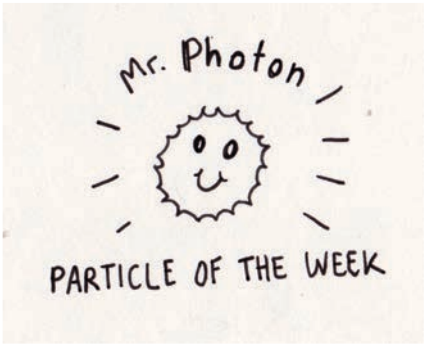
Six reporters have three hours to find out where they are, and what is going on. Using your reliable information and a hand cranked duplicator they produce a paper with the REAL news: The Daily Issue.

THE DAILY ISSUE

Edition **60** - 21/1/2014

FOM PHYSICS



WHAT IS FOM?

We asked non-Dutch conference visitors what this abbreviation could mean. "Foundations of Matter", "Freaks of Nature", "Far out Matter", "Something with matter, probably", "No clue", "FOM? What's that?", "Something to do with Lego".

CONFERENCE ABBREVIATIONS AND THE AMERICAN IMMIGRATION SERVICES

When you ask Justin on the meaning of the abbreviation FOM he is reminded of his experiences with the American Immigration Services. When he travelled to the US to attend the MRS conference, the officers asked him if he could explain MRS. 'Luckily I could!' Justin smiles. He doesn't know what FOM stands for, but he doesn't expect any consequences for his stay in Veldhoven.

YOUR OPINION COUNTS

Call for opinions: "Do numerics, and you lose creativity", tell us what you think. Please share your opinion with us at our office, located at the center of the Beneluxhal.

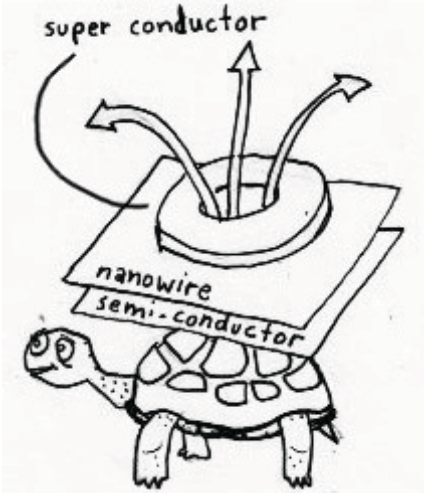
URSULA KELLER: THEORY VS EXPERIMENT

During your talk this morning you said, rather provocatively, that you lose your creativity if you do numerics.

Yes, but of course that is not completely true. You can be very creative using numerics. But as humans we need images. We work best if we can make a model. A simple one. And then we connect that to numerics, numerics becomes a tool, which, if you apply it well, can be very useful. For very small scales, we lack the intuition of how systems function. We are macro beings, we grow up seeing only macro interactions. Students usually love quantum mechanics because it is completely unlike anything we know. We can only understand it through using mathematics.

I like simple models. An experimentalist wants to understand data. My goal is to generate the most simple model, to make it even simpler until it stops working. In that way I can understand the fundamental dynamics. At some level a model is always wrong. It is always an approximation.

As an experimentalist I hope a theory turns out to be wrong. Otherwise it would become boring, if all your measurements confirm the theory. If you measure something that's not according to the theory, you keep measuring and changing your experiment until you are sure. I am an explorer. I want to expand the frontiers of experiment. By pushing those limits, we are bound to disprove theory at some point. With the attoclock, we did just that.



NEW KID ON THE BLOCK

Thomas (12) must be the youngest participant of FOM Physics. He was first invited to last years' Veldhoven conference by Wim van Saarloos. Being interested in energy physics and relativity he is destined to studying physics. Today we are lucky to welcome Thomas on the editorial board of The Daily Issue.

TODAY WE WILL INTERVIEW A PARTICIPANT OF THE FOM@VELDHOVEN2014 CONFERENCE.

What's your name?

Minori.

Why are you here?

Because I'm interested in physics. Specially in bubbles and droplets.

Why are you interested in bubbles?

It's easy to study bubbles, because of the round shape.

What do you think about this conference?

It's very exciting for me, but the time is a little too early for me. I woke up at 5:00 AM!

WHERE'S THE SIMPLE STUFF?

'We kinda run out of simple stuff to look at. A lot of fields are approaching a stage in which they are forced to deal with more complex problems.' Nikolas (30)

NON-NEWTONIAN DROPPINGS

Florian (41) moved to the Netherlands a month a ago and is completely excited about the Veldhoven conference, which is 'the most creative environment' he has ever seen. He has an appetite for expensive experiments. Or rather, his appetite comes with expensive experiments. To create an ultracold quantum gas as he does apparantly cannot be done at the kitchen table.

How different is this at the other end of the demo hall, were we run into Siesja (22), Katja, Henri, Nick and Christian from University of Amsterdam. They drop eggs into corn starch and silly putty to find out about the shock absorbing capacity of these non-newtonian fluids. It appears that the fundamental physics of these experiments are not yet fully understood. Is it due to the fluids' visco-elastic properties? To shear thickening? No one knows. The UvA group doesn't hesitate to shoot bullets into the stuff, but the most obvious experiment (to us) has not yet been carried out...

If an ordinary egg can survive a 9m drop, how is that for eggs from geese or ostriches? And how about a human being jumping from a building? So here a chance for all of our dear readers. Fill up the kitchen sink, the bath tub or swimming pool with a corn starch solution and return to Galileo Galilei's classic: There still is unexplained magic in the dropping of stuff from high buildings.

FOM@HOME

As we just learned, an egg and a jar of corn starch suffice for doing fundamental research. We call upon all our readers for input: What other simple experiments still evade scientific understanding? For our last edition of the Veldhoven conference, The Daily Issue would like to compile a list of topics that are (as the saying goes) 'cheap, fast and out of control'. Please help out and come to our office in the main hall.

COLOFON

The Daily Issue is written and printed on the spot by a varying board of editors. This issue was made by: Danibal, Diana Wildschut, Dick Bos, Harmen Zijp, Lemke Kraan, Luis Fernandez, Peter Uithoven and Thomas Mersi.

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