



AN INTRODUCTION TO

FORMAL LANGUAGES AND AUTOMATA

SIXTH EDITION

PETER LINZ

Introduction To Formal Languages And Automata

Willem J. M. Levelt



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and Computability Reduction Automata Finite Automata DFA and NFA Pushdown Automata PDA Turing Machines Mealy and Moore Machines

An Introduction to Formal Language Theory Robert N. Moll, Michael A. Arbib, A.J. Kfoury, 2012-12-06 The study of formal languages and of related families of automata has long been at the core of theoretical computer science. Until recently the main reasons for this centrality were connected with the specification and analysis of programming languages which led naturally to the following questions: How might a grammar be written for such a language? How could we check whether a text were or were not a well formed program generated by that grammar? How could we parse a program to provide the structural analysis needed by a compiler? How could we check for ambiguity to ensure that a program has a unique analysis to be passed to the computer? This focus on programming languages has now been broadened by the increasing concern of computer scientists with designing interfaces which allow humans to communicate with computers in a natural language at least concerning problems in some well delimited domain of discourse. The necessary work in computational linguistics draws on studies both within linguistics: the analysis of human languages and within artificial intelligence. The present volume is the first textbook to combine the topics of formal language theory traditionally taught in the context of programming languages with an introduction to issues in computational linguistics. It is one of a series, The AKM Series in Theoretical Computer Science, designed to make key mathematical developments in computer science readily accessible to undergraduate and beginning graduate students.

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