Nashwan Sabti

Physics · PhD Researcher

nashwan.sabti@kcl.ac.uk | NNSSA | NNSSA | @NashIn0044

Profile

I am doing my PhD in theoretical physics at King's College London. My interests surround addressing fundamental questions and contributing to our understanding of the Universe. I am dedicated to my work and have developed a strong set of analytical and technical skills required for problem solving. I am also interested in scientific outreach through teaching and mentoring.

Education

PhD in Theoretical Physics — *King's College London, UK*
Research field: Particle physics and cosmology — *2018 - present*

Master of Science in Theoretical Physics — *Leiden University, The Netherlands*
Thesis: "Heavy Neutral Leptons during the Big Bang Nucleosynthesis epoch" — *2016 - 2018*
GPA: 9.0/10 (Cum Laude)

Dual Bachelor of Science in Physics and Astronomy — *Leiden University, The Netherlands*
Thesis: "Constraining cosmological parameters using the CLASS code" — *2013 - 2016*
GPA: 9.0/10 (Cum Laude)

Work Experience and Projects

Teaching undergraduate courses — *King's College London*
Teaching assistant — *2018 - present*
1st year Labs, 3rd year particle physics.

Mentoring A-level student with a research project — *King's College London*
Supervisor — *May 2019 - Sep 2019*
Guiding an academic piece of work, produced by an A-level pupil as part of the Realising Opportunities programme.

Development and guidance of research topic for secondary school students — *Leiden University*
Supervisor — *Dec 2016*
Supervising pupils with a project that involved calculation of the mass of the black hole in the centre of the Milky Way using Keplerian orbits of stars nearby Sgr A*.

Imaging and analysis of astrophysical data — *Leiden University*
Researcher — *May 2015*
Project involved imaging and photometric analysis of the Cosmic Horseshoe gravitational lensing system using the Isaac Newton Telescope at the Roque de los Muchachos Observatory in La Palma with the goal of estimating the dark matter abundance within the lens.

Computing Skills

Proficient: `Python`, `Mathematica`, LaTeX
Basic: `C++`

Languages

Fluent: English, Dutch
Intermediate: Arabic
Basic: Russian

Awards and Certificates

Hendrik Casimir Prize — *Dec 2017*
Awarded by the Casimir Research School for best performance during the Master's program in physics.

Young Talent Encouragement Award — *Nov 2014*
Awarded by the Royal Holland Society of Sciences and Humanities for best performance during the first year of the Bachelor's program in physics.

Publications

1. N. Sabti, J. Alvey, M. Escudero, M. Fairbairn and D. Blas, *Refined Bounds on MeV-scale Thermal Dark Sectors from BBN and the CMB*, JCAP 2001 (2020) 004 [1910.01649].
2. J. Alvey, N. Sabti, M. Escudero and M. Fairbairn, *Improved BBN Constraints on the Variation of the Gravitational Constant*, Eur. Phys. J.C80.2 (2020), p. 148 [1910.10730].
3. N. Sabti, A. Magalich and A. Filimonova, *An Extended Analysis of Heavy Neutral Leptons during Big Bang Nucleosynthesis*, [2006.07387].