# Vivian H Su

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## Education

**Stony Brook University, Stony Brook, NY** GPA: 3.45

**B.E.** Engineering Science – Specialization in Biotechnology; Minor in Nanotechnology Studies *May 2022*

**M.S.** Materials Science and Engineering *May 2023*

Awards and Honors: Presidential Scholarship and Dean's List

## Skills

**Technologies**

Autodesk Inventor, Autodesk Fusion 360, 3D Printing (Ultimaker and TAZ), ImageJ, Microsoft Excel

## Relevant Experiences

**Operations Team Lead** *iCREATE at Stony Brook University* *Fall 2018 – present*

- Diagnosed 10+ Ultimaker and TAZ 3D printers for quality assurance of self service and queue prints
- Initiated Beginner Autodesk Inventor and Fusion 360 workshops and hosted weekly Ultimaker Cura trainings
- Developed and implemented protocols for streamlining communication between 30+ consultants and members

**Biodesign Intern** *Sinai BioDesign at Mount Sinai Hospital* *Winter 2020*

- Advanced computational base for cranioplasty alternative by designing and simulating 3+ models on Fusion 360

## Projects

**3D Printed Transparent Masks for Visual Communication** *Summer 2020*

*Stony Brook University Department of Materials Science and Chemical Engineering/iCREATE at Stony Brook University*

- Guided team of undergraduate students with operating Fusion 360 to model 7 distinct mask designs
- Computed air velocities and pressures of 2D and 3D mask simulations using COMSOL Multiphysics

**Optimizing Configurations for Intracranial Pressure**

*Sinai BioDesign at Icahn School of Medicine at Mount Sinai Hospital* *Winter 2020*

- Produced 3+ multiscale simulations using Fusion 360 to determine optimal configurations for medical model
- Varied geometric parameters and assigned material properties to analyze stress, strain, and displacement

**The Influence of Exposure to Nanostructures on Dental Pulp Stem Cells: TiO2 Nanoparticles and Collagen Fibers**

*Stony Brook University and Stony Brook School of Dental Medicine* *Spring 2018*

- Investigated the impact of TiO2 nanoparticles (0.1 mg/mL) in the oral cavity using dental pulp stem cells
- Compared cell proliferation, morphology, bacterial sensitivity, and substrate effects of samples

## Additional Experiences

**REU** *Garcia Center for Polymers at Engineering Interfaces at Stony Brook University* *Summer 2019*

- Collaborated with a team of 8 undergraduate and graduate students to design and execute bioprinting protocols
- Supervised and trained 7 high school students with wet laboratory skills such as tissue culture decontamination

**Research Trainee** *Icahn School of Medicine at Mount Sinai Hospital* *Summer 2018 and Winter 2019*

- Prepared cell cultures and extracellular matrices for imaging using immunofluorescence assays
- Imaged cells using confocal (Leica SP5 DMI) microscopy and quantified results using ImageJ

**Teaching Assistant for Engineering Laboratory** *Stony Brook University* *Fall 2020*

**Teaching Assistant for Biomaterials** *Stony Brook University* *Spring 2020*

**Teaching Assistant for Introductory Biology Laboratory** *Stony Brook University* *Fall 2019*

## Leadership

**President** *Stony Brook University Taiwanese Students Association* *Fall 2020*

- Delegated tasks among 20+ cabinet members to execute cultural events and meetings with a $7,000 budget

**Treasurer** *Stony Brook University Taiwanese Students Association* *Fall 2018 – Spring 2019*

- Oversaw more than $6,000 of the organization's budget for a year of events, fundraisers, and meetings
- Attained $3,000 travel grant and coordinated out-of-state trip for more than 15 members