

Unknown matters



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columnist

Some of the smartest people in the world were in Newport Beach last week. Particle physicists converged for the 14th International Conference on Supersymmetry and the Unification of Fundamental Interactions, or SUSY06, hosted by UC Irvine. I was there too. They had cake.

It's an exciting time to be a physicist. Next year, near Geneva, Switzerland, the Large Hadron Collider, the world's most powerful particle accelerator, will begin colliding proton beams at an energy of 14 TeV. I don't know what that means either, but the very thought of it turned physicists

giddy with anticipation.

Smashed particles reveal secrets. Physicists speculate about someday discovering how every particle of matter in the universe is related. It's known as the final theory – a secret that explains how all of nature works. The theory of everything,

Public knowledge

MIT professor Frank Wilczek gave a lecture, open to the public, at the Barclay Theatre at UCI. He spoke about the universe, Einstein, quarks ... it was all way over my head, so I asked him about his shirt.

His wife bought it for him.



Vendetta, a character from "Making Fiends." They're fans of the animated Web series by Los Angeles cartoonist Amy Winfrey. See it at: www.makingfiends.com



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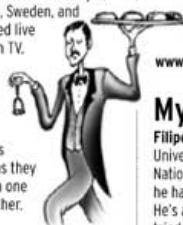
It's OK if you don't understand it. Just take it as poetry.



A dinner to honor Nobel prize recipients is held annually in Stockholm, Sweden, and broadcasted live on Swedish TV.

In 2004, Frank was awarded a Nobel prize in physics.

During the award dinner, waiters descended a marble staircase, as they balanced a tray of desserts with one hand and rang a bell with the other.



Cosmos and celebrity chat

Thoughts on dark matter and the prime minister of Denmark, from professor David Owen, from the Ben-Gurion University of the Negev, Israel:

Because matter in the universe is expanding more rapidly than science can explain, some physicists think that an invisible, unidentified something else is affecting the cosmos. They call it **dark matter**.

"I saw the **Danish prime minister** with Bush on television today," David said. "He (the prime minister) looks like a movie star. He looked like a cross between Brad Pitt and Antonio Banderas."



Anders Fogh Rasmussen
Prime minister of Denmark

Apple crumb cake



Casio watch shows California time and current time in Israel (10 hours ahead)

A bag of **potato chips** for munching in case he got sleepy. Chips help fight jet lag, he said. His theory is that the salt raises his blood pressure.

It works like a charm.

Sweating the smallest stuff

USC physics and astronomy professor **Clifford V. Johnson** is part of a research group trying to identify and understand the origin and future of the universe by studying the smallest particles in nature. He's also learning to play the trumpet and has a **blog**:

www.cosmicvariance.com/clifford/

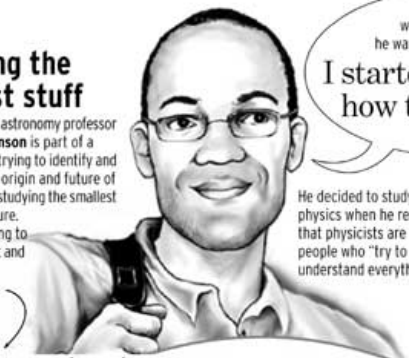
My turn to teach

Filipe Joaquim is a post-doctoral student at the University of Padua in Italy and a member of Italy's National Institute of Nuclear Physics. A week before, he had presented his work in Paris. He's a smart guy, but he'd never tried sushi. He didn't think he'd like raw fish.

I had a theory that Filipe would like sushi. If my initial equation, $\text{:)} = \text{fish}/\text{rice}^2$, proved successful, subsequent testing would reduce the rice-to-fish ratio until rice was eliminated from the equation.

The sushi experiment:

1. Testing began with a **California roll**.
2. Then a **spicy tuna roll**. "I like this."
3. Next, **yellowtail**. This sort of scared him, because it's clearly a hunk of raw fish, but he liked it. "This tastes very fresh," so the experiment continued.
4. Testing concluded, and my theory was successfully proven with **tuna sashimi**.



Clifford knew when he was 8 that he wanted to be a scientist. I started wondering how things work.

He decided to study physics when he read that physicists are people who "try to understand everything."

SUSY06 freebies:

Tote bag



Foam brain-shaped thing

Tin of mints

Ballpoint pen with two buttons, three watch batteries and no instructions on how to install them.



Filipe assembled the pen for me. The buttons turn on a **red pointer light** and a **flashlight**. "This is good," he said. "Usually they give useless things."

This one is my favorite.

Final word, final theory

I asked what it would mean for physicists to discover **the theory of everything?** It could mean that there'd be no further need for physicists, Filipe said.

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