Suni (Stephanie) Yao

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Education

University of California, Berkeley   Berkeley, California · *Expected Grad: May 2029*
Candidate for bachelor's degree (BA) in Mathematics.

Shanghai Pinghe School   Shanghai, China · *2022 - 2025*
- *Coursework*: IBDP Final Grade: 44/45 (7/7 in Math HL, Physics HL, Chemistry HL, Economics HL, English B HL; 6/7 in Chinese A SL; 3/3 in Extended Essay & Theory of Knowledge); self-studied APs: Calculus BC, Physics C Mechanics, Physics C Electricity and Magnetism, CSA. All 5/5.
- President of math and physics clubs; Pinghe X-Program math courses lecturer; organizer of *Elenchus* Debate Competition 3.0; media department head for IronPulse 6941 and CarbonPulse 10541; PTV Studio photographer;
- *Outside*: initiated Shanghai International Math Circle | SIMaC; co-directed PHormula Math Contest.

Research/Exposition

Extracting Music Notes from Chords by Applying and Improving Fourier Transform   *2024*
Constructed a discrete frequency-magnitude matrices database for piano notes from direct FFT result, then implemented an additional algorithm after FFT to eliminate the overtones' disturbance in the chord.

Detailed Dandelion Spread Prediction Model Based on Wind Roses with Tianyi You, Xinyan Huang, Yuyang Wang   *2023*
Predicted the spread of dandelion based on various factors and wind roses to determine the possibility for the dandelion seeds landing in various spots; additionally concluded that dandelion possesses a relatively high invasiveness by quantification.

River water injecting into sea: Movement of sediments in stable stratified flows   *2023*
Quantified the effect of sediment-driven instability on the horizontal motion of sediment in a stably stratified fluid; experimented for cross-validation. Won CONF-CIAP 2024 Best Paper, published on Theoretical and Natural Science.

Academic Experience

Teaching Assistant, AwesomeMath Summer Program   Remote · *Summer 2025*
The AwesomeMath Program is a three-week intensive virtual summer camp for mathematically gifted students from around the globe, and as a teacher assistant I lead problem-solving sessions, grade problem sets, and help testsolve the exams over weekends.

Junior Counselor, First Year, Ross Mathematics Program   Indiana, US · *Summer 2023, 2024*
Was selected as one of 16 junior counselors from 4000+ applicants in 2024; led recitations and graded homework; conducted number theory research.

Problem Writer, INTEGIRLS Math Competition   *Apr 2024 - May 2025*
Wrote 10+ problems; did test-solving; currently managing global chapter (Shanghai) for 2024-25 INTEGIRLS competitions with 7k+ participants and 30+ chapters.

Skills

- **Technical Skills**: LaTeX, Web Dev (React, Next.js), Figma, C++, C, GitHub / project management, Python, Java
- **Languages**: English & Chinese (native)

Honors/Awards

- Jane Street WiSE NYC Participant (2025)
- PAIR & ESPR Camper (2025, 2024)
- Non-Trivial Research Fellow (2025)
- FIRST Robotics Halic Regional Champion (2025), Istanbul Regional 2nd Place (2025), Istanbul Regional Champion (2024), China Playoff-Season Champion (2023).
- USA Math Olympiad Qualifier (2023, 2024)
- High School Math Contest in Modeling Finalist (2023)
- American Regional Math League Global Top 10 (2023)
- British Physics Olympiad Global Top Gold (2023)

Projects

- ⚠ Opal: an Obsidian plugin powered by AI to help you construct a better second brain.
- ⌨ prime-hunt: a daily game inspired by word hunt but searching for prime numbers instead of words.
- ⌨ math-kitten: a web app to sharpen your algebra skills with cute kitten figures.
- ⌨ PathTogether : create private map session for friends to record their location and stay connectedafter working together, whether as classmate or alumni, co-campers or online friends in the same server.
- ⌨ DailyCode: a web app to push daily open coding challenges to users to ignite their passion for coding and help them build a habit of coding practice.

Last Updated in August, 2025