# Professor Jonathan Feng delivers What Matters to Me and Why lecture

Feng told the story of a life that’s taken him from the offices of Stephen Hawking to hunting for one of the most elusive things in the universe: dark matter.

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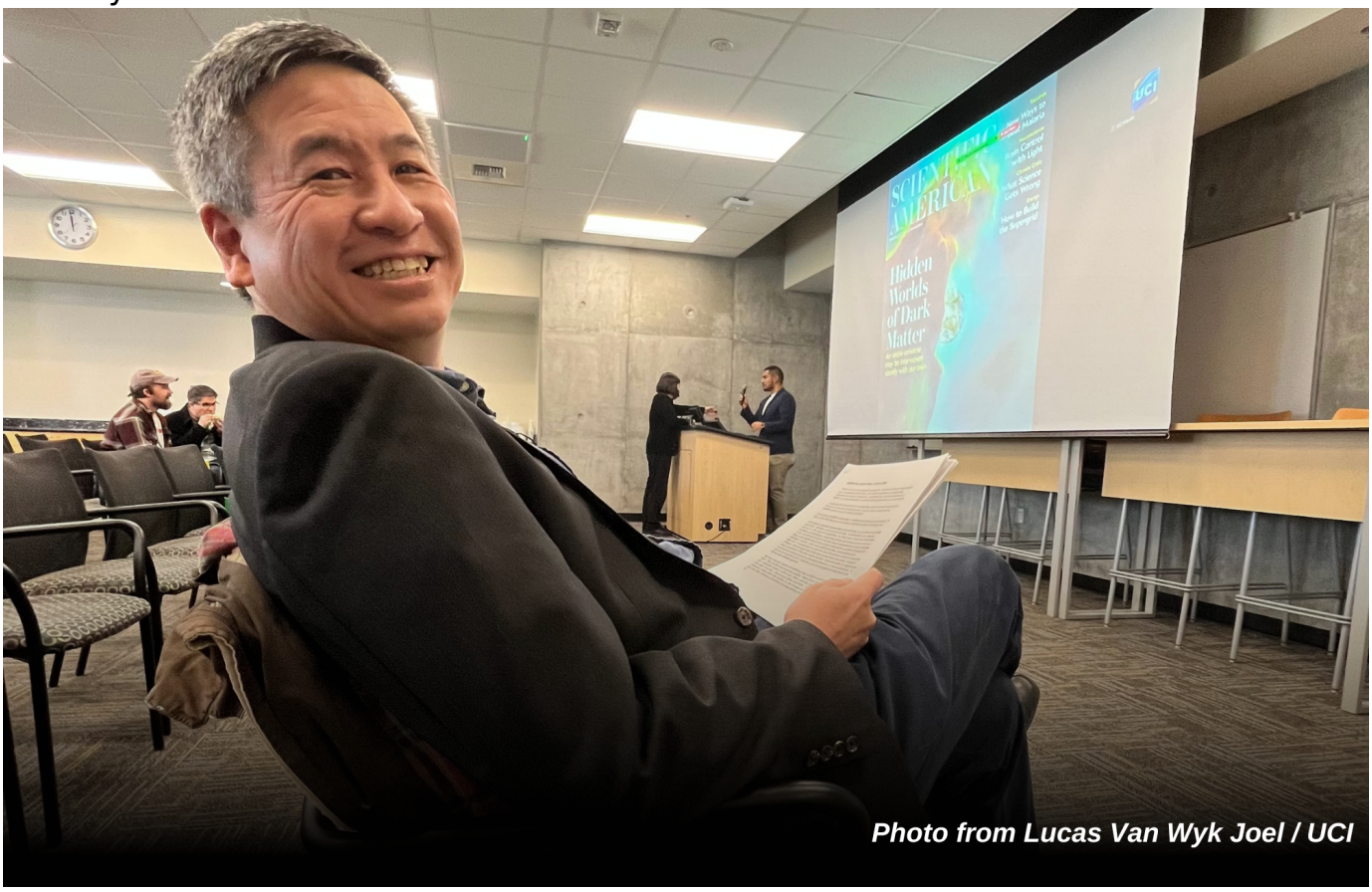

*Photo from Lucas Van Wyk Joel / UCI*

Professor Jonathan Feng if the UC Irvine Department of Earth System Science prepares to deliver a talk on the personal journey that underpins his career as a physicist.

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Professor Jonathan Feng of the UC Irvine Department of Physics & Astronomy leads an international team of physicists who are hunting for one of the most mysterious and elusive things in the universe: dark matter. Physicists think dark matter comprises most of the matter in the universe, but there's a problem: no one has ever detected it.

However, dark matter was not the focus of Feng's talk on Wednesday, February 7 as part of UCI's What Matters to Me and Why (WMMW) lecture series.

WMMW asks UCI professors to reflect on what motivates their dedication to research and how their personal journeys influenced their careers.

Feng conceived of and founded WMMW in 2012, and Wednesday was the first time he himself delivered a talk for the series.

"I've been waiting a long time, maybe a decade, to see this," said Professor Clare Yu, also of UCI Physics & Astronomy, while introducing Feng. "Finally, he is going to tell us his story."

Feng started by talking about his middle school years in Walnut Creek, California, when as a boy formative teachers introduced him to computers and instilled in him a reverence for math and the questions it can help answer.

These experiences — coupled with a family that encouraged a playful engagement with mathematical puzzles and games — would help Feng dream big about what was possible for his life.

At about 20 years old, a search for graduate school programs led him to get "it in my head that I wanted to go work with Stephen Hawking," the famed astrophysicist.

Feng moved to Cambridge, England, where Hawking was a professor, but quickly realized that getting to work with Hawking would not be as easy as he thought.

But after months of hard work, Feng received a note from Professor Hawking asking him to visit his office.

"He offered me a Ph.D. position," said Feng.

It was a dream come true, but by that time Feng wanted to return home to the States to be closer to home and to study theoretical particle physics at Stanford.

“‘That’s a good place,’” Feng recalled Hawking telling him. “‘You’ll find good people to work with there.’”

Feng returned to the States, and, after finishing his Ph.D. and a number of postdoctoral positions, he secured a faculty position at UC Irvine.

“I was just crying with joy,” Feng said after receiving the news.

At UCI, Feng leads a project called FASER, which is a particle detector installed at the European Organization for Nuclear Research (CERN).

One of FASER’s goals is to detect evidence for the existence of dark matter.

“We only know about 5% of the universe,” said Feng. “Imagine trying to understand Shakespeare if you can only see the letter ‘h.’”

But exactly when evidence for the existence of dark matter will emerge is not clear.

“It could take 500 years,” said Feng. “Honestly. We don’t know.”

And so Feng’s journey continues.

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