

CLAIRE APUAN

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 Denver, CO

EDUCATION

Thayer School of Engineering
at Dartmouth College
Hanover, NH
June 2019

Dartmouth College
Hanover, NH
November 2018

PROJECTS

Thayer School of Engineering
Hanover, NH
March - June 2019

Thayer School of Engineering
Hanover, NH
September 2017 - January 2019

Wegst Biomimetics Lab
Hanover, NH
March - June 2017

HONORS

Journal of Sexual Medicine
Miami, FL
November 2018

Thayer School of Engineering
Hanover, NH
June 2018

Society of Women Engineers
October 2017, 2018

LEADERSHIP

Society of Women Engineers
Hanover, NH
January 2015 - Current

Dartmouth Outing Club
Hanover, NH
September 2014 - Current

SKILLS

Expert: MATLAB, SolidWorks, Mathematica, Google Suite, MS Suite (Word, Excel, PowerPoint), Adobe Creative Suite

Intermediate: FDA Approval Pathway, FPGA/VHDL, Python, CSS/HTML,

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

Bachelor of Engineering concentrating in Biomedical Engineering

- Major Coursework: Biomechanics, Intermediate Biomedical Engineering, Biological Physics, Medical Diagnostics and Monitoring
- Observation of Partial Knee Arthroplasty at DHMC

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

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
- Worked directly with a surgeon and engineering team for the robotic translation system
- Used Matlab and DH parameters to program a robotic arm with 6 DOF

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

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

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: mechanical analysis, instron testing, biomedical-level sample making procedure, SEM, autoclave, NMR spectrometry

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

Brianna 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

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

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

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