



**STUDENT EMPLOYMENT OPPORTUNITY** Student Job System # 43476

Title: Research Assistant – Surface into Form

Hours: 6-12 per week

Hourly wage: \$12-13 per hour depending on experience and background

Wage Category: Student Assistant 2 or 3

Position Available: Fall term 2017 (ideally continuing for future terms)

Supervisor Name: Nancy Cheng, Associate Professor of Architecture

Job Description:

A student assistant is needed for creative work and research investigations into the architectural applications of cut and folded sheet materials. The project examines how surface morphology works with the dynamics of light and airflow using physical and digital simulation. The goal is to create beautiful architectural screens or siding that passively increase cooling and ventilation. The light-diffusing patterns have been used to create shading screens, luminaires and sculptural elements. Wind tunnel measurements and hydrogen bubble electrolysis visualization have been used to understand how surface geometry and apertures affect airflow. More info:

<http://blogs.uoregon.edu/shapinglight> ; <http://blogs.uoregon.edu/nywc> ; <http://place.la/galeria/nancy-cheng>

The next steps will be organizing, analyzing and documenting airflow data, and then developing a lexicon that shows how basic operations can generate a variety of possibilities. Tasks will include:

**Making:**

- Create precise drawings and 3D models from sketches
- Use shop tools and digital fabrication tools (i.e. lasercutting, CNC routing and 3D printing) to create samples and testing equipment.
- Assist in hanging sculptural and architectural pieces using tall ladders
- Organize tools, components, materials and products
- Setup and cleanup for workshops and installations

**Research:**

- Collaborate on refining research test procedures
- Collect, organize and assist in interpreting data

Documentation: (i.e. funding proposals, academic papers, social media, press releases, posters, signage, etc.)

- Organize digital files (i.e. images, Rhino and Grasshopper, video, Adobe Illustrator) into categories
- Create illustrations and graphic design pieces
- Layout Web (Wordpress i.e. [blogs.uoregon.edu](http://blogs.uoregon.edu)) and print graphics
- Translate ideas from discussions, one-on-one conversations and dictation into legible text.
- Proofread and edit

Required Qualifications: *[Note: If I find two individuals with complementary skills (i.e science vs. design), then they don't both have to be able to do everything.]*

- Strong architectural representation skills using Rhinoceros Adobe Photoshop, Illustrator and other graphic programs.
- Has successfully completed at least one year of Architecture, Interior Architecture, Landscape Architecture, Product Design, Art or similar program with a strong academic record.
- Excellent communication skills, positive attitude and can-do resourcefulness

Desirable:

- Comfortable using Grasshopper plug-ins, energy or lighting analysis software
- Background in scientific research, aerodynamics, acoustics, lighting, scientific writing, or grant-writing
- Can work for more than one academic year (i.e. not graduating in 2018).
- Has work-study funding

Application Procedure:

Please contact Nancy Cheng @nywc@uoregon.edu with an email explaining relevant abilities and experience with a resume and portfolio link. Please mention if you have work-study funding and how much.