

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 courses:

RAC, PEP, BP / ASM, FSU, EXO / GPP

BA courses:

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 – 12.2024

Physics teacher to about 200 students, aged 13 to 19, in Bulgaria's most prestigious high school. I continue to lead extracurricular classes where I provide training for physics competitions and advise on university admissions.

Freelance Teaching in Physics and Astronomy

09.2015 –

I teach using original materials, from secondary school to second year university, with >1000^h of lecturing. Multiple students of mine have competed at International Science Olympiads.

Personal Skills

Languages:

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

Computing:

git, bash, Mathematica, \LaTeX , Asymptote

Programming:

C++, Python

Outreach

High School Competitions

05.2019 –

Jury member for the Bulgarian Astronomy Olympiad; Deputy Leader for IOAA. In this capacity I've done lots of problem writing and editing, and I've led classes at the annual training camps.

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. [1]).

Invited Talks

01.2020 –

Popular science at regional forums. I have lectured on electronic circuits, photometry, undergraduate degrees in physics, and the scientific mindset.

Physics Handouts

09.2023 –

I've published hundreds of pages' worth of physics resources for free, directed towards talented high-schoolers. Hosted at <https://si335.github.io/teaching>.

Humanity's Last Exam

11.2024

I wrote difficult problems in physics and astronomy to be used in a cutting-edge AI benchmark. 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, 2019
Silver medal, European Physics Olympiad	2018
Gold medal (Absolute winner), International Astronomy Olympiad	2015