

Alan Turing The Enigma Andrew Hodges

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Bletchley Park - The Secret Archives - Sinclair McKay 2016-03-15

This beautifully presented slipcased collector's edition of the best selling title, *The Lost World of Bletchley Park* is a comprehensive illustrated history of this remarkable place, from its prewar heyday as a country estate, its wartime requisition and how it became the place where modern computing was invented and the German Enigma code was cracked, to its post-war dereliction and then rescue towards the end of the twentieth century as a museum. Removable memorabilia includes: 1938 recruiting memo with a big tick against Turing's name Churchill's 'Action this day' letter giving code breakers extra resources Handwritten Turing memos Top Secret Engima decryptions, about the sinking of the Bismark, German High Command's assessment of D-Day threat and the message announcing Hitler's suicide A wealth of everyday items such as authentic theatre posters, a map of Bletchley Park, canteen menus, teleprinter print-outs of codes, the Colossus paper tape spooled through machines Newly redesigned interiors with 25% new content, high end slipcase package featuring removable facsimile documents, this is an essential purchase for everyone interested and wanting to experience the place where code-breaking helped to win the war.

Turing - Andrew Hodges 1999

The Imitation Game - Jane Rollason 2015-09-03

Based on the award winning 2014 film, *The Imitation Game* tells the true story of cryptanalyst Alan Turing and his brilliant team of code-breakers as they crack the famous Enigma Code during World War II. Full colour stills from the award winning film bring story to life and a two-page Fact File section provides supplementary material on the story background.

Engines of Logic - Martin Davis 2001

A pioneer in computer development chronicles the history of the machine, and the software that makes it tick, elucidating the core principles driving every calculation, stored record, and mouse click. Originally published as *The Universal Computer*. Reprint.

The Annotated Turing - Charles Petzold 2008-06-16

Programming Legend Charles Petzold unlocks the secrets of the extraordinary and prescient 1936 paper by Alan M. Turing Mathematician Alan Turing invented an imaginary computer known as the Turing Machine; in an age before computers, he explored the concept of what it meant to be computable, creating the field of computability theory in the process, a foundation of present-day computer programming. The book expands Turing's original 36-page paper with additional background chapters and extensive annotations; the author elaborates on and clarifies many of Turing's statements, making the original difficult-to-read document accessible to present day programmers, computer science majors, math

geeks, and others. Interwoven into the narrative are the highlights of Turing's own life: his years at Cambridge and Princeton, his secret work in cryptanalysis during World War II, his involvement in seminal computer projects, his speculations about artificial intelligence, his arrest and prosecution for the crime of "gross indecency," and his early death by apparent suicide at the age of 41.

Alan Turing - Andrew Hodges 1992

"It 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 Times?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."--Amazon.com.

Prof - Dermot Turing 2015-09-15

Following hot on the heels of *The Imitation Game*, this is the first modern biography of Alan Turing by a member of the family--Alan's nephew, Sir Dermot Turing Alan Turing was an extraordinary man who crammed into a life of only 42 years the careers of mathematician, codebreaker, computer scientist, and biologist. He is widely regarded as a war hero grossly mistreated by his unappreciative country and it has become hard to disentangle the real man from the story. It is easy to cast him as a misfit, the stereotypical professor. But actually Alan Turing was never a professor, and his nickname "Prof" was given by his codebreaking friends at Bletchley Park. Now, Alan Turing's nephew, Dermot Turing, has taken a fresh look at the influences on Alan Turing's life and creativity, and the later creation of a legend. Dermot's vibrant and entertaining approach to the life and work of a true genius makes this a fascinating read. This unique family perspective features insights from secret documents only recently released to the UK National Archives and other sources not tapped by previous biographers, looks into the truth behind Alan's conviction for gross indecency, and includes previously unpublished photographs from the Turing family album.

Enigma - Andrew Hodges 2017-10

Alan Turing - Hourly History 2019-04-16

Alan Turing Alan Turing had a radical and ingenious mind. He is considered one of the fathers of artificial intelligence, and his theories on this matter range from purely mechanical to almost spiritual. During World War II, his decryption of the Nazis' Enigma codes proved vital for the Allied victory over the Axis powers. Turing's fingerprints are everywhere, and yet his own country for quite some time failed to acknowledge it. It wasn't until 2009 that the then prime minister of the

United Kingdom, Gordon Brown, issued an official, posthumous apology to Alan Turing for "the appalling way he was treated." To many, this was an admission that was far too long in coming. Inside you will read about... ✓ The Death of His First Love ✓ Turing Machines ✓ Breaking the Nazis' Enigma Codes ✓ Conviction and Chemical Castration ✓ The Poison Apple And much more! As the chronicling of this book demonstrates, Alan Turing's life was by no means easy; there were hardships, trials, and tribulations that would shake him to his core. But despite the tragic way his life ended by way of a poison apple, the spark ignited by Alan Turing's short life is still something exceedingly brilliant to behold. Series Information: World War 2 Biographies Book 7

Alan Turing: The Enigma - Andrew Hodges 2014-11-10

A NEW YORK TIMES BESTSELLER The official book behind the Academy Award-winning film *The Imitation Game*, starring Benedict Cumberbatch and Keira Knightley It 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 Times--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 Turing's life, Andrew Hodges tells how Turing'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 Turing'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.

Alan M. Turing - Sara Turing 2012-03-22

Containing never-before-published material, this fascinating account sheds new light on one of the greatest figures of the twentieth century.

Alan Turing - Nigel Cawthorne 2014-09-14

Spring 1940: The Battle of the Atlantic rages. Vulnerable merchant convoys are at the mercy of German U-boats controlled by a cunning system of coded messages created by a machine called Enigma. Only one man believes that these codes can be broken - mathematician and Bletchley Park cryptanalyst Alan Turing. Winston Churchill later described Turing's success in breaking the Enigma codes as the single biggest contribution to victory against Nazi Germany. Unheralded during his lifetime, Turing is now recognized as the father of modern computer science and as possessing one of the greatest minds of the 20th century. Drawing on original source material, interviews and photographs, this book explores Turing's groundbreaking work as well as revealing the private side of a complex and unlikely national hero.

Alan Turing - Andrew Hodges 2012

"It 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 Times?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."--Amazon.com.

Alan Turing - Andrew Hodges 1985

The Hut Six Story - Gordon Welchman 1997

Alan Turing Decoded - Dermot Turing 2021-11-04

Alan Turing was an extraordinary man who crammed into his 42 years the careers of mathematician, codebreaker, computer scientist and biologist. He is widely regarded as a war hero grossly mistreated by his unappreciative country, and it has become hard to disentangle the real man from the story. Now Dermot Turing has taken a fresh look at the influences on his uncle's life and creativity, and the creation of a legend. He discloses the real character behind the cipher-text, answering questions that help the man emerge from his legacy: how did Alan's childhood experiences influence him? How did his creative ideas evolve? Was he really a solitary genius? What was his wartime work after 1942, and what of the Enigma story? What is the truth about the conviction for gross indecency, and did he commit suicide? In *Alan Turing Decoded*, Dermot's vibrant and entertaining approach to the life and work of a true genius makes this a fascinating and authoritative read.

A Well-Ordered Thing - Michael D. Gordin 2019

Dmitrii Mendeleev (1834–1907) is a name we recognize, but perhaps only as the creator of the periodic table of elements. Generally, little else has been known about him. *A Well-Ordered Thing* is an authoritative biography of Mendeleev that draws a multifaceted portrait of his life for the first time. As Michael Gordin reveals, Mendeleev was not only a luminary in the history of science, he was also an astonishingly wide-ranging political and cultural figure. From his attack on Spiritualism to his failed voyage to the Arctic and his near-mythical hot-air balloon trip, this is the story of an extraordinary maverick. The ideals that shaped his work outside science also led Mendeleev to order the elements and, eventually, to engineer one of the most fascinating scientific developments of the nineteenth century. *A Well-Ordered Thing* is a classic work that tells the story of one of the world's most important minds.

Station X - Michael Smith 2004

In 1939, several hundred people - students, professors, international chess players, officers, actresses and debutantes - reported to a Victorian mansion in Buckinghamshire: Bletchley Park, known as 'Station X', where enemy codes were deciphered. This title details their remarkable achievements.

One to Nine - Andrew Hodges 2008

Describes numeration and mathematics in practical terms, exploring the significance of numbers in literature, religion, and philosophy.

Turing's Imitation Game - Kevin Warwick 2016-09-22

Useful for undergraduate study, this book provides an account of the Turing Test, its history, context and implications, illustrated with practical tests.

Turing - B. Jack Copeland 2014

Alan Turing is regarded as one of the greatest scientists of the 20th century. But who was Turing, and what did he achieve during his tragically short life of 41 years? Best known as the genius who broke Germany's most secret codes during the war of 1939-45, Turing was also the father of the modern computer. Today, all who

'click-to-open' are familiar with the impact of Turing's ideas. Here, B. Jack Copeland provides an account of Turing's life and work, exploring the key elements of his life-story in tandem with his leading ideas and contributions. The book highlights Turing's contributions to computing and to computer science, including Artificial Intelligence and Artificial Life, and the emphasis throughout is on the relevance of his work to modern developments. The story of his contributions to codebreaking during the Second World War is set in the context of his thinking about machines, as is the account of his work in the foundations of mathematics.

Reflections of Alan Turing - Dermot Turing 2021-04-22

Everyone knows the story of the codebreaker and computer science pioneer Alan Turing. Except when Dermot Turing is asked about his famous uncle, people want to know more than the bullet points of his life. They want to know everything was Alan Turing actually a codebreaker? What did he make of artificial intelligence? What is the significance of Alan Turing's trial, his suicide, the Royal Pardon, the £50 note and the film *The Imitation Game*? In *Reflections of Alan Turing*, Dermot strips off the layers to uncover the real story. Its time to discover a fresh legacy of Alan Turing for the twenty-first century.

Alan Turing: His Work and Impact - S. Barry Cooper 2013-03-18

In this 2013 winner of the prestigious R.R. Hawkins Award from the Association of American Publishers, as well as the 2013 PROSE Awards for Mathematics and Best in Physical Sciences & Mathematics, also from the AAP, readers will find many of the most significant contributions from the four-volume set of the *Collected Works of A. M. Turing*. These contributions, together with commentaries from current experts in a wide spectrum of fields and backgrounds, provide insight on the significance and contemporary impact of Alan Turing's work. Offering a more modern perspective than anything currently available, *Alan Turing: His Work and Impact* gives wide coverage of the many ways in which Turing's scientific endeavors have impacted current research and understanding of the world. His pivotal writings on subjects including computing, artificial intelligence, cryptography, morphogenesis, and more display continued relevance and insight into today's scientific and technological landscape. This collection provides a great service to researchers, but is also an approachable entry point for readers with limited training in the science, but an urge to learn more about the details of Turing's work. 2013 winner of the prestigious R.R. Hawkins Award from the Association of American Publishers, as well as the 2013 PROSE Awards for Mathematics and Best in Physical Sciences & Mathematics, also from the AAP Named a 2013 Notable Computer Book in *Computing Milieux* by *Computing Reviews Affordable*, key collection of the most significant papers by A.M. Turing Commentary explaining the significance of each seminal paper by preeminent leaders in the field Additional resources available online

Alan Turing's Manchester - Jonathan Swinton 2022-05-19

Turing's involvement in the world's first computer and his life in Manchester.

The Imitation Game - Jim Ottaviani 2016-03-22

Award winning authors Jim Ottaviani and Leland Purvis present a historically accurate graphic novel biography of English mathematician and scientist Alan Turing in *The Imitation Game*. English mathematician and scientist Alan Turing (1912-1954) is credited with many of the foundational principles of contemporary computer science. *The Imitation Game* presents a historically accurate graphic novel biography of Turing's life, including his groundbreaking work on the fundamentals of cryptography and artificial intelligence. His code breaking efforts led to the cracking of the German Enigma during World War II, work that saved countless lives and accelerated the Allied defeat of the Nazis. While

Turing's achievements remain relevant decades after his death, the story of his life in post-war Europe continues to fascinate audiences today. Award-winning duo Jim Ottaviani (the #1 New York Times bestselling author of *Feynman* and *Primates*) and artist Leland Purvis (an Eisner and Ignatz Award nominee and occasional reviewer for the *Comics Journal*) present a factually detailed account of Turing's life and groundbreaking research--as an unconventional genius who was arrested, tried, convicted, and punished for his openly gay lifestyle, and whose innovative work still fuels the computing and communication systems that define our modern world. Computer science buffs, comics fans, and history aficionados will be captivated by this riveting and tragic story of one of the 20th century's most unsung heroes.

The Universal Computer - Martin Davis 2018-10-08

The breathtakingly rapid pace of change in computing makes it easy to overlook the pioneers who began it all. Written by Martin Davis, respected logician and researcher in the theory of computation, *The Universal Computer: The Road from Leibniz to Turing* explores the fascinating lives, ideas, and discoveries of seven remarkable mathematicians. It tells the stories of the unsung heroes of the computer age – the logicians. The story begins with Leibniz in the 17th century and then focuses on Boole, Frege, Cantor, Hilbert, and Gödel, before turning to Turing. Turing's analysis of algorithmic processes led to a single, all-purpose machine that could be programmed to carry out such processes—the computer. Davis describes how this incredible group, with lives as extraordinary as their accomplishments, grappled with logical reasoning and its mechanization. By investigating their achievements and failures, he shows how these pioneers paved the way for modern computing. Bringing the material up to date, in this revised edition Davis discusses the success of the IBM Watson on *Jeopardy*, reorganizes the information on incompleteness, and adds information on Konrad Zuse. A distinguished prize-winning logician, Martin Davis has had a career of more than six decades devoted to the important interface between logic and computer science. His expertise, combined with his genuine love of the subject and excellent storytelling, make him the perfect person to tell this story.

The Once and Future Turing - S. Barry Cooper 2016-03-24

Alan Turing (1912–1954) made seminal contributions to mathematical logic, computation, computer science, artificial intelligence, cryptography and theoretical biology. In this volume, outstanding scientific thinkers take a fresh look at the great range of Turing's contributions, on how the subjects have developed since his time, and how they might develop still further. The contributors include Martin Davis, J. M. E. Hyland, Andrew R. Booker, Ueli Maurer, Kanti V. Mardia, S. Barry Cooper, Stephen Wolfram, Christof Teuscher, Douglas Richard Hofstadter, Philip K. Maini, Thomas E. Woolley, Eamonn A. Gaffney, Ruth E. Baker, Richard Gordon, Stuart Kauffman, Scott Aaronson, Solomon Feferman, P. D. Welch and Roger Penrose. These specially commissioned essays will provoke and engross the reader who wishes to understand better the lasting significance of one of the twentieth century's deepest thinkers.

Alan Turing: Enigma - Anna Revell 2017-08-10

Alan Turing: Enigma: The Incredible True Story of the Man Who Cracked The Code If you have ever used a computer, you owe that joy to Alan Turing. Turing is known by many as the Father of the Modern Computer for his conception of the theoretical stored-memory machine (known as the Turing Machine) and for the subsequent implementation of this idea in the creation of some of the world's first working computers, the Automatic Computing Engine, and the Manchester Mark 1. Impressive

as they are, though, Turing's contributions to computer science are not necessarily his most famous or influential projects. Alan Turing was one of the most significant figures in the Allied victory of World War Two, thanks to his ingenious code breaking skills and the invention of the British Bombe at Bletchley Park. In his later life, Turing even dabbled in artificial intelligence, and biology, creating concepts that are still being investigated today. Until recently, Alan Turing had often been overlooked as an important figure in history. Thanks to in-depth biographies like Andrew Hodges' *Alan Turing: The Enigma*, and film depictions of Turing's life, like *The Imitation Game*, based on Hodges' book, Alan Turing is quickly becoming a household name, as people begin to recognize that his contributions to various fields were so influential they actually changed the course of human history.

Turing's Vision - Chris Bernhardt 2016-05-13

In 1936, when he was just twenty-four years old, Alan Turing wrote a remarkable paper in which he outlined the theory of computation, laying out the ideas that underlie all modern computers. This groundbreaking and powerful theory now forms the basis of computer science. In *Turing's Vision*, Chris Bernhardt explains the theory, Turing's most important contribution, for the general reader. Bernhardt argues that the strength of Turing's theory is its simplicity, and that, explained in a straightforward manner, it is eminently understandable by the nonspecialist. As Marvin Minsky writes, "The sheer simplicity of the theory's foundation and extraordinary short path from this foundation to its logical and surprising conclusions give the theory a mathematical beauty that alone guarantees it a permanent place in computer theory." Bernhardt begins with the foundation and systematically builds to the surprising conclusions. He also views Turing's theory in the context of mathematical history, other views of computation (including those of Alonzo Church), Turing's later work, and the birth of the modern computer. In the paper, "On Computable Numbers, with an Application to the Entscheidungsproblem," Turing thinks carefully about how humans perform computation, breaking it down into a sequence of steps, and then constructs theoretical machines capable of performing each step. Turing wanted to show that there were problems that were beyond any computer's ability to solve; in particular, he wanted to find a decision problem that he could prove was undecidable. To explain Turing's ideas, Bernhardt examines three well-known decision problems to explore the concept of undecidability; investigates theoretical computing machines, including Turing machines; explains universal machines; and proves that certain problems are undecidable, including Turing's problem concerning computable numbers.

Cosmogramma - Courttia Newland 2021-10-28

In his sharply crafted, unnerving first collection of speculative fiction shorts, Courttia Newland envisages an alternate future as lived by the African diaspora. Robots used as human proxies in a war become driven by all-too-human desires; Kill Parties roam the streets of a post-apocalyptic world; a matriarchal race of mer creatures depends on inter-breeding with mortals to survive; mysterious seeds appear in cities across the world, growing into the likeness of people in their vicinity. Through transfigured bodies and impossible encounters, Newland brings a sharp, fresh eye to age-old themes of the human capacity for greed, ambition and self-destruction, but ultimately of our strength and resilience.

Alan Turing - Dermot Turing 2017-09-01

Alan Turing was an extraordinary man who crammed into a life of only 42 years the careers of mathematician, codebreaker, computer scientist and biologist. His

codebreaking work at Bletchley Park was so significant it helped to shorten the Second World War, and with Tommy Flowers he built the first computer. A man ahead of his time, many of his theories and calculations are still relevant today. Often believed to be an eccentric loner, recent research by his nephew, Dermot Turing, has unearthed a fresh perspective, and here his story is condensed into a short, accessible Pitkin guide.

The Man Who Knew Too Much: Alan Turing and the Invention of the Computer (Great Discoveries) - David Leavitt 2006-11-17

Outlines the Bletchley Park mathematician's efforts to launch artificial intelligence innovations, describing his thwarted attempts to gain support for a programmable calculating machine, his contributions to cracking the Nazi Enigma code during World War II, and how the revelation of his homosexuality led to his tragic imprisonment and suicide. Reprint.

Terry Pratchett: A Life With Footnotes - Rob Wilkins 2022-09-29

'Always readable, illuminating and honest. It made me miss the real Terry.' - NEIL GAIMAN 'Sometimes joyfully, sometimes painfully, intimate . . . it is wonderful to have this closeup picture of the writer's working life.' - FRANK COTTRELL-BOYCE, OBSERVER 'Spins magic from mundanity in precisely the way Pratchett himself did.' - THE TELEGRAPH 'As frank, funny and unsentimental as anything its subject might have produced himself.' - MAIL ON SUNDAY ----- At the time of his death in 2015, award-winning and bestselling author Sir Terry Pratchett was working on his finest story yet - his own. The creator of the phenomenally bestselling Discworld series, Terry Pratchett was known and loved around the world for his hugely popular books, his smart satirical humour and the humanity of his campaign work. But that's only part of the picture. Before his untimely death, Terry was writing a memoir: the story of a boy who aged six was told by his teacher that he would never amount to anything and spent the rest of his life proving him wrong. For Terry lived a life full of astonishing achievements: becoming one of the UK's bestselling and most beloved writers, winning the prestigious Carnegie Medal and being awarded a knighthood. Now, the book Terry sadly couldn't finish has been written by Rob Wilkins, his former assistant, friend and now head of the Pratchett literary estate. Drawing on his own extensive memories, along with those of the author's family, friends and colleagues, Rob unveils the full picture of Terry's life - from childhood to his astonishing writing career, and how he met and coped with what he called the 'Embuggerance' of Alzheimer's disease. A deeply moving and personal portrait of the extraordinary life of Sir Terry Pratchett, written with unparalleled insight and filled with funny anecdotes, this is the only official biography of one of our finest authors. 'Of all the dead authors in the world, Terry Pratchett is the most alive.' - JOHN LLOYD

The Secret Life of Bletchley Park - Sinclair McKay 2011-08-26

Bletchley Park was where one of the war's most famous – and crucial – achievements was made: the cracking of Germany's "Enigma" code in which its most important military communications were couched. This country house in the Buckinghamshire countryside was home to Britain's most brilliant mathematical brains, like Alan Turing, and the scene of immense advances in technology – indeed, the birth of modern computing. The military codes deciphered there were instrumental in turning both the Battle of the Atlantic and the war in North Africa. But, though plenty has been written about the boffins, and the codebreaking, fictional and non-fiction – from Robert Harris and Ian McEwan to Andrew Hodges' biography of Turing – what of the thousands of men and women who lived and worked there during the war? What was life like for them – an odd, secret territory between the civilian

and the military? Sinclair McKay's book is the first history for the general reader of life at Bletchley Park, and an amazing compendium of memories from people now in their eighties – of skating on the frozen lake in the grounds (a depressed Angus Wilson, the novelist, once threw himself in) – of a youthful Roy Jenkins, useless at codebreaking, of the high jinks at nearby accommodation hostels – and of the implacable secrecy that meant girlfriend and boyfriend working in adjacent huts knew nothing about each other's work.

Alan Turing - Andrew Hodges 2014-11-19

The official book behind the film, *The Imitation Game*, this is a dramatic portrayal of the life and work of Alan Turing, one of Britain's most extraordinary unsung heroes, and one of the world's greatest innovators. This is the official story that has inspired the British film, *The Imitation Game*, a nail-biting race against time following Alan Turing, the pioneer of modern-day computing and credited with cracking the German Enigma code, and his brilliant team at Britain's top-secret code-breaking centre, Bletchley Park, during the darkest days of World War II. Turing, whose contributions and genius significantly shortened the war, saving thousands of lives, was the eventual victim of an unenlightened British establishment, but his work and legacy live on. Prime Minister Gordon Brown released a statement of apology in 2009 on behalf of the British government for the "appalling" treatment of Turing.

A Beautiful Mind - Sylvia Nasar 2012-11-15

A Beautiful Mind is Sylvia Nasar's award-winning biography about the mystery of the human mind, the triumph over incredible adversity, and the healing power of love. At the age of thirty-one, John Nash, mathematical genius, suffered a devastating breakdown and was diagnosed with schizophrenia. Yet after decades of leading a ghost-like existence, he was to re-emerge to win a Nobel Prize and world acclaim. *A Beautiful Mind* has inspired the Oscar-winning film directed by Ron Howard and featuring Russell Crowe in the lead role of John Nash.

Alan Turing, Enigma - Andrew Hodges 1994-11-17

Alan Turing, Enigma ist die Biographie des legendären britischen Mathematikers, Logikers, Kryptoanalytikers und Computerkonstruktors Alan Mathison Turing (1912-1954). Turing war einer der bedeutendsten Mathematiker dieses Jahrhunderts und eine höchst exzentrische Persönlichkeit. Er gilt seit seiner 1937 erschienenen Arbeit "On Computable Numbers", in der er das Prinzip des abstrakten Universalrechners entwickelte, als der Erfinder des Computers. Er legte auch die Grundlagen für das heute "Künstliche Intelligenz" genannte Forschungsgebiet. Turings zentrale Frage "Kann eine Maschine denken?" war das Motiv seiner Arbeit und wird die Schlüsselfrage des Umgangs mit dem Computer werden. Die bis 1975 geheimgehaltene Tätigkeit Turings für den britischen Geheimdienst, die zur Entschlüsselung des deutschen Funkverkehrs führte, trug entscheidend zum Verlauf und Ausgang des Zweiten Weltkriegs bei.

The Essential Turing - B. Jack. Copeland 2004-09-09

Alan Turing, pioneer of computing and WWII codebreaker, is one of the most important and influential thinkers of the twentieth century. In this volume for the first time his key writings are made available to a broad, non-specialist readership. They make fascinating reading both in their own right and for their historic significance: contemporary computational theory, cognitive science, artificial intelligence, and artificial life all spring from this ground-breaking

work, which is also rich in philosophical and logical insight. An introduction by leading Turing expert Jack Copeland provides the background and guides the reader through the selection. About Alan Turing Alan Turing FRS OBE, (1912-1954) studied mathematics at King's College, Cambridge. He was elected a Fellow of King's in March 1935, at the age of only 22. In the same year he invented the abstract computing machines - now known simply as Turing machines - on which all subsequent stored-program digital computers are modelled. During 1936-1938 Turing continued his studies, now at Princeton University. He completed a PhD in mathematical logic, analysing the notion of 'intuition' in mathematics and introducing the idea of oracular computation, now fundamental in mathematical recursion theory. An 'oracle' is an abstract device able to solve mathematical problems too difficult for the universal Turing machine. In the summer of 1938 Turing returned to his Fellowship at King's. When WWII started in 1939 he joined the wartime headquarters of the Government Code and Cypher School (GC&CS) at Bletchley Park, Buckinghamshire. Building on earlier work by Polish cryptanalysts, Turing contributed crucially to the design of electro-mechanical machines ('bombers') used to decipher Enigma, the code by means of which the German armed forces sought to protect their radio communications. Turing's work on the version of Enigma used by the German navy was vital to the battle for supremacy in the North Atlantic. He also contributed to the attack on the cyphers known as 'Fish'. Based on binary teleprinter code, Fish was used during the latter part of the war in preference to morse-based Enigma for the encryption of high-level signals, for example messages from Hitler and other members of the German High Command. It is estimated that the work of GC&CS shortened the war in Europe by at least two years. Turing received the Order of the British Empire for the part he played. In 1945, the war over, Turing was recruited to the National Physical Laboratory (NPL) in London, his brief to design and develop an electronic computer - a concrete form of the universal Turing machine. Turing's report setting out his design for the Automatic Computing Engine (ACE) was the first relatively complete specification of an electronic stored-program general-purpose digital computer. Delays beyond Turing's control resulted in NPL's losing the race to build the world's first working electronic stored-program digital computer - an honour that went to the Royal Society Computing Machine Laboratory at Manchester University, in June 1948. Discouraged by the delays at NPL, Turing took up the Deputy Directorship of the Royal Society Computing Machine Laboratory in that year. Turing was a founding father of modern cognitive science and a leading early exponent of the hypothesis that the human brain is in large part a digital computing machine, theorising that the cortex at birth is an 'unorganised machine' which through 'training' becomes organised 'into a universal machine or something like it'. He also pioneered Artificial Intelligence. Turing spent the rest of his short career at Manchester University, being appointed to a specially created Readership in the Theory of Computing in May 1953. He was elected a Fellow of the Royal Society of London in March 1951 (a high honour).

The Turing Guide - B. Jack Copeland 2017

This carefully edited resource brings together contributions from some of the world's leading experts on Alan Turing to create a comprehensive guide that will serve as a useful resource for researchers in the area as well as the increasingly interested general reader.

Natural Wonders Every Child Should Know - Edwin Tenney Brewster 1939