

Ew 101 A First Course In Electronic Warfare Radar Library

EW 101 has been a popular column in the Journal of Electronic Defense for a number of years. This compilation of tutorial articles from JED provides introductory level electronic warfare instruction for students of the discipline.

In answer to great demand, Artech House is proud to bring professionals a newly revised and updated edition of the bestselling book Introduction to Modern EW Systems. The Second Edition has been greatly expanded to include a wealth of new material, from remote piloted airborne systems, directed energy weapons, and non-cooperative air surveillance...to EW radar band sensor next generation architectures, real-time data links, and smart jamming. This authoritative resource provides engineers and students with the latest electronic warfare (EW) techniques and technologies related to on-board military platforms. Practitioners gain expert design guidance on technologies and equipment used to detect and identify emitter threats, offering an advantage in the never-ending chess game between sensor guided weapons and EW systems. This unique book provides deeper insight into EW systems principles of operation and their mathematical descriptions, arming professionals with better knowledge for their specific design applications. Moreover, readers get practical information on how to counter modern communications data links which provide connectivity and command flow among the armed forces in the battlefield. Taking a sufficiently broad perspective, this comprehensive volume offers a panoramic view of the various physical domains RF, Infrared, and electronics that are present in modern electronic warfare systems. This in-depth book is supported with over 340 illustrations and more than 450 equations.

Worldwide growth of space communications has caused a rapid increase in the number of satellites operating in geostationary orbits, causing overcrowded orbits. This practical resource is designed to help professionals overcome this problem. This timely book provides a solid understanding of the use of radio interferometers for tracking and monitoring satellites in overcrowded environments. Practitioners learn the fundamentals of radio interferometer hardware, including antennas, receiving equipment, signal processing and phase detection, and measurement accuracies. This in-depth volume describes the nature of the targets to be tracked by the interferometer, helping to clarify the movement of target satellites and what specific information has to be caught by the interferometer. Additionally, engineers find details on applications to practical cases of satellite tracking, covering different types of interferometers, recent technical developments, orbital monitoring and safety control.

EW 101A First Course in Electronic Warfare Artech House

This comprehensive resource provides theoretical formulation for detecting and geolocating non-cooperative emitters. Implementation of geolocation algorithms are discussed, as well as performance prediction of a hypothetical passive location system for systems analysis or vulnerability calculation. Comparison of novel direction finding and geolocation algorithms to classical forms are also included. Rooted in statistical signal processing and array processing theory, this book also provides an overview of the application of novel detection and estimation algorithms to real world problems in EW. The book is divided into three parts: detection, angle of arrival estimation, and geolocation. Each section begins with an introductory chapter covering the relevant signal processing theory (either detection or estimation), then provides a series of chapters covering specific methods to achieve the desired end-product. MATLAB® code is provided to assist readers with relevant probability and statistics, RF propagation, atmospheric absorption, and noise, giving readers an understanding of the implementation of the algorithms in the book, as well as developing new approaches to solving problems. Packed with problem sets and examples, this book strikes a balance between introductory texts and reference manuals, making it useful for novice as well as advanced practitioners.

Simon vs. the Homo Sapiens Agenda goes to Italy in Arvin Ahmadi's newest incisive look at identity and what it means to find yourself by running away. Eighteen-year-old Amir Azadi always knew coming out to his Muslim family would be messy--he just didn't think it would end in an airport interrogation room. But when faced with a failed relationship, bullies, and blackmail, running away to Rome is his only option. Right? Soon, late nights with new friends and dates in the Sistine Chapel start to feel like second nature... until his old life comes knocking on his door. Now, Amir has to tell the whole truth and nothing but the truth to a US Customs officer, or risk losing his hard-won freedom. At turns uplifting and devastating, How It All Blew Up is Arvin Ahmadi's most powerful novel yet, a celebration of how life's most painful moments can live alongside the riotous, life-changing joys of discovering who you are.

"Will get Buffy fans up in their feels." —Entertainment Weekly A New York Times and Publishers Weekly bestseller From bestselling author Kiersten White comes the first novel in a series set in the world of Buffy the Vampire Slayer that introduces a new Slayer as she grapples with the responsibility of managing her incredible powers that she's just beginning to understand. Into every generation a Slayer is born... Nina and her twin sister, Artemis, are far from normal. It's hard to be when you grow up at the Watcher's Academy, which is a bit different from your average boarding school. Here teens are trained as guides for Slayers—girls gifted with supernatural strength to fight the forces of darkness. But while Nina's mother is a prominent member of the Watcher's Council, Nina has never embraced the violent Watcher lifestyle. Instead she follows her instincts to heal, carving out a place for herself as the school medic. Until the day Nina's life changes forever. Thanks to Buffy, the famous (and infamous) Slayer that Nina's father died protecting, Nina is not only the newest Chosen One—she's the last Slayer, ever. Period. As Nina hones her skills with her Watcher-in-training, Leo, there's plenty to keep her occupied: a monster fighting ring, a demon who eats happiness, a shadowy figure that keeps popping up in Nina's dreams... But it's not until bodies start turning up that Nina's new powers will truly be tested—because someone she loves might be next. One thing is clear: Being Chosen is easy. Making choices is hard.

This comprehensive book gives an overview of how cognitive systems and artificial intelligence (AI) can be used in electronic warfare (EW). Readers will learn how EW systems respond more quickly and effectively to battlefield conditions where sophisticated radars and spectrum congestion put a high priority on EW systems that can characterize and classify novel waveforms, discern intent, and devise and test countermeasures. Specific techniques are covered for optimizing a cognitive EW system as well as evaluating its ability to learn new information in real time. The book presents AI for electronic support (ES), including characterization, classification, patterns of life, and intent recognition. Optimization techniques, including temporal tradeoffs and distributed optimization challenges are also discussed. The issues concerning real-time in-mission machine learning and suggests some approaches to address this important challenge are presented and described. The book covers electronic battle management, data management, and knowledge sharing. Evaluation approaches, including how to show that a machine learning system can learn how to handle novel environments, are also discussed. Written by experts with first-hand experience in AI-based EW, this is the first book on in-mission real-time learning and optimization.

Look to this informative new reference for an in-depth, comprehensive treatment of the principles of electronic warfare (EW). Written by leading experts in the field, this authoritative book takes a systematic approach to exploring EW theory, mathematical models, and quantitative analysis. You get a detailed examination of the basic targets of EW operations, a thorough presentation of critical radar jamming methods, and definitions of the effectiveness criteria for EW systems and techniques.

Annotation In these times, correctly and quickly identifying a stray electronic blip on a radar screen can have incalculable consequences. Now more than ever, radar electronic intelligence (ELINT) can be the first line of defense for the battlefield or the homeland. Offering new insight into radar signal analysis, this book ensures more reliable and timely gathering of electronic intelligence. Combining and updating the author's two previous definitive books on ELINT, this volume is the indispensable reference for every ELINT professional.

Serving as a continuation of the bestselling book EW 101: A First Course in Electronic Warfare, this new volume is a second book based on the popular tutorials featured in the Journal of Electronic Defense. Without delving into complex mathematics, this book lets you understand important concepts central to EW, so you gain a basic working knowledge of the technologies and techniques deployed in today's EW systems.

More than three decades after its first publication, Edward Said's groundbreaking critique of the West's historical, cultural, and political perceptions of the East has become a modern classic. In this wide-ranging, intellectually vigorous study, Said traces the origins of "orientalism" to the centuries-long period during which Europe dominated the Middle and Near East and, from its position of power, defined "the orient" simply as "other than" the occident. This entrenched view continues to dominate western ideas and, because it does not allow the East to represent itself, prevents true understanding. Essential, and still eye-opening, *Orientalism* remains one of the most important books written about our divided world.

This book presents a comprehensive set of radar and electronic warfare principles including many of the latest applications in a clear and consistent manner. Following on from the 3rd edition of this book (2004) *Radar and Electronic Warfare Principles for the Non-specialist*, 4th Edition, remains true to the traditional strength of the book, providing radar principles for the non-specialist, and also now introducing EW principles. All radar-related material has been reviewed, revised and enhanced as necessary. New to this edition: Significant revisions to; target signal-to-noise ratio, target detection theory, array antennas, radar measurements and tracking, and target signatures The addition of new EW-related material addressing electronic support (ES), electronic attack (EA), and electronic protection (EP) The advanced radar concepts chapter has been revised, including the addition of a section on modern multi-function, -mode, -mission radar systems. Most of the chapters are stand-alone allowing the reader to be selective and still benefit from the content. Exercises at the end of each chapter are provided to reinforce the concepts presented and illustrate their applications, making this book ideal for academic learning, training courses or self-study. Topics covered include: electromagnetic propagation, target detection, antennas, measurements and tracking, radar cross section and system applications. By reading this book, you should expect to be able to conduct a respectable, first-order radar system design or analysis and perform a first-order EW system design or analysis. This book will also provide you with the skills to critique the designs or analysis of others.

"It took me a long time and most of the world to learn what I know about love and fate and the choices we make, but the heart of it came to me in an instant, while I was chained to a wall and being tortured." So begins this epic, mesmerizing first novel by Gregory David Roberts, set in the underworld of contemporary Bombay. *Shantaram* is narrated by Lin, an escaped convict with a false passport who flees maximum security prison in Australia for the teeming streets of a city where he can disappear. Accompanied by his guide and faithful friend, Prabaker, the two enter Bombay's hidden society of beggars and gangsters, prostitutes and holy men, soldiers and actors, and Indians and exiles from other countries, who seek in this remarkable place what they cannot find elsewhere. As a hunted man without a home, family, or identity, Lin searches for love and meaning while running a clinic in one of the city's poorest slums, and serving his apprenticeship in the dark arts of the Bombay mafia. The search leads him to war, prison torture, murder, and a series of enigmatic and bloody betrayals. The keys to unlock the mysteries and intrigues that bind Lin are held by two people. The first is Khader Khan: mafia godfather, criminal-philosopher-saint, and mentor to Lin in the underworld of the Golden City. The second is Karla: elusive, dangerous, and beautiful, whose passions are driven by secrets that torment her and yet give her a terrible power. Burning slums and five-star hotels, romantic love and prison agonies, criminal wars and Bollywood films, spiritual gurus and mujaheddin guerrillas---this huge novel has the world of human experience in its reach, and a passionate love for India at its heart. Based on the life of the author, it is by any measure the debut of an extraordinary voice in literature.

THE INSTANT NEW YORK TIMES BESTSELLER! From Jay Asher, #1 New York Times bestselling author of *Thirteen Reasons Why*, comes a holiday romance that will break your heart, but soon have you believing in love again. . . . "A beautiful story of love and forgiveness." —Stephen Chbosky, New York Times bestselling author of *The Perks of Being a Wallflower* Sierra's family runs a Christmas tree farm in Oregon—it's a bucolic setting for a girl to grow up in, except that every year, they pack up and move to California to set up their Christmas tree lot for the season. So Sierra lives two lives: her life in Oregon and her life at Christmas. And leaving one always means missing the other. Until this particular Christmas, when Sierra meets Caleb, and one life eclipses the other. By reputation, Caleb is not your perfect guy: years ago, he made an enormous mistake and has been paying for it ever since. But Sierra sees beyond Caleb's past and

becomes determined to help him find forgiveness and, maybe, redemption. As disapproval, misconceptions, and suspicions swirl around them, Caleb and Sierra discover the one thing that transcends all else: true love. What Light is a love story that's moving and life-affirming and completely unforgettable.

The Electronic Warfare Pocket Guide is the perfect companion for any user that needs to access key definitions, concepts, and equations for their work in the field, lab, or even in military theater of operations. While this concise guide fits in almost any pocket, it packs a real punch by providing users the answers to real world electronic warfare problems that come up every day in concept development, technique development, system design, system testing, operational testing, mission planning and operations. It is especially useful (if combined with training) for members of the military who are in combat and need to use EW techniques to counter missile-strikes, improvised explosive devices, and other threats. This booklet could usefully go into the pocket of every pilot, sailor, soldier and marine.

Young Cassie Logan endures humiliation and witnesses the racism of the KKK as they embark on a cross-burning rampage, before she fully understands the importance her family attributes to having land of their own.

Through-the-wall radar imaging (TWRI) allows police, fire and rescue personnel, first responders, and defense forces to detect, identify, classify, and track the whereabouts of humans and moving objects. Electromagnetic waves are considered the most effective at achieving this objective, yet advances in this multi-faceted and multi-disciplinary technology require taking phenomenological issues into consideration and must be based on a solid understanding of the intricacies of EM wave interactions with interior and exterior objects and structures. Providing a broad overview of the myriad factors involved, namely size, weight, mobility, acquisition time, aperture distribution, power, bandwidth, standoff distance, and, most importantly, reliable performance and delivery of accurate information, Through-the-Wall Radar Imaging examines this technology from the algorithmic, modeling, experimentation, and system design perspectives. It begins with coverage of the electromagnetic properties of walls and building materials, and discusses techniques in the design of antenna elements and array configurations, beamforming concepts and issues, and the use of antenna array with collocated and distributed apertures. Detailed chapters discuss several suitable waveforms inverse scattering approaches and revolve around the relevance of physical-based model approaches in TWRI along with theoretical and experimental research in 3D building tomography using microwave remote sensing, high-frequency asymptotic modeling methods, synthetic aperture radar (SAR) techniques, impulse radars, airborne radar imaging of multi-floor buildings strategies for target detection, and detection of concealed targets. The book concludes with a discussion of how the Doppler principle can be used to measure motion at a very fine level of detail. The book provides a deep understanding of the challenges of TWRI, stressing its multidisciplinary and phenomenological nature. The breadth and depth of topics covered presents a highly detailed treatment of this potentially life-saving technology.

#1 NEW YORK TIMES BESTSELLER * The highly anticipated sequel to the beloved worldwide bestseller Ready Player One, the near-future adventure that inspired the blockbuster Steven Spielberg film. **NAMED ONE OF THE BEST BOOKS OF THE YEAR BY THE WASHINGTON POST** * "The game is on again. . . . A great mix of exciting fantasy and threatening fact."--The Wall Street Journal **AN UNEXPECTED QUEST. TWO WORLDS AT STAKE. ARE YOU READY?** Days after winning OASIS founder James Halliday's contest, Wade Watts makes a discovery that changes everything. Hidden within Halliday's vaults, waiting for his heir to find, lies a technological advancement that will once again change the world and make the OASIS a thousand times more wondrous--and addictive--than even Wade dreamed possible. With it comes a new riddle, and a new quest--a last Easter egg from Halliday, hinting at a mysterious prize. And an unexpected, impossibly powerful, and dangerous new rival awaits, one who'll kill millions to get what he wants. Wade's life and the future of the OASIS are again at stake, but this time the fate of humanity also hangs in the balance. Lovingly nostalgic and wildly original as only Ernest Cline could conceive it, Ready Player Two takes us on another imaginative, fun, action-packed adventure through his beloved virtual universe, and jolts us thrillingly into the future once again.

Get a glimpse into the history of the hackers who stole the .sve_urs3lf handle.

NATIONAL BESTSELLER • A family returns to their hometown—and to the dark past that haunts them still—in this masterpiece of literary horror by the New York Times bestselling author of Wanderers “The dread, the scope, the pacing, the turns—I haven’t felt all this so intensely since The Shining.”—Stephen Graham Jones, New York Times bestselling author of The Only Good Indians Long ago, Nathan lived in a house in the country with his abusive father—and has never told his family what happened there. Long ago, Maddie was a little girl making dolls in her bedroom when she saw something she shouldn’t have—and is trying to remember that lost trauma by making haunting sculptures. Long ago, something sinister, something hungry, walked in the tunnels and the mountains and the coal mines of their hometown in rural Pennsylvania. Now, Nate and Maddie Graves are married, and they have moved back to their hometown with their son, Oliver. And now what happened long ago is happening again . . . and it is happening to Oliver. He meets a strange boy who becomes his best friend, a boy with secrets of his own and a taste for dark magic. This dark magic puts them at the heart of a battle of good versus evil and a fight for the soul of the family—and perhaps for all of the world. But the Graves family has a secret weapon in this battle: their love for one another.

Through journal entries, sixteen-year-old Miranda describes her family's struggle to survive after a meteor hits the moon, causing worldwide tsunamis, earthquakes, and volcanic eruptions.

This text blends traditional introductory physics topics with an emphasis on human applications and an expanded coverage of modern physics topics, such as the existence of atoms and the conversion of mass into energy. Topical coverage is combined with the author's lively, conversational writing style, innovative features, the direct and clear manner of presentation, and the emphasis on problem solving and practical applications.

A comprehensive guide to statistics—with information on collecting, measuring, analyzing, and presenting statistical data—continuing the popular 101 series. Data is everywhere. In the age of the internet and social media, we're responsible for consuming, evaluating, and analyzing data on a daily basis. From understanding the percentage probability that it will rain later today, to evaluating your risk of a health problem, or the fluctuations in the stock market, statistics impact our lives in a variety of ways, and are vital to a variety of careers and fields of practice. Unfortunately, most statistics text books just make us want to take a snooze, but with Statistics 101, you'll learn the basics of statistics in a way that is both easy-to-understand and apply. From learning the theory of probability and different kinds of distribution concepts, to identifying data patterns and graphing and presenting precise findings, this essential guide can help turn statistical math from scary and complicated, to easy and fun. Whether you are a student looking to supplement your learning, a worker hoping to better understand how statistics works for your job, or a lifelong learner looking to improve your grasp of the world, Statistics 101 has you covered.

#1 NEW YORK TIMES BESTSELLER • A modern, sophisticated suspense novel from National Book Award finalist, and Printz Award honoree E. Lockhart. Don't miss the eagerly anticipated prequel, Family of Liars, available May 2022! A beautiful and distinguished family. A private island. A brilliant, damaged girl; a passionate, political boy. A group of four friends—the Liars—whose friendship turns destructive. A revolution. An accident. A secret. Lies upon lies. True love. The truth. Read it. And if anyone asks you how it ends, just LIE. "Thrilling, beautiful, and blisteringly smart, We Were Liars is utterly unforgettable." —John Green, #1 New York Times bestselling author of The Fault in Our Stars

The third book in the bestselling Artech House EW 100 series is dedicated entirely to the practical aspects of electronic warfare against enemy communication. From communications math (mainly simple dB formulas), receiving systems, and signals, to communications emitter location, intercept, and jamming, this comprehensive volume covers all the key topics in the field. The visionary author's masterpiece pulls us—along with her Black female hero—through time to face the horrors of slavery and explore the impacts of racism, sexism, and white supremacy then and now. Dana, a modern black woman, is celebrating her twenty-sixth birthday with her new husband when she is snatched abruptly from her home in California and transported to the antebellum South. Rufus, the white son of a plantation owner, is drowning, and Dana has been summoned to save him. Dana is drawn back repeatedly through time to the slave quarters, and each time the stay grows longer, more arduous, and more dangerous until it is uncertain whether or not Dana's life will end, long before it has a chance to begin.

This updated and revised first-course textbook in applied probability provides a contemporary and lively post-calculus introduction to the subject of probability. The exposition reflects a desirable balance between fundamental theory and many applications involving a broad range of real problem scenarios. It is intended to appeal to a wide audience, including mathematics and statistics majors, prospective engineers and scientists, and those business and social science majors interested in the quantitative aspects of their disciplines. The textbook contains enough material for a year-long course, though many instructors will use it for a single term (one semester or one quarter). As such, three course syllabi with expanded course outlines are now available for download on the book's page on the Springer website. A one-term course would cover material in the core chapters (1-4), supplemented by selections from one or more of the remaining chapters on statistical inference (Ch. 5), Markov chains (Ch. 6), stochastic processes (Ch. 7), and signal processing (Ch. 8—available exclusively online and specifically designed for electrical and computer engineers, making the book suitable for a one-term class on random signals and noise). For a year-long course, core chapters (1-4) are accessible to those who have taken a year of univariate differential and integral calculus; matrix algebra, multivariate calculus, and engineering mathematics are needed for the latter, more advanced chapters. At the heart of the textbook's pedagogy are 1,100 applied exercises, ranging from straightforward to reasonably challenging, roughly 700 exercises in the first four "core" chapters alone—a self-contained textbook of problems introducing basic theoretical knowledge necessary for solving problems and illustrating how to solve the problems at hand – in R and MATLAB, including code so that students can create simulations. New to this edition • Updated and re-worked Recommended Coverage for instructors, detailing which courses should use the textbook and how to utilize different sections for various objectives and time constraints • Extended and revised instructions and solutions to problem sets • Overhaul of Section 7.7 on continuous-time Markov chains • Supplementary materials include three sample syllabi and updated solutions manuals for both instructors and students

This revised and expanded second edition brings you to the cutting edge with new chapters on LPI radar design, including over-the-horizon radar, random noise radar, and netted LPI radar. You also discover critical LPI detection techniques, parameter extraction signal processing techniques, and anti-radiation missile design strategies to counter LPI radar.

Andrew Radford's new textbook is principally for students with little or no background in syntax who need a lively and up-to-date introduction to contemporary work on transformational grammar. It covers four main topics - the goals of linguistic theory, syntactic structure, the nature and role of the lexicon, and the function of transformations and the principles governing their application. The framework takes into account the major works such as Chomsky's *Knowledge of Language and Barriers* written since the publication of Radford's widely acclaimed *Transformational Syntax* in 1981. Not only does the present book use a more recent theoretical framework, but at the descriptive level it covers a wider range of constructions and rules than its predecessor. Andrew Radford is well known for his effective pedagogical approach, and in this book even more care has been devoted to providing a sympathetic and non-technical introduction to the field. At the end of each chapter are exercises which reinforce the text, enable students to apply the various concepts, etc. discussed, or encourage them to look more critically at some of the assumptions and analyses presented. The book also has a detailed bibliographical background section and an extensive bibliography which will be a useful source of reference to the primary literature. Although intended principally as a coursebook for students of syntax or English grammar, *Transformational Grammar* will be invaluable to any reader who needs a straightforward and comprehensive introduction to the latest developments in this field.

When your nemesis also happens to be your fiancé, happily ever after becomes a lot more complicated in this wickedly funny, lovers-to-enemies-to-lovers romantic comedy debut. Naomi Westfield has the perfect fiancé: Nicholas Rose holds doors open for her, remembers her restaurant orders, and comes from the kind of upstanding society family any bride would love to be a part of. They never fight. They're preparing for their lavish wedding that's three months away. And she is miserably and utterly sick of him. Naomi wants out, but there's a catch: whoever ends the engagement will have to foot the nonrefundable wedding bill. When Naomi discovers that Nicholas, too, has been feigning contentment, the two of them go head-to-head in a battle of pranks, sabotage, and all-out emotional warfare. But with the countdown looming to the wedding that may or may not come to pass, Naomi finds her resolve slipping. Because now that they have nothing to lose, they're finally being themselves—and having fun with the last person they expect: each other.

This popular series of tutorials, featured over a period of years in the *Journal of Electronic Defense*, is now available in a single volume. Organized into chapters with new introductory and supplementary material from the author, you get clear, concise and well-illustrated examinations of critical topics such as antenna parameters, receiver sensitivity, processing tasks, and search strategies, LPI signals, jamming, communication links, and simulation. The chapters define key terms and explain how and why particular technologies are relevant to electronic defense. Detailed charts, diagrams and formulas give you the practical knowledge you need to apply specific techniques in the field.

The fourth book in the bestselling Artech House EW 100 series is dedicated to reviewing legacy threats and discussing new threats which have arisen since Y2K in communications, radar, and IR threats. Like its predecessors, EW 104 presents a series of highly informative and easy-to-comprehend tutorials, along with insightful introductory and connective material that helps you understand how each aspect fits together. This reference starts with a review of the generalities of legacy threats, from the technical point of view, with a focus on what makes the new threats more challenging. Readers are provided with details of threats in three major areas -Communications, Radars, and IR Threats.

A heart-stopping adventure that defies time and space--New York Times bestselling author Marie Lu calls it "an incredibly intricate, brilliantly paced, masterfully written journey." Farway Gaius McCarthy was born outside of time. The son of a time traveler from 2354 AD and a gladiator living in ancient Rome, Far's very existence defies the laws of nature. All he's ever wanted was to

explore history for himself, but after failing his entrance exam into the government program, Far will have to settle for a position on the black market—captaining a time-traveling crew to steal valuables from the past. During a routine heist on the sinking Titanic, Far meets a mysterious girl named Eliot who always seems to be one step ahead of him. Eliot has secrets—big ones—that will affect Far's life from beginning to end. Armed with the knowledge that history is not as steady as it seems, she will lead Far and his team on a race through time to set things right before the clock runs out.

EW 104 has been a popular column in the Journal of Electronic Defense for a number of years. This compilation of tutorial articles from JED provides introductory level electronic warfare instruction for students of the discipline.

A FIRST COURSE IN DIFFERENTIAL EQUATIONS WITH MODELING APPLICATIONS, 10th Edition strikes a balance between the analytical, qualitative, and quantitative approaches to the study of differential equations. This proven and accessible text speaks to beginning engineering and math students through a wealth of pedagogical aids, including an abundance of examples, explanations, Remarks boxes, definitions, and group projects. Written in a straightforward, readable, and helpful style, this book provides a thorough treatment of boundary-value problems and partial differential equations. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The fifth book in the bestselling Artech House EW 100 series explores electronic warfare (EW) in space. Practical problems – including intercept and jamming of hostile signals transmitted from the Earth's surface and the vulnerability of satellite links to attack from the Earth's surface are discussed. Spherical trigonometry is covered to provide the background necessary to understand the scope of satellite problems. Orbit mechanics, specifically the way the Earth and its satellites revolve around one another, is also explained. The basics of radio propagation and how it applies to communications Electronic Warfare are demonstrated, as well as the special considerations that apply to radio transmission to and from an Earth satellite. Satellite links and link vulnerability are discussed. Readers learn how to calculate the distance over which a satellite can view as a function of its orbital parameters, how long the satellite can see that point, and the frequency shift in signals received by the satellite or an Earth based receiver. EW applications of orbit mechanics, satellite links, radio propagation and link vulnerability. Written by an expert in the field, this book is useful for technical and non-technical professionals.

A mathematical introduction to the theory and applications of logic and set theory with an emphasis on writing proofs Highlighting the applications and notations of basic mathematical concepts within the framework of logic and set theory, A First Course in Mathematical Logic and Set Theory introduces how logic is used to prepare and structure proofs and solve more complex problems. The book begins with propositional logic, including two-column proofs and truth table applications, followed by first-order logic, which provides the structure for writing mathematical proofs. Set theory is then introduced and serves as the basis for defining relations, functions, numbers, mathematical induction, ordinals, and cardinals. The book concludes with a primer on basic model theory with applications to abstract algebra. A First Course in Mathematical Logic and Set Theory also includes: Section exercises designed to show the interactions between topics and reinforce the presented ideas and concepts Numerous examples that illustrate theorems and employ basic concepts such as Euclid's lemma, the Fibonacci sequence, and unique factorization Coverage of important theorems including the well-ordering theorem, completeness theorem, compactness theorem, as well as the theorems of Löwenheim–Skolem, Burali-Forti, Hartogs, Cantor–Schröder–Bernstein, and König An excellent textbook for students studying the foundations of mathematics and mathematical proofs, A First Course in Mathematical Logic and Set Theory is also appropriate for readers preparing for careers in mathematics education or computer science. In addition, the book is ideal for introductory courses on mathematical logic and/or set theory and appropriate for upper-undergraduate transition courses with rigorous mathematical reasoning involving algebra, number theory, or analysis.

#1 NEW YORK TIMES BESTSELLER • ONE OF ESSENCE'S 50 MOST IMPACTFUL BLACK BOOKS OF THE PAST 50 YEARS In this iconic memoir of his early days, Barack Obama “guides us straight to the intersection of the most serious questions of identity, class, and race” (The Washington Post Book World). “Quite extraordinary.”—Toni Morrison In this lyrical, unsentimental, and compelling memoir, the son of a black African father and a white American mother searches for a workable meaning to his life as a black American. It begins in New York, where Barack Obama learns that his father—a figure he knows more as a myth than as a man—has been killed in a car accident. This sudden death inspires an emotional odyssey—first to a small town in Kansas, from which he retraces the migration of his mother's family to Hawaii, and then to Kenya, where he meets the African side of his family, confronts the bitter truth of his father's life, and at last reconciles his divided inheritance. Praise for *Dreams from My Father* “Beautifully crafted . . . moving and candid . . . This book belongs on the shelf beside works like James McBride's *The Color of Water* and Gregory Howard Williams's *Life on the Color Line* as a tale of living astride America's racial categories.”—Scott Turow “Provocative . . . Persuasively describes the phenomenon of belonging to two different worlds, and thus belonging to neither.”—The New York Times Book Review “Obama's writing is incisive yet forgiving. This is a book worth savoring.”—Alex Kotlowitz, author of *There Are No Children Here* “One of the most powerful books of self-discovery I've ever read, all the more so for its illuminating insights into the problems not only of race, class, and color, but of culture and ethnicity. It is also beautifully written, skillfully layered, and paced like a good novel.”—Charlayne Hunter-Gault, author of *In My Place* “*Dreams from My Father* is an exquisite, sensitive study of this wonderful young author's journey into adulthood, his search for community and his place in it, his quest for an understanding of his roots, and his discovery of the poetry of human life. Perceptive and wise, this book will tell you something about yourself whether you are black or white.”—Marian Wright Edelman

College Algebra provides a comprehensive exploration of algebraic principles and meets scope and sequence requirements for a typical introductory algebra course. The modular approach and richness of content ensure that the book meets the needs of a variety of courses. The text and images in this textbook are grayscale.

[Copyright: 0af2147b08e6559a230dbcadc6843554](https://www.pearson.com/9780132147086/0af2147b08e6559a230dbcadc6843554)