



APPLIED PHYSICS: MARCEL SCHMITTFULL HAS DISCOVERED THE SECRET OF VENTRILOQUISM — BUT HE'S NOT TELLING

Marcel Schmittfull, when did you first discover your passion for mathematics and physics?

From the time I started school. I was always able to work with bigger numbers than other people. The teachers gave me complex calculations to do and I even did arithmetic in the afternoons, just for fun.

When did the fun become serious?

When I was ten, working on the family computer at home. I used it to practice arithmetic. By 13 I had started programming web sites.

How often?

Every day. I never chatted or played games, or even surfed. I just wrote programs and learned physics.

So you were a star pupil?

No, I had weak subjects as well. Languages don't appeal to me and I hate art.

Boys play soccer and go to the movies. Didn't you?

I preferred to study geometric optics, working out how light is refracted through lenses for example.

That was about the time you came to the attention of your physics teacher. How did that happen?

I wanted to ask him a question by e-mail, and to make it easier to understand I created a software program to develop geometric constructions and sent it as an attachment. He was impressed and suggested I should take part in a student science competition.

Obviously with some success since a year later you won the "Chancellor's Award" in the research contest "Jugend forscht" (a competition for young scientists in Germany).

What was your project?

When you kick a soccer ball against a wall, it bounces off and comes back. Not so in quantum mechanics: a particle will with a certain degree of probability pass through the wall. This is the tunnel effect: the particle "tunnels" through the wall even though its energy is actually insufficient to do so. I simulated this and visualized it on the computer.

Were you able to explain that to Gerhard Schröder when you visited the Chancellery?

I'm not sure. He laughed.

