

## **Christopher Chen**

11th Grade

**Hobbies:** Squash, Basketball, Guitar, Singing

**Clubs:** Co-Founder of Math Club, Computer Science Club; Founder of Physics Club; Co-Editor-in-Chief of Journalism Club

**Contest/Competition Experience or Honors:** 4x AIME Qualifier (2020-2023); USAJMO Qualifier (2022); 4x USAPhO Qualifier (2020-2023); USAPhO Honorable Mention (2021), Bronze (2022); US Physics Team (2023); ACSEF First Place (2023); USACO Gold (2019-Present)

### **Autobiography:**

I was throwing a tennis ball up and down on the car ride to Target for my family's weekly shopping run, dutifully practicing my hand-eye coordination. Yet, I found that whenever the car turned, I would always fumble the ball. As a proficient catcher, I knew something was up. After conducting numerous experiments in a Target shopping cart, 7-year-old me had unknowingly confirmed the concepts of acceleration and Newton's First Law.

I was introduced to physics through my investigations of the curious phenomena all around me — ice freezing from top to bottom, paper clips sinking in soapwater, and gyro toys lighting up when in contact with metallic surfaces. Through Science Olympiad, Science Bowl, and middle school physics courses, I became fascinated with understanding and assigning terms to concepts that I had stumbled upon years prior.

In 8th grade, my sister brought to our dinner table the infamous plank-on-rollers physics problem, inciting hours of debate and discussion and forever igniting my obsession with Olympiad physics. In my first few years of competitive physics, I struggled to fully grasp more advanced topics and found many physics problems impossible to solve. Yet, motivated by my passion for physics, I pushed on. I pored over college textbooks, attended online physics communities, consulted mentors, studied on MIT OCW, trained on practice problems, and led my school's Physics Club. I often spent weeks tackling a problem or exploring alternate paths to an answer on car rides, evening jogs, and in my dreams.

I started to more clearly comprehend the physical world. I learned to calculate the kinematics of everything from cars and rolling spheres to oscillating charges and elliptically orbiting planets. I bashed out proofs 10+ times for Carnot engines, Coriolis forces, Kepler's laws, and relativistic momentum, understanding how the universe worked through each iteration. My infatuation with physics intensified after seeing the world with such satisfying clarity.

I'm truly honored to be a member of the 2023 U.S. Physics Team, and I cannot wait to discover and learn even more about our physical world.

I couldn't have done it without the help of those who supported me along the way. Thank you to Dr. Sanhita and Dr. Chaudhri for solidifying my fundamental understanding of physics. Thank you to Dr. Tang for guiding me through the complexities of physics with rigor and accuracy. And lastly, thanks to my family for providing me with endless inspiration and motivation for exploring physics.