

Guy UONG

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EDUCATION

- Sept 2018
– Jul 2022
- University of Cambridge, Selwyn College**
MSci and BA (Hons) in Natural Sciences (Astrophysics) [2.1]
Modules include: Structure and Evolution of Stars, Astrophysical Fluid Dynamics, Dynamics of Astrophysical Discs, Modern Stellar Dynamics.
- Sept 2011
– Jul 2018
- Dartford Grammar School**
International Baccalaureate Diploma [44 points]
Higher Level: Mathematics (7), Physics (7) and Chemistry (7)
Standard Level: English Literature (7), Economics (6), Mandarin Chinese (7)
- GCSEs [11 A*]**
Subjects include Mathematics, Physics, Chemistry, Biology, English, Mandarin Chinese and others.
- Sept 2014
– Jul 2017
- Trinity Laban Conservatoire of Music and Dance**
Scholarship to study violin and piano.
Participated in various groups, leading Sinfonia Orchestra and Mezcla ensemble.
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RELEVANT PROJECTS (GitHub: <https://github.com/UONGGuy>)

- Sept 2021
– Jun 2022
- Dynamical Friction on Supermassive Black Holes in Galaxy Formation Simulations**
- Explored the dependence of black hole trajectory the number of dark matter particles in simulation, categorising three regimes of behaviours.
 - Analysed over 100 million observations per data set with Python, determining thresholds for simulation accuracy to advise development based off findings.
- Sept 2020
– Jun 2021
- Particle and Photon orbits near a Black Hole**
- Investigated the motion of a particle or photon in the Schwarzschild solution of the Einstein field equations.
 - Numerically integrated ODEs in MATLAB (Runge-Kutta methods) to predict particle behaviours and trajectories.
- Sept 2021
– Jun 2022
- Monte Carlo simulation of the Ising Model**
- Designed a Monte Carlo simulation in MATLAB to evolve the Ising model into new configurations.
 - Learned about using Monte Carlo methods to simulate randomness and solve problems that are probabilistic in nature.
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WORK EXPERIENCE

- Oct 2015
– Oct 2015
- Kent County Council, Dartford Library – Volunteer Helper**
- Prepared weekly public events and resolved daily inquiries from members of the public, helping them access library resources.
 - Operated a new ICT to register and track item movements.
 - Accessed and reconciled cash from self-service machines.
- Sept 2014
– Jul 2015
- The Mick Jagger Centre, The Red Rooster Project – Volunteer Helper**
- Taught children aged 7-11 years to read and play music over a 30-week period, cooperating with staff to deliver encouraging learning environments and termly concerts.

ADDITIONAL INFORMATION

IT skills	Python (numpy, scipy, matplotlib, h5py, pandas), C++, MATLAB, Microsoft Office (Word, Excel, PowerPoint).
Languages	Limited Mandarin Chinese (International Baccalaureate level 7 ab initio), conversational Cantonese.
Interests	Have played violin and piano for 13 years. Swam for Dartford District Swimming club for 3 years.