

Black Hole Focus How Intelligent People Can Create A Powerful Purpose For Their Lives

Proven ways to create a more loving family Research proves that happy families are good for health, longevity, peace of mind, productivity, and success. In *The Secrets of Happy Families*, Scott Haltzman offers an original approach to building family contentment that works for families of all ethnicities and make-ups—two-parent, single-parent, blended, childless, or same-sex couple. He provides a "positive psychology" way of solving family problems through strategy and leadership, including knowing and accepting who you are, taking a leadership role in loving and united relationships, building a network of support in extended families and communities, and making quality time for fun, adventures, holidays, and rituals.

A mindbending, relentlessly surprising thriller from the author of the bestselling *Wayward Pines* trilogy. "Are you happy with your life?" Those are the last words Jason Dessen hears before the masked abductor knocks him unconscious. Before he awakens to find himself strapped to a gurney, surrounded by strangers in hazmat suits. Before a man Jason's never met smiles down at him and says, "Welcome back, my friend." In this world he's woken up to, Jason's life is not the one he knows. His wife is not his wife. His son was never born. And Jason is not an ordinary college physics professor, but a celebrated genius who has achieved something remarkable. Something impossible. Is it this world or the other that's the dream? And even if the home he remembers is real, how can Jason possibly make it back to the family he loves? The answers lie in a journey more wondrous and horrifying than anything he could've imagined—one that will force him to confront the darkest parts of himself even as he battles a terrifying, seemingly unbeatable foe. *Dark Matter* is a brilliantly plotted tale that is at once sweeping and intimate, mind-bendingly strange and profoundly human—a relentlessly surprising science-fiction thriller about choices, paths not taken, and how far we'll go to claim the lives we dream of.

"Singularity" is a swift, gripping novel with a goose-pimple mix of scary science and near-future action. An excellent debut from Bill DeSmedt - and I'll be looking forward to his next one " - GREG BEAR, "New York Times" bestselling author "One of the best debuts of the year " - Barnes & Noble's Explorations "DeSmedt veers an action-packed thriller into perilous realms of black hole physics. The combination of adrenaline and intellect sizzles." - DAVID BRIN, "New York" Times bestselling author ""Singularity" juggles Clancy, Crichton and The Da Vinci Code. An innovative concept for an end-of-the-world thriller, with convincing research and locomotive pacing." - KEVIN J. ANDERSON, "New York Times" bestselling author Synopsis: "June 30th, 1908" - In the remote Tunguska region of Siberia, the most violent cosmic collision in recorded history flattened ancient forests over an area half the size of Rhode Island. Yet after a hundred years of international scientific research the cause of this impact remains a mystery. A MAVERICK ASTROPHYSICIST Jack Adler thinks he's fingered the culprit: a submicroscopic black hole, smaller than an atom, heavier than a mountain, older than the stars. What's more, that fantastic object is still down there, deep inside the Earth, burrowing through the mantle in an ever-decaying orbit that will end only when it has devoured the entire planet. A ROOKIE SECRET AGENT Marianna Bonaventure is tracking three missing scientists suspected of involvement in weapons of mass destruction research. The trail leads to Rusalka, the luxurious floating corporate headquarters of billionaire Russian industrialist Arkady Grishin. Determined to prove herself, Marianna creates an elaborate ruse in order to infiltrate the megayacht - a dangerous gambit that requires the coerced cooperation of a rather special civilian ... AN UNCANNY CONSULTANT Jonathan Knox is one of the country's most sought-after analysts; his knack for intuiting hidden relationships among seemingly disparate events serves his Fortune-50 clients well. But when Marianna compels the reluctant Knox to join her undercover mission, he must grapple with puzzles of a whole different order of magnitude. Against violent and cunning opposition, the three of them unearth a scheme to capture the submicroscopic black hole that caused the Tunguska Event and use its awesome power to transform the world - or end it altogether. Bill DeSmedt's debut is a tour-de-force of breakneck plotting, complex characters, and cutting-edge science. In the tradition of Michael Crichton and Greg Bear, "Singularity" weaves a richly detailed and intelligent tale, meticulously researched and elegantly told.

The authoritative story of the headline-making discovery of gravitational waves—by an eminent theoretical astrophysicist and award-winning writer. From the author of *How the Universe Got Its Spots* and *A Madman Dreams of Turing Machines*, the epic story of the scientific campaign to record the soundtrack of our universe. Black holes are dark. That is their essence. When black holes collide, they will do so unilluminated. Yet the black hole collision is an event more powerful than any since the origin of the universe. The profusion of energy will emanate as waves in the shape of spacetime: gravitational waves. No telescope will ever record the event; instead, the only evidence would be the sound of spacetime ringing. In 1916, Einstein predicted the existence of gravitational waves, his top priority after he proposed his theory of curved spacetime. One century later, we are recording the first sounds from space, the soundtrack to accompany astronomy's silent movie. In *Black Hole Blues and Other Songs from Outer Space*, Janna Levin recounts the fascinating story of the obsessions, the aspirations, and the trials of the scientists who embarked on an arduous, fifty-year endeavor to capture these elusive waves. An experimental ambition that began as an amusing thought experiment, a mad idea, became the object of fixation for the original architects—Rai Weiss, Kip Thorne, and Ron Drever. Striving to make the ambition a reality, the original three gradually accumulated an international team of hundreds. As this book was written, two massive instruments of remarkably delicate sensitivity were brought to advanced capability. As the book draws to a close, five decades after the experimental ambition began, the team races to intercept a wisp of a sound with two colossal machines, hoping to succeed in time for the centenary of Einstein's most radical idea. Janna Levin's absorbing account of the surprises, disappointments, achievements, and risks in this unfolding story offers a portrait of modern science that is unlike anything we've seen before.

A rigorous and scientific analysis of the myriad possibilities of life beyond our planet. "Are we alone in the universe?" This tantalizing question has captivated humanity over millennia, but seldom has it been approached rigorously. Today the search for signatures of extraterrestrial life and intelligence has become a rapidly advancing scientific endeavor. Missions to Mars, Europa, and Titan seek evidence of life. Laboratory experiments have made great strides in creating synthetic life, deepening our understanding of conditions that give rise to living entities. And on the horizon are sophisticated telescopes to detect and characterize exoplanets most likely to harbor life. *Life in the Cosmos* offers a thorough overview of the burgeoning field of astrobiology, including the salient methods and paradigms involved in the search for extraterrestrial life and intelligence. Manasvi Lingam and Abraham Loeb tackle three areas of interest in hunting for life "Out there": first, the pathways by which life originates and evolves; second, planetary and stellar factors that affect the habitability of worlds, with an eye on the biomarkers that may reveal the presence of microbial life; and finally, the detection of technological signals that could be indicative of intelligence. Drawing on empirical data from observations and experiments, as well as the latest theoretical and computational developments, the authors make a compelling scientific case for the search for life beyond what we can currently see. Meticulous and comprehensive, *Life in the Cosmos* is a master class from top researchers in astrobiology, suggesting that the answer to our age-old question is closer than ever before.

Managing the Black Hole

Black Hole Focus

Black Hole Sun

Challenging our Assumptions in the Search for Extraterrestrial Intelligence

Behavior Trees in Robotics and AI

This Will Make You Smarter

150 New Scientific Concepts to Improve Your Thinking

Black Hole FocusHow Intelligent People Can Create a Powerful Purpose for Their Lives, John Wiley & Sons

Physics World's 'Book of the Year' for 2016 An Entertaining and Enlightening Guide to the Who, What, and Why of String Theory, now also available in an updated reflowable electronic format compatible with mobile devices and e-readers. During the last 50 years, numerous physicists have tried to unravel the secrets of string theory. Yet why do these scientists work on a theory lacking experimental confirmation? Why String Theory? provides the answer, offering a highly readable and accessible panorama of the who, what, and why of this large aspect of modern theoretical physics. The author, a theoretical physics professor at the University of Oxford and a leading string theorist, explains what string theory is and where it originated. He describes how string theory fits into physics and why so many physicists and mathematicians find it appealing when working on topics from M-theory to monsters and from cosmology to superconductors.

“What the Communist Manifesto is to the capitalist world, Annihilation of Caste is to India.” —Anand Teltumbde, author of The Persistence of Caste B.R. Ambedkar’s Annihilation of Caste is one of the most important, yet neglected, works of political writing from India. Written in 1936, it is an audacious denunciation of Hinduism and its caste system. Ambedkar – a figure like W.E.B. Du Bois – offers a scholarly critique of Hindu scriptures, scriptures that sanction a rigidly hierarchical and iniquitous social system. The world’s best-known Hindu, Mahatma Gandhi, responded publicly to the provocation. The hatchet was never buried. Arundhati Roy introduces this extensively annotated edition of Annihilation of Caste in “The Doctor and the Saint,” examining the persistence of caste in modern India, and how the conflict between Ambedkar and Gandhi continues to resonate. Roy takes us to the beginning of Gandhi’s political career in South Africa, where his views on race, caste and imperialism were shaped. She tracks Ambedkar’s emergence as a major political figure in the national movement, and shows how his scholarship and intelligence illuminated a political struggle beset by sectarianism and obscurantism. Roy breathes new life into Ambedkar’s anti-caste utopia, and says that without a Dalit revolution, India will continue to be hobbled by systemic inequality.

In a bizarre tale of deception, a man who posed for years as Saddam Hussein's eldest son shares the grisly story of life in Iraq's inner sanctum, giving readers a glimpse into this closed society and its horrors.

Harvard's top astronomer lays out his controversial theory that our solar system was recently visited by advanced alien technology from a distant star

The Selling of a Scientific Celebrity

Computational Intelligence and Its Applications in Healthcare

An Introduction

Singularity

The Day We Found the Universe

Achieving Your Wildly Important Goals

The Secrets of Happy Families

A stunning novel about the transformative power of love, perfect for fans of 13 Reasons Why by Jay Asher. Sixteen-year-old physics nerd Aysel is obsessed with plotting her own death. With a mother who can barely look at her without wincing, classmates who whisper behind her back, and a father whose violent crime rocked her small town, Aysel is ready to turn her potential energy into nothingness. There's only one problem: she's not sure she has the courage to do it alone. But once she discovers a website with a section called Suicide Partners, Aysel's convinced she's found her solution—Roman, a teenage boy who's haunted by a family tragedy, is looking for a partner. Even though Aysel and Roman have nothing in common, they slowly start to fill in each other's broken lives. But as their suicide pact becomes more concrete, Aysel begins to question whether she really wants to go through with it. Ultimately, she must choose between wanting to die or trying to convince Roman to live so they can discover the potential of their energy together.

Longlisted for the National Book Award New York Times Bestseller A former Wall Street quant sounds an alarm on the mathematical models that pervade modern life -- and threaten to rip apart our social fabric We live in the age of the algorithm. Increasingly, the decisions that affect our lives--where we go to school, whether we get a car loan, how much we pay for health insurance--are being made not by humans, but by mathematical models. In theory, this should lead to greater fairness: Everyone is judged according to the same rules, and bias is eliminated. But as Cathy O'Neil reveals in this urgent and necessary book, the opposite is true. The models being used today are opaque, unregulated, and uncontestable, even when they're wrong. Most troubling, they reinforce discrimination: If a poor student can't get a loan because a lending model deems him too risky (by virtue of his zip code), he's then cut off from the kind of education that could pull him out of poverty, and a vicious spiral ensues. Models are propping up the lucky and punishing the downtrodden, creating a "toxic cocktail for democracy." Welcome to the dark side of Big Data. Tracing the arc of a person's life, O'Neil exposes the black box models that shape our future, both as individuals and as a society. These "weapons of math destruction" score teachers and students, sort r sum s, grant (or deny) loans, evaluate workers, target voters, set parole, and monitor our health. O'Neil calls on modelers to take more responsibility for their algorithms and on policy makers to regulate their use. But in the end, it's up to us to become more savvy about the models that govern our lives. This important book empowers us to ask the tough questions, uncover the truth, and demand change. --

Longlist for National Book Award (Non-Fiction) -- Goodreads, semi-finalist for the 2016 Goodreads Choice Awards (Science and Technology) -- Kirkus, Best Books of 2016 -- New York Times, 100 Notable Books of 2016 (Non-Fiction) -- The Guardian, Best Books of 2016 -- WBUR's "On Point," Best Books of 2016: Staff Picks -- Boston Globe, Best Books of 2016, Non-Fiction New York Times Best Seller Named a Best Book of 2019 by Vogue and NPR's Maureen Corrigan "Freudenberger's brilliant and compassionate novel takes on the big questions of the universe and proves, again, that she is one of America's greatest writers." --Andrew Sean Greer, Pulitzer Prize-winning author of Less An emotionally engaging, suspenseful new novel from the best-selling author, told in the voice of a renowned physicist: an exploration of female friendship, romantic love, and parenthood--bonds that show their power in surprising ways. Helen Clapp's breakthrough work on five-dimensional spacetime landed her a tenured professorship at MIT; her popular books explain physics in plain terms. Helen disdains notions of the supernatural in favor of rational thought and proven ideas. So it's perhaps especially vexing for her when, on an otherwise unremarkable Wednesday in June, she gets a phone call from a friend who has just died. That friend was Charlotte Boyce, Helen's roommate at Harvard. The two women had once confided in each other about everything--in college, the unwanted advances Charlie received from a star literature professor; after graduation, Helen's struggles as a young woman in science, Charlie's as a black screenwriter in Hollywood, their shared challenges as parents. But as the years passed, Charlie became more elusive, and her calls came less and less often. And now she's permanently, tragically gone. As Helen is drawn back into Charlie's orbit, and also into the web of feelings she once had for Neel Jonnal--a former college classmate now an acclaimed physicist on the verge of a Nobel Prize-winning discovery--she is forced to question the laws of the universe that had always steadied her mind and heart. Suspenseful, perceptive, deeply affecting, *Lost and Wanted* is a story of friends and lovers, lost and found, at the most defining moments of their lives.

Fear is devastatingly real. All of us, at some point, have faced it. In fact, approximately one out of ten people has experienced a panic attack or a crisis situation. From fear of public speaking to fear of spiders, this feeling can prevent us from reaching our full potential. Large or small, the things we fear may seem insurmountable, but they're not. This book teaches you that the closer you get to your fears, the more you understand them and the more easily you can defeat them. Speaking from his own experience, pastor Witt takes readers on a clear path toward following the word of God as a bridge to living a life of victory and freedom, without fear.--From publisher description.

An astrophysicist offers an entertaining introduction to Einstein's theories, explaining how well they have held up to rigorous testing over the years, and even describing the amazing phenomena readers would actually experience if they took a trip through a black hole.

Eight Keys to Building a Lifetime of Connection and Contentment

Overcome Fear, Realize Truth, and Create the Life You Were Meant to Live

When We Cease to Understand the World

The First Sign of Intelligent Life Beyond Earth

Out of My Mind

Lost and Wanted

Updated Edition

"Eleven-year-old Stella Rodriguez finds herself in possession of a strange new pet that swallows up everything in sight when a black hole decides to follow her home"--

BUSINESS STRATEGY. "The 4 Disciplines of Execution" offers the what but also how effective execution is achieved. They share numerous examples of companies that have done just that, not once, but over and over again. This is a book that every leader should read! (Clayton Christensen, Professor, Harvard Business School, and author of "The Innovator's Dilemma)." Do you remember the last major initiative you watched die in your organization? Did it go down with a loud crash? Or was it slowly and quietly suffocated by other competing priorities? By the time it finally disappeared, it's likely no one even noticed. What happened? The whirlwind of urgent activity required to keep things running day-to-day devoured all the time and energy you needed to invest in executing your strategy for tomorrow. "The 4 Disciplines of Execution" can change all that forever.

Intelligence That Comes from the Heart Every parent knows the importance of equipping children with the intellectual skills they need to succeed in school and life. But children also need to master their emotions. Raising an Emotionally Intelligent Child is a guide to teaching children to understand and regulate their emotional world. And as acclaimed psychologist and researcher John Gottman shows, once they master this important life skill, emotionally intelligent children will enjoy increased self-confidence, greater physical health, better performance in school, and healthier social relationships. Raising an Emotionally Intelligent Child will equip parents with a five-step "emotion coaching" process that teaches how to: * Be aware of a child's emotions * Recognize emotional expression as an opportunity for intimacy and teaching * Listen empathetically and validate a child's feelings * Label emotions in words a child can understand * Help a child come up with an appropriate way to solve a problem or deal with an upsetting issue or situation Written for parents of children of all ages, Raising an Emotionally Intelligent Child will enrich the bonds between parent and child and contribute immeasurably to the development of a generation of emotionally healthy adults.

Featuring a foreword by David Brooks, This Will Make You Smarter presents brilliant—but accessible—ideas to expand every mind. What scientific concept would improve everybody's cognitive toolkit? This is the question John Brockman, publisher of Edge.org, posed to the world's most influential thinkers. Their visionary answers flow from the frontiers of psychology, philosophy, economics, physics, sociology, and more. Surprising and enlightening, these insights will revolutionize the way

you think about yourself and the world. Contributors include: Daniel Kahneman on the “focusing illusion” Jonah Lehrer on controlling attention Richard Dawkins on experimentation Aubrey De Grey on conquering our fear of the unknown Martin Seligman on the ingredients of well-being Nicholas Carr on managing “cognitive load” Steven Pinker on win-win negotiating Daniel Goleman on understanding our connection to the natural world Matt Ridley on tapping collective intelligence Lisa Randall on effective theorizing Brian Eno on “ecological vision” J. Craig Venter on the multiple possible origins of life Helen Fisher on temperament Sam Harris on the flow of thought Lawrence Krauss on living with uncertainty

“...an absurdly motivating book.” –A.J. Jacobs, New York Times bestselling author Don’t get stuck on a career path you have no passion for. Don’t waste your intelligence on something that doesn’t really mean anything more to you than a paycheck. Let Isaiah Hankel help you define a focus so powerful that everything in your life will be pulled towards it. Create your purpose and change your life. Be focused. Be fulfilled. Be successful. Black Hole Focus has been endorsed by top names in business, entrepreneurship, and academia, including 4 times New York Times bestseller AJ Jacobs and Harvard Medical School Postdoc Director Dr. Jim Gould. The book is broken up into 3 different sections; the first section shows you why you need a purpose in life, the second section shows you how to find your new purpose, and the third section shows you how to achieve your goals when facing adversity. In this book, you will learn: How to understand what you really want in life and how to get it Why people with a powerful purpose live to 100 How to rapidly improve focus and change your life using the secret techniques of an international memory champion How people like Jim Carrey, Oprah Winfrey, and J.K. Rowling transformed pain into purpose How to start a business by avoiding willpower depletion and the life hack lie Black Hole Focus includes exclusive case studies from medical practitioners, research scientists, lawyers, corporate executives and small business owners who have used the techniques described in this book to achieve massive success in their own lives. About the Author: Dr. Hankel is an internationally recognized expert in the biotechnology industry and prolific public speaker. He's given over 250 seminars in 22 different countries while working with many of the world's most respected companies and institutions, including Harvard University, Oxford University, Roche Pharmaceuticals, Eli Lilly & Company, Baxter International and Pfizer. Dr. Hankel uses the science of purpose and the principles of entrepreneurship to help people achieve their biggest goals.

Black Hole Survival Guide

Holes

A novel

Why String Theory?

I was Saddam's Son

A hilariously brilliant guide to this thing called life

The Executive's Guide to Software Project Risk

More and more businesses and government agencies are finding software and IT to be crucial to their success and efficiency. This increased reliance is surfacing many shortcomings in the way software projects are managed. Software is central to running any business effectively - it's just as important to success as marketing, sales, finance, and operations. This book provides an MBA level of understanding of the key dynamics of software projects and will position executives to improve outcomes. Managing the "Black Hole" is about management, not technology. Software projects are risky - failures are common. Less than 1/3 of all software projects (purchased or built) are fully successful (on-time, on-budget, with all intended features and functions). The average software project overruns its budget by around 50% and schedule by around 80%. The average project delivers less than 70% of planned features and functions. Software projects are extremely wasteful - in an average organization only 30-40% of total software cost results in "value-added" - best in class organizations (less than 15%) achieve twice as much value add - 100% more 'bang for the buck'. This book examines the underlying root causes of failures - the "Seven Deadly Sins" and provides a non-technical introduction to a range of proven remedies - the "Five Redeeming Virtues." The ideas in this book will enable your organization to join the elite few who have taken these lessons to heart. Leaving the solution to these problems solely in the hands of IT specialists has not proven a successful strategy - top management understanding and engagement are required to improve outcomes! "Managing the Black Hole provides a substantive yet refreshingly succinct tour of software project risks and remedies. This book explains the most important software project issues without 'geek-speak', using examples and metaphor readily comprehensible to those without extensive technical backgrounds. Gary has captured just the right level of depth and detail for today's busy executives, both inside and outside IT. Anyone dealing with risky software projects, whether 'buying' or 'building', will benefit from this book." -Tony Salvaggio, CEO, Computer Aid, Inc. About the Author Gary Gack is an MBA from the Wharton School, a Six Sigma Black Belt, and an ASQ-certified software quality engineer. He provides consulting, training and coaching related to business and software/IT process improvement, with emphasis on "best of breed" integration of proven best practices and models. His primary focus and interest is in helping organizations improve business performance by more effective management of the interface between general managers and software and IT. By working on both sides of the "technology divide" he has helped reduce failures, increase productivity and quality, reduce waste, and control risk.

Considered by many to be mentally retarded, a brilliant, impatient fifth-grader with cerebral palsy discovers a technological device that will allow her to speak for the first time.

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 Schr ö dinger—these are some of luminaries into whose troubled lives Benjam í n 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 unique exposition of the foundations of the quantum theory of black holes including the impact of string theory, the idea of black hole

complementarily and the holographic principle bull; Aims to educate the physicist or student of physics who is not an expert on string theory, on the revolution that has grown out of black hole physics and string theory

Durango is playing the cards he was dealt. And it ' s not a good hand. He ' s lost his family. He ' s lost his crew. And he ' s got the scars to prove it. You don ' t want to mess with Durango.

What Is Relativity?

Unhackable

How Smart People Focus, Create and Grow Their Way to Success

A Black Hole is Not a Hole

147 Things

Handbook of Gravitational Wave Astronomy

New York Times Best Seller How will Artificial Intelligence affect crime, war, justice, jobs, society and our very sense of being human? The rise of AI has the potential to transform our future more than any other technology—and there's nobody better qualified or situated to explore that future than Max Tegmark, an MIT professor who's helped mainstream research on how to keep AI beneficial. How can we grow our prosperity through automation without leaving people lacking income or purpose? What career advice should we give today's kids? How can we make future AI systems more robust, so that they do what we want without crashing, malfunctioning or getting hacked? Should we fear an arms race in lethal autonomous weapons? Will machines eventually outsmart us at all tasks, replacing humans on the job market and perhaps altogether? Will AI help life flourish like never before or give us more power than we can handle? What sort of future do you want? This book empowers you to join what may be the most important conversation of our time. It doesn't shy away from the full range of viewpoints or from the most controversial issues—from superintelligence to meaning, consciousness and the ultimate physical limits on life in the cosmos.

A black hole isn't really a hole . . . is it? Get ready to S-T-R-E-T-C-H your mind with this beloved and best-selling science book. Updated with an all-new chapter about the first black-hole image ever! What are black holes, what causes them, and how the heck did scientists discover them? Acclaimed STEM writer Carolyn DeCristofano's playful text shares how astronomers find black holes, introduces our nearest black-hole neighbors, and provides an excellent introduction to an extremely complex scientific topic. Gorgeous space paintings supplement real telescopic images, and funny doodles and speech bubbles keep the content light and fun.

*This handbook provides an updated comprehensive description of gravitational wave astronomy. In the first part, it reviews gravitational wave experiments, from ground and space based laser interferometers to pulsar timing arrays and indirect detection from the cosmic microwave background. In the second part, it discusses a number of astrophysical and cosmological gravitational wave sources, including black holes, neutron stars, possible more exotic objects, and sources in the early Universe. The third part of the book reviews the methods to calculate gravitational waveforms. The fourth and last part of the book covers techniques employed in gravitational wave astronomy data analysis. This book represents both a valuable resource for graduate students and an important reference for researchers in gravitational wave astronomy. Stephen Hawking was widely recognized as the world's best physicist and even the most brilliant man alive—but what if his true talent was self-promotion? When Stephen Hawking died, he was widely recognized as the world's best physicist, and even its smartest person. He was neither. In *Hawking Hawking*, science journalist Charles Seife explores how Stephen Hawking came to be thought of as humanity's greatest genius. Hawking spent his career grappling with deep questions in physics, but his renown didn't rest on his science. He was a master of self-promotion, hosting parties for time travelers, declaring victory over problems he had not solved, and wooing billionaires. In a wheelchair and physically dependent on a cadre of devotees, Hawking still managed to captivate the people around him—and use them for his own purposes. A brilliant exposé and powerful biography, *Hawking Hawking* uncovers the authentic Hawking buried underneath the fake. It is the story of a man whose brilliance in physics was matched by his genius for building his own myth.*

*Behavior Trees (BTs) provide a way to structure the behavior of an artificial agent such as a robot or a non-player character in a computer game. Traditional design methods, such as finite state machines, are known to produce brittle behaviors when complexity increases, making it very hard to add features without breaking existing functionality. BTs were created to address this very problem, and enables the creation of systems that are both modular and reactive. *Behavior Trees in Robotics and AI: An Introduction* provides a broad introduction as well as an in-depth exploration of the topic, and is the first comprehensive book on the use of BTs. This book introduces the subject of BTs from simple topics, such as semantics and design principles, to complex topics, such as learning and task planning. For each topic, the authors provide a set of examples, ranging from simple illustrations to realistic complex behaviors, to enable the reader to successfully combine theory with practice. Starting with an introduction to BTs, the book then describes how BTs relate to, and in many cases, generalize earlier switching structures, or control architectures. These ideas are then used as a foundation for a set of efficient and easy to use design principles. The book then presents a set of important extensions and provides a set of tools for formally analyzing these extensions using a state space formulation of BTs. With the new analysis tools, the book then formalizes the descriptions of how BTs generalize earlier approaches and shows how BTs can be automatically generated using planning and learning. The final part of the book provides an extended set of tools to capture the behavior of Stochastic BTs, where the outcomes of actions are described by probabilities. These tools enable the computation of both success probabilities and time to completion. This book targets a broad audience, including both students and professionals interested in modeling complex behaviors for robots, game characters, or other AI agents. Readers can choose at which depth and pace they want to learn the subject, depending on their needs and background.*

Annihilation of Caste

The Care and Feeding of a Pet Black Hole

The Science of Intelligent Achievement

Black Hole Blues and Other Songs from Outer Space

Life 3.0

Being Human in the Age of Artificial Intelligence

Hawking Hawking

#1 NEW YORK TIMES BESTSELLER □ NEWBERY MEDAL WINNER □ NATIONAL BOOK AWARD WINNER Dig deep in this award-winning, modern classic that will remind readers that adventure is right around the corner—or just under your feet! Stanley Yelnats is under a curse. A curse that began with his no-good-dirty-rotten-pig-stealing-great-great-grandfather and has since followed generations of Yelnatses. Now Stanley has been unjustly sent to a boys' detention center, Camp Green Lake, where the boys build character by spending all day, every day digging holes exactly five feet wide and five feet deep. There is no lake at Camp Green Lake. But there are an awful lot of holes. It doesn't take long for Stanley to realize there's more than character improvement going on at Camp Green Lake. The boys are digging holes because the warden is looking for something. But what could be buried under a dried-up lake? Stanley tries to dig up the truth in this inventive and darkly humorous tale of crime and punishment—and redemption. "A smart jigsaw puzzle of a novel." —New York Times *Includes a

double bonus: an excerpt from *Small Steps*, the follow-up to *Holes*, as well as an excerpt from the New York Times bestseller *Fuzzy Mud*.

Black holes entered the world of science fiction and films in the 1960s, and their popularity in our culture remains today. The buzz surrounding black holes was and is due, in large part, to their speculative nature. It is still difficult for the general public to determine fact versus fiction as it pertains to this terrifying idea: something big enough to swallow anything and everything in close proximity, with a gravitational force so strong that nothing, including light, can escape. In the fall of 2015, scientists at the Laser Interferometry Gravitational-Wave Observatory (LIGO) detected the first sounds from black holes, brought to earth by the gravitational waves that emitted from the merging of two black holes 1.4 billion light years away in space. This confirmed the existence of gravitational waves, which Albert Einstein predicted in 1916. In the spring of 2017, physicists and astronomers who were working on the Event Horizon Telescope (EHT) project captured the first image of a black hole. This was the supermassive black hole hosted by the galaxy M87 in the constellation Virgo, 53 million light years away, and the image shows the shadow the black hole casts upon the bright light surrounding it. In this book, John Moffat shares the history of black holes and presents the latest research into these mysterious celestial objects, including the astounding results from gravitational wave detection and the shadow of the black hole.

Computational Intelligence and Its Applications in Healthcare presents rapidly growing applications of computational intelligence for healthcare systems, including intelligent synthetic characters, man-machine interface, menu generators, user acceptance analysis, pictures archiving, and communication systems. Computational intelligence is the study of the design of intelligent agents, which are systems that act intelligently: they do what they think are appropriate for their circumstances and goals; they're flexible to changing environments and goals; they learn from experience; and they make appropriate choices given perceptual limitations and finite computation. Computational intelligence paradigms offer many advantages in maintaining and enhancing the field of healthcare. Provides coverage of fuzzy logic, neural networks, evolutionary computation, learning theory, probabilistic methods, telemedicine, and robotics applications. Includes coverage of artificial intelligence and biological applications, soft computing, image and signal processing, and genetic algorithms. Presents the latest developments in computational methods in healthcare. Bridges the gap between obsolete literature and current literature.

"this book will show you how to develop your focus by being very selective with where you spend your mental energy. If you've failed to reach an important goal because you were distracted, misinformed, or overcommitted, then you know the role focus and selectivity play in achievement. Second, you will learn how to stop allowing your happiness and success to be dependent on other people and instead, start taking ownership over your life. Finally, you will learn the art of changing your life through pragmatic decisions and actions. Self-improvement is not the result of dramatic changes. Instead, science has shown that personal and professional change is initiated and sustained by consistent, practical changes. To grow, you must leverage the power of micro-decisions, personal responsibility, and mini-habits. Your own biology will not let you improve your life in any other way"--

Provides an insider's view of how the massive black hole was discovered at the Galactic Center.

Revealing the Heart of the Galaxy

The Annotated Critical Edition

The Elixir for Creating Flawless Ideas, Leveraging Superhuman Focus, and Achieving Optimal Human Performance

How Big Data Increases Inequality and Threatens Democracy

The 4 Disciplines of Execution

Raising An Emotionally Intelligent Child

From Biosignatures to Technosignatures

Looks at the discovery of the true nature and immense size of the universe, tracing the decades of work done by a select group of scientists to make it possible.

The importance of achieving focus goes well beyond your own productivity. Deep focus allows you to lead others successfully, find clarity amid uncertainty, and heighten your sense of professional fulfillment. Yet the forces that challenge sustained focus range from dinging phones to office politics to life's everyday worries. This book explains how to strengthen your ability to focus, manage your team's attention, and break the cycle of distraction. This volume includes the work of: Daniel Goleman Heidi Grant Amy Jen Su Rasmus Hougaard HOW TO BE HUMAN AT WORK. The HBR Emotional Intelligence Series features smart, essential reading on the human side of professional life from the pages of Harvard Business Review. Each book in the series offers proven research showing how our emotions impact our work lives, practical advice for managing difficult people and situations, and inspiring essays on what it means to tend to our emotional well-being at work. Uplifting and practical, these books describe the social skills that are critical for ambitious professionals to master.

Better than money, power, or connections-Unhackable is the new secret weapon of super achievers-the ones who live their dreams.

From the acclaimed author of *Black Hole Blues and Other Songs from Outer Space*—an authoritative and accessible guide to the most alluring and challenging phenomena of contemporary science. "[Levin will] take you on a safe black hole trip, an exciting travel story enjoyed from your chair's event horizon."

—Boston Globe Through her writing, astrophysicist Janna Levin has focused on making the science she studies not just comprehensible but also, and perhaps more important, intriguing to the nonscientist. In this book, she helps us to understand and find delight in the black hole—perhaps the most opaque theoretical construct ever imagined by physicists—illustrated with original artwork by American painter and photographer Lia Halloran. Levin takes us on an evocative exploration of black holes, provoking us to imagine the visceral experience of a black hole encounter. She reveals the influence of black holes as they populate the universe, sculpt galaxies, and even infuse the whole expanse of reality that we inhabit. Lively, engaging, and utterly unique, *Black Hole Survival Guide* is not just informative—it is, as well, a wonderful read from first to last.

It's *Sapiens* for teenagers.' The Times LIFE IS WEIRD. Nothing gives you a sense of perspective like

finding out just how weird. I'm an extremely curious chap and with this book I wanted to share the content of my noggin, because I think these are the 147 things that have helped me through this thing we call life. Sometimes because it shows how lucky we are to be here at all, but often because I'm a moron and learned whatever lesson it taught me the hard way, and I'd like to save you the pain of making the same mistakes (I refer here to the waxing of my pubic hair). Ever wondered if first times are over-rated (hint: they are), whether you'll ever find the one (hint: there are 7 billion of us) or pondered the sheer unlikelihood of the you who is you being in the world right now? If so, then YouTube superstar and fact-obsessed, over-sharer Jim Chapman is here to explain it all - whether it's why your heart actually aches after a break-up, what's happening when you get hangry, or why people are just so plain RUDE online. Along the way, we'll find out how much fun he has when Tanya's sleep-talking and why he looked like a gangly T-rex with wonky teeth when he was a teenager. As with his videos, no subject is off-limits, as Jim lifts the lid on his life and his relationships, sharing embarrassing stories and things he's learnt along the way (trust us, the thing about kangaroos will really freak you out).

A Novel

Weapons of Math Destruction

Dark Matter

Practical Manifesting

How Intelligent People Can Create a Powerful Purpose for Their Lives

The Holographic Universe

The Contact Paradox

In 1974 a message was beamed towards the stars by the giant Arecibo telescope in Puerto Rico, a brief blast of radio waves designed to alert extraterrestrial civilisations to our existence. Of course, we don't know if such civilisations really exist. For the past six decades a small cadre of researchers have been on a quest to find out, as part of SETI, the search for extraterrestrial intelligence. So far, SETI has found no evidence of extraterrestrial life, but with more than a hundred billion stars in our Galaxy alone to search, the odds of quick success are stacked against us. The silence from the stars is prompting some researchers, inspired by the Arecibo transmission, to transmit more messages into space, in an effort to provoke a response from any civilisations out there that might otherwise be staying quiet. However, the act of transmitting raises troubling questions about the process of contact. We look for qualities such as altruism and intelligence in extraterrestrial life, but what do these mean to humankind? Can civilisations survive in the Universe long enough for us to detect them, and what can their existence, or lack thereof, reveal to us about our future prospects? Can we learn something about our own history when we explore what happens when two civilisations come into contact? Finally, do the answers tell us that it is safe to transmit, even though we know nothing about extraterrestrial life, or as Stephen Hawking argued, are we placing humanity in jeopardy by doing so? In *The Contact Paradox*, author Keith Cooper looks at how far SETI has come since its modest beginnings, and where it is going, by speaking to the leading names in the field and beyond. SETI forces us to confront our nature in a way that we seldom have before – where did we come from, where are we going, and who are we in the cosmic context of things? This book considers the assumptions that we make in our search for extraterrestrial life, and explores how those assumptions can teach us about ourselves.

My Heart and Other Black Holes

Focus (HBR Emotional Intelligence Series)

Life in the Cosmos

An Intuitive Introduction to Einstein's Ideas, and Why They Matter

Extraterrestrial

The Shadow of the Black Hole

An Introduction to Black Holes, Information and the String Theory Revolution