



Polynomial Root-finding and Polynomiography

Bahman Kalantari

Download now

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

Polynomial Root-finding and Polynomiography

Bahman Kalantari

Polynomial Root-finding and Polynomiography Bahman Kalantari

This book offers fascinating and modern perspectives into the theory and practice of the historical subject of polynomial root-finding, rejuvenating the field via polynomiography, a creative and novel computer visualization that renders spectacular images of a polynomial equation. Polynomiography will not only pave the way for new applications of polynomials in science and mathematics, but also in art and education. The book presents a thorough development of the basic family, arguably the most fundamental family of iteration functions, deriving many surprising and novel theoretical and practical applications such as: algorithms for approximation of roots of polynomials and analytic functions, polynomiography, bounds on zeros of polynomials, formulas for the approximation of Pi, and characterizations or visualizations associated with a homogeneous linear recurrence relation. These discoveries and a set of beautiful images that provide new visions, even of the well-known polynomials and recurrences, are the makeup of a very desirable book. This book is a must for mathematicians, scientists, advanced undergraduates and graduates, but is also for anyone with an appreciation for the connections between a fantastically creative art form and its ancient mathematical foundations.

Contents: Approximation of Square-Roots and Their Visualizations; The Fundamental Theorem of Algebra and a Special Case of Taylor's Theorem; Introduction to the Basic Family and Polynomiography; Equivalent Formulations of the Basic Family; Basic Family as Dynamical System; Fixed Points of the Basic Family; Algebraic Derivation of the Basic Family and Characterizations; The Truncated Basic Family and the Case of Halley Family; Characterizations of Solutions of Homogeneous Linear Recurrence Relations; Generalization of Taylor's Theorem and Newton's Method; The Multipoint Basic Family and Its Order of Convergence; A Computational Study of the Multipoint Basic Family; A General Determinantal Lower Bound; Formulas for Approximation of Pi Based on Root-Finding Algorithms; Bounds on Roots of Polynomials and Analytic Functions; A Geometric Optimization and Its Algebraic Offsprings; Polynomiography: Algorithms for Visualization of Polynomial Equations; Visualization of Homogeneous Linear Recurrence Relations; Applications of Polynomiography in Art, Education, Science and Mathematics; Approximation of Square-Roots Revisited; Further Applications and Extensions of the Basic Family and Polynomiography.

 [Download Polynomial Root-finding and Polynomiography ...pdf](#)

 [Read Online Polynomial Root-finding and Polynomiography ...pdf](#)

From reader reviews:

Joyce Morton:

Do you among people who can't read pleasant if the sentence chained from the straightway, hold on guys that aren't like that. This Polynomial Root-finding and Polynomiography book is readable simply by you who hate those perfect word style. You will find the facts here are arrange for enjoyable studying experience without leaving even decrease the knowledge that want to supply to you. The writer regarding Polynomial Root-finding and Polynomiography content conveys thinking easily to understand by many individuals. The printed and e-book are not different in the articles but it just different as it. So , do you even now thinking Polynomial Root-finding and Polynomiography is not loveable to be your top listing reading book?

Jorge Raines:

Playing with family in a very park, coming to see the ocean world or hanging out with buddies is thing that usually you might have done when you have spare time, then why you don't try matter that really opposite from that. One activity that make you not experiencing tired but still relaxing, trilling like on roller coaster you already been ride on and with addition of knowledge. Even you love Polynomial Root-finding and Polynomiography, you are able to enjoy both. It is great combination right, you still wish to miss it? What kind of hang-out type is it? Oh come on its mind hangout folks. What? Still don't understand it, oh come on its called reading friends.

Marilyn Leonard:

Publication is one of source of understanding. We can add our know-how from it. Not only for students but additionally native or citizen have to have book to know the revise information of year to help year. As we know those textbooks have many advantages. Beside we all add our knowledge, could also bring us to around the world. Through the book Polynomial Root-finding and Polynomiography we can take more advantage. Don't one to be creative people? To get creative person must love to read a book. Merely choose the best book that suitable with your aim. Don't always be doubt to change your life with this book Polynomial Root-finding and Polynomiography. You can more inviting than now.

Thomas Rice:

Reading a reserve make you to get more knowledge from the jawhorse. You can take knowledge and information from your book. Book is composed or printed or descriptive from each source that filled update of news. On this modern era like now, many ways to get information are available for an individual. From media social similar to newspaper, magazines, science publication, encyclopedia, reference book, novel and comic. You can add your understanding by that book. Do you want to spend your spare time to open your book? Or just in search of the Polynomial Root-finding and Polynomiography when you essential it?

**Download and Read Online Polynomial Root-finding and
Polynomiography Bahman Kalantari #DXHOYRGJIAK**

Read Polynomial Root-finding and Polynomiography by Bahman Kalantari for online ebook

Polynomial Root-finding and Polynomiography by Bahman Kalantari 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 Polynomial Root-finding and Polynomiography by Bahman Kalantari books to read online.

Online Polynomial Root-finding and Polynomiography by Bahman Kalantari ebook PDF download

Polynomial Root-finding and Polynomiography by Bahman Kalantari Doc

Polynomial Root-finding and Polynomiography by Bahman Kalantari Mobipocket

Polynomial Root-finding and Polynomiography by Bahman Kalantari EPub