Agastya Goel

Junior at Henry M. Gunn High School, Palo Alto, CA

Hobbies:

Tennis; hiking; stargazing; frisbee/board games with friends; singing; playing guitar and piano; listening to news, economics, and science podcasts; coding; and, of course, physics.

Clubs:

Gunn Board Game Club, Gunn Competitive Programming Club, Gunn Varsity Tennis Team, Gunn Choir

Contest/Competition Experience or Honors:

IOI Gold 2023, USACO Finalist (2024, 2023, 2022), MOP 2023, USAPhO Semifinalist (2023 Silver, 2022 HM), PRIMES-USA 2023, Honor Choir Participant (via audition) - Various (2021, 2022, 2023, 2024)

Autobiography

My earliest memories of doing physics are with my dad during long car rides and hikes. One of the most memorable car-physics experiences I have had was when playing Angry Birds. In Angry Birds, you fling birds at houses and castles to tear them apart. On one level, I couldn't get the bird to fly far enough. My dad saw a learning opportunity. That car ride was when I learned about projectile motion. I learned that to send the bird the farthest, you should launch it at a 45° angle. Though I have studied physics consistently since then and formally for the past four years, it was only this year that I discovered physics in all of its glory: physics is all around, and it exists to be applied.

My first taste of competition was actually through the USACO competition series. I started preparing for this competition in 6th grade, and through a combination of hard work, great lessons from my dad, and a bit of luck, I qualified for the USACO training camp in my freshman year. That experience was a huge motivator for me, and I went on to spend the next year in intense study, culminating in my selection for the United States IOI team.

I, like many kids, was asked what I wanted to do in college many times during those years. I was sure that I wanted to go into a STEM field, and while I enjoyed my time studying biology and chemistry in school, I was sure that I did not want to build a career in those subjects. Last year, I would say that I would probably want to major in computer science—but I always felt that I had not really tried out physics yet and that I should give it a fair chance.

This year, I decided that I would finally try out physics, so over my winter break, I cracked open Kevin Zhou's handouts and looked outside. After a whirlwind 14 days consumed by these handouts (to the

extent that I did physics in front of the Taj Mahal), I knew that physics was another passion. I am not sure what I learned during those 14 days that made up my mind—maybe it was learning the brilliance of the uniqueness theorem or learning how to cleverly manipulate differential equations; maybe it was the realization that the world might make *sense* after all—but something about the physical world has hooked me since.

Of course, learning physics has come with its perils. I have always been an easy target for nerd snipers, but with no computer science problems constantly staring me in the face, this has not been an issue. However, once I became engrossed in physics, simply looking out the window and observing the pattern of water falling off the roof was enough to doom my APUSH homework for the evening. I suppose this means that I will never be bored….