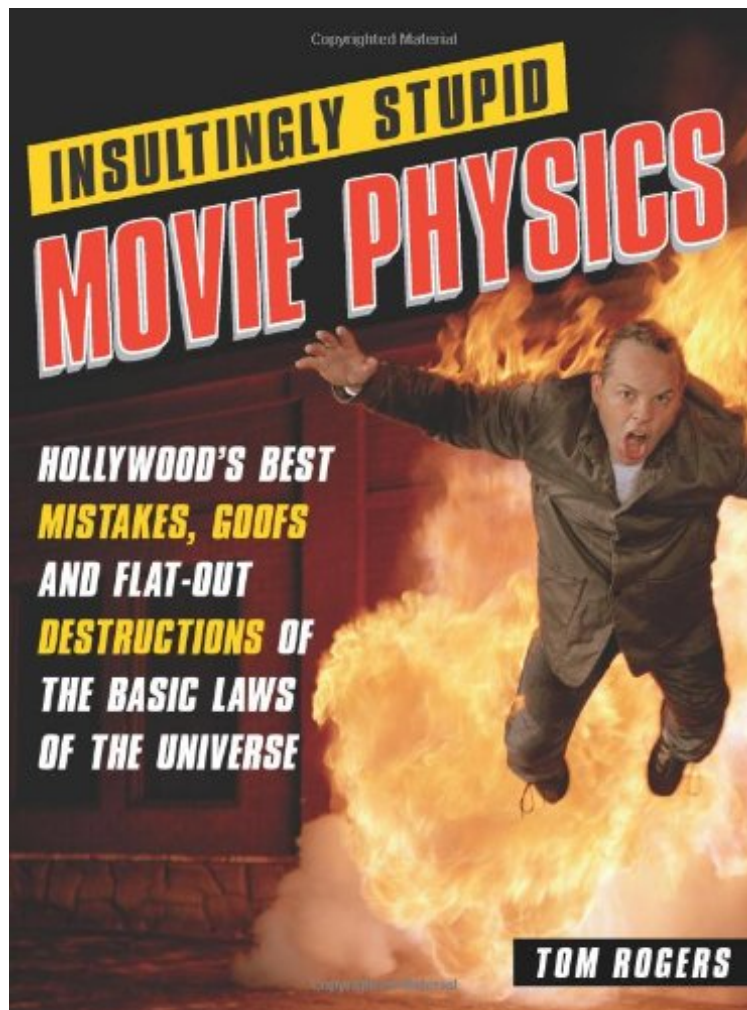


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## Insultingly Stupid Movie Physics: Hollywood's Best Mistakes, Goofs and Flat-Out Destructions of the Basic Laws of the Universe

Tom Rogers

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#817098 in Books Tom Rogers 2007-11-01 2007-11-01Ingredients: Example IngredientsOriginal language:EnglishPDF # 1 8.10 x .95 x 6.371, 1.00 #File Name: 1402210337336 pagesInsultingly Stupid Movie Physics Hollywood s Best Mistakes Goofs and Flat Out Destructions of the Basic Laws of the Universe | File size: 26.Mb

**Tom Rogers : Insultingly Stupid Movie Physics: Hollywood's Best Mistakes, Goofs and Flat-Out Destructions of the Basic Laws of the Universe** before purchasing it in order to gage whether or not it would be worth my time, and all praised Insultingly Stupid Movie Physics: Hollywood's Best Mistakes, Goofs and Flat-Out Destructions of the Basic Laws of the Universe:

0 of 0 people found the following review helpful. Is there going to be a Part 2?By Armando RodriguezThe book

Insultingly Stupid Movie Physics or ISMP for short, shows how movies have shaped the way most 20th century humans expect nature to behave. Indeed, unless you are somehow into physics, you would expect a body to take flight after being shot even by a small hand gun or after being kicked by a martial arts master. The same goes for cigarettes that ignite gasoline or cars crashes that blow up like bombs among so many other absurdities. The discussions are thorough, calculations revealing, easy to follow and spiced with humor, making the reading a pleasant experience. Not everyone is insulted; my wife for instance, thinks that if movies showed the kind respect to physics I demand, they would be no fun at all. Yet, I was really pleased to see that I was not alone in my insult and I'm sure that there is a whole science loving community out there that will feel the same kind of relief that I felt reading this book. However, I was eagerly expecting chapters on insultingly stupid scenes involving electricity and magnetism, but reached the end without finding one. I've grown hypersensitive on this kind of movie offenses; maybe it is because I taught this subject for several years back in the seventies at Havana University. I was also expecting stupidities on computer issues there are plenty of those. Well, maybe I'm talking about a Part 2 of this book and I'm looking forward to it.

Armando Rodriguez 1 of 1 people found the following review helpful. Great - entertaining and informative  
By Metallurgist  
Before I go further, I think that a disclaimer is in order. I am a retired metallurgist/materials scientist, who has taken graduate as well as undergraduate physics and mechanics courses, and a lot of physical chemistry courses, so this book was of great interest to me. This book is written in an entertaining style, if a bit snide at times and I feel that term "insultingly stupid" in the title is a bit hyperbolic and may be off putting to some potential readers, but these are very minor points that I choose to ignore. This is not a book that tries to dissect illogical plot points, continuity errors (such as a stain that magically disappears and then reappears from scene to scene) and filming errors (such as an extra wearing a college sweatshirt in ancient Rome). Rather, this book discusses the physics of movie scenes, such as people being propelled backwards when hit by gunfire, impossible battle scenes, artificial gravity that defies the laws of physics, igniting gasoline with lighted cigarettes, etc. For the most part, the physics being discussed is no more advanced than that covered in high school course or in the first few classes of a freshman college course. In addition, there is some physical chemistry concerned with the combustion of gasoline, and a smattering of relativity physics (but only in one chapter). The format is to describe the scene and then analyze it using basic physics (and chemistry in one instance). The details of the physics are discussed in separate gray background inserts, so that they can be skipped if desired (although, in my opinion, to do so eliminates the reason why one should read the book in the first place). These gray sections include equations, but not their derivation, or much of the background concerning their development. Thus, there are simple equations in the book and these equations are used to describe why a particular scene portrays incorrect physics. I liked this book a lot - it made me think, as I had not even previously thought about the unphysical nature of many of the scenes that I had heretofore taken for granted. For instance, I never even stopped to consider if a person would actually be propelled backwards when hit by gunfire. A simple analysis using the conservation of momentum clearly shows that they would not. Likewise, in opposition to what is shown in many movies, the book explains why cigarettes will generally not ignite gasoline. This book does much more than just explain why some movie scenes are physically incorrect. In some respects the book fills a gap between the academic world of physics and the greater world beyond as it dares to tackle some questions that physics texts shy away from. The book contains an excellent discussion of the JFK assassination (as part of the discussion of the Oliver Stone film JFK). This analysis illustrates the complexity of the problem and why a second shooter was not required to produce the images shown in the Zapruder film. The book also tackles the effects of pressure waves and intense temperatures on structures, and shows why the Alfred P. Murrah Federal Building in Oklahoma City and the Twin Towers in New York collapsed as they did. These analyses provide the physics, metallurgy and structural analysis that counters the claims of conspiracy theorists. The book also provides an excellent analyses of the effects of gravity and the weightlessness that one feels in near earth orbit (as part of the discussion of Apollo 13). It clearly shows that the force provided by gravity is not zero in near earth orbit, but that it is the elimination of the normal force provided by contact with the earth that produces the effect of weightlessness. This book is a very good adjunct to a physics text as it illustrates a lot of simple physics in a very entertaining manner. It is a great way for a student to hone their understanding of physics using the format of popular movies. I also see it as a great way for a teacher to engage students with the basics of physics (hopefully in class and not sprung upon them in a test). I recommend this book to people who enjoy the TV program "Myth Busters", to those interested in physics and how it relates to everyday life and to those who want an entertaining book that makes you think. I definitely do not recommend this book to the phobic or people who just want to watch a movie and do not care if the scenes in the movie defy the laws of physics and sometimes common sense.

0 of 0 people found the following review helpful. A fun read for movie buffs....  
By Zube  
The author does a good job of balancing the idea of "insultingly stupid" with a general love for cinema. I wasn't crazy about the method of presentation, however, and would have preferred a different structure. He inserts little summaries that are of no interest and don't really contribute to the book. Perhaps they're meant to be cute. I was also a bit surprised that he did not have a chapter or section dedicated to miscellaneous misconceptions about various technologies. (My #1 peeve here is when someone sets off a single fire sprinkler head and water comes out of every other head simultaneously.) Granted, these issues aren't strictly physics, but there are reasons that systems and devices work the way they do and those ARE based in

physics.

-Would the bus in Speed really have made that jump?-Could a Star Wars ship actually explode in space?-What really would have happened if you said "Honey, I shrunk the kids"?The companion book to the hit website ([www.intuitor.com/moviephysics](http://www.intuitor.com/moviephysics)), which boasts more than 1 million visitors per year, *Insultingly Stupid Movie Physics* is a hilarious guide to the biggest mistakes, most outrageous assumptions, and the outright lunacy at work in Hollywood films that play with the rules of science. In this fascinating and funny guide, author Tom Rogers examines 20 different topics and shows how, when it comes to filmmaking, the rules of physics are flexible. Einsteins and film buffs alike will be educated and entertained by this wise and witty guide to science in Hollywood.

From the Back Cover When it comes to filmmaking, the rules of physics are flexible The companion book to the hit website, *Insultingly Stupid Movie Physics* is a hilarious and fascinating guide to the biggest mistakes, the most outrageous assumptions and the outright lunacy of Hollywood films. Author Tom Rogers uses basic scientific principles, such as Newton's First Law, along with a little common sense to examine and expose Hollywood's absolute worst physics offenders, including *The Matrix*, *Speed* and *Star Wars*. Find out how your favorite films measure up! -- Would the bus in *Speed* really have made that jump? --Could a *Star Wars* ship actually explode in space? --Can you really ignite gasoline with the flick of a cigarette? --What really would have happened if you said "Honey, I shrunk the kids"? About the Author Tom Rogers is the founder and creator of the wildly popular website *Insultingly Stupid Movie Physics*. He has a Bachelors Degree in Mechanical Engineering from Arizona State University and a Master of Business Administration Degree from Clemson University. He worked as an engineer for 18 years and currently lives in Greenville, South Carolina. Excerpt. Reprinted by permission. All rights reserved. Excerpt from Chapter 1: THE NOBLE CAUSE: Striking a Blow for Decency in Movie Physics IT'S ONLY A MOVIE "It's only a movie," is often spoken by fans in defense of flicks with flaky physics, as though reviewing movies for physics content is an insult. But isn't the fact that Hollywood thinks they can feed us stupid physics the real insult? Let me explain why reviewing movies for something they need is not insulting, or unnecessary--starting with a hypothetical. Imagine a football movie: a group of plucky individualists have been forged into a team by the tough yet big-hearted coach. No one gave them a chance; yet, here they are in the big game playing their hearts out as Murphy, their beloved teammate, lies in the hospital with bandaged eyes, listening to the contest via radio. The team is behind and desperate. It's the seventh down in the eleventh quarter, so they punt a touchdown pass from the 127th yard line. But wait, this isn't football. It's nonsense. Anyone with football knowledge would think it was ridiculous; some would be offended. The scene would never appear in a movie--not because it's unlikely or hackneyed, but because it's unthinkable to take artistic license with the rules of football. (For those who don't favor American-style football, substitute basketball, soccer, hockey, or just about any other team sport. With a few modifications, the plot will still work.) Artistic license isn't a driver's license; it's an ambulance license. It grants the right to break rules without suffering petty penalties like traffic tickets. But rule breaking can cause errors, leading to serious penalties: wrecks. Rule breaking requires care; it's not a good idea unless there's a good reason. Hollywood would never take such a gamble with the manmade rules of football. So, when it comes to something profound like the guiding rules of the universe, why, of course, break the rules at will--no risk here. Okay, I realize that Hollywood isn't likely to reform, but at least by discussing bad movie physics it's possible to repair some of the damage done to our clear thinking by constant exposure to foolishness. Sadly, Hollywood has a rational reason for affording more respect to the rules of football than the laws of physics: audiences are more likely to know them. Ironically, movies may be part of the cure for this ailment: Hollywood's bad physics examples are good physics teaching tools. Besides, movies are almost as entertaining as physics, so what could be more fun than combining the two? In 1997, after years of watching one Hollywood physics wreck after another, I took a stand for decency in movie physics by founding what has become the premier movie physics site on the Internet. Since American moviegoers are used to rating systems warning of possible affronts to their sensibilities from strong language, violence, and sexuality, and since warning systems are, of course, highly effective deterrents, how could I resist? I created a similar system to warn about affronts from bad physics. Well, maybe ratings aren't so effective but at least they're fun. Movie Physics Rating System: GP = Good physics in general PGP = Pretty good physics (just enough flaws to be fun) GP-13 = Children under 13 might be tricked into thinking the physics were pretty good; parental guidance is suggested RP = Retch XP = Obviously physics from an unknown universe NR = Unrated. When a movie is obviously a parody, fantasy, cartoon, or is clearly based on a comic book, it can't be rated but may still have some interesting physics worth discussing. THE IMPACT ON ARTISTIC QUALITY To understand when the rules (the laws of physics) should not be broken, it's best to start with the situations where they can or should be. These include cartoons, parodies, and fantasies. Even top-notch science fiction routinely stretches the boundaries of physics for the sake of story. Time-travel is a good example of acceptable physics-bending for the sake of story. Ask ten physicists about time travel and you'll get eleven different answers, and that's with two abstaining. The truth is nobody really knows for sure if it's possible, let alone how to do it. Without it, however, there would be no Terminator movies, a definite loss of some great cinematic moments (not to mention catchy gubernatorial campaign slogans). In The

Terminator [PGP] (1984), computers/machines have developed consciousness and a need for entertainment along with it. What to do: work a few math problems-for a computer, how mundane-or kill off humanity? It's a no-brainer: kill people. Unfortunately, those irascible humans are unenthusiastic about extinction. A human leader steps forward and pulls together an effective resistance movement. To remedy this affront, the machines send a terminator-a metal robot covered with living tissue (ArnoldSchwarzenegger)-back in time to assassinate the resistance leader's mother and snuff the movement before it starts. The humans, somehow, get wind of the plot and send back one of their own to protect the mother. Both protector and terminator arrive naked since, according to the movie, anything nonliving has to be surrounded by living tissue in order to be transported backwards through time. (Evidently hair, dead skin, and fingernails are the exception.) Okay, the business about having to surround metal with living tissue and only send naked people back in time has no scientific basis, but it's necessary for the film's central conflict. If the human could carry a futuristic weapon, he could easily blow away the terminator and spoil the fun. Instead, he's a rabbit desperately trying to avoid the jaws of a bloodthirsty wolf in possibly the highest intensity chase ever filmed. The nakedness also taps into the deepest levels of the human psyche. Imagine arriving naked, not just at work or school but in an entirely different era. The moviemakers do the arrival scene right: they depict a gray area of physics, time travel, with a minimum of scientific mumbo-jumbo and considerable artistic purpose. It's another matter to defy well-established physics principles for no good reason. Any bright high school physics student (probably not a target audience) can easily spot such foolishness. Many people feel it-like an annoying itch-even when they have no physics background whatsoever. They may not be able to verbalize reasons but have experienced gravity, velocity, acceleration, force, and energy firsthand their entire lives. Individuals with military experience-shooting guns, setting off explosives, flying helicopters-are especially cranky about the itch. Here's a scary thought: in spite of physics' reputation for difficulty, it's really not all that hard to learn; verbalizing soon follows.