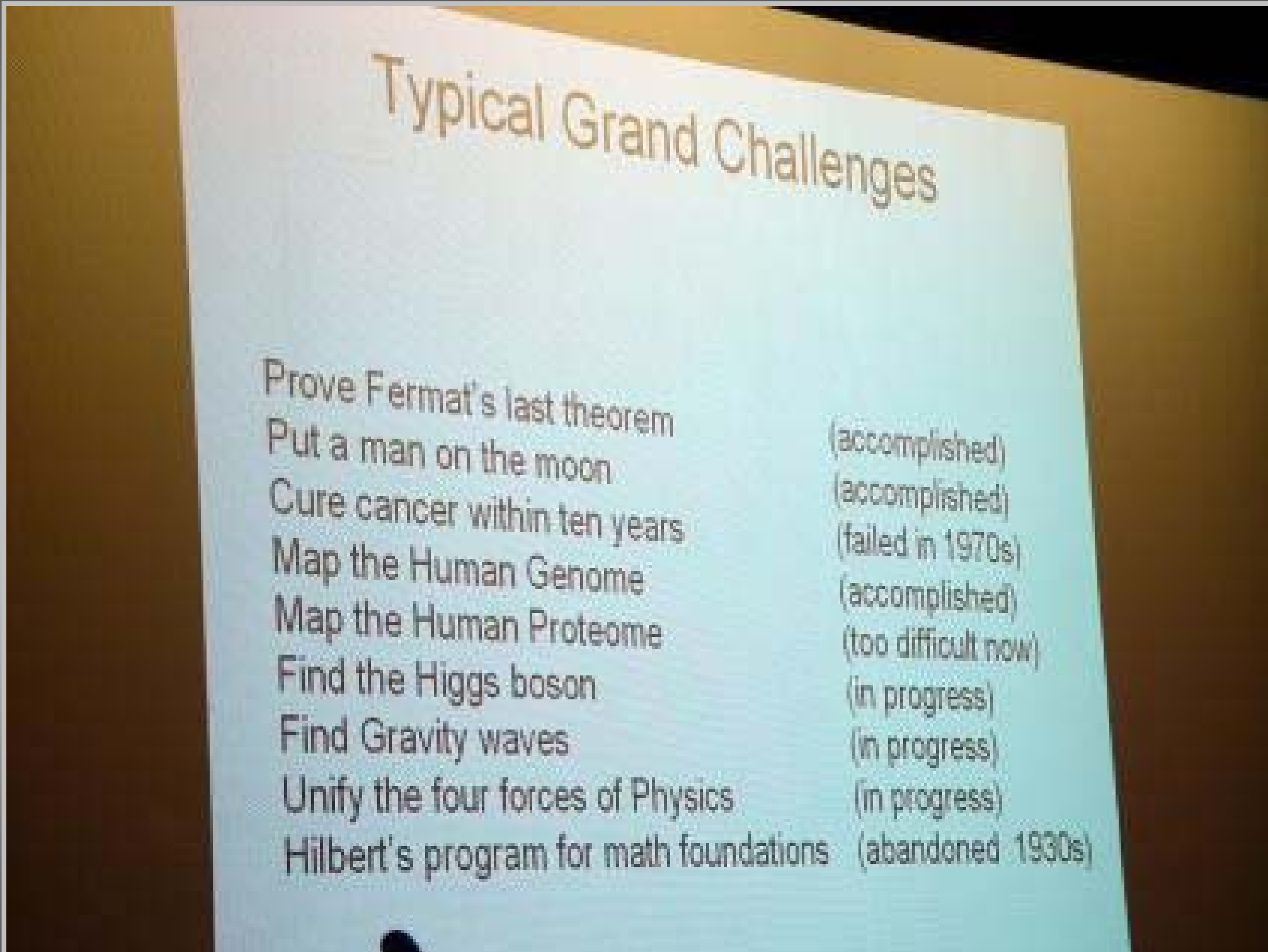
The Axiomatic Basis of Computer Programming. Фрагмент рукописи Хоара



Конференция PSI'2003. Новосибирск. Из доклада Хоара

Конференция PSI'2003. Новосибирск. Сэр Энтони Хоар (Microsoft Research)