

FIGHT LIKE A PHYSICIST

The
Incredible
Science behind
Martial Arts



Make physics your advantage in the ring and on the street

See through the illusion of safety provided by gloves and helmets

Reduce traumatic brain injury in contact sports

Give the esoteric side of martial arts a reality check

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Fight Like a Physicist: The Incredible Science Behind Martial Arts (Martial Science)



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In addition to wearing down the concepts behind the punches, Dr. Whether you are an experienced martial artist or a curious enthusiast, this book can give you an "unfair advantage" Thalken invites visitors to have a scientific approach to training and fighting, and all the tools necessary to get the most out of their encounters and make their teaching count. USA Best Books Award WINNER - 2015 Fight Just like a Physicist has an in-depth, sometimes whimsical look into the physics behind martial arts for sport and self-defense. Thalken, a computational physicist with a long history of martial arts across various styles, applies the mind-set of a physicist to several controversial topics in the martial arts: Making physics your "unfair benefit," in the band and on the street Examining middle of mass, pi, levers, wedges, angular momentum, and linear momentum for martial artists Protecting the brains of fighters and football players from concussions Reducing traumatic human brain injury in contact sports Exposing the illusion of basic safety provided by gloves and helmets Overturning conventional wisdom on compliance during an assault Busting Hollywood action myths Giving the mystical part of martial arts a much-needed fact check Dr. by unraveling the complicated science of effective fighting techniques and examining the core principles that make them work.



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Applying Newtonian physics to self-defense or the ring When I saw this book's title, I imagined a bloodied and battered Poindexter in a bow-tie--a professorial type dying in a puddle of his own fluids as he calculated the Bayesian possibility of winning considering that initial beating. Phillip Stephens - Author Nevertheless, Thalken makes an excellent point with his description of the name (and the publication's theme. But also gives me an appreciation for how essential that classes indeed be controlled and safe as you possibly can.! These last two chapters look like a turn from the primary theme of the reserve, but they do stay under the umbrella of the fighting techniques through a scientific zoom lens. The book is split into two parts. The initial part explains how classical mechanics can help one to be considered a better fighter. As the author spends considerable time discussing concussions and associated brain harm. e. I teach fighting techniques to kids and parents in my neighborhood and have less have to teach devastating methods. This section is definitely what one would anticipate from such a reserve. Unlike the next section, which deals mainly with sport fighters, the guidance on offer in the initial section is as applicable to those involved with self-defense or additional real life combative situations since it would be to fighters in the band. Jason Thalken lifts the curtain so you can see the research and there is a lot of science here down to the formula's. The reader gains great insight into the mechanics and neuroscience of a knockout. While the most the section offers suggestions for those involved in combative sports, the last two chapters take a bit of a turn. The first of these two handles the myths perpetuated by Hollywood--which, let's face it, may be the source of most people's details on what fight is. Debunking the notion that a person who gets shot is usually always and everywhere instantly incapacitated is certainly a central theme this chapter. Once history these earlier sections, this is right now extended into actual combat situations, and at this point craft takes a back chair to survival. It turns out that there is definitely a time for a fighter to be cerebral, but it's if they are making decisions about how exactly to train. While that is a publication about technology, it's readable also for an educated nonscientist. All of the math is put in boxes that the reader can opt to skip, or to adhere to, depending upon his or her comfort level with equations. Insightful, and a little scary simultaneously I found the early portions of this book very helpful with regards to technique to keep in mind when executing punches, kicks, blocks and such in conditions , of what is actually going on playing off rate versus mass. The physics is largely high school level Newtonian mechanics. And that alone will make the price of the book well worth it. Bottom-line, the only way to protect the head is to not strike it. I'd recommend this book for those who are interested in how science could be applied to the fighting techniques or human movement more generally. It's short, readable, and offers some interesting food for thought. Essential for strategy coaches! Excellent, clear to see scientific principles of fighting. Being a medical professional I am very thinking about the physics and research of fighting, understanding how it all comes together gives a significant edge to any fighter. I love being a part of the strategical coaching staff and this book is an excellent addition to my collection! I'm an instructor in Krav Maga Excellent. As an aside, additionally it is a creative method of teaching fundamental physic principles to high schoolers! In short, become skeptical, but inquiring. I ran across the work while researching my own book on principles of fighting.! That is a reserve of interest not merely to fighter's but those thinking about science as well. Useful introduction to the physical principles of the martial arts Thalken has taken enough time to show fellow martial artists how the formulas of physics translate into 'real world' implications for just how that fighting techniques works. A must have for each and every Martial Artist's library. As a 30 plus year FIGHTING TECHNIQUES Veteran, I can tell you this is among the best books I've ever continue reading the Martial Arts. Good not greate Interesting, but not too much

covered, would have prefer to see better depth and more topics. I've this book on my set of must reads for all of my students. Really very good. There is no complicated jargon, nor any incomprehensible principles. And provides one a completely different "considering" perspective to practicing one's chosen style. Very useful and useful. The last chapter deals with the problem of pseudoscience in the fighting techniques, and the insanity of believing you can defeat an opponent with chi (also qi, or—in Japanese Romanization—ki) or mind power by itself. And quickly impressed upon me that is no longer kids stuff as one might usually lapse into with my granddaughter's TKD classes -- which are tame, managed, instructional.) He's suggesting that one use tactics and techniques that are supported by evidence and rooted in a audio understanding of the science of combat—instead of mindlessly doing whatever your sensei tells you or—worse yet—simply muddling through on a combination of instinct and ignorance. You can find four chapters in this section that cope with center of mass and its own crucial role in a fight, the distinctions between high momentum and high energy strikes and how each is usually achieved, variations in circular versus linear paths and where the advantage in each lies, and what basic machines (i. You received't find out about chi (qi) in this publication except to end up being reminded that it's a make-believe concept. Head safety doesn't matter. Utter disappointment Despite its silly title (my father was a university professor of physics and I've met all of his colleagues, and none would know the first thing about fighting) I anticipated a whole lot from this book. THEREFORE I am great with tame classes. I will be working with my granddaughter to introduce improved technique in line with the early parts of the reserve. Diehard believers in the supernatural or pseudo-scientific conceptions of the universe should be warned that this isn't the book for you personally if you don't like your sacred cows flame-broiled. I would recommend. (So long as you understand it is written for adults possesses some basic foul vocabulary). The book is written in an exceedingly approachable manner, with the use of the formulas clearly explained. Of particular interest was the difference between generating momentum from a hit and producing kinetic energy, and the various ways of attaining that result. This publication is preferred to martial artists who would like to look below the surface of our arts and see how some of the underlying principles apply. True to the title This book advocates something I make an effort to do, which is the reason I thought we would read it. While FIGHTING TECHNIQUES are indeed arts, they are also techniques to make you a better human, if only by improving the way you move and withstand injury. Any technique should be tested for feasible improvements and validity. This book provides scientific approach to testing from a supply who is both physicist and martial artist. Highly recommended.! I'm an instructor in Krav Maga, and I've found this book useful in helping me to have the terms and functions I need to put into words what I know from experience. Great start but deviates from this issue to helmets for some time. I purchased this publication through YMAA. It is well written, and hits the pertinent physics without turning out to be a mathematics or physics textbook. Also wish to visit a section on impulse. I particularly just like the fact that it addresses a lot of information extremely commonly left out of each other publication out generally there. Based on the author, harm occurs when the mind is normally spun or rotated. It shipped very little. There are even some errors in formulas and equations without the equal sign! Certainly, you cannot contact it an equation if it hasn't got an = sign! A typical "American" book, plenty of talk but hardly any meat on the bones (also called "substance"). I doubt martial arts practitioners will improve anything as a result of reading this thin volume. Fight Science - Down to the Formulas Did you ever question how a punch provides power? How motion works to a fighter's benefit? The second section examines the problem of concussions and brain damage in a few detail, including consideration of the degree to which

gloves and headgear perform—or don't—make one safer. My child enjoyed the reserve while he was working on a degree in physics since it made the formulas fun. I utilized it as a homeschool tool for my child and exercised perfectly! Some ideas required additional study and understanding but all in all a great and fun platform to make use of for physics lessons! In the end, physics is an extremely cerebral activity, and getting cerebral in a fight is a certain way to a beat down. Good thought about body mechanics and building techniques effective. I like most of the book. There are several very good ideas in it. Some parts of it are geared more toward individuals who want to battle in MMA competitions as the author talks about a good bit about doing damage to your opponent. levers and wedges) can do for a fighter. However the principles discussed can be used along a spectrum, therefore to each his own. The reserve does a good job of making sense of body motion and the effectiveness of physical principles in the fighting techniques. I recommend this reserve to anyone learning fighting or self defense. Good intro book. It really is well ... I purchased this reserve through YMAA. Needs to stay on subject a bit more. Five Stars Great Book! Great Price!!



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