

Stefan Ivanov

Sofia, Bulgaria

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Education

University of Cambridge (Gonville & Caius College)

10.2019 – 06.2023

MSci in Natural Sciences

Class I (87%)

Dissertation:

Black holes in a new relativistic theory for modified Newtonian dynamics
Supervised by [Dr Will Barker](#) and [Dr Amel Durakovic](#)

MSci coursework:

Major topics: • Relativistic astrophysics and cosmology • Biological physics • Geophysics
Minor topics: • Advanced statistical mechanics • Exoplanets • Formation of structure in the Universe • General physics paper

BA in Natural Sciences

Class II.1 (65% avg.)

BA coursework:

Physics, Mathematics, Materials Science, Earth Sciences

Acad. Nikola Obreshkov High School, Burgas

09.2011 – 06.2019

High School Diploma

Grade 5.99/6.00

Main modules:

Mathematics, Natural Sciences, English, Russian

Work Experience

Sofia Mathematics High School

10.2023 – 07.2025

Physics teacher to about 200 students, aged 13 to 19, in Bulgaria's most prestigious high school. Apart from regular classes, I led extracurriculars where I provided training for physics competitions and advised on university admissions.

Personal Skills

Languages:

English (proficient), Russian (conversational), Bulgarian (native)

Computing:

git, bash, Mathematica, L^AT_EX, Asymptote

Programming:

C++, Python

Outreach

High School Competitions

05.2019 –

I've served as a jury member for the Bulgarian Astronomy Olympiad. In this capacity I've done lots of problem writing and editing (e.g. [\[1\]](#), [\[2\]](#)), and I've led classes at the annual training camps.

In 2025 I served as Leader for the Bulgarian team at [IOAA](#), contributing to its best-ever performance (3 gold, 1 silver).

From 2019 until 2023, I managed [Burgas Challenge](#), which at one point was the largest online Maths & Physics competition in Bulgaria.

I occasionally contribute problems for international-level competitions as well (e.g. [\[3\]](#)).

Invited Talks

01.2020 –

Popular science at regional forums. I have lectured on charge-coupled devices, photometry, the history of astronomy, getting a degree in physics, and the scientific method.

Physics Handouts

09.2023 –

I've published hundreds of pages' worth of physics resources for free, directed towards talented high-schoolers. Hosted at <https://stefanivanov.site/teaching>.

I wrote difficult problems in physics and astronomy to be used in a cutting-edge [AI benchmark](#) ([2501.14249](#)). I was awarded prize money for question quality and novelty.

Selected Awards

Nevill Mott prize for best theoretical physics project, University of Cambridge	2023
Senior scholarship, Gonville & Caius College	2021
Silver medal, International Geography Olympiad	2019
Gold medal, International Olympiad on Astronomy and Astrophysics	2017, 2018
Silver medal, European Physics Olympiad	2018
Gold medal (Absolute winner), International Astronomy Olympiad	2015