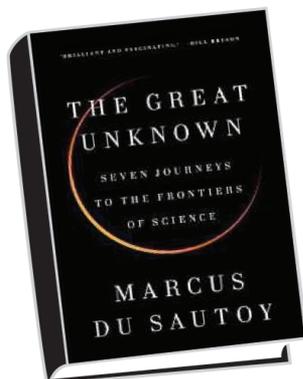




New and Noteworthy Titles on Our Bookshelf April 2017

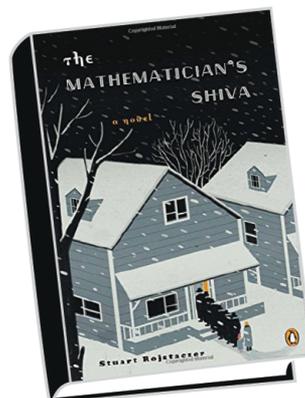


The Great Unknown: Seven Journeys to the Frontiers of Science, by Marcus du Sautoy (Penguin Group Viking, April 2017).

Marcus du Sautoy, in addition to being a mathematics professor at Oxford University, is the Simonyi Professor for the Public Understanding of Science.

In this latter capacity, he

has contributed to raising public awareness of mathematics in a multitude of ways, such as appearing in television and radio broadcasts, serving as a math consultant for theatrical productions, curating and presenting musical concerts, and even writing and performing in his own play about mathematics called *X & Y*. He has also pursued the more-traditional path to reaching the public, namely, writing popular books. One of these, titled *Symmetry: A Journey into the Patterns of Nature* (Harper, March 2008), tells the story of the classification of finite simple groups and was reviewed by Brian Blank in the February 2011 issue of the *Notices*. His latest book, *The Great Unknown* (originally published in the UK as *What We Cannot Know*), draws on many of his wide-ranging interests. The subject of the book is “what we know we cannot know”—that is, scientific and mathematical questions that we know can never be answered. Du Sautoy discusses many examples in a variety of areas such as particle physics, brain science, cosmology, biology, and mathematics. Not attempting to be definitive, the book instead provides philosophical reflections on the limits of knowledge. In a review on the web site *Undark*, John Durant, director of the MIT Museum, wrote of the book: “Du Sautoy is an eminently enjoyable interpreter of science; and his, like others’, is a distinctive view of the place of science in human affairs.”



The Mathematician's Shiva, by Stuart Rojstaczer (Penguin Random House, September 2014).

The central character of the novel *The Mathematician's Shiva* is Rachela, a Polish Jew who was educated in Moscow—she was a student of Kolmogorov—and is now a mathematician at the University of Wisconsin. Her son narrates the story, which mainly centers

on inter-relationships within her family—her father, husband, brother, and (semi-)adopted Russian daughter, who is a ballet dancer. Rachela's death is the beginning of the novel. She is the greatest mathematician of the age, and people suspect that she might have in hand a solution to the Navier-Stokes problem. The book's only explanation of the problem is that it has something to do with turbulence. The mathematics is not important in the book, except as a vehicle for Rachela's singular genius and a metaphor for aspects of her life (turbulent, rigorous). Perhaps it is also supposed to supply a reason for the personality quirks of the mathematical horde that descends on Madison for her funeral/shiva. Together, the mathematicians take the opportunity to mount an attack on Navier-Stokes for the week. They fail. But the deceased has already succeeded, in secret, and the climax of the novel is her husband's posthumous presentation of her work at the 107th Annual Meeting of the AMS in Boston!

Suggestions for the BookShelf can be sent to notices-booklist@ams.org.

We try to feature items of broad interest. Appearance of a book in the *Notices* BookShelf does not represent an endorsement by the *Notices* or by the AMS. For more, visit the AMS Reviews webpage www.ams.org/news/math-in-the-media/reviews.