

**Review<sup>1</sup> of  
Factor Man  
by Matt Ginsberg  
Published by Zowie 2018  
281 pages, Hardcover, \$45.00 , Softcover \$14.00 used  
Review by  
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## 1 Introduction

What would you do if you proved  $P=NP$ ? If you publish it you might be rich and famous... in a world destroyed by cyber terrorists. If you don't publish it someone might beat you to it. Can you make money off of it?

Matt Ginsberg's fictional book, *Factor Man*, grapples intelligently with this question. The premise is that someone (alias Factor Man) has proven  $P=NP$  and has a pretty good plan for how to (1) cash in, and (2) not create economic havoc.

## 2 How Real is the Book?

The book takes place in the real world of today. How real? Scott Aaronson and Steve Rudich are characters. William Gasarch's poll on  $P$  vs  $NP$  is mentioned. Sylvester Stallone wants to know the factors of

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Well, maybe that last item is not likely to happen in our world. But in a world where Factor Man invites people to submit numbers that he can factor, to prove he has  $P=NP$  (though fictional Scott Aaronson points out, as the real one would, that this only helps verify that Factor Man can, uh, factor), I can very much imagine that celebrities would get into the game. More generally, all of the characters act like I think they would act. This book is *not* satire. This book is a realistic speculation of what would happen if someone showed  $P=NP$ .

## 3 Is the book Technically Correct?

I've seen some reviews with some (correct) quibbles; however, where it matters, the book is spot on. None of the technical errors have any bearing on the plot.

Getting the math right is especially impressive in light of other attempts. I'll just give a pointer to one. There was an episode of *Elementary* where it seems as though  $P=NP$  has been established. How much did the episode get wrong? It might be easier to tell you how much they got right. See my blog post about it:

<https://blog.computationalcomplexity.org/2013/10/p-vs-np-is-elementary-no-p-vs-np-is-on.html>

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## 4 Pacing? A Good Read?

I started this book on a Saturday and finished it on a Sunday. And I am not speed reader. The pacing is good and its never dull. You begin reading it and you want to see what will happen next. The beginning, middle, and end are all satisfying (you are invited to insert a joke about satisfiability here). As they said at the website Goodreads, its a Good Read.

I was asked if its a thriller or a mystery or science fiction or what. I find it hard to classify; however, I would call it both a thriller and science fiction. And it's a good read on both counts.

## 5 Who Will Enjoy this Book?

Anyone who has even a passing acquaintance with P vs NP will enjoy this book. The book also has some explanation of P and NP for those who do not know the problem. I tend to think that if one does not know the problem, best to skip those sections and just know that  $P=NP$  breaks all crypto but can be used to do awesome science.