

Perfect Rigour: A Genius And The Mathematical Breakthrough Of A Century

****WINNER OF THE 2020 NOBEL PRIZE IN PHYSICS**** The Road to Reality is the most important and ambitious work of science for a generation. It provides nothing less than a comprehensive account of the physical universe and the essentials of its underlying mathematical theory. It assumes no particular specialist knowledge on the part of the reader, so that, for example, the early chapters give us the vital mathematical background to the physical theories explored later in the book. Roger Penrose's purpose is to describe as clearly as possible our present understanding of the universe and to convey a feeling for its deep beauty and philosophical implications, as well as its intricate logical interconnections. The Road to Reality is rarely less than challenging, but the book is leavened by vivid descriptive passages, as well as hundreds of hand-drawn diagrams. In a single work of colossal scope one of the world's greatest scientists has given us a complete and unrivalled guide to the glories of the universe that we all inhabit. 'Roger Penrose is the most important physicist to work in relativity theory except for Einstein. He is one of the very few people I've met in my life who, without reservation, I call a genius' Lee Smolin For over thirty years, besides making music, David Byrne has focused his unique genius upon forms as diverse as the archaeology of music as we know it, architectural photography and the uses of PowerPoint. Now he presents his most personal work to date, a collection of drawings exploring the form of the tree diagram. Arboretum is an eclectic blend of science, automatic writing, self-analysis and satire. A journey through irrational logic - the application of scientific rigour and form to irrational premises, proceeding from careful nonsense to unexpected sense. The tree diagram is a form that might reveal more about yourself than you dreamed possible.

WINNER OF THE 2017 NATIONAL BOOK AWARD IN NONFICTION FINALIST FOR THE NATIONAL BOOK CRITICS CIRCLE AWARDS WINNER OF THE NEW YORK PUBLIC LIBRARY'S HELEN BERNSTEIN BOOK AWARD NAMED A BEST BOOK OF 2017 BY THE NEW YORK TIMES BOOK REVIEW, LOS ANGELES TIMES, WASHINGTON POST, BOSTON GLOBE, SEATTLE TIMES, CHRISTIAN SCIENCE MONITOR, NEWSWEEK, PASTE, and POP SUGAR The essential journalist and bestselling biographer of Vladimir Putin reveals how, in the space of a generation, Russia surrendered to a more virulent and invincible new strain of autocracy. Award-winning journalist Masha Gessen's understanding of the events and forces that have wracked Russia in recent times is unparalleled. In The Future Is History, Gessen follows the lives of four people born at what promised to be the dawn of democracy. Each of them came of age with unprecedented expectations, some as the children and grandchildren of the very architects of the new Russia, each with newfound aspirations of their own--as entrepreneurs, activists, thinkers, and writers, sexual and social beings. Gessen charts their paths against the machinations of the regime that would crush them all, and against the war it waged on understanding itself, which ensured the unobstructed reemergence of the old Soviet order in the form of today's terrifying and seemingly unstoppable mafia state. Powerful and urgent, The Future Is History is a cautionary tale for our time and for all time.

Genius' is an over-used, but rarely-accurate, description applied to remarkable figures. In the case of Richard Trevithick, however, its use is not only apt, but could even be regarded as something of an understatement. Philip Hosken's 'Genius' offers a perfect introduction to the great engineer. Combining detailed and original research, the result is a clearly stated, unbiased and readable account of his life and achievements. From childhood and early motivation, through feverish experimentation and frustration, to the eventual triumph of his revolutionary high pressure cylindrical boiler, 1801 road engine and the world's first railway locomotive, the author explains how and why Trevithick became a giant of invention and innovation. Laying to rest myths regurgitated by less-diligent writers, while not neglecting the major contributions to the story of Papin, Newcomen, Savery and others, Hosken employs the kind of scientific rigour which the protagonist of his book might recognise and approve. If you only read one book about Richard Trevithick, make sure it's this one.

Ordinary Differential Equations

A Genius and the Mathematical Breakthrough of a Lifetime

Winning Ways for Your Mathematical Plays

A Short Bright Flash: Augustin Fresnel and the Birth of the Modern Lighthouse

Surviving Autocracy

Real Life

Set against the turbulent and innovative world of the Renaissance, a detailed portrait of the master artist, scientist, inventor, and philosopher draws on the personal notebooks, journals, art, and other writings to provide a compelling study of Leonardo da Vinci and his seminal contributions to his era. 12,500 first printing.

At last, a more inspired approach to business. Business Genius describes how to grow your business more effectively through intelligent strategy and imaginative leadership, radical innovation and sustained change. Combining the entrepreneurial passion of a start-up with the commercial rigour of large enterprises... this is for everyone who seeks the inspiration to think and act differently. Business Genius helps you drive more profitable, sustainable growth in today's fast changing and connected markets. It explores the challenges of strategy and innovation, leadership and change as you grow your business, and yourself, in order to achieve high performance. From the craze for Crocs to the cool of Diesel, the secrets of Kikkoman and energy of Red Bull, the vision of Google and disruption of Current TV, the revolution of P&G and the phenomenon of Umpqua – the book captures the best insights from around the world, and a new agenda for today's business. Seeing things differently is the foundation of genius. Connecting your left and right brain to think more holistically, exploring opportunities from the future back as well as now forward – then doing business from the outside in rather than the inside out, in order to turn radical ideas into practical action.

Some probability problems are so difficult that they stump the smartest mathematicians. But even the hardest of these problems can often be solved with a computer and a Monte Carlo simulation, in which a random-number generator simulates a physical process, such as a million rolls of a pair of dice. This is what Digital Dice is all about: how to get numerical answers to difficult probability problems without having to solve complicated mathematical equations. Popular-math writer Paul Nahin challenges readers to solve twenty-one difficult but fun problems, from determining the odds of coin-flipping games to figuring out the behavior of elevators. Problems build from relatively easy (deciding whether a dishwasher who breaks most of the dishes at a restaurant during a given week is clumsy or just the victim of randomness) to the very difficult (tackling branching processes of the kind that had to be solved by Manhattan Project mathematician Stanislaw Ulam). In his characteristic style, Nahin brings the problems to life with interesting and odd historical anecdotes. Readers learn, for example, not just how to determine the optimal stopping point in any selection process but that astronomer Johannes Kepler selected his second wife by interviewing eleven women. The book shows readers how to write elementary computer codes using any common programming language, and provides solutions and line-by-line walk-throughs of a MATLAB code for each problem. Digital Dice will appeal to anyone who enjoys popular math or computer science.

Winner of the 2017 JPBM Communications Award For Expository and Popular Books. "A delightful meta-biography--playful indeed--of a brilliant iconoclast.†? --James Gleick, author of The Information John Horton Conway is a singular mathematician with a lovely loopy brain. He is Archimedes, Mick Jagger, Salvador Dalí, and Richard Feynman all rolled into one--he boasts a rock star's charisma, a slyly bent sense of humor, a polymath's promiscuous curiosity, and an insatiable compulsion to explain everything about the world to everyone in it. At Cambridge, Conway wrestled with "Monstrous Moonshine," discovered the aptly named surreal numbers, and invented the cult classic Game of Life--more than just a cool fad. Life demonstrates how simplicity generates complexity and provides an analogy for mathematics and the entire universe. As a "mathemagician" at Princeton, he used ropes, dice, pennies, coat hangers, even the occasional Slinky, as props to extend his winning imagination and share his many nerdlsh delights. He granted Roberts full access to his idiosyncrasies and intellect both, though not without the occasional grumble: "Oh hell," he'd say. "You're not going to put that in the book. Are you!?!?"

When We Cease to Understand the World

A Life

Genius and Ink: Virginia Woolf on How to Read

A More Inspired Approach to Business Growth

An Inquiry Into Its Laws and Consequences

A Biography

The Meaning of Genius

A gripping and tragic tale that sheds rare light on the unique burden of genius In 2006, an eccentric Russian mathematician named Grigori Perelman solved the Poincare Conjecture, an extremely complex topological problem that had eluded the best minds for over a century. A prize of one million dollars was offered to anyone who could unravel it, but Perelman declined the winnings, and in doing so inspired journalist Masha Gessen to tell his story. Drawing on interviews with Perelman's teachers, classmates, coaches, teammates, and colleagues in Russia and the United States--and informed by her own background as a math whiz raised in Russia--Gessen uncovered a mind of unrivaled computational power, one that enabled Perelman to pursue mathematical concepts to their logical (sometimes distant) end. But she also discovered that this very strength turned out to be Perelman's undoing and the reason for his withdrawal, first from the world of mathematics and then, increasingly, from the world in general. In August 1859 Bernhard Riemann, a little-known 32-year old mathematician, presented a paper to the Berlin Academy titled: "On the Number of Prime Numbers Less Than a Given Quantity." In the middle of that paper, Riemann made an incidental remark "â€" a guess, a hypothesis. What he tossed out to the assembled mathematicians that day has proven to be almost cruelly compelling to countless scholars in the ensuing years. Today, after 150 years of careful research and exhaustive study, the question remains. Is the hypothesis true or false? Riemann's basic inquiry, the primary topic of his paper, concerned a straightforward but nevertheless important matter of arithmetic "â€" defining a precise formula to track and identify the occurrence of prime numbers. But it is that incidental remark "â€" the Riemann Hypothesis "â€" that is the truly astonishing legacy of his 1859 paper. Because Riemann was able to see beyond the pattern of the primes to discern traces of something mysterious and mathematically elegant shrouded in the shadows "â€" subtle variations in the distribution of those prime numbers. Brilliant for its clarity, astounding for its potential consequences, the Hypothesis took on enormous importance in mathematics. Indeed, the successful solution to this puzzle would herald a revolution in prime number theory. Proving or disproving it became the greatest challenge of the age. It has become clear that the Riemann Hypothesis, whose resolution seems to hang tantalizingly just beyond our grasp, holds the key to a variety of scientific and mathematical investigations. The making and breaking of modern codes, which depend on the properties of the prime numbers, have roots in the Hypothesis. In a series of extraordinary developments during the 1970s, it emerged that even the physics of the atomic nucleus is connected in ways not yet fully understood to this strange conundrum. Hunting down the solution to the Riemann Hypothesis has become an obsession for many "â€" the veritable "great white whale" of mathematical research. Yet despite determined efforts by generations of mathematicians, the Riemann Hypothesis defies resolution. Alternating passages of extraordinarily lucid mathematical exposition with chapters of elegantly composed biography and history, Prime Obsession is a fascinating and fluent account of an epic mathematical mystery that continues to challenge and excite the world. Posited a century and a half ago, the Riemann Hypothesis is an intellectual feast for the cognoscenti and the curious alike. Not just a story of numbers and calculations, Prime Obsession is the engrossing tale of a relentless hunt for an elusive proof "â€" and those who have been consumed by it.

A FINANCIAL TIMES AND TLS BOOK OF THE YEAR An exhilarating new biography of John von Neumann: the lost genius who invented our world 'A sparkling book, with an intoxicating mix of pen-portraits and grand historical narrative. Above all it fizzes with a dizzying mix of deliciously vital ideas. . . . A staggering achievement' Tim Harford The smartphones in our pockets and computers like brains. The vagaries of game theory and evolutionary biology. Self-replicating moon bases and nuclear weapons. All bear the fingerprints of one remarkable man: John von Neumann. Born in Budapest at the turn of the century, von Neumann is one of the most influential scientists to have ever lived. His colleagues believed he had the fastest brain on the planet - bar none. He was instrumental in the Manhattan Project and helped formulate the bedrock of Cold War geopolitics and modern economic theory. He created the first ever programmable digital computer. He prophesied the potential of nanotechnology and, from his deathbed, expounded on the limits of brains and computers - and how they might be overcome. Taking us on an astonishing journey, Ananyo Bhattacharya explores how a combination of genius and unique historical circumstance allowed a single man to sweep through so many different fields of science, sparking revolutions wherever he went. Insightful and illuminating, The Man from the Future is a thrilling intellectual biography of the visionary thinker who shaped our century.

`In one of tje funniest biographies I have ever read, Lewis assembles all the excellently entertaining anecdotes about this deeply loved, much mocked, sometimes reviled figure whose departure has robbed the literary world of its social smartness and any worthwhile eccentricity . . . [An] excellent, wildly funny and informative biography. `Auberon Waugh, Literary Review. Precociously brilliant in his youth, Cyril Connolly was haunted for the rest of his life by a sense of failure and a romatic yearning to recover a lost Eden. His two great books, The Unquiet Grave and Enemies of Promise, are classics of English prose, combining wit, romanticism and merciless self-knowledge. As witty in person as he as in his prose, he was notoriously slothful and greedy; he was married three times, abd his dealings with women were bedevilled by a lifelong tendency to be in love with two or more people at once.

The Passion of Pussy Riot

The Unlikely Rise of Vladimir Putin

Where the Jews Aren't

Cyril Connolly

Leonardo's Universe

The Origins of the Digital Universe

Invisible Geniuses: Could the Knowledge Frontier Advance Faster?

One of The New York Times Book Review's "10 Best Books of 2021" Shortlisted for the 2021 International Booker Prize A fictional examination of the lives of real-life scientists and thinkers whose discoveries resulted in moral consequences beyond their imagining. When We Cease to Understand the World is a book about the complicated links between scientific and mathematical discovery, madness, and destruction. Fritz Haber, Alexander Grothendieck, Werner Heisenberg, Erwin Schrödinger--these are some of luminaries into whose troubled lives Benjamin Labatut thrusts the reader, showing us how they grappled with the most profound questions of existence. They have strokes of unparalleled genius, alienate friends and lovers, descend into isolation and insanity. Some of their discoveries reshape human life for the better; others pave the way to chaos and unimaginable suffering. The lines are never clear. At a breakneck pace and with a wealth of disturbing detail, Labatut uses the imaginative resources of fiction to tell the stories of the scientists and mathematicians who expanded our notions of the possible.

A comprehensive and practical guide to the stock market from a successful fund manager--filled with case studies, important background information, and all the tools you'll need to become a stock market genius. Fund manager Joel Greenblatt has been beating the Dow (with returns of 50 percent a year) for more than a decade. And now, in this highly accessible guide, he's going to show you how to do it, too. You're about to discover investment opportunities that portfolio managers, business-school professors, and top investment experts regularly miss--uncharted areas where the individual investor has a huge advantage over the Wall Street wizards. Here is your personal treasure map to special situations in which big profits are possible, including: · Spin-offs · Restructurings · Merger Securities · Rights Offerings · Recapitalizations · Bankruptcies · Risk Arbitrage

Presents the history of the invention of computers, describing the collaboration of John von Neumann and his colleagues as they worked together to create the first computer, an event which led to the hydrogen bomb and the birth of the digital age.

In 2006, an eccentric Russian mathematician named Grigori Perelman solved one of the world's greatest intellectual puzzles. The Poincare conjecture is an extremely complex topological problem that had eluded the best minds for over a century. In 2000, the Clay Institute in Boston named it one of seven great unsolved mathematical problems, and promised a million dollars to anyone who could find a solution. Perelman was awarded the prize this year - and declined the money. Journalist Masha Gessen was determined to find out why. Drawing on interviews with Perelman's teachers, classmates, coaches, teammates, and colleagues in Russia and the US - and informed by her own background as a math whiz raised in Russia - she set out to uncover the nature of Perelman's astonishing abilities. In telling his story, Masha Gessen has constructed a gripping and tragic tale that sheds rare light on the unique burden of genius.

In Search of the Shape of the Universe

Einstein and Oppenheimer

The Future Is History

Computational Solutions to Practical Probability Problems

The Man Without a Face

Perfect Rigour

Creative Genius

This classic on games and how to play them intelligently is being re-issued in a new, four volume edition. This book has laid the foundation to a mathematical approach to playing games. The wise authors wield witty words, which wangle wonderfully winning ways. In Volume 1, the authors do the Spade Work, presenting theories and techniques to "dissect" games of varied structures and formats in order to develop winning strategies.

Time and space. Genetics and robotics. Education and fashion. Possibilities limited only by our imaginations. The future is yours to create. Could you be the Leonardo da Vinci of our times? Most ideas are incremental, quickly copied and suffocated by conventions. "Future back" thinking starts with stretching possibilities then makes them a reality "now forward". The best ideas emerge by seeing what everyone has seen, and thinking like nobody else. Newness occurs in the margins not the mainstream. Solutions emerge through powerful fusions of the best ideas into practical, useful concepts. Creative people rise up. Visionaries, border crossers and game changers. Engage your right brain, open your eyes, think more holistically... intuition rules. From Apple to Blackberry, GE to Google, innovative companies stand out from the crowd not so much for their exceptional products, despite what one might assume, but for the way they challenge conventions, redefine markets, and change consumer expectations. Apple didn't just create the iPod; it envisioned the future of music and then made a product to service that future. And the same holds true for every highly innovative company. In Creative Genius, Peter Fisk presents ten tracks for innovation and provides business blueprints for making that innovation happen. Creative Genius is inspired by the imagination and perspective of Leonardo da Vinci, in order to drive creativity, design and innovation in more radical and powerful ways. It includes practical tools ranging from scenario planning and context reframing to accelerated innovation and market entry, plus 50 tracks, 25 tools, and 50 inspiring case studies. Creative Genius is "the best and last" in the Genius series by bestselling author Peter Fisk. Others include Business Genius, Marketing Genius and Customer Genius.

Perfect RigourA Genius and the Mathematical Breakthrough of a LifetimeIcon Books Ltd

A FINALIST for the Booker Prize, the National Book Critics Circle John Leonard Prize, the VCU/Cabell First Novelist Prize, the Lambda Literary Award, the NYPL Young Lions Award, and the Edmund White Debut Fiction Award "A blistering coming of age story" —O: The Oprah Magazine Named a Best Book of the Year by The New York Times, The Washington Post, New York Public Library, Vanity Fair, Elle, NPR, The Guardian, The Paris Review, Harper's Bazaar, Financial Times, Huffington Post, BBC, Shondaland, Barnes & Noble, Vulture, Thrillist, Vice, Self, Electric Literature, and Shelf Awareness A novel of startling intimacy, violence, and mercy among friends in a Midwestern university town, from an electric new voice. Almost everything about Wallace is at odds with the Midwestern university town where he is working uneasily toward a biochem degree. An introverted young man from Alabama, black and queer, he has left behind his family without escaping the long shadows of his childhood. For reasons of self-preservation, Wallace has enforced a wary distance even within his own circle of friends—some dating each other, some dating women, some feigning straightness. But over the course of a late-summer weekend, a series of confrontations with colleagues, and an unexpected encounter with an ostensibly straight, white classmate, conspire to fracture his defenses while exposing long-hidden currents of hostility and desire within their community. Real Life is a novel of profound and lacerating power, a story that asks if it's ever really possible to overcome our private wounds, and at what cost.

Words Will Break Cement

The Book of Job

An Eternal Golden Braid

Prime Obsession

Linear Algebra

Step by Step

An Innovation Guide for Business Leaders, Border Crossers and Game Changers

Learn how to increase rigor so that all students can reach higher levels of learning! With this new edition of a teacher-tested best seller, you get practical ideas for increasing text complexity, providing scaffolding during reading instruction, creating open-ended projects, and much more. The enhanced second edition provides important connections to the Common Core State Standards, plus new sections on problem-based learning, implementation of high standards, and working with special-needs students.

The theme of lost childhood remains constant in this short fictional narrative of rebellious Annie John's coming of age on the small island of Antigua

Describes the life of the man who invented a new lighthouse lens, capable of shining brighter, farther and more efficiently than existing light sources, and his fight against the scientific elite, his poor health and the limits of his era's technology. 13,000 first printing.

The advancement of the knowledge frontier is crucial for technological innovation and human progress. Using novel data from the setting of mathematics, this paper establishes two results. First, we document that individuals who demonstrate exceptional talent in their teenage years have an irreplaceable ability to create new ideas over their lifetime, suggesting that talent is a central ingredient in the production of knowledge. Second, such talented individuals born in low- or middle-income countries are systematically less likely to become knowledge producers. Our findings suggest that policies to encourage exceptionally-talented youth to pursue scientific careers—especially those from lower income countries—could accelerate the advancement of the knowledge frontier.

Mathematical Scandals

Arboretum

Perfect Rigor

The Man from the Future

Volume 1

The Curious Mind of John Horton Conway

Uncover the Secret Hiding Places of Stock Market P

Albert Einstein and J. Robert Oppenheimer, two iconic scientists of the twentieth century, belonged to different generations, with the boundary marked by the advent of quantum mechanics. By exploring how these men differed—in their worldview, in their work, and in their day—this book provides powerful insights into the lives of two critical figures and into the scientific culture of their times.

Skillfully organized introductory text examines origin of differential equations, then defines basic terms and outlines the general solution of a differential equation. Subsequent sections deal with integrating factors; dilution and accretion problems; linearization of first order systems; Laplace Transforms; Newton's Interpolation Formulas, more.

Generally regarded as Nella Larsen's best work, Passing was first published in 1929 but has received a lot of renewed attention because of its close examination of racial and sexual ambiguities. It has achieved canonical status in many American universities. Clare Kendry is living on the edge. Light-skinned, elegant, and ambitious, she is married to a racist white man unaware of her African American heritage, and has severed all ties to her past after deciding to 'pass' as a white woman. Clare's childhood friend, Irene Redfield, just as light-skinned, has chosen to remain within the African American community, and is simultaneously allured and repelled by Clare's risky decision to engage in racial masquerade for personal and societal gain. After frequenting African American-centric gatherings together in Harlem, Clare's interest in Irene turns into a homoerotic longing for Irene's black identity that she abandoned and can never embrace again, and she is forced to grapple with her decision to pass for white in a way that is both tragic and telling.

“What Bodanis does brilliantly is to give us a feel for Einstein as a person. I don't think I've ever read a book that does this as well” (Popular Science). In this “fascinating” biography, the acclaimed author of E=mc2 reveals that in spite of his indisputable brilliance, Albert Einstein found himself ignored by most working scientists during the final decades of his life, his ideas opposed by even his closest friends (Forbes). How did this happen? Einstein revolutionized our understanding of the cosmos with his general theory of relativity, and helped lead us into the atomic age. This book goes beyond his remarkable intellect and accomplishments to examine the man himself, from the skeptical, erratic student to the world's greatest physicist to the fallen-from-grace celebrity. An intimate biography that “imparts fresh insight into the genius—and failures—of the 20th century's most celebrated scientist,” Einstein's Greatest Mistake reveals what we owe Einstein today—and how much more he might have achieved if not for his all-too-human flaws (Publishers Weekly). Named a Science Book of the Year by the Sunday Times and one of the Top Five Science Books of 2016 by ABC News Australia, this unique book “offers a window onto Einstein's achievements and missteps, as well as his life—his friendships, his complicated love life (two marriages, many affairs) and his isolation from other scientists at the end of his life” (BookPage).

Digital Dice

How Totalitarianism Reclaimed Russia

Einstein's Greatest Mistake

Gödel, Escher, Bach

Annie John

The Road to Reality

A Genius and the Mathematical Breakthrough of the Century

A collection of stories about famous mathematicians and their very human background in the history of mathematics, including the paranoia of Godel and how Newton's apple never was

National Book Award winner Masha Gessen's biography of a ruthless man's ascent to near-absolute power. “In a country where journalists critical of the government have a way of meeting untimely deaths, Gessen has shown remarkable courage in researching and writing this unflinching indictment of the most powerful man in Russia.” —The Wall Street Journal “Thanks to fearless reporting and acute psychological insights, Masha Gessen has done the impossible in writing a highly readable, compelling life of Russia's mysterious president-for-life.”

—Tina Brown, The Daily Beast The Man Without a Face is the chilling account of how a low-level, small-minded KGB operative ascended to the Russian presidency and, in an astonishingly short time, destroyed years of progress and made his country once more a threat to his own people and to the world. Handpicked as a successor by the “family” surrounding an ailing and increasingly unpopular Boris Yeltsin, Vladimir Putin seemed like a perfect choice for the oligarchy to shape according to its own designs. Suddenly the boy who had stood in the shadows, dreaming of ruling the world, was a public figure, and his popularity soared. Russia and an infatuated West were determined to see the progressive leader of their dreams, even as he seized control of media, sent political rivals and critics into exile or to the grave, and smashed the country's fragile electoral system, concentrating power in the hands of his cronies. As a journalist living in Moscow, Masha Gessen experienced this history firsthand, and for The Man Without a Face has drawn on information and sources no other writer has tapped. This account of how a “faceless” man maneuvered his way into absolute—and absolutely corrupt—power is the definitive biography of Vladimir Putin.

The life and times of this iconic and enduring biblical book The book of Job raises stark questions about the meaning of innocent suffering and the relationship of the human to the divine, yet it is also one of the Bible's most obscure and paradoxical books. Mark Larrimore provides a panoramic history of this remarkable book, traversing centuries and traditions to examine how Job's trials and his challenge to God have been used and understood in diverse contexts, from commentary and liturgy to philosophy and art. Larrimore traces Job's reception by figures such as Gregory the Great, William Blake, and Elie Wiesel, and reveals how Job has come to be viewed as the Bible's answer to the problem of evil and the perennial question of why a God who supposedly loves justice permits bad things to happen to good people.

“This book is intended for first- and second-year undergraduates arriving with average mathematics grades ... The strength of the text is in the large number of examples and the step-by-step explanation of each topic as it is introduced. It is compiled in a way that allows distance learning, with explicit solutions to all of the set problems freely available online <http://www.oup.co.uk/companion/singh>” – From preface.

The Renaissance World of Leonardo Da Vinci

Rigor Is NOT a Four-Letter Word

Turing's Cathedral

The Sad and Absurd Story of Birobidzhan, Russia's Jewish Autonomous Region

An Elementary Textbook for Students of Mathematics, Engineering, and the Sciences

A Complete Guide to the Laws of the Universe

All the Birds in the Sky

From National Book Award winner Masha Gessen, the heroic story of Pussy Riot, who resurrected the power of truth in a society built on lies. On February 21, 2012, five young women entered the Cathedral of Christ the Savior in Moscow. In neon-colored dresses, tights, and balaclavas, they performed a “punk prayer” beseeching the “Mother of God” to “get rid of Putin.” They were quickly shut down by security, and in the weeks and months that followed, three of the women were arrested and tried, and two were sentenced to a remote prison colony. But the incident captured international headlines, and footage of it went viral. People across the globe recognized not only a fierce act of political confrontation but also an inspired work of art that, in a time and place saturated with lies, found a new way to speak the truth. Masha Gessen’s riveting account tells how such a phenomenon came about. Drawing on her exclusive, extensive access to the members of Pussy Riot and their families and associates, she reconstructs the fascinating personal journeys that transformed a group of young women into artists with a shared vision, gave them the courage and imagination to express it unforgettably, and endowed them with the strength to endure the devastating loneliness and isolation that have been the price of their triumph.

“When Gessen speaks about autocracy, you listen.” —The New York Times “A reckoning with what has been lost in the past few years and a map forward with our beliefs intact.” —Interview As seen on MSNBC’s Morning Joe and heard on NPR’s All Things Considered: the bestselling, National Book Award-winning journalist offers an essential guide to understanding, resisting, and recovering from the ravages of our tumultuous times. This incisive book provides an essential guide to understanding and recovering from the calamitous corrosion of American democracy over the past few years. Thanks to the special perspective that is the legacy of a Soviet childhood and two decades covering the resurgence of totalitarianism in Russia, Masha Gessen has a sixth sense for the manifestations of autocracy—and the unique cross-cultural fluency to delineate their emergence to Americans. Gessen not only anatomizes the corrosion of the institutions and cultural norms we hoped would save us but also tells us the story of how a short few years changed us from a people who saw ourselves as a nation of immigrants to a populace haggling over a border wall, heirs to a degraded sense of truth, meaning, and possibility. Surviving Autocracy is an inventory of ravages and a call to account but also a beacon to recovery—and to the hope of what comes next.

Entertainment Weekly's 27 Female Authors Who Rule Sci-Fi and Fantasy Right Now Winner of the 2017 Nebula Award for Best Novel Finalist for the 2017 Hugo Award for Best Novel Paste's 50 Best Books of the 21st Century (So Far) List “The book is full of quirkiness and playful detail...but there's an overwhelming depth and poignancy to its virtuos ending.” —NPR From the former editor-in-chief of io9.com, a stunning Nebula Award-winning and Hugo-shortlisted novel about the end of the world—and the beginning of our future An ancient society of witches and a hipster technological startup go to war in order to prevent the world from tearing itself apart. To further complicate things, each of the groups’ most promising followers (Patricia, a brilliant witch and Laurence, an engineering “wunderkind”) may just be in love with each other. As the battle between magic and science wages in San Francisco against the backdrop of international chaos, Laurence and Patricia are forced to choose sides. But their choices will determine the fate of the planet and all mankind. In a fashion unique to Charlie Jane Anders, All the Birds in the Sky offers a humorous and, at times, heart-breaking exploration of growing up extraordinary in a world filled with cruelty, scientific ingenuity, and magic. At the Publisher's request, this title is being sold without Digital Rights Management Software (DRM) applied.

In 1929, the Soviet Union declared the area of Birobidzhan a homeland for Jews. It was championed by a group of intellectuals who envisioned a place of post-oppression Jewish culture, and by the early 1930s, tens of thousands of Jews had moved there from the shtetls. The state-building ended quickly, in the late 1930s, with arrests and purges of the Communist Party and cultural elite, but after the Second World War, the newly named "Jewish Autonomous Region" received an influx of Jews dispossessed from what had once been the Pale, most of whom had lost families in the Holocaust. In the late 1940s, another wave of arrests swept through Birobidzhan, traumatizing the Jews into silence, and effectively making them invisible. Now Masha Gessen gives us a haunting account of the dream of Birobidzhan—and how it became

Hereditary Genius

Passing

From BRCA1 to Designer Babies, How the World and I Found Ourselves in the Future of the Gene

Bernhard Riemann and the Greatest Unsolved Problem in Mathematics

Business Genius

Genius, Richard Trevithick's Steam Engines

You Can Be a Stock Market Genius

Henri Poincaré was one of the greatest mathematicians of the late nineteenth and early twentieth century. He revolutionized the field of topology, which studies properties of geometric configurations that are unchanged by stretching or twisting. The Poincaré conjecture lies at the heart of modern geometry and topology, and even pertains to the possible shape of the universe. The conjecture states that there is only one shape possible for a finite universe in which every loop can be contracted to a single point. Poincaré's conjecture is one of the seven "millennium problems" that bring a one-million-dollar award for a solution. Grigory Perelman, a Russian mathematician, has offered a proof that is likely to win the Fields Medal, the mathematical equivalent of a Nobel prize, in August 2006. He also will almost certainly share a Clay Institute millennium award. In telling the vibrant story of The Poincaré Conjecture, Donal O'Shea makes accessible to general readers for the first time the meaning of the conjecture, and brings alive the field of mathematics and the achievements of generations of mathematicians whose work have led to Perelman's proof of this famous conjecture.

A National Book Award winner's personal journey through the ethical dilemmas and unsettling choices raised by the new frontier of DNA testing. Several years after Masha Gessen's mother died of breast cancer, she discovered she too had the BRCA1 gene mutation, which predisposes women to high rates of ovarian and breast cancer. Her doctors gave her narrow options: surgical removal of her breasts and ovaries or living with the likelihood of one day developing cancer. As Gessen wrestled with her own health decisions, she sought more information about the implications of genetic testing from a variety of sources—ranging from others faced with her same dilemma to medical researchers, historians, and religious thinkers. With concerns both practical and philosophical, personal and societal, her inquiry led her across the globe, with stops in Israel, Russia, Austria, and the United States. Weaving her own story into her journalistic research, Gessen offers insight into how knowledge that was once unimaginable now shapes our lives. Blood Matters explores not only the decisions we must make in our physical and emotional health, but also the ethical choices we face when choosing spouses or having children. “Valuable reading to almost anyone facing a huge health decision, not only for the literary commiseration it offers, but also for the inspired example of medical sleuthing on one's own behalf that it provides. Gessen keeps an inflammatory topic at room temperature, writing elegantly and without self pity.” —The New York Times Book Review

FOREWORD BY ALI SMITH WITH AN INTRODUCTION BY FRANCESCA WADE Who better to serve as a guide to great books and their authors than Virginia Woolf?

'What is a self and how can a self come out of inanimate matter?' This is the riddle that drove Douglas Hofstadter to write this extraordinary book. In order to impart his original and personal view on the core mystery of human existence - our intangible sensation of 'I'-ness - Hofstadter defines the playful yet seemingly paradoxical notion of 'strange loop', and explicates this idea using analogies from many disciplines.

The Visionary Life of John von Neumann

A Novel

The Poincare Conjecture

Genius At Play

Blood Matters