Abstract: Mathematics is a creative endeavour, and mathematicians are used to working on intractable problems that require dynamic and original thinking to produce solutions. Mathematicians are intellectually fearless, and are trained to think flexibly, to evaluate ideas objectively and efficiently, and to see new paths to solutions by combining diverse tools. In this talk, we will go from research on the Riemann hypothesis, to industrial machine learning problems to some of the biggest global problems we face as a civilization. We will discover something amazing: Training in mathematics provides an amazing toolkit for dealing with wide-ranging problems, and for contributing in meaningful ways to important problems in numerous other domains. The intent will be to inspire you to think big; to look for applications of mathematical thinking in the world around you; to go beyond intellectual fearlessness, into something more - realizing that mathematics is not only intellectual, but can present powerful motivators for altruistic action.