

## CONTENTS

<b>PRELIMINARIES . . . . .</b>	<b>1</b>
<b>CHAPTER 1. COMPLETE SEQUENTIAL MACHINES . . . . .</b>	<b>5</b>
1.1 Preliminary concepts . . . . .	5
1.2 Equivalence . . . . .	9
1.3 An application . . . . .	22
1.4 Strongly connected machines . . . . .	28
1.5 Determination of terminal state . . . . .	30
1.6 History . . . . .	42
<b>CHAPTER 2. INCOMPLETE SEQUENTIAL MACHINES . . . . .</b>	<b>43</b>
2.1 Preliminaries . . . . .	43
2.2 Results on $\leq$ . . . . .	46
2.3 Compatibility . . . . .	61
2.4 Reduction . . . . .	65
2.5 Synthesis . . . . .	73
2.6 History . . . . .	82
<b>CHAPTER 3. ABSTRACT MACHINES . . . . .</b>	<b>83</b>
3.1 Basic terms . . . . .	83
3.2 Examples . . . . .	85
3.3 Equivalence . . . . .	89
3.4 Input-equivalence . . . . .	93
3.5 Synthesis . . . . .	101
3.6 History . . . . .	106
<b>CHAPTER 4. RECOGNITION DEVICES . . . . .</b>	<b>107</b>
4.1 Automata . . . . .	107
4.2 Nondeterministic automata . . . . .	110
4.3 Characterization theorems . . . . .	114
4.4 Equivalence of automata . . . . .	122
4.5 Other recognition devices . . . . .	127
4.6 Two-way automata . . . . .	132
4.7 Two-tape automata . . . . .	134
4.8 History . . . . .	137
<b>BIBLIOGRAPHY . . . . .</b>	<b>139</b>
<b>APPENDIX . . . . .</b>	<b>143</b>
<b>INDEX . . . . .</b>	<b>147</b>