

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 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. Documents the innovations of a group of eccentric geniuses who developed computer code in the mid-20th century as part of mathematician Alan Turing's theoretical universal machine idea, exploring how their ideas led to such developments as digital television, modern genetics and the hydrogen bomb. "Michael Olinick has written a vibrant and absorbing biography of Alan Turing. Turing's work as a cryptographer during WW II and his pioneering development of the digital computer helped us win that war and make our technology-driven world of today possible—all this against the backdrop of the homophobic world Turing tried to navigate." — Joseph Malkevitch, Professor of Mathematics at York College (CUNY) and CUNY Graduate Center *Alan Turing (1912-1954)* was born in London and showed signs of genius from a very young age. Turing was just 24 when he devised the theory that led to the development of modern computers and he went on to achieve major breakthroughs in probability, number theory, cryptology, and mathematical biology. His codebreaking efforts during World War II allowed the British to decipher secret German communications, effectively shortening the war and saving millions of lives. Yet instead of being celebrated for his accomplishments, Turing was prosecuted for being a homosexual and was forced to undergo hormone treatments designed to reduce his sexual drive. Turing died of cyanide poisoning in 1954 at the age of 41, a tragic end to a brilliant life, and an event that remains mysterious to this day. In *Simply Turing*, Professor Michael Olinick recounts the life and work of a man who, along with Newton and Darwin, is considered one of the three most influential British scientists of all time. Prof. Olinick provides an accessible explanation of Turing's monumental achievements, while introducing us to the friends, colleagues, and rivals who shared his life, and exploring the controversy surrounding his death. For anyone interested in the beginnings of our computer-defined age, or anyone who wants a better understanding of why LGBTQ rights are so important, *Simply Turing* is an indispensable and fascinating introduction to a man who was both ahead of his time and a tragic victim of it. ****Cited in Books for College Libraries, 3d ed. Hodges (mathematics, Wadham College, Oxford) examines both the heroic and tragic sides of Turing's life, from his decryption of the German U-boat Enigma cipher, to his tragic suicide (caused in part by his detection as a homosexual and subsequent mandatory hormone therapy to suppress his libido). Annotation copyrighted by Book News, Inc., Portland, OR "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. A facsimile edition of Alan Turing's influential Princeton thesis *Between inventing the concept of a universal computer in 1936 and breaking the German Enigma code during World War II, Alan Turing (1912–1954), the British founder of computer science and artificial intelligence, came to Princeton University to study mathematical logic. Some of the greatest logicians in the world—including Alonzo Church, Kurt Gödel, John von Neumann, and Stephen Kleene—were at Princeton in the 1930s, and they were working on ideas that would lay the groundwork for what would become known as computer science. This book presents a facsimile of the original typescript of Turing's fascinating and influential 1938 Princeton PhD thesis, one of the key documents in the history of mathematics and computer science. The book also features essays by Andrew Appel and Solomon Feferman that explain the still-unfolding significance of the ideas Turing developed at Princeton. A work of philosophy as well as mathematics, Turing's thesis envisions a practical goal—a logical system to formalize mathematical proofs so they can be checked mechanically. If every step of a theorem could be verified mechanically, the burden on intuition would be limited to the axioms. Turing's point, as Appel writes, is that "mathematical reasoning can be done, and should be done, in mechanizable formal logic." Turing's vision of "constructive systems of logic for practical use" has become reality: in the twenty-first century, automated "formal methods" are now routine. Presented here in its original form, this fascinating thesis is one of the key documents in the history of mathematics and computer science. 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 classic biography of the founder of computer science, reissued on the centenary of his birth with a substantial new preface by the author, is the definitive account of an extraordinary mind and life. A gripping story of mathematics, computers, cryptography, and homosexual persecution, Andrew Hodges's acclaimed book captures both the inner and outer drama of Turing's life. 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 story 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 story of the mathematical genius and father of computing whose codebreaking changed the course of the Second World War. Alan Turing has long proved a subject of fascination, but following the centenary of his birth in 2012, the code-breaker, computer pioneer, mathematician (and much more) has become even more celebrated with much media coverage, and several meetings, conferences and books raising public awareness of Turing's life and work. This volume will bring together contributions from some of the leading experts on Alan Turing to create a comprehensive guide to Turing that will serve as a useful resource for researchers in the area as well as the increasingly interested general reader. The book will cover aspects of Turing's life and the wide range of*

his intellectual activities, including mathematics, code-breaking, computer science, logic, artificial intelligence and mathematical biology, as well as his subsequent influence. This film tie-in tells the true story behind the nail-biting race against time following Alan Turing (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. In 1954, aged 41, Alan Turing committed suicide and one of Britain's greatest scientific minds was lost. Turing's involvement in the world's first computer and his life in Manchester. The official book behind the Academy Award-winning film *The Imitation Game*, starring Benedict Cumberbatch and Keira Knightley Alan Turing was the mathematician whose cipher-cracking transformed the Second World War. Taken on by British Intelligence in 1938, as a shy young Cambridge don, he combined brilliant logic with a flair for engineering. In 1940 his machines were breaking the Enigma-enciphered messages of Nazi Germany's air force. He then headed the penetration of the super-secure U-boat communications. But his vision went far beyond this achievement. Before the war he had invented the concept of the universal machine, and in 1945 he turned this into the first design for a digital computer. Turing's far-sighted plans for the digital era forged ahead into a vision for Artificial Intelligence. However, in 1952 his homosexuality rendered him a criminal and he was subjected to humiliating treatment. In 1954, aged 41, Alan Turing took his own life. 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). 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. 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. Written by a distinguished cast of contributors, *Alan Turing: Life and Legacy of a Great Thinker* is the definitive collection of essays in commemoration of the 90th birthday of Alan Turing. This fascinating text covers the rich facets of his life, thoughts, and legacy, but also sheds some light on the future of computing science with a chapter contributed by visionary Ray Kurzweil, winner of the 1999 National Medal of Technology. Further, important contributions come from the philosopher Daniel Dennett, the Turing biographer Andrew Hodges, and from the distinguished logician Martin Davis, who provides a first critical essay on an emerging and controversial field termed "hypercomputation". 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

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He was elected a Fellow of the Royal Society of London in March 1951 (a high honour). December, 1932 In the bathroom of a Belgian hotel, a French spymaster photographs top-secret documents – the operating instructions of the cipher machine, Enigma. A few weeks later a mathematician in Warsaw begins to decipher the coded communications of the Third Reich and lays the foundations for the code-breaking operation at Bletchley Park. The co-operation between France, Britain and Poland is given the cover-name 'X, Y & Z'. December, 1942 It is the middle of World War Two. The Polish code-breakers have risked their lives to continue their work inside Vichy France, even as an uncertain future faces their homeland. Now they are on the run from the Gestapo. People who know the Enigma secret are not supposed to be in the combat zone, so MI6 devises a plan to exfiltrate them. If it goes wrong, if they are caught, the consequences could be catastrophic for the Allies. Based on original research and newly released documents, X, Y & Z is the exhilarating story of those who risked their lives to protect the greatest secret of World War Two. 'Turing writes on codebreaking with understandable authority and compelling panache.' - Michael Smith, bestselling author of Station X. At Bletchley Park, some of Britain's most talented mathematicians, linguists, and intellectuals were assembled to break Nazi codes. Kept secret for nearly thirty years, we have now come to realise the crucial role that these codebreakers played in the Allied victory in World War II. Written by Dermot Turing - the nephew of famous codebreaker Alan Turing - this illustrated account provides unique insight into the behind-the-scenes action at Bletchley Park. Discover how brilliant and eccentric individuals such as Dilly Knox, Alan Turing and Joan Clarke were recruited, the social life that grew up around the park, and how they dealt with the ever-present burden of secrecy. Including a foreword by Professor Christopher Andrew of Cambridge University, author of MI5's official history The Secret World, this book brings to life the stories of the men and women who toiled day and night to crack the seemingly unbreakable enigma code. Are you a movie fan looking forward to seeing The Imitation Game starring Benedict Cumberbatch? Or a World War II buff with a particular interest in code breaking? Alan Turing, the man who Winston Churchill described as the single biggest contributor to the Allied victory over the Nazis, was a genius of our lifetime and father of the modern day computer. That we can now sit and read books on a computer screen is largely thanks to his early work developing the world's first computer. His code-breaking efforts during the Second World War are thought to have brought forward the end of the war by two years, a remarkable achievement. Recently, recognition of Turing's work has exploded. Bletchley Park where Turing worked during WWII has been restored. It now acts as a major tourist destination and place of historical interest. Turing's story has also now been dramatized in a major new movie starring actor-of-the-moment, Benedict Cumberbatch. The Imitation Game has received rave early reviews and is currently on short lists for Oscar success. Cumberbatch, best-known to us as the inimitable detective in the British TV series, Sherlock, brings this intriguing and heroic man to life with his own unique acting style. In doing so, he tells his story to a generation who need to know just what he achieved and how much he changed the world. But what was this strange, socially awkward man, painfully inept at the common niceties of life, really about? The Bletchley Park Enigma: 200+ Facts on the Story of Alan Turing That Inspired the Smash Hit Movie The Imitation Game Starring Benedict Cumberbatch details the real life story of Alan Turing, his ground-breaking work, his complexities, the ultimate tragedy of his life and his posthumous success. You will learn about: His early work Code breaking at Bletchley Park The post-war years The tragedy of his personal life Efforts to pardon him and honor his work News about The Imitation Game and Benedict Cumberbatch All this put down in a rapid reading format so that you can absorb it super-quick. This is a great companion book to the movie. Don't delay! Pick Up Your Copy of The Bletchley Park Enigma: 200+ Facts on the Story of Alan Turing That Inspired the Smash Hit Movie The Imitation Game Starring Benedict Cumberbatch Right Away! 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. December, 1932 In the bathroom of a Belgian hotel, a French spymaster photographs secret documents - operating instructions of the cipher machine, Enigma. A few weeks later a mathematician in Warsaw begins to decipher the coded communications of the Third Reich and lay the foundations for the code-breaking operation at Bletchley Park. The co-operation between France, Britain and Poland is given the cover name 'X, Y & Z'. December, 1942 It is the middle of World War II. The Polish code-breakers are in France on the run from the Gestapo. People who know the Enigma secret are not supposed to be in the combat zone for fear of capture so MI6 devises a plan to exfiltrate them. If it goes wrong, if they are caught, they could give away the greatest secret of the war. X, Y & Z describes how French, British and Polish secret services came together to unravel the Enigma machine. It tells of how, under the very noses of the Germans, Enigma code-breaking continued in Vichy France. And how code-breakers from Poland continued their work for Her Majesty's Secret Service, watching the USSR's first steps of the Cold War. The people of X, Y and Z were eccentric, colourful and caught up in world events that they could watch not control. This is their story... 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. *Mathematical Logic* is a collection of the works of one of the leading figures in 20th-century science. This collection of A.M. Turing's works is intended to include all his mature scientific writing, including a substantial quantity of unpublished material. His work in pure mathematics and mathematical logic extended considerably further; the work of his last years, on morphogenesis in plants, is also of the greatest originality and of permanent importance. This book is divided into three parts. The first part focuses on computability and ordinal logics and covers Turing's work between 1937 and 1938. The second part covers type theory; it provides a general introduction to Turing's work on type theory and covers his published and unpublished works between 1941 and 1948. Finally, the third part focuses on enigmas, mysteries, and loose ends. This concluding section of the book discusses Turing's *Treatise on the Enigma*, with excerpts from the *Enigma Paper*. It also delves into Turing's papers on programming and on minimum cost sequential analysis, featuring an excerpt from the unpublished manuscript. This book will be of interest to mathematicians, logicians, and computer scientists. A New York Times Bestseller Selected as a 2017 ALA/YALSA Great Graphic Novel for Teens: Nonfiction 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 being openly gay, 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. Containing never-before-published material, this fascinating account sheds new light on one of the greatest figures of the twentieth century. Can you tell the difference between talking to a human and talking to a machine? Or, is it possible to create a machine which is able to converse like a human? In fact, what is it that even makes us human? Turing's *Imitation Game*, commonly known as the Turing Test, is fundamental to the science of artificial intelligence. Involving an interrogator conversing with hidden identities, both human and machine, the test strikes at the heart of any questions about the capacity of machines to behave as humans. While this subject area has shifted dramatically in the last few years, this book offers an up-to-date assessment of Turing's *Imitation Game*, its history, context and implications, all illustrated with practical Turing tests. The contemporary relevance of this topic and the strong emphasis on example transcripts makes this book an ideal companion for undergraduate courses in artificial intelligence, engineering or computer science. 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 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. It's time to discover a fresh legacy of Alan Turing for the twenty-first century. 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.

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