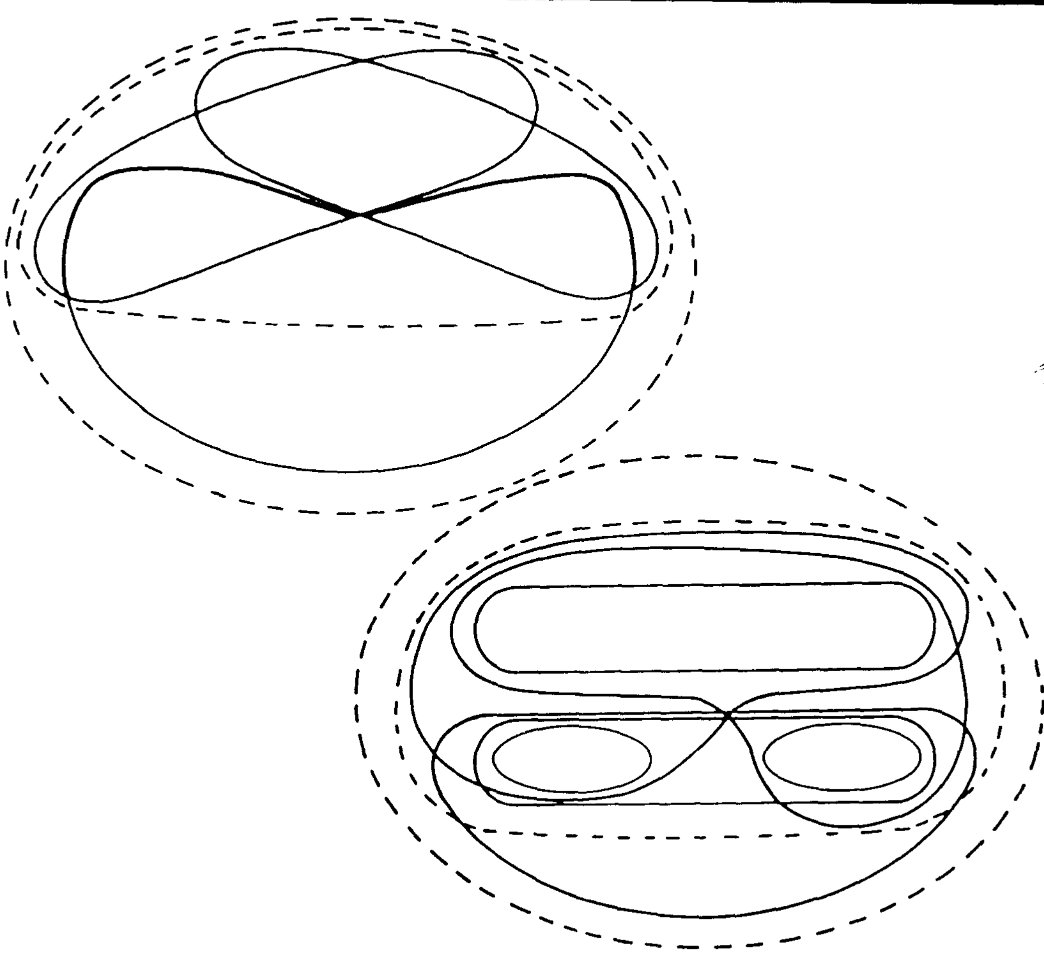
THE THEORY OF RELATIONAL DATABASES

DAVID MAIER



COMPUTER SCIENCE PRESS

TABLE OF CONTENTS

ABOUT THE AUTHOR

David Maier received his BA degree in mathematics and computer science from the University of Oregon in 1974 and his PhD from Princeton University in 1978. For four years he was assistant professor of computer science with the State University of New York at Stony Brook. He is currently assistant professor of computer science at the Oregon Graduate Center.

Dr. Maier's papers on database theory have appeared in JACM, ACM Transactions on Database Systems, and the SIAM Journal of Computing.

ABOUT THE BOOK

This remarkably comprehensive new book assembles concepts and results in relational databases theory previously scattered through journals, books, conference proceedings, and technical memoranda in one convenient source, and introduces pertinent new material not found elsewhere. The book is intended for a second course in databases, but is an excellent reference for researchers in the field. The material covered includes relational algebra, functional dependencies, multivalued and join dependencies, normal forms, tableaux and the chase computation, representation theory, domain and tuple relational calculus, query modification, database semantics and null values, acyclic database schemes, template dependencies, and computed relations. The final chapter is a brief survey of query languages in existing relational systems. Each chapter contains numerous examples and exercises, along with bibliographic remarks.

ISBN 0-914894-42-0