

# CLAIRE APUAN

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📍 Hanover, NH

## EDUCATION

### Thayer School of Engineering at Dartmouth College

Hanover, NH  
June 2019

### Bachelor of Engineering concentrating in Biomedical Engineering

- Major Coursework: Biomechanics, Intermediate Biomedical Engineering, Biological Physics, Medical Diagnostics and Monitoring

### Dartmouth College

Hanover, NH  
November 2018

### Bachelor of Arts in Engineering Sciences

- Major Coursework: Systems, Solid Mechanics, Numerical Analysis, Differential Equations, Linear Algebra, Calculus III, Digital Electronics, Foundations of Mathematics in Computer Science, Cell Structure and Function

## PROJECTS

### Thayer School of Engineering

Hanover, NH  
March - June 2019

### Development of MR-Guided Robotically-actuated C1-C2 Fusion, *Robotics Lead*

- Demonstrated proof of concept for an image guidance system, a real-time feedback system, and a robotic translation system that actuates a pneumatic drill
- Collaborated with a team on the robotic translation system to achieve 1mm precision
- Used Matlab to program an AL5D robotic arm with 6 DOF

### Thayer School of Engineering

Hanover, NH  
September 2017 - January 2019

### Rethinking Solutions to Erectile Dysfunction with Coloplast, *Lead Author*

- Reinvented a three-piece inflatable penile implant to fit patient's needs
- Created a works-like prototype that provides an erection with axial rigidity to sustain a 3.3lbf load and a 17% increase in 60 seconds
- Designed a looks-like prototype in SolidWorks
- Collaborated with a 3-person engineering team and R&D engineers at Coloplast

### Wegst Biomimetics Lab

Hanover, NH  
March - June 2017

### Investigation of Feasibility of Thermally Cross-linking Chitosan, *Research Assistant*

- Researched and analyzed an optimal sample preparation method of thermally cross-linked Chitosan tissue scaffolds for biomedical applications
- Skills used: instron testing, lyophilization, biomedical-level sample making procedure, SEM, autoclave, NMR spectrometry

## HONORS

### Journal of Sexual Medicine

Miami, FL  
November 2018

### Sexual Medicine Society of North America's (SMSNA) 19th Annual Meetup, *Speaker*

- Presented as the lead author on my team's solution to erectile dysfunction

### Thayer School of Engineering

Hanover, NH  
June 2018

### Brieanna S. Weinstein Engineering Design Prize, *Award Recipient*

- Recognized my team for demonstrating outstanding design skill to address the needs and challenges of people with physical disabilities

### Society of Women Engineers

October 2017, 2018

### World's Largest Conference for Women Engineers, *Dartmouth Representative*

## LEADERSHIP

### Society of Women Engineers

Hanover, NH  
January 2015 - Current

### Founding Member, (*Former President 2018, Vice President 2017, Secretary 2016*)

- Reinstated the Dartmouth chapter after a 16 year hiatus
- Led alumni panels, study groups, small projects, and networking events

### Dartmouth Outing Club

Hanover, NH  
September 2014 - Current

### Trad Leader, (*Former First-Year Trips Directorate Staff 2017, Chair 2017*)

- Managed risk, group dynamics, and logistics for international climbing trips
- Updated Mountaineering Club safety standards in accordance with the American Mountain Guides Association

## SKILLS

**Technical Skills:** MATLAB, SolidWorks, Mathematica, FPGA/VHDL, Python, Word, Excel, PowerPoint, CSS/HTML, Photoshop

**Soft Skills:** Communication, Hardworking, Reliable, Committed, Team Player

**Interests:** Surgical device innovation, Rock climbing, Aerial silks