

Robin McDonald

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EDUCATION

California Institute of Technology (Caltech)

Material Science, GPA: 4.0/4.0

Bachelor of Science expected June 2023

SKILLS

Experience in MATLAB, Mathematica, Solidworks, 3D printing, Excel, Tutoring
Lab experience in titration, gel electrophoresis, flash columns, NMR, prep plates, glovebox.

RESEARCH EXPERIENCE

Biomaterials Laboratory of Dr. Roumeli, UW (6/2020 – present)

- Characterized the structural and mechanical properties of *Arabidopsis Thaliana* VND7 using optical microscopy, microindentation, and atomic force microscopy for future biocomposites
- Presented at SURF Symposium, wrote interim reports and [final report](#)
- Findings will be published in *Plants* (in preparation), 3rd author

Natural Products Laboratory of Dr. Reisman, Caltech (7/2019 - 8/2019, 1/2020–3/2020)

- Improved catalysis of the reductive cross-coupling mechanism
- Learned organic chemistry techniques
- Presented research at FSRI Symposium

Collaborative Sequencing Center of Dr. Liang, TGen – Helios Intern (6/2017-7/2017)

- Performed the genetic analysis for a case-control study on ALS
- Maintained Illumina NGS and learned DNA library prep
- Presented poster at the Helios Scholars Symposium

LEADERSHIP EXPERIENCE

MAΘ Honor Society – Arizona School for the Arts (ASA), President (2017- 2019)

- Taught weekly lessons on math topics and coordinated events
- Devised school's first Pi Day Celebration and obtained \$480 in grant funding
- Administered winning 2019 Mathematical Minutes Video Competition entry

First Tech Challenge Robotics – ASA, member (2015-2019), Team Captain (2018-2019)

- Won the Think Award (2016) for technical writing in the Engineering Notebook

School Ambassador – ASA, General Ambassador (2014-2017), Lead Ambassador (2017-2019)

EXTRACURRICULAR ACTIVITIES

Student Investment Fund – Caltech, member (10/2019-present), Secretary (10/2020-present)

- Organize weekly discussions on the stock market and portfolio management

Formula SAE – Caltech, member (10/2019 – present)

- Aerodynamics subsystem: work in Solidworks and Ansys.