

## EDUCATION

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**University of Oxford, Exeter College** *Oxford, UK*  
**MSc Mathematical & Theoretical Physics (Current)** *2020-2021*

- Courses: Quantum Field Theory, Advanced QFT, Groups & Representations, Topological Quantum Theory, Intro to Quantum Information, Standard Model I, QFT in curved space
- MSc thesis on ‘Quantum Machine Learning for Space Debris & Collision Avoidance’ under the supervision of Dr Stefano Gogioso and in collaboration with European Space Agency (in progress).

**University College London** *London, UK*  
**BSc Theoretical Physics, First Class Honours, Average: 85.67%** *2017 – 2020*

- Ranked second in graduating 2019/20 cohort for BSc Theoretical Physics.
- Courses: General Relativity, Cosmology, Electromagnetic Theory, Nuclear & Particle Physics, Solid State Physics, Quantum Mechanics, Theory of Dynamical Systems, Practical Mathematics & Computing, ...
- Developing Effective Communication (Year 1&2 course): STEM outreach, writing articles, group projects, team-work, individual and group presentations.

**TED Northern Cyprus College** *Nicosia, Cyprus*  
**GPA: 10.00/10.00** *2013 – 2017*

- A-Levels: Physics, Maths, Chemistry, Biology, Turkish (5 A\*s), Further Maths (A)
- GCSEs: 9 A\*s (including German)

## AWARDS

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**UCL Mathematical and Physical Sciences Faculty Dean’s List for 2020** *2020*  
Awarded to top 5% of graduating class of the faculty.

**Merit-based scholarship from North Cyprus government** *2017-2020*  
National award given to top 10 scoring students in their A-levels throughout their studies.

**EU Scholarship for Turkish Cypriot Community implemented by the British Council** *2017*  
1-year scholarship granted to selected prospective undergraduate students.

**High Honor Certificate and Full Academic Scholarship from TED College** *2013-2017*  
1<sup>st</sup> place in graduating class after 4-year high-school programme.

**Outstanding Cambridge Learner Award** *2016*  
Top in Cyprus for IGCSE Chemistry.

## RESEARCH EXPERIENCE

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**Summer Research Project** *2020*

‘Covariant derivative of a spinor in a metric-affine space’ with Dr Christian Böhmer

- 3 month mathematical research project with another UCL student.
- Studied the works of Schouten, Corson and Hehl in differential geometry and relativistic quantum mechanics.
- Introduced to the generalisation of ideas of GR to spaces of torsion and non-metricity and worked out the covariant derivative of spinors in such spaces.

## UCL Third Year Physics Group Project - Individual Grade 92%

2020

‘Developing Machine Learning Algorithms for text classification’ with Prof Paul Bartlett & Dr Kirsty Dunnett

- 3-month long project with frequent board meetings.
- Acted as the student project manager, arranged venues of meetings, coordinated the three sub-groups of the project and ensured all objectives were met in a timely manner.
- Worked on the technical side of this physics education research project which aimed to analyse UCL physics intake questionnaires on laboratories.
- Developed a Python algorithm utilising deep neural networks and natural language processing techniques to automatically assort open-ended questionnaire responses into (multiple) categories giving an indication of the accuracy of the model in the report.
- Currently working to publish the results in a physics education journal.

## UCL Second Year Computational Physics Project - Grade 87%

2019

‘Modelling Fluid Flow’ with Dr Patrick Guio

- Utilised computational methods to find numerical solutions to non-linear partial differential equations relating to fluid flow.
- Plotted graphs to illustrate the fluid flow pattern and interpreted the results physically.

## Summer Computing Mini-Project

2019

‘Modelling Magnetic Field of Ganymede’ with Prof Nick Achilleos

- Self-taught MATLAB for this 2-week project, plotted the magnetic field of Ganymede using theoretical models and data from Galileo missions.

## ACHIEVEMENTS

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### Cyprus Youth Entrepreneurship Summer Institute

Summer Programme at George Washington University funded by the US Embassy in Cyprus

*Washington DC, USA*

*Aug 2017*

### EUROSCOLA Programme at the European Parliament

MEP for a day

*Strasbourg, France*

*Nov 2015*

### Creating Friendships for Peace

A year-long peace-building programme with a cultural exchange component in the US

*Cyprus and NH, USA*

*July 2015*

## SKILLS

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**Website:** Created my own website, [www.hsrevisionnotes.com](http://www.hsrevisionnotes.com), in July 2019 to share my A-Level notes with students. Since opening, the website has been visited more than 11000 times by 6000 users.

**Programming skills:** Python, MATLAB, Mathematica, L<sup>A</sup>T<sub>E</sub>X

**Language skills:** English (Fluent), Turkish (Native), German (Intermediate)

## REFEREES

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### Prof Steven T. Bramwell

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