

Zian Shi
Grade 11

Hobbies: Hiking, Kayaking, Catan, Coding random scripts, Go, Applying DFS to Wikipedia :)

Clubs: Science Bowl Captain, Competitive Programming Club (P), Experimental Science Club (P), Math Circle (assistant instructor), OPhO Co-President

Contest/Competition Experience or Honors: IPhO 2023 Gold, US Physics Team 2021, 2023, USAJMO Honorable Mention, USACO Platinum

Autobiography:

When passionate people talk about how they managed to be so successful in a subject, they usually weave a tale of ups and downs. One of extreme struggles and how they overcome them. And how they eventually succeeded with determination.

I don't really feel this fits my story. While I have always been interested in science in general, my main path before starting physics was most definitely CS or Math. I believed it, my parents wanted it, and my friends saw it. And that was how things would have usually worked out most of the time. I would have probably ended up cramming competition math every day of my life. I would never have had a single minute of free time -- time to let my mind wander and evaluate my life, time to explore other prospective subjects.

But that's not how it played out. Instead, I lived in the rural community of Fresno, where free time was plentiful and people were carefree (obviously an oversimplification lol). While I initially saw this as a hinderance to my life -- very few people around me shared my level of interest in STEM, and there were a bit fewer resources. Eventually, I came to see this as a blessing, for I discovered a subject that absolutely mesmerized me.

I only started physics in 8th grade. It was initially just "hey I'll take the $F=MA$ for fun" effort. As time passed, however, I found that physics just clicked. It wasn't a sharp, distinct click of a metronome, but rather the long, continued note of a violin bow. Physics just flowed naturally. Conclusions, results, and models seemed obvious and intuitive, not just a bunch of equations. Even though the only resource I had access to were public online books, I managed to make camp in my first year. No struggles, no late nights cramming textbooks, no solving 100 problems a day. But there was no denying it: I did have a good understanding.

My urge to pursue physics reached even greater heights this year. What jump-started the whole thing was a really great research opportunity at a local university (related to low-temperature calorimetry). Afterwards, my love for physics evolved into a full-blown passion. This time I decided on rigorous preparation and extremely thorough understanding to extend the intuitive sense of physics I developed prior. Though this strategy may sound boring, as time wore on, I found physics to continue to be fun and natural, the connections across subjects and

symmetries pulling me in. This may have been in part due to SPARC (a rationality/effective altruism summer camp). There, I gained the belief that I need to discover what I really want to do, not what others expect me to do. And after some thought, I decided that thing is physics. And so I allocated more of my time to pursue physics and take time from activities I care less about. Though of course I had to make some tradeoffs, I felt I definitely made the right choice.

IPhO was not merely about the competition; the experience, people, and community were far more influential. There were tons of memories, from playing Avalon and Cambio with other aspirational students from around the world, to insightful conversations with Nobel Prize Laureates, to dancing during the Summer Festival to the hugely authentic Japanese tune of YMCA. The process served not as a conclusion of my physics journey, but a continued source of inspiration for my continued pursuit.

I would like to thank my family and friends for their never-ending support of my pursuit of physics. I would also like to thank my physics teacher Mr. Kipp for organizing the exams and introducing me to the amazing world of olympiad physics.