

Jean Paul Cromieres is a lead researcher and an electronic engineer in Aimé Cotton laboratory in the CNRS: National Center of Scientific Research in Orsay and he gives lessons in the university of Orsay. He works in CNRS since 1995. He collaborates with NeuroSpin, SOLEIL synchrotron...

Did you work with other scientist?

Yes I work with other scientist because the scientists didn't work alone otherwise they will wear out.

It's right for the scientists like engineer and other. Someone learn tremendously some other scientists. All scientists learn with other scientists. We help with publications of other scientists of other countries accessible in internet.

What did you study?

My studies is complex. It's not the studies normal like other scientists. I have done a Bac S and after a BTS in electronic, then I integrate an engineer School in evening course. I have worked in several business. Finally I have been work in Cnrs since 1995.

Are you working at a new project right now?

Yes, the project I talk before of slowlight to stock memory. The project began 4 years ago. It's an applied project.

It's to imagine solution to make a new sensor for distance measurement, where are calling this kind of sensor time, of light sensor you are emitting a wave, a light pulse wave, pulse light wave and as the light has got a finished the pulse will travel by example in this way and we will receive a pulse which hasn't change with no noise.

Do you feel good working on Cnrs?

It's sometimes good and sometimes not good.

Other scientists who work in industry have a time like 6 months but we have not this time so it's good. We work somethings that doesn't exist, it's very interesting for me. In industry they improve what already exist. So I prefer my work.

Did you often travel in your work and where?

I rarely travel, I have traveled in Germany in Berlin. Because I am just an engineer not a scientist like astrophysicist. But I want to travel in China, United States and work with other scientists in other countries.

Did you have another work before an electronic engineer?

Yes I have worked in the business for car: Renault and Souriau, this business is specialized in equipment manufacturing of electrical installation.

Why did you choose this work?

I choose this work because I am curious. I want to explain all the things the world. I prefer when it's difficult. The simple things are bored for me. Since I was a young I am fond of discovering. For example, I had a Christmas gift, it's a remote-controlled car, so I wanted to discover how it works. I found that it's magic. So it's my vocation since ever.

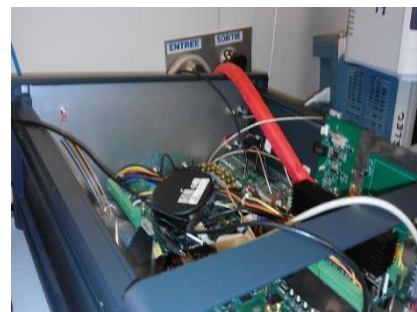
What was the best research you have ever done?

It was when we made a new sigma metre it's a project to measure the wavelength the frequency of laser beam.

For the sigma metre we expected the circle in an oscilloscope and we had this circle and the circle had to be constant had to not move in the time and the circle that we have done was perfectly stable, it never moved. So it's my best research I have done.



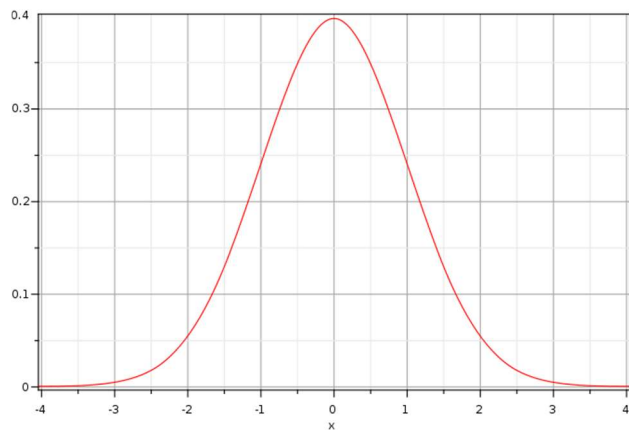
Oscilloscope



Sigma metre

And the molecular decelerator is to cool the molecules. The objective is to eject molecules at a high speed for observe molecules.

The molecules must go at the same velocity which slowed them down they are ejected more than 400m/s. They are faster than the speed of sound. We have got in a magnetic field back and we have slowed them down. We often have done a set of molecules, there was slow molecules and speed molecules who created a Gauss curve. It was a curve in the shape of dome. This dome shape was because there were speed molecules who have arrived in first time, then there were a lot of molecules to arrive in the same time, finally there were slow molecules to arrive in last. In our experience, there was the normal Gaussienne like all phenomenons where there was chance but here there was a tip who presented a cool molecule. This experience has been using to measure the gravity in this molecule.



Gaussienne curve