Wee Don Teo — Resume

Contact Information

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Objective

To secure a position applying 5+ years of quantitative research, analysis, and programming skills to solve challenging data-driven problems.

Education

Ph.D. Physics, *Cornell University* **January, 2013**

Thesis: *Search for Supersymmetry with b-quark Jets and Missing Transverse Energy in pp Collisions at* $\sqrt{s} = 7$ *TeV*

M.Sc. Physics, *Cornell University* **June, 2010**

B.Sc. Mathematics and Physics, *University of Toronto* **June, 2007**

Awards

Natural Sciences and Engineering Research Council of Canada Postgraduate Fellowship • American Association of Physics Teachers Outstanding Teaching Assistant of the Year • Dean's List • Samuel Beatty In-Course Scholarship • Donald G. Ivey Scholarship in Physics

Work Experience

Graduate Researcher, *Cornell University* **2008 - 2013**

- Member of the Compact Muon Solenoid experiment at the Large Hadron Collider of the CERN laboratory in Geneva, Switzerland.
- Worked in tight-knit teams on large-scale data analysis projects that successfully measured the production rate of rare particles and that searched for as-yet-undiscovered particles.
- Analysis responsibilities included the processing of datasets, the planning and optimization of the analysis strategy, the determination of selection efficiencies/systematic uncertainties, and the development of novel background-estimation methods.
- Developed a suite of data quality monitoring visualization software tools that provided real-time diagnostics on the performance of the detector trigger systems.

Graduate Teaching Assistant, *Cornell University* **2007 - 2009**

- Conducted weekly tutorial and laboratory sessions, prepared quizzes, and graded homework sets and examinations in fundamental physics courses for engineers and pre-med majors. Taught and supervised a total of roughly 60 students per semester.

Undergraduate Research Assistant, *York University/University of Toronto* **2006 - 2007**

- Implemented pattern-finding and distortion correction methods in C++ for calibrating beam images using a proton beam monitor system prototype and custom-made Monte Carlo simulations.
- Built a complete simulation model of the beam monitor system using proprietary ray-tracing software for studying the effects of system misalignment and beam size uncertainty on the final physics measurement.

Computer Skills

- **Analysis Tools**: Significant experience with ROOT analysis framework. Working knowledge of R, Excel. Past experience in Maple, Mathematica.
- **Languages**: Proficient in C++. Working knowledge of Java, Python, SQL. Past experience in Perl, Unix shell scripts. Experience with CVS, SVN revision control systems.
- **Operating Systems**: Extensive experience with Unix/Linux, Windows.

Selected Publications

- *Search for Supersymmetry in Events with b-quark Jets and Missing Transverse Energy in pp Collisions at 7 TeV,* CMS Collaboration, 2012, Phys. Rev. D 86 072010
- *Measurement of the* $t\bar{t}$ *Production Cross Section in pp Collisions at 7 TeV in Lepton + Jets Events Using b-quark Jet Identification,* CMS Collaboration, 2011, Phys. Rev. D 84 092004
- *Commissioning of the CMS High-Level Trigger with cosmic rays,* CMS Collaboration, 2010, JINST 5 T03005

Languages

- Fluent: English, Mandarin. Intermediate: Cantonese, French. Basic: Japanese.