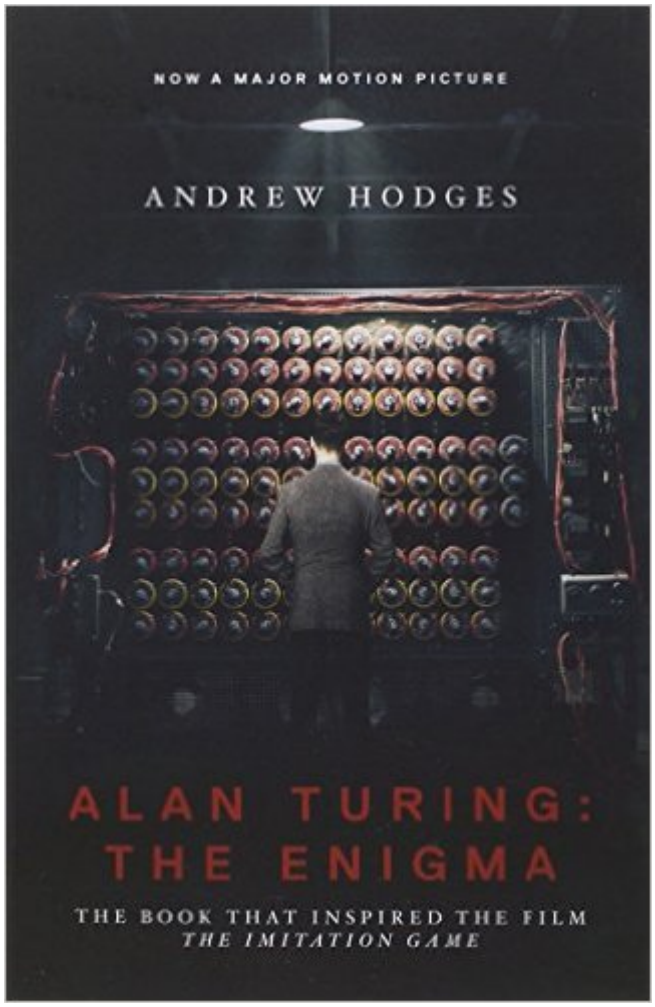
Alan Turing: The Enigma: The Book That Inspired The Film "The Imitation Game"



Synopsis

A NEW YORK TIMES BESTSELLERThe official book behind the Academy Award-winning film The Imitation Game, starring Benedict Cumberbatch and Keira KnightleyIt is only a slight exaggeration to say that the British mathematician Alan Turing (1912-1954) saved the Allies from the Nazis, invented the computer and artificial intelligence, and anticipated gay liberation by decades--all before his suicide at age forty-one. This New York Timesâ “bestselling biography of the founder of computer science, with a new preface by the author that addresses Turing’s royal pardon in 2013, is the definitive account of an extraordinary mind and life.Capturing both the inner and outer drama of Turingâ ™s life, Andrew Hodges tells how Turingâ ™s revolutionary idea of 1936--the concept of a universal machine--laid the foundation for the modern computer and how Turing brought the idea to practical realization in 1945 with his electronic design. The book also tells how this work was directly related to Turingâ ™s leading role in breaking the German Enigma ciphers during World War II, a scientific triumph that was critical to Allied victory in the Atlantic. At the same time, this is the tragic account of a man who, despite his wartime service, was eventually arrested, stripped of his security clearance, and forced to undergo a humiliating treatment program--all for trying to live honestly in a society that defined homosexuality as a crime.The inspiration for a major motion picture starring Benedict Cumberbatch and Keira Knightley, Alan Turing: The Enigma is a gripping story of mathematics, computers, cryptography, and homosexual persecution.

Book Information

Paperback: 768 pages
Publisher: Princeton University Press; Updated edition with a New preface by the author edition (November 10, 2014)
Language: English
ISBN-10: 069116472X
ISBN-13: 978-0691164724
Product Dimensions: 2 x 5 x 8 inches
Shipping Weight: 1.2 pounds (View shipping rates and policies)
Average Customer Review: 3.6 out of 5 stars 642 customer reviews
Best Sellers Rank: #32,541 in Books (See Top 100 in Books) #12 inÂ Books > Computers & Technology > History & Culture > History #21 inÂ Books > Science & Math > Mathematics > History #24 inÂ Books > Biographies & Memoirs > Professionals & Academics > Computers & Technology

Customer Reviews

Alan Turing died in 1954, but the themes of his life epitomize the turn of the millennium. A pure mathematician from a tradition that prided itself on its impracticality, Turing laid the foundations for modern computer science, writes Andrew Hodges: Alan had proved that there was no "miraculous machine" that could solve all mathematical problems, but in the process he had discovered something almost equally miraculous, the idea of a universal machine that could take over the work of any machine. During World War II, Turing was the intellectual star of Bletchley Park, the secret British cryptography unit. His work cracking the German's Enigma machine code was, in many ways, the first triumph of computer science. And Turing died because his identity as a homosexual was incompatible with cold-war ideas of security, implemented with machines and remorseless logic: "It was his own invention, and it killed the goose that laid the golden eggs." Andrew Hodges's remarkable insight weaves Turing's mathematical and computer work with his personal life to produce one of the best biographies of our time, and the basis of the Derek Jacobi movie Breaking the Code. Hodges has the mathematical knowledge to explain the intellectual significance of Turing's work, while never losing sight of the human and social picture: In this sense his life belied his work, for it could not be contained by the discrete state machine. At every stage his life raised questions about the connection (or lack of it) between the mind and the body, thought and action, intelligence and operations, science and society, the individual and history. And Hodges admits what all biographers know, but few admit, about their subjects: "his inner code remains unbroken." Alan Turing is still an enigma. --Mary Ellen Curtin --This text refers to an out of print or unavailable edition of this title.

A New York Times BestsellerThe Imitation Game, Winner of the 2015 Academy Award for Best Adapted ScreenplayWinner of the 2015 (27th) USC Libraries Scripter Award, University of Southern California LibrariesOne of The Guardianâ ™s Best Popular Physical Science Books of 2014, chosen by GrrlScientist"Scrupulous and enthralling."--A. O. Scott, New York Times"One of the finest scientific biographies ever written."--Jim Holt, New Yorker"Andrew Hodges' 1983 book Alan Turing: The Enigma, is the indispensable guide to Turing's life and work and one of the finest biographies of a scientific genius ever written."--Michael Hiltzik, Los Angeles Times"Turing's rehabilitation from over a quarter-century's embarrassed silence was largely the result of Andrew Hodges's superb biography, Alan Turing: The Enigma (1983; reissued with a new introduction in 2012). Hodges examined available primary sources and interviewed surviving witnesses to elucidate Turing's multiple dimensions. A mathematician, Hodges ably explained Turing's intellectual accomplishments

with insight, and situated them within their wider historical contexts. He also empathetically explored the centrality of Turing's sexual identity to his thought and life in a persuasive rather than reductive way."--Michael Saler, Times Literary Supplement"On the face of it, a richly detailed 500-page biography of a mathematical genius and analysis of his ideas, might seem a daunting proposition. But fellow mathematician and author Hodges has acutely clear and often extremely moving insight into the humanity behind the leaping genius that helped to crack the Germans' Enigma codes during World War II and bring about the dawn of the computer age. . . . This melancholy story is transfigured into something else: an exploration of the relationship between machines and the soul and a full-throated celebration of Turing's brilliance, unselfconscious quirkiness and bravery in a hostile age."--Sinclair McKay, Wall Street Journal"A first-class contribution to history and an exemplary work of biography."--I. J. Good, Nature"An almost perfect match of biographer and subject. . . . [A] great book."--Ray Monk, Guardian"A superb biography. . . . Written by a mathematician, it describes in plain language Turing's work on the foundations of computer science and how he broke the Germans' Enigma code in the Second World War. The subtle depiction of class rivalries, personal relationships, and Turing's tragic end are worthy of a novel. But this was a real person. Hodges describes the man, and the science that fascinated him--which once saved, and still influences, our lives."--Margaret Boden, New Scientist"Andrew Hodges's magisterial Alan Turing: The Enigma . . . is still the definitive text."--Joshua Cohen, Harper's"Andrew Hodges's biography is a meticulously researched and written account detailing every aspect of Turing's life. . . . This account of Turing's life is a definitive scholarly work, rich in primary source documentation and small-grained historical detail."--Mathematics Teacher"Tells a powerful story that combines professional success and personal tragedy."--Nancy Szokan, Washington Post"[A] really excellent biography. . . . The great thing about this book is that the author is a mathematician and can explain the details of Turing's work--as a scientist, mathematician, and a code breaker--in a way that is easy to understand. He is also wonderful at the emotional nuance of Alan's life, who was a somewhat odd--a student was assigned to him in school to help him maintain a semblance of tidiness in his appearance, rooms and school work and at Bletchley Park he was known for chaining his tea mug to a pipe--but he was also charming and intelligent and Hodges brings all the aspects of his personality and life into sharp focus."--Off the Shelf"This book is an incredibly detailed and meticulously researched biography of Alan Turing. Reading it is a melancholy experience, since you know from the outset that the ending is a tragic one and that knowledge overshadows you throughout. While the author divides the text into two parts, it actually reads like a play in four acts. . . . This book is Turing's memorial, and one that does justice to the subject."--Katherine

Safford-Ramus, MAA Reviews"The new paperback edition of the 1983 book that inspired the film, with an updated introduction by Oxford mathematics professor Andrew Hodges, is an exhilarating, compassionate and detailed biography of a complicated man."--Jane Ciabattari, BBC"If [The Imitation Game] does nothing else but send you, as it did me, to Alan Hodges's Alan Turing: The Enigma (1983, newly prefaced in the 2014 Princeton University Press edition) it more than justifies its existence. A great read, Hodges's intellectual biography depicts Turing as a brilliant mathematician; a crucial pioneering figure in the theorization and engineering of digital computing; and the biggest brain in Bletchley Park's Hut #8."--Amy Taubin, Artforum"It is indeed the ultimate biography of Alan Turing. It will bring you as close as possible to his enigmatic personality."--Adhemar Bultheel, European Mathematical Society"A book whose time has finally come. I found it to be a page-turner in spite of the occasionally esoteric explanations of mathematical theories that reminded of why Brooklyn Technical High School was not the wisest choice for me."--Terrance, Paris Readers Circle"Thanks to the movie The Imitation Game, Alan Turing has emerged from history's shadows, where his memory had languished for decades. For anyone whose interest in the pioneering computer scientist, mathematician, and logician was piqued by the film, the book that served as the film's source material, Andrew Hodges's exhaustive biography Alan Turing: The Enigma, has the answers."--Frank Caso, Simply Charly

Never have I been so amazed at how one author, even if he IS a mathematician himself, could so break down complex scientific issues into such an easily digestible and simple presentation. It was mere child's play to understand what concepts and creative processes and mathematical formulas Mr. Turing and company dealt, all those long and formative years ago. If you can't fathom author Andrew Hodges' breaking down of complex principles to mere pablum for the reader to grasp, if simplistically, then you should not venture further into a mathematics, physics or even a silly little computer science major. He makes it THAT easy! Amazing.Now, having said that, I DO think as most of the other 640 commentators have stated, (exactly 67.84% of total commentators, to be precise) that the weight of the text is in many ways too taken up with all this simplistic math and science. We really do NOT get a full picture of Alan Turing or his life. Apparently there is a LOT Mr. Hodges left out, (and not ONLY Sweden) that would be more appropriate to the telling of an regular biography of a real person. We do not see many of Alan Turing's warts and we spend far too little time with HIM and HIS life, in favor of a more chemical rendition, dealing as much with the history of computers (shame on you, Gates and Jobs for pretending YOU discovered things!) as it is with a history of Mr. Turning's life. If we learned anything from the movie (need I mention the name of it?) it

is that Hollywood can take merely a few essential facts and run away with reality, but AH WELL to all that, for that is Hollywood and it's twisted version of the truth at least got all of us interested in the REAL Alan Turing, didn't it?Thus it is a very very bad SHAME when more than half the book is given over, not to biography, but to computer history. We never truly sense any continuity in the story of Alan Turing. We don't know all the things he was engaged in or what so many other things he did. Mostly, his life is expressed in a few pages of real biography at a rationed time. We hear where he's moved, what lectures he gives, what papers he writes. He never COMES ALIVE. Oddly, that is what Turing might have argued on behalf of his early computer dreams.....that, deep down, "Number 5 is ALIVE!". But the sad part is that if his invention is truly alive, Mr. Hodges represents Alan Turing as a dummy terminal. Lifeless on it's own. This wasn't the real man represented here but remember, this IS a "scientific biography" (read the back cover) and so perhaps Mr. Hodges DID meet his goals; he expressed the life of Alan Turing as a mathematical function dependent on the variable of computer science.

The book begins with the obligatory summary of his parents' lives and Turing's rather uneventful early years. It gets interesting when Turing gets to Cambridge, where he faces real intellectual challenges and starts on what was to be his major scientific accomplishment: the question known as Ã¢Â Âœcomputability Ã¢Â Â•. Hodges provides a very good discussion of this question and Turing's resolution, and how it lead to the concept of the Turing machine, a model that can be said to be implemented in all modern computers, but in no way serves as an ancestor of any of them.The real fascination of Turing's career (for most of the reading public) is his work on calculating machines to aid in the decrypting messages from the German Enigma machine used to encode their naval communications, most particularly with their submarines. The particular contribution of Turing was the design of the electro- mechanical device called the Ã¢Â Âœbombe Ã¢Â Â• (an anglicization of the polish Ã¢Â Âœbomba Ã¢Â Â•, for a prior device for a similar purpose developed in Poland based on even earlier work in France in the late 1930's, at a time when both these countries seemed more sensitive to the need for decoding German military communications than was England). Turing's bombe was an electro-mechanical device that efficiently replicated the action of several Enigma machines wired together. As used by the Germans, the rotors of the Enigma (which provided the random encryption) were reset each day. The challenge for the British was to twiddle the rotors in the array of bombe's until they got some rational looking text from an attempted decryption of the intercepted German messages. Most of the enormous number of possible rotor settings were generally reduced by screening out those that did not produce any of a frequently used set of terms

(called Ã¢Â ÂœcribsÃ¢Â Â•) anywhere in the message. Once a promising setting was determined, all the rest of the messages for that day could be decoded. The book provides extensive details of bombe operations and how they were applied.The book describes the roles of many individuals as the bombes were improved and their numbers expanded to operate at several sites in England (as a precaution against arial bombardment of a single site). While the book gives Turing the most important role in this process, it is nowhere near the Ã¢Â Âœbut forÃ¢Â Â• importance implied in the movie Ã¢Â ÂœThe Imitation GameÃ¢Â Â•, which is loosely based on this book. The book describes several of Turing's unique contributions including his famous letter to Churchill, dated October 21, 1941, as an eminent scientist pleading for more funds to accelerate the Bletchley Park effort, Churchill's positive response may have made a significant difference in anti-submarine warfare at that time. Another unique contribution was Turing's visit to the United States from November 1942-March 1943, with his offering very perceptive guidance on the US bombe construction program (which eventually surpassed the British in numbers and speed of computation).Nearly half of the last 100 pages of the book is devoted to Turing's affair with Arnold Murray and his subsequent prosecution for it. The author reveals that he (Hodges) is also a homosexual, as if to prepare the reader for some insight on the matter. I would have appreciated some explanation of the fact that, although Turing had a number of sexual relations with men of his own age, class and intellectual attainments (described fleetingly in the prior narrative), he suddenly chose a working class man, less than half his age, with only modest intellectual yearnings and no accomplishments. [My own interpretation is that he wanted, consciously or subconsciously, to be a martyr and brought the whole thing on himself by going to the police to report a minor burglary connected to the affair.] As for the larger social significance of the situation, Hodges tries to build a case that Turing was especially prosecuted because it was perceived that his uncontrollability made him a serious security threat. This argument is not very convincing since Turing had done no security work for at least 5 years previous and had no prospect of doing any in the future. Furthermore, there is no evidence of any involvement by high government officials, only a few local police and prosecutors.I would advise skipping the rather lengthy introduction (31 pages) until after you've read the book; it doesn't introduce the subject, but does give some interesting tidbits of discoveries and re-interpretations since Turing's death. This subject is also treated in the Author's note at the end of the book.

Alan Turing: The Enigma by Andrew Hodges covers a fascinating and important subject in the life of Alan Turing, but I would not recommend it to a math layman like myself. Much of the book outlines

the history of mathematical and scientific ideas of the first half of the 20th century, Alan's included of course, as well as describing the machines that he helped design and build. This makes for extremely rough reading, especially since the book is over 500 pages. I commend Hodges for the large amount of research that went into this book especially since Alan was so secretive.

I am upgrading my review from *** to **** as I plow through the book. The book is quite good, but quite detailed or technical. Not for a general reader.It is quite good to see the role that Turing played during WW II and how effective he was. He was also very ineffective at times because he was clueless about social clues and unwilling/unable to understand military/war hierarchies. Still a fascinating and detailed, detailed, and more detailed book.My original review:Digression after digression, especially at the beginning of the book. Do I really need to know what letters Turing sent to a friend's mother or how she replied? Quite distracting. Too many digressions about historical figures, too. There is too much of that in the first 15% or so of the book.Once the book gets into Turing's post-graduate work and his work to create computers, that kind detail is very useful -- and relevant.I ordered this book as a Kindle book, because there were too many complaints about the small font in the print copies. It's easy to read on a Kindle app.