# **Contents**

Preface ix
Acknowledgments xi
Introduction xiii
The Name "Mark I" xix
Introducing Howard Aiken 1
I. Bernard Cohen
I
Aiken's Machines
Proposed Automatic Calculating Machine 9
Howard Aiken
Aiken's First Machine: The IBM ASCC/Harvard Mark I 31
Robert Campbell
Robert Campben
Constructing the IBM ASCC (Harvard Mark I) 65
Charles Bashe
Programming Mark I 77
Richard Bloch

111

Mark II, an Improved Mark I

Robert Campbell

Aiken's Alternative Number System 129 Henry Tropp

#### II

Aiken's Program of Instruction and Training

Aiken and the Harvard "Comp Lab" 137 Frederick Brooks Jr.

Aiken as a Teacher 143
Peter Calingaert

Aiken's Program in a Harvard Setting 163
Gregory Welch (concluding note by Adam Rabb Cohen)

### III

Recollections

Commander Aiken and My Favorite Computer 185 Grace Hopper

Reminiscences of Aiken during World War II and Later 195 Richard Bloch

Reminiscences of the Boss 203
Anthony Oettinger

A View from Overseas 215
Maurice Wilkes

Aiken at Home, 1973 219 Henry Tropp

## *IV*

In His Own Words

Aiken in His Own Words 229 selected and introduced by Gregory Welch

## Appendixes

Specifications of Aiken's Four Machines 257
Robert Campbell and Peter Strong

Aiken's Doctoral Students and Their Dissertations 273

Index 275