

How did you end up being a quantum physicist?

It all began a long time ago when I was a child. I was a very curious child, and when people told me something was hard then I definitely wanted to try it. About quantum physics I became interested by reading the book *The Adventures of Mr. Tompkins* my uncle gave to me. He warned me that the book talked about something very important, the character of Mr Tompkins, which later I found it was created by the physicist George Gamow, explains modern scientific theories to a popular audience. At that time I did not know that the book was about quantum physics becoming obvious in everyday life. I have fallen in love with quantum physics much later. As a teenager I lived in a small village and for a year I followed physics courses over the mail. I also liked maths a lot and because I wanted to show masculinity to the world I decided to do theoretical physics, since at that time no women followed physics or maths.

Why have you chosen Oxford for postgraduate studies?

It wasn't something I was anticipating, I did not even dream of being educated at Oxford. I managed it though, I got a scholarship for Oxford and I chose to study theoretical condensed matter physics rather than elementary particles. I completed my D. Phil. at 1980, with thesis title: "*Dynamic Jahn-Teller effects in solids.*" I did a post doc for one year at Imperial College and I moved back to Oxford, I went to ILL in Grenoble and then I joined the Greek army for 22 months. The army was the biggest mistake of my life (the second biggest mistake is getting married - joke). Then I moved to the Research Center of Crete at Heraklion where I mostly worked alone. I enjoyed my time in Crete; the people were nice although the place was rather less "civilized" than I was used to. Crete is still an exotic place for me, with the labyrinth, Minotaur and all that and the Institute in the middle of nowhere was the only scientific establishment around.

What is your research about?

I am trying on various projects related to electrons in complex systems. The projects are inspired by the physics of nanoscience. I employ concepts of quantum information, such as entanglement and also traditional techniques, such as scaling, quantum chaos, statistical methods, etc. The dominant theory concerns the Anderson metal-insulator transition in a tight binding setting; it involves both diagonalization of random matrices and scattering techniques, my purpose is to understand electron quantum transport in disordered systems. I have also introduced chaotic measures of wave function localization, by invoking topological concepts and multifractality, etc.

What do you enjoy most in your field?

To see how nature works at the level of nanoscience and to find out whether quantum computers will be available one day. I think the field is hard and creative, I am tackling on very new things in a way that hasn't been looked at before. In order

to achieve my purpose, to a large extent, every day I am pushing my own limits. A quantum physicist never really relaxes, he/she is obliged to a constant learning.

What do you find hard to do?

To deal with the enormous flow of information; this arises from everywhere and spills all over the place. I find very hard the challenge of trying something new. It can be very frustrating, since there is no guarantee that my efforts will bring the desired result. When I think of it, the fact that I stand in the front row of today's science it gives me solace.

Are you searching for the truth?

A lot of scientists these days search for the truth, but very few of them make important discoveries. I think even fewer scientists make discoveries which can be classified under a systematic plan. I, myself, do not look only for the truth but for something that can really surprise me.

What hopes do you have for your field?

I hope, during my time, to see a quantum computer in full operation. I wish to share this pleasure with young people, I suggest to them to enter the field immediately. It is a very interesting field and not so hard as many think. For example, whenever I talk to people about my work I can see them getting curious and I would like to make them forget their assumption about quantum systems, quantum information and topological quantum computing, being difficult. In my research I deal with the most fundamental physics and, I believe, my findings can influence the world. We all hope to create a better world.

Would you tell us something about you that may surprise us?

A few years ago I was jogging for 7 km every day! I also did a lot of aerobics in various countries, such as England, Germany, Italy, Cyprus and Greece. Another thing which might surprise you is that I also write; apart from scientific books I have published a collection of short stories: *Order out of chaos* and the novels: *Quanta*, *the other half* and *The Professor vanishes*.