

Preface

This book could have been called “Selections from the New Book of Prime Number Records.” However, I preferred the title which propelled you on the first place to open it, and perhaps (so I hope) to buy it!

But the book is not very different from its parent. Like a bonsai, which has all the main characteristics of the full-sized tree, this paperback should exert the same fatal attraction. I wish it to be as dangerous as the other one. I wish you, young student, teacher or retired mathematician, engineer, computer buff, all of you who are friends of numbers, to be driven into thinking about the beautiful theory of prime numbers, with its inherent mystery. I wish you to exercise your brain and fingers—not vice-versa.

This second edition is still a little book, but the primes have “grown bigger”. An irrepressible activity of computation specialists has pushed records to levels previously unthinkable. These endeavours generated—or were possible by—new algorithms and great advances in programming techniques and hardware developments. A fruitful interplay for the intended aim, to produce large, awesome numbers.

These updated records are reported; they are like a snapshot taken May 2003. However, only limited progress was made in the theoretical results. They are explained in the appropriate place. The old

classical problems remain open and continue defying our great minds. With an inner smile: “If you solve me, you’ll become idle”. Not knowing that we, mathematicians, invent more problems than we can solve. Idle, we shall not be.

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