The New Prize That Wants to Turn Science and Math Whizzes Into Rock Stars

New prizes are popping up left and right these days, and it seems there is no shortage of philanthropists who dream of creating the next Nobel or Pulitzer. But the Breakthrough Prizes are in a category of their own.

They are a suite of annual, $3 million awards started up by Russian tech investor Yuri Milner, and supported by fellow billionaires, including Sergey Brin and Mark Zuckerberg. The idea is to draw attention to scientific geniuses with a big splash of money, making them “rock stars of science,” and balancing out the riches showered upon celebrities and athletes. Prizes are awarded for life sciences, physics, and as of this year mathematics, and the dollar amounts blow away other science prizes, even the Nobel, which awards around $1.2 million. Awards are officially presented at a fancy annual ceremony, hosted and attended by Hollywood stars.

This week, five mathematicians—including one former child prodigy, and one multi-talented researcher who has now won three seven-figure science awards—are winners of the very first Breakthrough Prizes in Mathematics. The mathematicians landed $3 million each, and will serve on the selection committee to decide future winners.

There is no Nobel in mathematics, but there are other comparable prizes like the Shaw Prize in Mathematical Sciences, the Abel Prize, and the Fields Medal. None come close to the $3 million Breakthrough Prize, however.

Not only are the five winners instant millionaires, but they also have a chance to decide who among their colleagues will join the elite club of Breakthrough winners. All five have agreed to serve on the Breakthrough selection committee, responsible for picking the next winners of the prizes. Anyone can be nominated, although there are no self-nominations.

That means if you want to know how to win the next Breakthrough Prize in Mathematics, take a close look at these guys:

- Simon Donaldson, Stony Brook University and Imperial College London, awarded for his work studying and classifying four-dimensional shapes using a theory designed for particle physics.
- Maxim Kontsevich, Institute of Advanced Scientific Studies, for work in many mathematical disciplines. His versatility is demonstrated by the fact that Kontsevich also won the Breakthrough Prize in Physics back in 2012. That same year, he won the $1 million Shaw Prize.
- Jacob Lurie, Harvard University, for his work studying the intersection of topology and algebraic geometry. Lurie is the youngest of the winners, at just 36.
- Terence Tao, UCLA, for making many breakthrough contributions in mathematics, including work with prime numbers and fluid flow. Tao was a child prodigy who was the youngest full professor ever at UCLA, and has won the Fields Medal (as have Donaldson and Kontsevich), and a MacArthur Genius Grant.
- Richard Taylor, Institute for Advanced Study, who is known for his work in number theory, and for helping prove Fermat’s last theorem in 1995.

Tao and Lurie, the youngest recipients, were thrown for a loop when they found out they had won. Lurie thought maybe Milner wanted his advice on the next winner. Tao tried to talk Milner out of his decision, thinking he hadn’t done enough.
A number of the winners intend to spend some portion of the funding on support for other mathematicians, with Tao considering an open journal or collaborative online study.

While the winners are no doubt highly deserving, and leading their fields, the Breakthrough Prizes have inherited one unfortunate trait from the tech world that spawned them. Men continue to overwhelmingly dominate the awards, with zero female winners in math or in the last round of life sciences and physics prizes.