



# Quantum Computational Number Theory

*Song Y. Yan*

Download now

[Click here](#) if your download doesn't start automatically

# Quantum Computational Number Theory

Song Y. Yan

## Quantum Computational Number Theory Song Y. Yan

This book provides a comprehensive introduction to advanced topics in the computational and algorithmic aspects of number theory, focusing on applications in cryptography. Readers will learn to develop fast algorithms, including quantum algorithms, to solve various classic and modern number theoretic problems. Key problems include prime number generation, primality testing, integer factorization, discrete logarithms, elliptic curve arithmetic, conjecture and numerical verification.

The author discusses quantum algorithms for solving the Integer Factorization Problem (IFP), the Discrete Logarithm Problem (DLP), and the Elliptic Curve Discrete Logarithm Problem (ECDLP) and for attacking IFP, DLP and ECDLP based cryptographic systems. Chapters also cover various other quantum algorithms for Pell's equation, principal ideal, unit group, class group, Gauss sums, prime counting function, Riemann's hypothesis and the BSD conjecture.

*Quantum Computational Number Theory* is self-contained and intended to be used either as a graduate text in computing, communications and mathematics, or as a basic reference in the related fields. Number theorists, cryptographers and professionals working in quantum computing, cryptography and network security will find this book a valuable asset.



[Download Quantum Computational Number Theory ...pdf](#)



[Read Online Quantum Computational Number Theory ...pdf](#)

## **Download and Read Free Online Quantum Computational Number Theory Song Y. Yan**

---

### **From reader reviews:**

#### **Hattie Jasso:**

As people who live in often the modest era should be update about what going on or information even knowledge to make these people keep up with the era and that is always change and make progress. Some of you maybe may update themselves by examining books. It is a good choice for you personally but the problems coming to anyone is you don't know which you should start with. This Quantum Computational Number Theory is our recommendation to cause you to keep up with the world. Why, because this book serves what you want and want in this era.

#### **Vera Velez:**

The particular book Quantum Computational Number Theory will bring someone to the new experience of reading any book. The author style to clarify the idea is very unique. If you try to find new book to see, this book very suitable to you. The book Quantum Computational Number Theory is much recommended to you you just read. You can also get the e-book in the official web site, so you can quicker to read the book.

#### **Jamie Lundquist:**

The guide with title Quantum Computational Number Theory has a lot of information that you can learn it. You can get a lot of gain after read this book. This specific book exist new information the information that exist in this book represented the condition of the world currently. That is important to you to understand how the improvement of the world. That book will bring you within new era of the syndication. You can read the e-book on the smart phone, so you can read the idea anywhere you want.

#### **Karen Chan:**

People live in this new moment of lifestyle always make an effort to and must have the extra time or they will get lot of stress from both daily life and work. So, if we ask do people have time, we will say absolutely of course. People is human not just a robot. Then we question again, what kind of activity are you experiencing when the spare time coming to you of course your answer will unlimited right. Then ever try this one, reading guides. It can be your alternative within spending your spare time, typically the book you have read will be Quantum Computational Number Theory.

## **Download and Read Online Quantum Computational Number Theory Song Y. Yan #6A5Y4RD32JV**

# **Read Quantum Computational Number Theory by Song Y. Yan for online ebook**

Quantum Computational Number Theory by Song Y. Yan Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Quantum Computational Number Theory by Song Y. Yan books to read online.

## **Online Quantum Computational Number Theory by Song Y. Yan ebook PDF download**

**Quantum Computational Number Theory by Song Y. Yan Doc**

**Quantum Computational Number Theory by Song Y. Yan MobiPocket**

**Quantum Computational Number Theory by Song Y. Yan EPub**