

Wee Don Teo — Résumé

CONTACT INFORMATION

1645 International Dr, Unit 114
McLean, Virginia 22102
USA

☎ 703-362-0289
✉ don.teo@gmail.com

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

WORK EXPERIENCE

Opower

Implementation Engineer III

October, 2015 - Present

- Technical lead on enterprise-level client delivery team. Implemented the product launches of Opower's Small and Medium Business energy efficiency product offerings for two enterprise utility clients.
- Developed business segment classification and open hours prediction algorithms for Opower's Machine Learning Lab.

Implementation Engineer II

October, 2014 - October, 2015

- Client-facing engineer for smart meter data acquisition and customer information system migration efforts. Built an automated data quality validation framework in Ruby. Led a pilot project to allow utility clients to monitor their smart meter data via a data warehouse. Developed BI reporting extracts in MySQL and Hive.

Implementation Engineer I

July, 2013 - October, 2014

- Worked with utility companies on data integration projects for Opower's energy efficiency product offerings. Primary client-facing engineer for two of Opower's pilot Behavioral Demand Response product launches. Built internal tools in Ruby, Hive, and D3.js to assess quality of large-scale smart meter data.

Compact Muon Solenoid (CMS) Experiment

Ph.D. Student, Cornell University

August, 2008 - January, 2013

- Member of the CMS experiment at the CERN laboratory in Geneva, Switzerland.
- Developed a suite of data quality monitoring (DQM) visualization software tools for the detector trigger systems. The tools provide the DQM shift crew real-time diagnostics on the performance of the trigger systems and issue alarms when unexpected trigger rates are detected.
- Worked in tight-knit teams on large-scale data analysis projects for the measurement of the production rate of the top quark and the search for new-physics particles. Analysis responsibilities included the processing and storing of the datasets, the optimization of the event selection strategy, the determination of efficiencies and systematic uncertainties, and the development of novel background-estimation methods.

Cornell University, Ithaca, New York, USA

Teaching Assistant and Grader

August, 2007 - May, 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.
- Graded homework sets for advanced graduate course in quantum field theory.

Tokai-to-Kamioka (T2K) Experiment

Undergraduate Research Project, University of Toronto

September, 2006 - May, 2007

- Integral member of the Optical Transition Radiation (OTR) proton beam monitor group.
- Built simulation model of beam monitor system in ASAPTM ray-tracing software framework and studied effects of system misalignment and light efficiency on beam image.
- Evaluated impact of beam size uncertainty on final neutrino measurements using Monte Carlo simulations.

Summer Research Assistant, York University

May, 2006 - August, 2006

- Implemented pattern-finding and distortion correction methods for calibrating beam images using beam monitor system prototype and custom-made ray-tracing simulations.

Collider Detector at Fermilab (CDF) Experiment

Undergraduate Research Project, University of Toronto

January, 2006 - May, 2006

- Studied various systematic uncertainties on the measurement of the top quark mass using the Neutrino Weighting Algorithm method in the dilepton decay channel.

Quantum Optics Group

Summer Research Assistant, University of Toronto

May, 2004 - August, 2004

- Developed a Fabry-Perot interferometer for laser calibration.
- Repaired and improved functionality of laser diode modules using LabVIEW platform.

TEACHING EXPERIENCE

Cornell University, Ithaca, New York, USA

Teaching Assistant and Grader

August, 2007 - May, 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.
- Graded homework sets for advanced graduate course in quantum field theory.

HONOURS AND AWARDS

NSERC (Natural Sciences and Engineering Research Council of Canada)
Postgraduate Fellowship

2009 - 2012

AAPT (American Association of Physics Teachers) Outstanding Teaching
Assistant of the Year

2008

Donald G. Ivey Scholarship in Physics, University of Toronto

2004

TECHNICAL SKILLS

- Analysis Tools: Significant experience with Scikit-learn, pandas, Past experience with Maple, Octave, R, ROOT.
- Programming Languages: Proficient in C++, Java, Python, Ruby. Experience in Perl, Javascript, Unix shell scripts.
- Web development: Experience in D3.js, Ruby on Rails.
- Database systems: Significant experience with SQL, Apache HBase and Hive.
- Extensive experience with Git revision control system.
- Experience with large-scale data analysis (>100 TB), Monte-Carlo simulations, and machine learning techniques.