

1139-00-281      **Edward Frenkel\***, Dept of Mathematics, University of California, Berkeley, CA 94720.  
*Imagination and knowledge.*

In this Einstein Public Lecture, I would like to talk about the essence of our profession, its role in today's world, and the responsibilities that come with it.

Einstein said, "Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world." In my talk, I will give examples from the history of mathematics that support Einstein's view, showing how imagination provides bursts of insight that enable mathematicians to make new advances and to abandon what was taken for granted as well known and well understood. We see that in the discovery of imaginary numbers in Cardano's book "Ars Magna"; in Ramanujan's marvelous formulas that he said were written by Goddess Namagiri in his dreams; in the ideas of the Langlands Program, and much more.

We need to acknowledge, embrace, and utilize our capacity to imagine in order to navigate this brave new world, in which AI-powered information technology is being used to modify and control our behavior while we are being told that life is just an algorithm and a human is nothing but a sequence of 0's and 1's. Imagination has always been humanity's best antidote to fear, dogma and oppression.

Dare to imagine. (Received February 13, 2018)