QICHEN DONG

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EDUCATION

University of Manchester September 2020 - September 2024
PhD Student in High Energy Physics *Manchester, UK*

· Expected December 2024

University of Manchester September 2018 - June 2020
Master of Physics (First Class Honours) *Manchester, UK*

· Overall GPA: 74.4
· Ranked 30th out of 150 students in the final year.

Shandong University September 2015 - June 2018
Bachelor of Science in Physics *Jinan, CN*

· Overall GPA: 83.3

RESEARCH EXPERIENCE

University of Manchester Sep 2020 - September 2024
PhD Project *Manchester, UK*

· Project supervised by Prof. Terry Wyatt.
· Harnessing the power of AI to analyse massive datasets generated by the ATLAS experiments.
· Proposed, developed, implemented, and tested improved methods to identify the highly boosted pair production of the heaviest τ leptons. Algorithm runs in Tier-0 ATLAS data processing system.
· Techniques benchmarked with data, achieving a three- to four-fold improvement in the signal-to-background ratio.
· Leading an analysis searching for resonant production of the Higgs boson pairs in the $bb\tau\tau$ channel.
· At least two papers are scheduled to be published for the benefit of the ATLAS collaboration, in which I will be the first author.

ATLAS experiment, CERN April 2022 - August 2022
Developer and Maintainer *Geneva, CH*

· Long-term-attached PhD student.
· Developer and reviewer of the ATLAS offline software.
· Senior shifter in the ATLAS software merge-requests review team.

University of Manchester September 2019 - June 2020
Master Project *Manchester, UK*

· Project supervised by Prof. Andrew Pilkington. Achieved 81%.
· Searching for extra source of CP violation which contributes to the large matter anti-matter asymmetry in the universe.
· The project measured the fiducial cross-section of the Vector Boson Scattering (VBS) processes.
· One of the first to set preliminary limits on the Standard Model Effective Field Theory parameters in VBS processes.
· Results presented to the ATLAS Collaboration.

WORK EXPERIENCE

Qube Research and Technology August 2022 - February 2023
Staffed Intern Quantitative Researcher *London, UK*

- Salaried internship.
- Developing and optimising database infrastructure for real-time financial market data, enhancing data retrieval and storage efficiency.
- Collaborated with a team to address critical NLP-related challenges in the finance industry leveraging AI.

ADDITIONAL EXPERIENCE

University of Manchester Sep 2020 - Present
Teaching Assistant *Manchester, UK*

- Demonstrating the C++ / Python laboratories for year-2 and year-3 undergraduate physics students.
- Sharing fundamental programming skills with the next-gen programmers.

Remote area in Sichuan June 2016 - September 2017
Volunteer Primary School Teacher *Sichuan, CN*

- Helping primary school students who live in remote area in Sichuan province during summer break.
- The team helped hundreds of children.
- Local tobacco farming industry which can potentially reduce poverty in local area was investigated.

Shandong University September 2015 - June 2017
Lead of Student Union *Jinan, CN*

- Responsible for organising voluntary works hosted by the university.
- Managing a team of 20 SU undergraduate representatives.

SKILLS AND INTERESTS

Programming	Proficient in programming with C/C++ and Python
Teamwork	Strong communication skill in highly collaborative environments
Languages	Chinese (Native), English (Professional)
Interests	Graphic design, Accelarated / Distributed computing