Kin Ho Lucien Lo

Resume

Education

2014–2017	**PhD. in Physics**, *University of Rochester*, New York.
2012–2014	**MSc. in Physics**, *University of Rochester*, New York.

PhD Research

Thesis topic	*Search for natural and split supersymmetric scenarios in pp collisions at 13 TeV in all-jet final states*
Supervisor	Associate Professor Aran Garcia-Bellido
Description	I analysed large dataset collected by the Compact Muon Solenoid detector (CMS) at CERN, the European Organization for Nuclear Research, the largest center for particle physics in the world. The CMS experiment consists of around 3800 scientists, with 43 different nationalities. I constructed statistical model and used simulation to predict behaviours of data and compared them to actual data.

Work Experience

2014–2017 **Graduate Research Assistant**, *CERN*, Geneva, Switzerland.

Postion based at CERN in Geneva, Switzerland, collaborated with physicists around the world and carried out data analysis on large experimental datasets.

- Published three papers on prestigious journals (European Physics Journal C and Physics Letter B)
- Leader of a detector working group consisting of 3 faculties, 3 postdocs and 10 students. Main developer and maintainer of the analysis software for the group. Analysed large amount of electronic data with various data mining techniques.
- Prepared and delivered presentations of results to management and at conferences

2015–2017 **Visiting Research Associate**, *Imperial College*, London, UK.

Collaborated with faculties, postdocs and students from Imperial College and worked on data analysis to search for new physics in the form of supersymmetry.

- Wrote data filtration algorithms in PYTHON and statistical inference.
- Led a team of 20 physicists: organising analysis tasks, documentation and code versioning (git).
- Main developer and maintainer of the analysis software for the group. Admin for the private git respository. Analysed large amount of electronic data with various data mining techniques.
- Developed excellent speaking and communicating skills and presented results on behalf of the group in many occasions

2015–2017	**Honorary Research Associate**, *University of Bristol*, Bristol, UK.
	Collaborated with faculties, postdocs and students from University of Bristol and worked mainly on data filtering.
	○ Wrote data filtering algorithms in PYTHON and reduce sizes of the datasets by a factor of 100 and signficantly speed up processing time of data analysis.
	○ Developed a software framework to visualise collision data and aid comprehension of data.
2012–2014	**Graduate Teaching Assistant**, *University of Rochester*, New York, US.
	Developed effective teaching and communicating skills as a teaching assistant of 2 under-graduate and 1 graduate courses in the Department of Physics.
2011–2012	**Undergraduate Research Assistant**, *Chinese University of Hong Kong*, Hong Kong.
	Developed a effective model to calculate the advance of the orbit of Mercury and resulted in a publication in American Journal of Physics.
2011 Summer	**Undergraduate Research Assistant**, *Brown University*, Providence, RI, US.
	Participated in a summer research program in the Brown particle astrophysics group on the LUX experiment
	Detailed achievements:
	○ Performed studies on the performance of Decision Tree algorithm on signal-to-noise separation

Awards

2011	Scholarship from physics department of CUHK and Brown University for summer research
2008	Hang Lung Mathematic Award and scholarship

Computer skills

OS	Linux, Unix OS
Programming Language	PYTHON, C++, Pascal, Delphi, Matlab
Version control	git, SVN
Misc	HTML, LATEX

Languages

Cantonese	**Mothertongue**
English	**Very fluent**
Mandarin	**Very fluent**
French	**Basic**

Interests

I am an enthusiastic climber, Go player, hiker, runner and skier.

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