

Tal Schwartz

5th Year Student of Engineering Physics

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Webpage: <https://tschwartz190.github.io/>

Citizenships: Canada, Israel, USA

ENGINEERING TRAINING

<i>Mechanical</i>	<i>Software</i>	<i>Research</i>
- Computer-aided design	- ANSYS	- Experimental design
- Thermal analysis	- MATLAB	- Rocket engine testing
- Materials analysis	- LabVIEW	- Equipment sourcing
- Composite manufacture	- NASA CEA	- Vacuum systems
- Machine tools/MIG welding	- Java	- Technical writing

EDUCATION

University of British Columbia

Vancouver Campus, September 2014 – Present

- ✓ B.A.Sc. in Engineering Physics, focus in Aerospace Engineering; Current GPA: A
- ✓ Expected graduation date: May 2019

WORK EXPERIENCE

Intern

Technion Aerospace Department, May – August 2018

- ✓ Undergraduate guest researcher at the Technion (Israel Institute of Technology), Rocket Propulsion Center
- ✓ Investigated the optimal operating conditions and properties of paraffin-based hybrid rocket fuel
- ✓ Involved in the development of a testbed for an experimental Pulsed Detonation Engine

Intern

Interorbital Systems, May – December 2017

- ✓ Engineering intern working on orbital rocket design, manufacture, and assembly
- ✓ Designed a heat exchanger saving 3 kg of vehicle mass
- ✓ Analyzed airflow across the launch vehicle fairing with ANSYS Fluent
- ✓ Designed and built rocket engine static test stand equipment

Intern

Max Planck Institute, January – April 2016

- ✓ Support engineering intern at the Max Planck Institute for the Structure and Dynamics of Matter
- ✓ Designed and built an optical system for the characterization of ultrafast infrared laser pulses
- ✓ Designed mechanical and electrical lab system components, including for ultra-high vacuum applications

Intern

International Business Machines (IBM), June – August 2016

- ✓ Database software design intern in Input/output Drawer and Adapter Development, Z Systems
- ✓ Investigated and determined failure conditions for IBM mainframe hardware
- ✓ Built a software tool to automatically compile and visually display hardware failure data

UNIVERSITY TECHNICAL EXPERIENCE

Adjustable Keyboard – Capstone Project

September 2017 – April 2018

- ✓ Project lead and mechanical designer for the adjustable keyboard, a prototype epaper keyboard
- ✓ Coordinated firmware design, UI implementation, PCB design, and mechanical prototyping efforts
- ✓ Successfully designed and built a working dynamic user interface device

Teaching Assistant

September 2016 – April 2018

- ✓ Multiple undergraduate courses in the engineering and physics departments
- ✓ Lab instructor, held office hours, reviewed and graded assignments. Liaison between professors and students

AWARDS AND ACHIEVEMENTS

- ✓ Wesbrook Scholar for academic excellence and community involvement (2018)
- ✓ University of British Columbia Deans Honour List: all eligible semesters (2014 – Present)
- ✓ Academic All-Canadian: 3-time university cross-country/track scholar-athlete award (2014 – 2016)
- ✓ University of British Columbia Chancellor's Scholar: for academic excellence (2014)

References available on request