

Patrick J. Lingane

Objective

I am seeking full-time employment designing mechanical or robotic systems in an environment where I can be productive, learn, and feel good about what I do.

Skills

- Work well in teams, often as a leader
- Strong writing and communication skills (including Spanish)
- Desire to intuitively understand processes behind equations
- Strong analytical skills within mechanical engineering
- Experienced in SolidWorks, MATLAB, C++, Alibre
- Proficient in machining, rapid prototyping, and welding

Education

2009 – 2010 **Cornell University** Ithaca, NY

Masters of Engineering in Mechanical Engineering

- Concentration: Mechatronics (robotics, dynamics and controls)
- GPA: 3.08

2005 – 2009 **Union College** Schenectady, NY

B.S. in Mechanical Engineering, magna cum laude

- Member of Union Scholars honors program
- Dean's List 2006, 2007, 2009
- Term abroad to University of La Salle, Mexico City, studying engineering
- GPA: 3.68

Projects

Masters Project: Analyzed (in Matlab), simulated and optimized (in C++) a method of causing a convex polyhedron to roll in a controlled way using only an internal resonating mass. Designed and built a prototype.

College senior year: Designed, built and analyzed a robotic, [2x scale dragonfly](#) using principles of dynamic similarity. Also studied novel actuators to allow further miniaturization.

College junior year: Designed, manufactured and used a mold to create a three piece slide lock in polypropylene.

College freshman year: Designed and built an autonomous car from simple provided materials without electronics to meet certain requirements. This car won third place in a competition of 29 similar cars.

High school senior year: Designed and built an AM radio transmitter as an optional senior project capable of transmitting music 100 feet to a pocket radio.

Work experience

3/2011 – Present [Acclarent, Inc](#) (a J&J company) Menlo Park, CA
Research and Development Intern

- Created electrical and mechanical test methods for medical devices
- Performed root cause analysis of failure modes.

2009 – 2010 (school year) Cornell University – [Machine Shop](#) Ithaca, NY
Teaching Assistant

- Created shop necessities by TIG welding, milling, sawing, etc
- Assisted students when problems arose and supervised shop on occasion

2008 –2009 (summers) [Nanosolar, Inc.](#) San Jose, CA
Design Intern

- Designed, built and used an experimental flow chamber and smoke system
- Modeled complex machinery and modifications using SolidWorks
- Designed and assembled portions of foil handling process equipment
- Assembled large sections of thermal fluid process equipment
- Designed and fabricated smaller components by machining and welding

2005 – 2009 (school years) Union College – Machine Shop Schenectady, NY
Machine Operator

- Operated equipment such as lathes, mills, and numerous hand tools
- Fabricated parts for students' and professors' projects

2006 (summer) [AB Design, LLC](#) San Jose, CA
Intern (SolidWorks)

- Modeled components of a rack to hold lasers during initial test and burn in
- Created drawings of components to be fabricated
- Completed initial design and layout work for some components

Honors

Elected to Tau Beta Pi, national engineering honor society

Elected to Pi Tau Sigma, mechanical engineering honor society

Elected to Sigma Xi, research honor society

Personal

I am a hard worker, proficient in Spanish. and an Eagle Scout. I enjoy the outdoors and art, and I play the violin regularly.

References

William D. Keat, Ph.D., *Assoc Prof/ME Dept. Chair*

Phone: 518-388-6321 E-Mail: keatw@union.edu

George Petry, *Supervisor of Emerson Machine Shop at Cornell.*

Phone: 607-255-9108 E-Mail: gp22@cornell.edu

Sam Kao, *Senior Engineer, Nanosolar Inc.* (summer employment)

Phone: 408-365-5960 ext. 315 E-Mail: sam.kao@nanosolar.com