

The King, your excellencies, ladies and gentlemen.

I would like to thank HRH Prince Khalid Al-Faisal for naming me the recipient of the 2021 King Faisal Science Prize. This is a great honor which is held in very high esteem by scientists around the world, especially because of the series of remarkable scientists who have been awarded this marvelous prize.

No scientist can carry out his or her work all by themselves. As Isaac Newton is reported to have said: "If I have seen further it is by standing on ye sholders of Giants.". I would like to thank the many colleagues who I have worked with over the years, both students, postdoctoral and visiting scientists and many collaborators (as well as the competitors who have inspired me to convince them that I was mostly right!). I can think of no scientist who is a better role model than Isaac Newton. He is the epitome of a natural scientist. Indeed, when I was a child I always wanted to study science at the University of Cambridge and indeed Trinity College, where Newton studied and became a Fellow of the College. I was fortunate to follow in his footsteps (only ~313 years later) and to be elected a research Fellow in Trinity during my Ph.D. (and more recently in 2014 an Honorary Fellow of the College). Being a Research Fellow meant that I could leave Cambridge and travel abroad for postdoctoral studies which I did, first to Paris, France, and then to California to IBM Research in San Jose. I stayed at IBM for more than 30 years before moving to the Max Planck Society in Germany in 2015. Both IBM and the Max Planck Society have a common believe that sustained investment in exploratory science and technology is absolutely necessary to develop what might just be a germ of an idea into something concrete and of significant value to society. This is exactly why I am so excited to explore and push beyond the boundaries of our knowledge and in my own research to have discovered and created novel spintronic materials and devices for memory and computing technologies.

I have been asked what the King Faisal Prize means to me. Of course in my mind I hope that it means a lot more funding for some of my crazy ideas! But crazy ideas are the way forward to the technologies that will change our world!