

# Dilraj Ghuman

4A Mathematical Physics | Pursuing Bachelor of Science

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## EXPERIENCE

### **TRIUMF, Vancouver—URA**

Supervisor(s): Mark Scott, Thomas Lindner

MAY 2018 - AUG 2018

Worked with the T2K group on NuPrism mPMT prototype construction. Also worked on NuPrism mPMT early tagging of events in GEANT4 simulation.

### **SNOLab, Sudbury —URA**

Supervisor(s): Chris Jillings, Pierre Gorel

SEPT 2017 - DEC 2017

Worked on the DEAP 3600 project. Updated software with PMT characterization to assist in monitoring the status of the PMTs used as detectors for possible events.

### **Humber College, Toronto —Math Centre Resource Person**

SEPT 2016 - APRIL 2017

Provided tutoring for college students. Provide customer service and helped lead new co-op students. Tutored all of the physics and majority of the statistics students.

## EDUCATION

### **University of Waterloo, Waterloo—BSc. Mathematical Physics**

SEPT 2014 - PRESENT

Presently pursuing a Bachelor of Science at the University of Waterloo with a major in Mathematical Physics.

### **Fletchers Meadow S.S, Brampton— High school Diploma**

SEPT 2010 - JUNE 2014

Received high school diploma with honours. Volunteered at multiple events during my time at the school.

## CODING/COURSES

C/C++, Python, ROOT, GEANT4, LaTeX, R, Julia proficiency experience.

Ordinary/Partial DEs, Vector Calculus, Complex Analysis, Calculus of Variations.

Group and Ring Theory, Differential Geometry, Geometry of Manifolds.

Quantum Physics/Theory 1 & 2, Classical Mechanics, E&M 1,2 & 3, Statistical Mechanics.

## AWARDS

Dean's Honour List 2016

Merit Scholarship 2014

**Top 41% Physics Contest**  
Completed in the top 41% of a physics test run by the University of Waterloo

**Tae Kwon Do Black Belt**  
Earned a Black Belt after 5 years of dedication

**High School Honours** Earned Honours throughout my years of highschool

## LANGUAGES

English, Punjabi, Hindi