Alumni Spotlight: Natali Fisher ’23

How a UC Irvine graduate turned a passion for physics and computer science into a thriving career.

Tuesday, September 30, 2025

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UC Irvine

As a toddler, Natali Fisher (B.S. Applied Physics ’23, B.S. Computer Science ’23) had already developed a knack for getting into mischief. There was always something to touch, take apart, or explore in her childhood home in Israel—a trait that left her mother scrambling for creative distractions.

On one particularly energetic afternoon, Fisher’s mother handed the restless toddler a set of empty plastic boxes. What began as an act of desperation turned into a moment of quiet, focused absorption. Fisher was entranced by the puzzle of how different things fit together. Years later, that same curiosity would fuel her journey from a nervous newcomer in a California classroom to a double-major in physics and computer science at UC Irvine.

When Fisher was just nine years old, her family emigrated to California, leaving behind the only world she knew. “Third grade was hard. I didn’t know anyone, and I didn’t speak English,” Fisher recalled. Her first days in a new country were steeped in anxiety. “I was annoyed and wanted to go home,” she admitted. The ESL class she was placed in was intimidating, but she slowly began to piece together vocabulary and gain confidence in school. Within a couple of years, she was fluent in English and excelling in her classes.

Fisher fell in love with science in elementary school, but she found her focus in high school when she took her first physics class. “We watched a video of the Tacoma Bridge collapse, and I couldn’t believe what I was seeing,” Fisher recalled. She struggled to reconcile the fluid motion of the bridge with her understanding of how a rigid structure was supposed to behave. Fisher found the answers in physics. “Physics explained the world in a way that felt logical,” she explained. “It made you reconsider things you never second-guessed before.”

Fisher’s curiosity and innate puzzle-solving skills had found a new focus.

The leap from high school classes to university-level physics at UC Irvine was daunting. During her first few weeks on campus, Fisher felt underprepared compared to her classmates. “I looked around at the level my classmates were at and realized that I was behind,” Fisher said. Early exam setbacks forced her to rethink her study methods. She ditched digital notetaking for active listening and worked through countless practice problems to catch up with her peers. “That struggle kind of became a puzzle of its own for me to solve,” Fisher said.

When the COVID-19 pandemic shifted her courses online, Fisher welcomed the efficiency of virtual learning. Eventually, though, her enthusiasm gave way to loneliness and then to a loss of interest in the things that once excited her. Then, a physics course focused on computer programming reignited her enthusiasm. The course included a modeling project that showed Fisher the power of computer science. It inspired her to pursue a second major in computer science.

Fisher's fondest college memories are from her physics courses, especially those that dealt with special relativity and quantum mechanics—the scientific theory of the relationship between time and space, first theorized by Galileo and popularized by Albert Einstein. "It was amazing to use math to explain things that seem impossible," she said.

Fisher joined a research group led by Kieron Burke, distinguished professor of chemistry and physics & astronomy at UC Irvine, where she did research on density functional theory (DFT) and used computational methods to better understand quantum chemistry. Fisher joined the research group before she took any upper-division physics courses. She found that many of the papers she was responsible for reading assumed a knowledge level more advanced than what she had. "I used to reverse-engineer formulas from papers to see if I could understand not only the derivations but also the full context for their initial assumptions," Fisher said. "It was another way for me to satisfy my curiosity about how the world works."

Her tenacity paid off. In 2021, she received the Herbert H. Chen Award, given to one Physics & Astronomy junior for outstanding scholarship. In her final year at UCI, Fisher was the recipient of both the Outstanding Graduating Senior Scholarship Award and the Outstanding Graduating Senior Service Award in the Department of Physics & Astronomy.

As graduation approached, another puzzle loomed: the job search. True to form, Fisher tailored each cover letter and resume, studied every prospective employer thoroughly, tracked interview questions and practiced behavioral responses. Her strategy paid off, and even before graduation arrived, she secured a role with Capital Group, one of the world's leading investment management firms.

Today, Fisher works as a solutions engineer in a business systems analyst (BSA) role, meeting with internal business users to gather and translate business requirements for development by her team. Her training in physics and computer

science is more than a resume highlight, it’s her superpower. “There’s a certain level of stubbornness you need to be in physics,” Fisher said. “It teaches you to not give up, and I rely on that every day in my job.” Her unique combination of disciplines physics and computer science training help her locate areas where optimization can be applied, and then methodically tackle those areas.

Fisher’s curiosity is as bright as it was when she was a child. As she looks ahead, she remains open to wherever it may lead, confident she can tackle new challenges—one puzzle at a time.

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