

Particle physicist Carolina Deluca retools when she needs to

Deluca has leveraged her physics background and artistic skills to pursue careers outside of academia.

“If I am fed up, I find ways to move on.” That attitude has taken Carolina Deluca from working in experimental particle physics to starting a business to teaching middle and high school physics. “I am not scared of change,” she says.

Deluca earned her physics PhD in 2009 in Barcelona, Spain, where she grew up. She spent time at Fermilab and then was based at CERN for two postdocs. She still lives nearby, in a small town in France about 8 km from the Swiss border. There was an unwritten rule in particle physics, she says, “that at the end of your second postdoc, you should get something more permanent.” Missing that window can make a candidate look less appealing and landing a job even harder. When she was in that position in



CAROLINA DELUCA in her studio. (Courtesy of Carolina Deluca.)

2015, she says, “people were retiring and posts were not being replaced.” As a result, the ambience among postdoctoral researchers became “competitive and sometimes aggressive.”

“The environment didn’t bring out the best in me,” says Deluca. Plus, she had a family, so she didn’t have the flexibility to go wherever a job might take her. Deluca began to feel that the “life-and-death deadlines” of the experiments were arbitrary. “The rest of humanity didn’t care if the paper for the Higgs boson came out this week or next.”

With the stress of work, Deluca returned to her childhood hobby of drawing. “A colleague at CERN saw my drawings and asked if I would do a poster for a conference,” she recalls. The poster was a success, and it led to more side jobs. She turned her artistic skills into a career move.

Her illustration business got off to a good start. Deluca took on both science and nonscience art projects. She illustrated projects for CERN, for universities, and for conferences. She made a coloring book about the ATLAS experiment and designed cards for Particools, a Guess Who?–style game based on standard-model particles. Producers from the TV show *The Big Bang Theory* asked to use her scientific posters for their set, she says. But they sent a contract that would have granted them “universal and permanent rights without any payment,” says Deluca. “I refused.”

For science-based art projects, she says, “you need to have knowledge to propose ideas and to make the illustrations relatable. You want to convey to the general public concepts that are super abstract. So my physics background helps a lot.”

Work had come mainly through word of mouth, she says. “I learned that being an entrepreneur requires qualities that maybe I don’t have. I don’t like to sell myself.”

Then the COVID-19 pandemic hit. “Things slowed down, and people developed other ways of doing things.”

She also realized that she missed physics. “I didn’t miss the research world, but I like making physics relatable to people and doing that in a creative way,” she says. With art projects slowing down, she decided to become a teacher.

In 2022, Deluca started teaching physics at a middle school in France. So far, she says, she enjoys the contact with physics, the satisfaction of conveying ideas, and helping teenagers learn. “Teaching has a creative aspect,” she says.

Now Deluca is working on getting certification to teach middle and high school in Switzerland where, she says, conditions for teachers are better. “If I manage to get into a stable position, then I would like to teach for at least a few years.” And once things settle a bit, she says, she hopes to get back to illustrating as a side hustle.

Toni Feder



THIS TAU NEUTRINO CARTOON is one of many cards Carolina Deluca designed for the game Particools in collaboration with Anna Sfyrla, a physics professor at the University of Geneva. (Courtesy of Carolina Deluca.)