

Perelman's Refusal: A Novel (Book Review)

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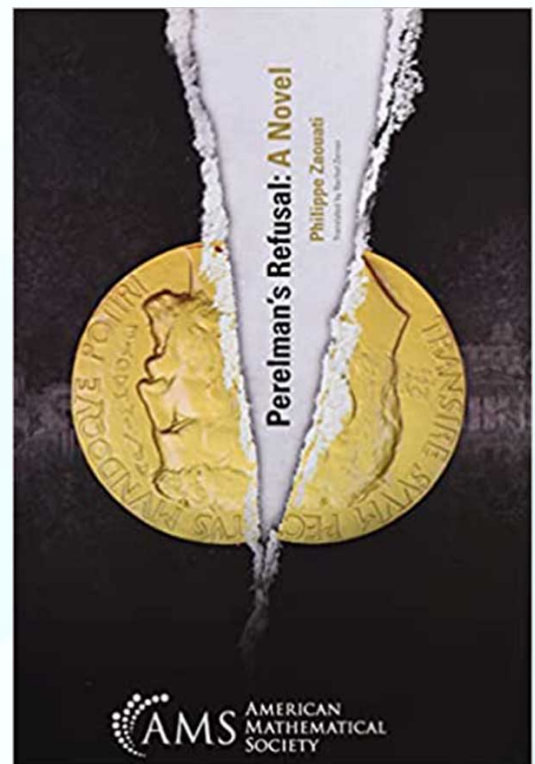
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Grigori Perelman, the secluded Russian genius who proved the Poincaré conjecture and refused to accept a million dollar prize is well known to the whole mathematics community. What is less known is the encounter of John Ball, then President of the International Mathematical Union, and Perelman in the summer of 2006 at St. Petersburg, where Ball tried to convince Perelman to accept the Fields Medal he was about to be presented in the upcoming International Congress of Mathematicians. The book **Perelman's Refusal**, a work of fiction is primarily about this encounter between Ball and Perelman.

The book consists mostly of conversations between Perelman and Ball which have been imagined by the author, Philippe Zaouati. The author notes in the end that he had met Ball and discussed Ball and Perelman's meeting in St. Petersburg, but none of the conversations between them were discussed properly so Zaouati had to imagine them all, hence this book is a proper work of fiction.

The book discusses several philosophical questions that arise about mathematics and mathematicians. But given its length (a mere 133 pages) it does not give any deep insight into any of



those questions. Readers looking for a primer in the Poincaré conjecture or any non-trivial mathematics would be disappointed. Although some amount of historical anecdotes about mathematicians and the history of the Soviet Union are sprinkled in the book, it is not very central to the narrative. The description of Poincaré Conjecture itself is not entirely correct and could possibly have been made mathematically more meaningful by the editors at the American Mathematical Society, who published the book.

This review appeared in the Mathematical Association of America's (MAA) Book Review page (<https://www.maa.org/press/maa-reviews/perelmans-refusal-a-novel>) and has been reprinted here with permission from the editor of MAA Book Reviews.

The problem-solver and the problem-creator

Different people have different styles of creative work. I want to discuss two different styles that I think are particularly useful in understanding the creative process. I call these the problem-solver and the problem-creator styles. They're not really disjoint or exclusive styles of working, but rather idealizations which are useful ways of thinking about how people go about creative work.

The problem-solver: This is the person who works intensively on well-posed technical problems, often problems known (and sometimes well-known) to the entire research community in which they work. The best problem-solvers are often extremely technically proficient and hard-working. Problem-solvers often attach great social cache to the level of difficulty of the problem they solve, without necessarily worrying so much about other indicators of the importance of the problem.

The problem-creator: This is a rarer working style. Problem-creators may often write papers that are technically rather simple, but ask an interesting new question, or pose an old problem in a new way, or demonstrate a simple but fruitful connection that no-one previously realized existed.

– Michael A. Nielsen